



(43) International Publication Date
26 May 2016 (26.05.2016)

(10) International Publication Number
WO 2016/078944 A1

(51) International Patent Classification:
C12Q 1/68 (2006.01)

(21) International Application Number:
PCT/EP2015/076010

(22) International Filing Date:
9 November 2015 (09.11.2015)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
14194223.5 21 November 2014 (21.11.2014) EP

(71) Applicant: NESTEC S.A. [CH/CH]; Avenue Nestlé 55,
CH-1800 Vevey (CH).

(72) Inventors: VALSESIA, Armand; Chemin des Ramiers
13, CH-1022 Chavannes-près-Renens (CH). HAGER,
Jorg; 95 Rue de Besançon, F-25300 Pontarlier (FR).

(74) Agent: KAMIBAYASHI, Lynne; Av. Nestlé 55, CH-
1800 Vevey (CH).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,
BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR,

KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG,
MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM,
PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC,
SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ,
TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU,
TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE,
DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU,
LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a
patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the
earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

Published:

- with international search report (Art. 21(3))
- with sequence listing part of description (Rule 5.2(a))

(54) Title: BIOMARKERS FOR PREDICTING WEIGHT LOSS AND WEIGHT MAINTENANCE

(57) Abstract: A method for assessing the predisposition of a subject to weight loss attainable by applying one or more dietary interventions to a subject and/or the predisposition of a subject to maintenance of weight loss following one or more dietary interventions which method comprises determining the nucleotide of the subject at one or more polymorphic positions selected from: (i) position 101 of SEQ ID NO:1 (rs953211) (ii) position 101 of SEQ ID NO:2 (rs1509290) (iii) position 101 of SEQ ID NO:3 (rs1509289) and/or detecting one or more biomarkers genetically linked to said polymorphic positions.



WO 2016/078944 A1

Biomarkers for predicting weight loss and weight maintenance**FIELD OF INVENTION**

The present invention provides biomarkers and biomarker combinations that can be used to predict the degree of weight loss attainable by applying one or more dietary interventions to a subject and/or the predisposition of a subject to maintenance of weight loss following one or more dietary interventions.

BACKGROUND

Obesity is a chronic metabolic disorder that has reached epidemic proportions in many areas of the world and is the major risk factor for serious co-morbidities such as type 2 diabetes mellitus, cardiovascular disease, dyslipidaemia and certain types of cancer (World Health Organ Tech Rep Ser. 2000;894:i-xii, 1-253).

It has long been recognized that low calorie dietary interventions can be very efficient in reducing weight and that this weight loss is generally accompanied by an improvement for the risk of obesity related co-morbidities, in particular type 2 diabetes mellitus. Empirical data suggests that a weight loss of at least 10% of the initial weight results in a considerable decrease in risk for obesity related co-morbidities (World Health Organ Tech Rep Ser. 2000;894:i-xii, 1-253). However, the capacity to lose weight shows large inter-subject variability.

It has been shown that a percentage of the population do not successfully lose weight on a low calorie diet (Ghosh, S. et al., Obesity (Silver Spring), (2011) 19(2):457-463). This leads to an unrealistic expectation of weight loss, which in turn causes non-compliance, drop-outs and generally unsuccessful dietary intervention.

Some studies also demonstrate that there are methods in the art for monitoring weight loss which include monitoring levels of particular biomarkers in plasma (e.g. Lijnen et al., Thromb Res. 2012 Jan, 129(1): 74-9; Cugno et al., Intern Emerg Med. 2012 Jun, 7(3): 237-42; and Bladbjerg et al., Br J Nutr. 2010 Dec, 104(12): 1824-30). However,

these methods do not provide a prediction or indication of the degree of weight loss attainable by a particular subject. There is no predictive value in looking at the correlation of biomarker levels with weight loss.

Keeping weight lost stable also presents a major challenge to the patient. It is known that only one year after a weight loss intervention, about one-third of the lost weight is regained (Hensrud, *Obes. Res.* 9 Suppl 4, 348S–353S, 2001). Moreover, diet-induced weight loss induces several physiological changes that facilitate weight regain (Sumithran and Proietto., *Clin. Sci. Lond. Engl.* 1979 124, 231–241 (2013)). These changes include alterations in energy expenditure, substrate metabolism and hormone pathways involved in appetite regulation. Our understanding of these physiological and molecular changes remains so far limited.

The solution for successful planning and design of dietary interventions, for example low calorie diets, lies in the availability of a method which predicts a weight loss trajectory. In addition, successful planning and design of weight management interventions would be aided by the availability of a test to predict the success (or failure) of a patient at keeping his/her weight loss stable during a weight maintenance program.

United States Patent Application US 2011/0124121 discloses a method for predicting weight loss success. The methods disclosed comprises selecting a patient who is undergoing or considering undergoing a weight loss therapy such as gastric banding, measuring one or more hormone responses of the patient to caloric intake and predicting success of a weight loss therapy based on the hormone response. The hormones measured are gastrointestinal hormones such as a pancreatic hormone.

European Patent Application EP 2 420 843 discloses a method for determining the probability that a person will maintain weight loss after an intentional weight loss by determining the level of angiotensin I converting enzyme (ACE) before and after the dietary period.

There is, however, still a need for a method of accurately predicting the degree of weight loss and weight maintenance in a subject. Consequently, it was the objective of the present invention to provide biomarkers that can be detected easily and that can

facilitate the prediction of weight loss and weight maintenance in a subject. Such biomarkers may be used to predict weight trajectories during weight loss and during weight maintenance and may help for stratification of patients into adapted treatment groups according to their biological weight loss and weight maintenance capacities.

Protocadherin Fat 4, also known as cadherin family member 14 (CDHF14) or FAT tumor suppressor homolog 4 (FAT4), is a protein that in humans is encoded by the *FAT4* gene. FAT4 is associated with the Hippo signaling pathway. The Hippo pathway has emerged as a conserved signaling pathway that is essential for the proper regulation of organ growth in *Drosophila* and vertebrates (Halder, 2011, Development, Jan;138(1):9-22).

It has recently been shown that *Drosophila* Fat (Ft) cadherin has a direct role in regulating mitochondrial morphology and metabolism (Sing et al., 2014, Cell, 158, 1293-1308). It was shown that proteolytic cleavage of Ft releases a soluble fragment (Ft^{mito}) that is imported into the mitochondria and that such cleavage functions as a switch mechanism to coordinate cell cycle and metabolism. It was suggested that altering the levels of Ft^{mito} may allow an organism to directly adjust metabolic rates in accordance with changing energy requirements.

SUMMARY OF THE INVENTION

The present invention identifies biomarkers useful in predicting the predisposition of a subject to change in weight-related phenotypes by applying one or more dietary interventions to a subject. The present invention also identifies biomarkers useful in predicting the predisposition of a subject to maintenance of weight-related phenotypes following one or more dietary interventions.

In particular, the invention discloses specific polymorphisms/alleles of the *FAT4* gene that are related to change in weight-related phenotypes as well as diagnostic tools and kits based on these susceptibility alterations. Thus, the invention can be used in predicting the outcome to a weight management program (including weight loss program or weight maintenance program).

Accordingly the present invention provides in one aspect a method for assessing the predisposition of a subject to weight loss attainable by applying one or more dietary

interventions to a subject and/or the predisposition of a subject to maintenance of weight loss following one or more dietary interventions which method comprises determining the presence of one or more polymorphic markers in the *FAT4* gene or a regulatory element thereof.

The present invention provides in one aspect a method for assessing the predisposition of a subject to weight loss attainable by applying one or more dietary interventions to a subject and/or the predisposition of a subject to maintenance of weight loss following one or more dietary interventions which method comprises determining the nucleotide of the subject at one or more polymorphic positions selected from:

- (i) position 101 of SEQ ID NO:1 (rs953211)
- (ii) position 101 of SEQ ID NO:2 (rs1509290)
- (iii) position 101 of SEQ ID NO:3 (rs1509289)

and/or detecting one or more biomarkers genetically linked to said polymorphic positions.

In one embodiment, the one or more biomarkers (e.g., SNPs) are within the *FAT4* gene or a regulatory element thereof. In one embodiment, the biomarker is less than 20, 15, 10, 5, 4, 3, 2, 1 kilobases (kb) from said polymorphic positions defined above.

Preferably the method comprises determining the nucleotide of the subject at both position 101 of SEQ ID NO:1 and position 101 of SEQ ID NO:2. In one embodiment, the method comprises determining the nucleotide of the subject at position 101 of SEQ ID NO:1, position 101 of SEQ ID NO:2 and position 101 of SEQ ID NO:3.

In one embodiment the method comprises determining the presence of A or G at position 101 of SEQ ID NO:1, and/or A or G at position 101 of SEQ ID NO:2, and/or A or G at position 101 of SEQ ID NO:3.

In one embodiment the method for assessing the predisposition of a subject to maintenance of weight loss by applying one or more dietary interventions comprises determining the presence of A or G at position 101 of SEQ ID NO:1 wherein the

weight loss is represented by a change in body mass index (BMI), fat mass, hip circumference or waist circumference.

In another embodiment the method for assessing the predisposition of a subject to maintenance of weight loss by applying one or more dietary interventions comprises determining the presence of A or G at position 101 of SEQ ID NO:2 wherein the weight loss is represented by a change in BMI, fat free mass, hip circumference or waist circumference.

In another embodiment the method for assessing the predisposition of a subject to maintenance of weight loss by applying one or more dietary interventions comprises determining the presence of A or G at position 101 of SEQ ID NO:3 wherein the weight loss is represented by a change in BMI, fat mass, fat free mass, hip circumference or waist circumference.

In another embodiment the method for assessing the predisposition of a subject to maintenance of weight loss by applying one or more dietary interventions comprises determining the presence of A or G at position 101 of SEQ ID NO:1 and the presence of A or G at position 101 of SEQ ID NO:2 wherein the weight loss is represented by BMI, fat mass, fat free mass, hip circumference or waist circumference.

In a particularly preferred embodiment subjects having a genotype comprising a G at position 101 of SEQ ID NO:1 and an A at position 101 of SEQ ID NO:2 are identified as having a predisposition maintain weight loss following a dietary intervention.

By “G at position 101” referred to above it is meant that the subject has at least one copy of G at said site, i.e., the subject may have the genotype G/G (homozygous) or G/A (heterozygous).

By “A at position 101” referred to above it is meant that the subject has at least one copy of A at said site, i.e., the subject may have the genotype A/A (homozygous) or G/A (heterozygous).

Preferably the method for assessing the predisposition of a subject to maintenance of weight loss comprises determining the presence of a genotype selected from:

- (i) G/G (homozygous) at position 101 of SEQ ID NO:1 and A/A (homozygous) at position 101 of SEQ ID NO:2;
- (ii) G/G (homozygous) at position 101 of SEQ ID NO:1 and G/A (heterozygous) at position 101 of SEQ ID NO:2;
- (iii) G/A (heterozygous) at position 101 of SEQ ID NO:1 and G/A (heterozygous) at position 101 of SEQ ID NO:2; and
- (iv) G/A (heterozygous) at position 101 of SEQ ID NO:1 and A/A (homozygous) at position 101 of SEQ ID NO:2;

and wherein the presence of said genotype indicates that a subject has a predisposition to maintain weight loss following a dietary intervention.

Preferably the method for assessing the predisposition of a subject to maintenance of weight loss comprises determining the presence of a genotype selected from:

- (i) A/A (homozygous) at position 101 of SEQ ID NO:1 and A/A (homozygous) at position 101 of SEQ ID NO:2;
- (ii) A/A (homozygous) at position 101 of SEQ ID NO:1 and A/G (heterozygous) at position 101 of SEQ ID NO:2;
- (iii) A/A (homozygous) at position 101 of SEQ ID NO:1 and G/G (homozygous) at position 101 of SEQ ID NO:2;
- (iv) A/G (heterozygous) at position 101 of SEQ ID NO:1 and G/G (homozygous) at position 101 of SEQ ID NO:2; and
- (v) G/G (homozygous) at position 101 of SEQ ID NO:1 and G/G (homozygous) at position 101 of SEQ ID NO:2;

and wherein the presence of said genotype indicates that a subject has a predisposition not to maintain weight loss following a dietary intervention.

Preferably the maintenance of weight loss is assessed by measuring a change in BMI.

In another embodiment the method for assessing the predisposition of a subject to weight loss attainable by applying on or more dietary interventions comprises determining the presence of A or G at position 101 of SEQ ID NO:1 and wherein the weight loss is represented by a change in hip circumference.

In another embodiment the method for assessing the predisposition of a subject to weight loss attainable by applying on or more dietary interventions comprises determining the presence of A or G at position 101 of SEQ ID NO:2 and wherein the weight loss is represented by a change in BMI or hip circumference.

In another embodiment the method for assessing the predisposition of a subject to weight loss attainable by applying on or more dietary interventions comprises determining the presence of A or G at position 101 of SEQ ID NO:3 and wherein the weight loss is represented by a change in BMI or hip circumference.

In another embodiment the method for assessing the predisposition of a subject to weight loss attainable by applying on or more dietary interventions comprises detecting the presence of A or G at position 101 of SEQ ID NO:1 and the presence of A or G at position 101 of SEQ ID NO:2 and wherein the weight loss is represented by a change in BMI or a change in hip circumference.

In a particularly preferred embodiment subjects having a genotype comprising a G at position 101 of SEQ ID NO:1 and an A at position 101 of SEQ ID NO:2 are identified as having a predisposition to lose weight.

By “G at position 101” referred to above it is meant that the subject has at least one copy of G at said site, i.e., the subject may have the genotype G/G (homozygous) or G/A (heterozygous).

By “A at position 101” referred to above it is meant that the subject has at least one copy of A at said site, i.e., the subject may have the genotype A/A (homozygous) or G/A (heterozygous).

Preferably the method for assessing the predisposition of a subject to weight loss attainable by applying on or more dietary interventions comprises determining the presence of a genotype selected from:

(i) G/G (homozygous) at position 101 of SEQ ID NO:1 and A/A (homozygous) at position 101 of SEQ ID NO:2;

(ii) G/G (homozygous) at position 101 of SEQ ID NO:1 and G/A (heterozygous) at position 101 of SEQ ID NO:2;

(iii) G/A (heterozygous) at position 101 of SEQ ID NO:1 and G/A (heterozygous) at position 101 of SEQ ID NO:2; and

(iv) G/A (heterozygous) at position 101 of SEQ ID NO:1 and A/A (homozygous) at position 101 of SEQ ID NO:2;

and wherein the presence of said genotype indicates that a subject has a predisposition to lose weight following a dietary intervention.

Preferably the method for assessing the predisposition of a subject to weight loss attainable by applying on or more dietary interventions comprises determining the presence of a genotype selected from:

(i) A/A (homozygous) at position 101 of SEQ ID NO:1 and A/A (homozygous) at position 101 of SEQ ID NO:2;

(ii) A/A (homozygous) at position 101 of SEQ ID NO:1 and A/G (heterozygous) at position 101 of SEQ ID NO:2;

(iii) A/A (homozygous) at position 101 of SEQ ID NO:1 and G/G (homozygous) at position 101 of SEQ ID NO:2;

(iv) A/G (heterozygous) at position 101 of SEQ ID NO:1 and G/G (homozygous) at position 101 of SEQ ID NO:2; and

(v) G/G (homozygous) at position 101 of SEQ ID NO:1 and G/G (homozygous) at position 101 of SEQ ID NO:2;

and wherein the presence of said genotype indicates that a subject has a predisposition not to lose weight following a dietary intervention.

In another aspect of the present invention there is provided a method for assessing the predisposition of a subject to weight loss attainable by applying one or more dietary interventions to a subject and/or the predisposition of a subject to maintenance of weight loss following one or more dietary interventions which method comprises determining the nucleotide of the subject at one or more polymorphic positions shown in Figure 7 (SEQ ID NOs 10 to 101).

The present invention provides in another aspect a method for assessing the predisposition of a subject to weight loss attainable by applying one or more dietary

interventions and/or the predisposition of a subject to maintenance of weight loss following one or more dietary interventions which method comprises determining the sequence of *FAT4* gene or a regulatory element thereof.

The dietary intervention referred to herein is preferably a low calorie diet.

The dietary intervention may comprise administering at least one diet product to the subject.

A low calorie diet may comprise a decreased consumption of fat and/or an increase in consumption of low fat foods. By way of example only, low fat foods may include wholemeal flour and bread, porridge oats, high-fibre breakfast cereals, wholegrain rice and pasta, vegetables and fruit, dried beans and lentils, baked potatoes, dried fruit, walnuts, white fish, herring, mackerel, sardines, kippers, pilchards, salmon and lean white meat.

In one embodiment the low calorie diet may comprises a calorie intake of about 600 to about 1200 kcal/day and/or may comprise administration of at least one diet product.

The low calorie diet may also comprise administration of up to, for example, about 400 g vegetables/day.

Preferably the diet product is Optifast® or Modifast®.

Thus, the diet may comprise a product such as Optifast® or Modifast®. This may be supplemented with three portions of non-starchy vegetables such that the total energy intake is about 2.5 MJ (600 kcal/day). This may be further supplemented with at least 2 L of water or other energy free beverages per day.

In another embodiment, the diet may comprise, for example, a composition which is 46.4% carbohydrate, 32.5% protein and 20.1% with fat, vitamins, minerals and trace elements; 2.1MJ per day (510 kcal/day); This may be supplemented with three portions of non-starchy vegetables such that the total energy intake is about 2.5 MJ (600 kcal/day). This may be further supplemented with at least 2 L of water or other energy free beverages per day.

In one embodiment, the low calorie diet has a duration of up to 12 weeks, e.g. 6 to 12 weeks.

The methods referred to herein may further comprise determining one or more anthropometric measures and/or lifestyle characteristics of the subject.

The anthropometric measure may be selected from, for example, the group consisting of gender, weight, height, age and body mass index, and the lifestyle characteristic may be, for example, whether the subject is a smoker or a non-smoker.

According to another aspect of the present invention there is provided a method for optimizing one or more dietary interventions for a subject comprising:

assessing the predisposition of a subject to weight loss attainable by one or more dietary interventions and/or the predisposition of a subject to maintenance of weight loss following one or more dietary interventions according to the method defined herein; and
applying one or more dietary interventions to the subject.

According to another aspect of the present invention there is provided a method for selecting a modification of lifestyle of a subject, the method comprising:

- (a) performing a method of assessing the predisposition of a subject to weight loss attainable by one or more dietary interventions and/or the predisposition of a subject to maintenance of weight loss following one or more dietary interventions according to the method defined herein; and
- (b) selecting a suitable modification in lifestyle based upon the predicted weight loss attainable and/or predicted maintenance of weight loss from (a).

In one embodiment, the modification of lifestyle comprises a dietary intervention, preferably a dietary intervention defined herein.

According to another aspect of the present invention there is provided a low calorie diet for weight loss, wherein the diet product is administered to a subject that is predicted to attain weight loss by the method defined herein.

According to another aspect of the present invention there is provided a diet product for use as part of a low calorie diet for weight loss, wherein the diet product is administered to a subject that is predicted to attain weight loss or maintenance by the method defined herein.

According to another aspect of the present invention there is provided a diet product for use as part of a low calorie diet for weight loss, wherein the diet product is administered to a subject that is predicted to attain both weight maintenance and weight loss by the method defined herein.

According to another aspect of the present invention there is provided a diet product for use in treating obesity or an obesity-related disorder, wherein the diet product is administered to a subject that is predicted to attain weight maintenance and/or weight loss by the method defined herein.

In one embodiment, the diet product may comprise a product such as Optifast® or Modifast®.

In another embodiment, the diet product may comprise, for example, a composition which is 46.4% carbohydrate, 32.5% protein and 20.1% with fat, vitamins, minerals and trace elements; 2.1MJ per day (510 kcal/day); This may be supplemented with three portions of non-starchy vegetables such that the total energy intake is about 2.5 MJ (600 kcal/day). This may be further supplemented with at least 2 L of water or other energy free beverages per day.

According to another aspect of the present invention there is provided an allele-specific oligonucleotide probe capable of detecting a polymorphic position within the *FAT4* gene or a regulatory element thereof.

According to another aspect of the present invention there is provided an allele-specific oligonucleotide primer capable of detecting a polymorphic position within the *FAT4* gene or a regulatory element thereof.

According to another aspect of the present invention there is provided an allele-specific oligonucleotide probe capable of detecting a polymorphic position selected from:

- (i) position 101 of SEQ ID NO:1;
- (ii) position 101 of SEQ ID NO:2; or
- (iii) position 101 of SEQ ID NO:3.

According to another aspect of the present invention there is provided an allele-specific oligonucleotide primer capable of detecting a polymorphic position selected from:

- (i) position 101 of SEQ ID NO:1;
- (ii) position 101 of SEQ ID NO:2; or
- (iii) position 101 of SEQ ID NO:3.

According to another aspect of the present invention there is provided a diagnostic kit comprising an allele-specific oligonucleotide primer and/or an allele-specific oligonucleotide probe as defined in.

According to another aspect of the present invention there is provided a diagnostic kit comprising (i) an allele-specific oligonucleotide primer and/or an allele-specific oligonucleotide probe capable of detecting the presence of G at position 101 of SEQ ID NO:1 and (ii) an allele-specific oligonucleotide primer and/or an allele-specific oligonucleotide probe capable of detecting the presence of A at position 101 of SEQ ID NO:2.

In one embodiment the diagnostic kit further comprises an allele-specific oligonucleotide primer and/or an allele-specific oligonucleotide probe capable of detecting the presence of A at position 101 of SEQ ID NO:3.

In a further aspect of the present invention, there is provided a computer program product comprising computer implementable instructions for causing a programmable computer to predict the degree of weight loss attainable by a subject according to the methods described herein.

Description of the figures

Figure 1: Association between SNPs located nearby the *FAT4* gene and change in BMI during weight maintenance. The X axis shows the SNP's coordinate on chromosome 4 and the Y axis shows the $-\log_{10}$ p-value from an allelic test. This figure displays results from SNPs assayed on the genotyping array.

Figure 2: Association between SNPs located nearby the *FAT4* gene and change in BMI during weight maintenance. The X axis shows the SNP's coordinate on chromosome 4 and the Y axis shows the $-\log_{10}$ p-value from an allele dosage test. This figure displays results from SNPs either assayed on the genotyping array or whose genotype was obtained from imputation.

Figure 3: Sequence of rs953211 (SEQ ID NO:1), rs1509290 (SEQ ID NO:2) and rs1509289 (SEQ ID NO: 3). The polymorphic position is shown in square brackets, i.e., [A/G].

Figure 4: Genomic sequence of *FAT4* gene (SEQ ID NO: 4). The polymorphic positions rs953211, rs1509290 and rs1509289 are identified as bold bases within the underlined sequences.

Figures 5A, 5B and 5C: Sequences of three *FAT4* transcripts (SEQ ID NOs 5, 6 and 7)

Figure 6 A and 6B: Sequences of two *FAT4* protein sequences (SEQ ID NOs: 8 and 9).

Figure 7: SNPs located nearby the *FAT4* gene (± 10 Kb). Shown are ninety-two SNPs have a p-value smaller than 5%.

DETAILED DESCRIPTION OF THE INVENTION

Predicting weight loss and weight maintenance

The present invention provides a method for assessing the predisposition of a subject to weight loss attainable by applying one or more dietary interventions to a subject and/or the predisposition of a subject to maintenance of weight loss following one or more dietary interventions. The invention allows accurate prediction of weight trajectory of a patient, prior to a weight loss intervention and/or prior to a weight maintenance intervention.

The method may be used to make an informed prediction of the subject's capacity to lose weight and/or maintain weight loss, and select or adjust one or more dietary intervention accordingly.

For example, the present invention can be used for predicting the outcome of a weight management program, for adapting the weight management program and for stratifying patients following such a program into groups of successful or less successful profiles. For example, the method can be used to identify subjects with either a "high" or "low" likelihood of achieving weight loss by applying a dietary intervention. Similarly, the method can be used to identify subjects with either a "high" or "low" likelihood of maintaining weight loss following a dietary intervention.

Where the dietary intervention is a low calorie diet, the method could be used to aid in the appropriate diet for the subject or to adjust the daily calorie intake or duration of a particular diet and aid in setting realistic expectations for the subject.

In particular, the method provides a skilled person with a useful tool for assessing which subjects will most likely benefit from a particular dietary intervention, e.g. a low calorie diet. The present method therefore enables dietary interventions such as a low calorie diet and modifications in lifestyle to be optimised.

Weight loss as defined herein may refer to a reduction in parameters such as weight (e.g. in kilograms), body mass index (kgm^{-2}), waist-hip ratio (e.g. in centimetres), fat mass (e.g. in kilograms), hip circumference (e.g. in centimetres) or waist circumference (e.g. in centimetres).

Weight loss may be calculated by subtracting the value of one or more of the aforementioned parameters at the end of the dietary intervention from the value of said parameter at the onset of the dietary intervention.

The degree of weight loss may be expressed as a percentage change of one of the aforementioned weight phenotype parameters (e.g., a percentage change in a subject's body weight (e.g. in kilograms) or body mass index (kgm^{-2})). For example, a subject predisposed to lose weight following a dietary intervention may be likely to lose at least 10% of their initial body weight, at least 8% of their initial body weight, or at least 5% of their initial body weight. By way of example only, a subject may be likely to lose between 5 and 10 % of their initial body weight.

In one embodiment, a degree of weight loss of at least 10% of initial body weight results in a considerable decrease in risk for obesity related co-morbidities.

Weight maintenance as defined herein may refer to the maintenance in parameters such as weight (e.g. in kilograms), body mass index (kgm^{-2}), waist-hip ratio (e.g. in centimetres) fat mass (e.g. in kilograms), hip circumference (e.g. in centimetres) or waist circumference (e.g. in centimetres) following a dietary intervention

The degree of weight maintenance may be calculated by determining the change in one or more of the aforementioned parameters during a period of time following the end of the dietary intervention. The period of time may be for example at least 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48 or 52 weeks following the end of the dietary intervention.

The degree of weight maintenance may be expressed as the percentage of weight change during a period following the end of the dietary intervention. For example, a subject predisposed to weight maintenance may be likely to regain less than 50, 40, 30, 20, 10, 5% or 1% of the weight lost during the dietary intervention.

Biomarkers

The term “polymorphism” refers to two or more alternate forms (alleles) in a population of a genetic locus that differ in nucleotide sequence or have variable

numbers of repeated nucleotide units. Polymorphisms occur in coding regions (exons), non-coding regions of genes or outside of genes (intergenic regions).

An “allele” is a particular form of a gene, genetic marker or other genetic locus, that is distinguishable from other forms of the gene, genetic marker or other genetic locus.. The term allele includes, for example and without limitation, one form of a single nucleotide polymorphism (SNP). An individual can be homozygous for a certain allele in diploid cells; i.e. the allele on both paired chromosomes is identical; or heterozygous for said allele; i.e. the alleles on both paired chromosomes are not identical.

The term “gene” refers to a unit of DNA which performs one function. Usually, this is equated with the production of one RNA or one protein. A gene may contain coding regions, introns, untranslated regions and control regions.

As used herein, the phrase "genetic marker" refers to a feature of an individual's genome (e.g., a nucleotide or a polynucleotide sequence that is present in an individual's genome) that is associated with one or more loci of interest. Typically, a genetic marker is polymorphic and the variant forms of genetic markers include, for example, single nucleotide polymorphisms (SNPs), indels (i.e., insertions/deletions), simple sequence repeats (SSRs), restriction fragment length polymorphisms (RFLPs), random amplified polymorphic DNAs (RAPDs), cleaved amplified polymorphic sequence (CAPS) markers, Diversity Arrays Technology (DArT) markers, and amplified fragment length polymorphisms (AFLPs), Microsatellites or Simple sequence repeat (SSRs) among many other examples.

A “single nucleotide polymorphism (SNP)” is a DNA sequence variation occurring when a single nucleotide - A (for Adenine), T (for Thymine), C (for Cytosine), or G (for Guanine)- in the genome (or other sequence shared between individuals of a species) differs between individuals of a species (or between paired chromosomes in an individual).

A “genotype” as used herein refers to the combination of both alleles of a genetic marker, e.g. without limitation of a SNP, on a single genetic locus on paired (homologous) chromosomes in an individual.

The term "haplotype" refers to variants or alleles from distinct markers (e.g. SNPs) that are co-located on the same chromosome.

"linkage disequilibrium" (also called "allelic association") refers to a phenomenon wherein particular alleles at two or more loci tend to remain together in linkage groups when segregating from parents to offspring with a greater frequency than expected from their individual frequencies in a given population.

In one aspect the present invention provides a method for assessing the predisposition of a subject to weight loss attainable by applying one or more dietary interventions to a subject and/or the predisposition of a subject to maintenance of weight loss following one or more dietary interventions which method comprises determining the nucleotide of the subject at one or more polymorphic positions selected from:

- (i) position 101 of SEQ ID NO:1 (rs953211)
- (ii) position 101 of SEQ ID NO:2 (rs1509290)
- (iii) position 101 of SEQ ID NO:3 (rs1509289)

and/or detecting one or more biomarkers genetically linked to said polymorphic positions.

Preferably the method comprises determining the presence of A or G at position 101 of SEQ ID NO:1, and/or A or G at position 101 of SEQ ID NO:2, and/or A or G at position 101 of SEQ ID NO:3.

It should be noted that in this application, SNPs are referred to by, for example, reference to a position in SEQ ID NO:1 (e.g. position 101), SEQ ID NO:2 (e.g. position 101) or SEQ ID NO:3 (e.g. position 101). However, when such references are made, it will be understood that the invention is not to be limited to the exact sequence as set out in the SEQ ID NO but includes variants and derivatives thereof. Instead, identification of SNP locations in similar sequences are contemplated (i.e. SNPs at positions which the skilled person would consider correspond to the positions identified in the SEQ ID numbers). The person skilled in the art can readily align similar sequences and locate the same SNP locations.

It should further be noted that detection of the nucleotide in the complement strand to SEQ ID NO:1, 2 or 3 that base-pairs with the nucleotide at position 101 of SEQ ID NO:1, 2 or 3 is of course within the scope of the claimed invention.

In the context of the present invention, detecting the presence of a biomarker in a *FAT4* gene or regulatory element thereof comprises determining the identity of one or more nucleotides at a polymorphic site in a *FAT4* encoding gene or regulatory element thereof of the individual. Similarly, detecting the presence of a biomarker genetically linked to the polymorphic positions 101 of SEQ ID NO:1, position 101 of SEQ ID NO:2 and position 101 of SEQ ID NO:3 comprises determining the identity of one or more nucleotides at a polymorphic site genetically linked to said positions.

The polymorphic site will be one which has an association with weight loss attainable by applying one or more dietary interventions and/or maintenance of weight loss following one or more dietary interventions in a subject population. By this is meant that a particular nucleotide or nucleotide sequence at the polymorphic site is correlated with said weight loss and/or maintenance.

It will be apparent to the person skilled in the art that there are a large number of analytical procedures which may be used to detect the presence or absence of variant nucleotides at one or more polymorphic positions of the invention. In general, the detection of allelic variation requires a mutation discrimination technique, optionally an amplification reaction and optionally a signal generation system.

Detection of alleles

The nucleic acids obtained from the sample can be genotyped to identify the particular allele present for a marker locus. A sample of sufficient quantity to permit direct detection of marker alleles from the sample may be obtained.

Alternatively, a smaller sample is obtained from the subject and the nucleic acids are amplified prior to detection. Optionally, the nucleic acid sample is purified (or partially purified) prior to detection of the marker alleles.

Examples of allele detection methods are given below:

Allele Specific PCR

Allele-specific PCR differentiates between target regions differing in the presence of absence of a variation or polymorphism. PCR amplification primers are chosen based upon their complementarity to the target sequence, such as a sequence disclosed herein. The primers bind only to certain alleles of the target sequence.

Allele Specific Oligonucleotide Screening Methods

Further screening methods employ the allele-specific oligonucleotide (ASO) screening methods (e.g. see Saiki et al., Nature 324:163-166, 1986).

Oligonucleotides with one or more base pair mismatches are generated for any particular allele. ASO screening methods detect mismatches between one allele in the target genomic or PCR amplified DNA and the other allele, showing decreased binding of the oligonucleotide relative to the second allele (i.e. the other allele) oligonucleotide. Oligonucleotide probes can be designed that under low stringency will bind to both polymorphic forms of the allele, but which at high stringency, bind to the allele to which they correspond. Alternatively, stringency conditions can be devised in which an essentially binary response is obtained, i.e., an ASO corresponding to a variant form of the target gene will hybridize to that allele, and not to the wildtype allele.

Ligase Mediated Allele Detection Method

Ligase can also be used to detect point mutations, such as the SNPs in a ligation amplification reaction (e.g. as described in Wu et al., Genomics 4:560-569, 1989). The ligation amplification reaction (LAR) utilizes amplification of specific DNA sequence using sequential rounds of template dependent ligation (e.g. as described in Wu, supra, and Barany, Proc. Nat. Acad. Sci. 88:189-193, 1990).

Denaturing Gradient Gel Electrophoresis

Amplification products generated using the polymerase chain reaction can be analyzed by the use of denaturing gradient gel electrophoresis. Different alleles can be identified based on the different sequence-dependent melting properties and electrophoretic migration of DNA in solution. DNA molecules melt in segments, termed melting domains, under conditions of increased temperature or denaturation.

Each melting domain melts cooperatively at a distinct, base-specific melting temperature (T_m). Melting domains are at least 20 base pairs in length, and can be up to several hundred base pairs in length.

Differentiation between alleles based on sequence specific melting domain differences can be assessed using polyacrylamide gel electrophoresis, as described in Chapter 7 of Erlich, ed., PCR Technology, Principles and Applications for DNA Amplification, W. H. Freeman and Co., New York (1992).

Generally, a target region to be analyzed by denaturing gradient gel electrophoresis is amplified using PCR primers flanking the target region. The amplified PCR product is applied to a polyacrylamide gel with a linear denaturing gradient as described in Myers et al., Meth. Enzymol. 155:501-527, 1986, and Myers et al., in Genomic Analysis, A Practical Approach, K. Davies Ed. IRL Press Limited, Oxford, pp. 95-139, 1988. The electrophoresis system is maintained at a temperature slightly below the T_m of the melting domains of the target sequences.

In an alternative method of denaturing gradient gel electrophoresis, the target sequences can be initially attached to a stretch of GC nucleotides, termed a GC clamp, as described in Chapter 7 of Erlich, *supra*. In one example, at least 80% of the nucleotides in the GC clamp are either guanine or cytosine. In another example, the GC clamp is at least 30 bases long. This method is particularly suited to target sequences with high T_m 's.

Generally, the target region is amplified by the polymerase chain reaction as described above. One of the oligonucleotide PCR primers carries at its 5' end, the GC clamp region, at least 30 bases of the GC rich sequence, which is incorporated into the 5' end of the target region during amplification. The resulting amplified target region

is run on an electrophoresis gel under denaturing gradient conditions as described above. DNA fragments differing by a single base change will migrate through the gel to different positions, which can be visualized by ethidium bromide staining.

Temperature Gradient Gel Electrophoresis

Temperature gradient gel electrophoresis (TGGE) is based on the same underlying principles as denaturing gradient gel electrophoresis, except the denaturing gradient is produced by differences in temperature instead of differences in the concentration of a chemical denaturant. Standard TGGE utilizes an electrophoresis apparatus with a temperature gradient running along the electrophoresis path. As samples migrate through a gel with a uniform concentration of a chemical denaturant, they encounter increasing temperatures. An alternative method of TGGE, temporal temperature gradient gel electrophoresis (TTGE or tTGGE) uses a steadily increasing temperature of the entire electrophoresis gel to achieve the same result. As the samples migrate through the gel the temperature of the entire gel increases, leading the samples to encounter increasing temperature as they migrate through the gel. Preparation of samples, including PCR amplification with incorporation of a GC clamp, and visualization of products are the same as for denaturing gradient gel electrophoresis.

Single-Strand Conformation Polymorphism Analysis

Target sequences or alleles can be differentiated using single-strand conformation polymorphism analysis, which identifies base differences by alteration in electrophoretic migration of single stranded PCR products, for example as described in Orita et al., Proc. Nat. Acad. Sci. 85:2766-2770, 1989. Amplified PCR products can be generated as described above, and heated or otherwise denatured, to form single stranded amplification products. Single-stranded nucleic acids can refold or form secondary structures which are partially dependent on the base sequence. Thus, electrophoretic mobility of single-stranded amplification products can detect base-sequence difference between alleles or target sequences.

Chemical or Enzymatic Cleavage of Mismatches

Differences between target sequences can also be detected by differential chemical cleavage of mismatched base pairs, for example as described in Grompe et al., *Am. J. Hum. Genet.* 48:212-222, 1991. In another method, differences between target sequences can be detected by enzymatic cleavage of mismatched base pairs, as described in Nelson et al., *Nature Genetics* 4:11-18, 1993. Briefly, genetic material from an animal and an affected family member can be used to generate mismatch free heterohybrid DNA duplexes. As used herein, 'heterohybrid' means a DNA duplex strand comprising one strand of DNA from one animal, and a second DNA strand from another animal, usually an animal differing in the phenotype for the trait of interest.

Non-gel Systems

Other possible techniques include non-gel systems such as TaqManTM (Perkin Elmer). In this system oligonucleotide PCR primers are designed that flank the mutation in question and allow PCR amplification of the region. A third oligonucleotide probe is then designed to hybridize to the region containing the base subject to change between different alleles of the gene. This probe is labeled with fluorescent dyes at both the 5' and 3' ends. These dyes are chosen such that while in this proximity to each other the fluorescence of one of them is quenched by the other and cannot be detected. Extension by Taq DNA polymerase from the PCR primer positioned 5' on the template relative to the probe leads to the cleavage of the dye attached to the 5' end of the annealed probe through the 5' nuclease activity of the Taq DNA polymerase. This removes the quenching effect allowing detection of the fluorescence from the dye at the 3' end of the probe. The discrimination between different DNA sequences arises through the fact that if the hybridization of the probe to the template molecule is not complete, i.e. there is a mismatch of some form, the cleavage of the dye does not take place. Thus only if the nucleotide sequence of the oligonucleotide probe is completely complimentary to the template molecule to which it is bound will quenching be removed. A reaction mix can contain two different probe sequences each designed against different alleles that might be present thus allowing the detection of both alleles in one reaction.

Many current methods for the detection of allelic variation are reviewed by Nollau et al., Clin. Chem. 43, 1114-1120, 1997; and in standard textbooks, for example "Laboratory Protocols for Mutation Detection", Ed. by U. Landegren, Oxford University Press, 1996 and "PCR", 2nd Edition by Newton & Graham, BIOS Scientific Publishers Limited, 1997.

Sample

The test sample of nucleic acid is conveniently a sample of blood, mouth swab, biopsy, or other body fluid or tissue obtained from an individual. It will be appreciated that the test sample may equally be a nucleic acid sequence corresponding to the sequence in the test sample, that is to say that all or a part of the region in the sample nucleic acid may firstly be amplified using any convenient technique e.g. PCR, before analysis of allelic variation. The invention includes the detection of the polymorphism determined from a nucleic acid sample (which may be as defined above) that has already been removed from the individual.

Primers/Probes

According to one aspect of the present invention there is provided an allele-specific oligonucleotide primer or an allele-specific oligonucleotide probe capable of detecting a polymorphism (e.g., a SNP) in a *FAT4* gene (or its complementary strand) or a regulatory region thereof.

According to another aspect of the present invention there is provided an allele-specific oligonucleotide primer or an allele-specific oligonucleotide probe capable of detecting a polymorphic position selected from:

- (i) position 101 of SEQ ID NO:1;
- (ii) position 101 of SEQ ID NO:2; or
- (iii) position 101 of SEQ ID NO:3.

It should be noted that reference to an allele-specific oligonucleotide primer or an allele-specific oligonucleotide probe which is capable of detecting a polymorphic position selected from position 101 of SEQ ID NO:1, position 101 of SEQ ID NO:2

or position 101 of SEQ ID NO:3 includes an allele-specific oligonucleotide primer or an allele-specific oligonucleotide probe which is capable of detecting the complement of a polymorphism at position 101 of SEQ ID NO:1, position 101 of SEQ ID NO:2 or position 101 of SEQ ID NO:3, respectively.

The allele-specific primers of the present invention are used, generally together with a constant primer, in an amplification reaction such as a PCR reaction, which provides the discrimination between alleles through selective amplification of one allele at a particular sequence position e.g. as used for ARMS(TM) assays. The allele-specific primers of the present invention are preferably 15-50 nucleotides, more preferably about 15-35 nucleotides, still more preferably about 17-30 nucleotides.

An allele-specific primer capable of detecting a polymorphism at position 101 of SEQ ID NO:1 may discriminate, in an amplification reaction such as a PCR reaction, between a sequence comprising base A at position 101 of SEQ ID NO:1 (or a sequence complementary to such a gene or fragment), and a sequence comprising base G at position 101 of SEQ ID NO:1 (or a sequence or fragment complementary to such a gene or fragment).

An allele-specific primer capable of detecting a polymorphism at position 101 of SEQ ID NO:2 may discriminate, in an amplification reaction such as a PCR reaction, between a sequence comprising base A at position 101 of SEQ ID NO:2 (or a sequence complementary to such a gene or fragment), and a sequence comprising base G at position 101 of SEQ ID NO:2 (or a sequence or fragment complementary to such a gene or fragment).

Similarly, an allele-specific primer capable of detecting a polymorphism at position 101 of SEQ ID NO:3 may discriminate, in an amplification reaction such as a PCR reaction, between a sequence comprising base A at position 101 of SEQ ID NO:3 (or a sequence complementary to such a gene or fragment), and a sequence comprising base G at position 101 of SEQ ID NO:3 (or a sequence or fragment complementary to such a gene or fragment).

Primers may be manufactured using any convenient method of synthesis. Examples of such methods may be found in standard textbooks, for example "Protocols for

Oligonucleotides and Analogues; Synthesis and Properties," Methods in Molecular Biology Series; Volume 20; Ed. Sudhir Agrawal, Humana ISBN: 0-89603-247-7; 1993; 1st Edition. If required the primer(s) may be labelled to facilitate detection.

The design of probes will be apparent to the molecular biologist of ordinary skill. Such probes are of any convenient length such as, for example, up to 100 bases, up to 50 bases, up to 40 bases and up to 30 bases in length. For example, the probes may be 10 to 30 bases, preferably 18-30 bases in length. The probes may comprise base sequences entirely complementary to the target sequence. However, if required one or more mismatches may be introduced, provided that the discriminatory power of the oligonucleotide probe is not unduly affected. The probes of the invention may carry one or more labels to facilitate detection.

An allele-specific probe capable of detecting a polymorphism at position 101 of SEQ ID NO:1 may discriminate, in a hybridisation reaction, between a sequence comprising base A at position 101 of SEQ ID NO:1 (or a sequence complementary to such a gene or fragment), and sequence comprising base G at position 101 of SEQ ID NO:1 (or a sequence or fragment complementary to such a gene or fragment).

An allele-specific probe capable of detecting a polymorphism at position 101 of SEQ ID NO:2 may discriminate, in a hybridisation reaction, between a sequence comprising base A at position 101 of SEQ ID NO:2 (or a sequence complementary to such a gene or fragment), and sequence comprising base G at position 101 of SEQ ID NO:2 (or a sequence or fragment complementary to such a gene or fragment).

An allele-specific probe capable of detecting a polymorphism at position 101 of SEQ ID NO:3 may discriminate, in a hybridisation reaction, between a sequence comprising base A at position 101 of SEQ ID NO:3 (or a sequence complementary to such a gene or fragment), and sequence comprising base G at position 101 of SEQ ID NO:3 (or a sequence or fragment complementary to such a gene or fragment).

The primers and/or probes of the present invention will typically be in the form of nucleic acids (e.g. DNA or cDNA). Alternatively, the primers and/or probes may be in the form of nucleic acid analogues, for example PNA (Peptide Nucleic Acids), LNA (Locked Nucleic Acids) or BNA (Bridged Nucleic Acids). The primers or probes may be nucleic acids which have been substituted in part by LNA or PNA.

Primer Design Strategy

Increased use of polymerase chain reaction (PCR) methods has stimulated the development of many programs to aid in the design or selection of oligonucleotides used as primers for PCR. Four examples of such programs that are freely available via the Internet are: PRIMER by Mark Daly and Steve Lincoln of the Whitehead Institute (UNIX, VMS, DOS, and Macintosh), Oligonucleotide Selection Program (OSP) by Phil Green and LaDeana Hiller of Washington University in St. Louis (UNIX, VMS, DOS, and Macintosh), PGEN by Yoshi (DOS only), and Amplify by Bill Engels of the University of Wisconsin (Macintosh only).

Generally these programs help in the design of PCR primers by searching for bits of known repeated-sequence elements and then optimizing the T_m by analyzing the length and GC content of a putative primer. Commercial software is also available 35 and primer selection procedures are rapidly being included in most general sequence analysis packages.

Designing oligonucleotides for use primers requires selection of an appropriate sequence that specifically recognizes the target, and then testing the sequence to eliminate the possibility that the oligonucleotide will have a stable secondary structure. Inverted repeats in the sequence can be identified using a repeat-identification or RNA-folding programs.

If a possible stem structure is observed, the sequence of the primer can be shifted a few nucleotides in either direction to minimize the predicted secondary structure.

For PCR primers used to amplify genomic DNA, the primer sequence should be compared to the sequences in the GenBank database to determine if any significant matches occur. If the oligonucleotide sequence is present in any known DNA sequence or, more importantly, in any known repetitive elements, the primer sequence should be changed.

Kits

According to another aspect of the present invention there is provided a diagnostic kit comprising an allele-specific oligonucleotide probe of the invention and/or an allele-specific primer of the invention.

In one embodiment the diagnostic kit comprises (i) an allele-specific oligonucleotide primer and/or an allele-specific oligonucleotide probe capable of detecting the presence of G at position 101 of SEQ ID NO:1 and (ii) an allele-specific oligonucleotide primer and/or an allele-specific oligonucleotide probe capable of detecting the presence of A at position 101 of SEQ ID NO:2.

In one embodiment the diagnostic kit comprises (i) an allele-specific oligonucleotide primer capable of detecting the presence of G at position 101 of SEQ ID NO:1 and (ii) an allele-specific oligonucleotide primer capable of detecting the presence of A at position 101 of SEQ ID NO:2.

In one embodiment the diagnostic kit comprises (i) an allele-specific oligonucleotide probe capable of detecting the presence of G at position 101 of SEQ ID NO:1 and (ii) an allele-specific oligonucleotide probe capable of detecting the presence of A at position 101 of SEQ ID NO:2.

The diagnostic kits may comprise appropriate packaging and instructions for use in the methods of the invention. Such kits may further comprise appropriate buffer(s) and polymerase(s) such as thermostable polymerases, for example taq polymerase.

***FAT4* gene**

Protocadherin Fat 4, also known as cadherin family member 14 (CDHF14) or FAT tumor suppressor homolog 4 (FAT4), is a protein that in humans is encoded by the *FAT4* gene. FAT4 is associated with the Hippo signaling pathway. The Hippo pathway has emerged as a conserved signaling pathway that is essential for the proper regulation of organ growth in *Drosophila* and vertebrates (Halder, 2011, Development, Jan;138(1):9-22).

The *FAT4* gene referred to herein may contain coding regions, introns, untranslated regions and control regions.

Figure 4 shows the genomic sequence of *FAT4* gene (SEQ ID NO: 4).

Figures 5A, 5B and 5C show examples of three *FAT4* transcripts (SEQ ID NOs 5, 6 and 7)

Figure 6 A and 6B show examples of two protein sequences (SEQ ID NOs: 8 and 9) translated from the *FAT4* gene.

It has recently been shown that *Drosophila* Fat (Ft) cadherin has a direct role in regulating mitochondrial morphology and metabolism (Sing et al., 2014, Cell, 158, 1293-1308). It was shown that proteolytic cleavage of Ft releases a soluble fragment (Ft^{mito}) that is imported into the mitochondria and that such cleavage functions as a switch mechanism to coordinate cell cycle and metabolism. It was suggested that altering the levels of Ft^{mito} may allow an organism to directly adjust metabolic rates in accordance with changing energy requirements.

It will be understood that reference to *FAT4* is not limited to the exact sequences disclosed above but includes variants and derivatives thereof. Identification of polymorphisms e.g., SNPs in similar sequences are contemplated (i.e. SNPs at positions which the skilled person would consider correspond to the positions identified herein).

Subject

Preferably the subject is a mammal, preferably a human. The subject may alternatively be a non-human mammal, including for example, a horse, cow, sheep or pig. In one embodiment, the subject is a companion animal such as a dog or a cat.

Dietary Intervention

By the term “dietary intervention” is meant an external factor applied to a subject which causes a change in the subject’s diet. In one embodiment, the dietary intervention is a low calorie diet.

The low calorie diet is one which is adjusted to the starting body weight of the animal.

Preferably the low calorie diet comprises a calorie intake of about 600 to about 1500 kcal/day, more preferably about 600 to about 1200 kcal/day, most preferably about

800 kcal/day. In one embodiment, the low calorie diet may comprise a predetermined amount (in grams) of vegetables per day. Preferably up to about 400g vegetables/day, e.g. about 200g vegetables/day.

The low calorie diet may comprise administration of at least one diet product. The diet product may be a meal replacement product or a supplement product which may e.g. suppress the subject's appetite. The diet product can include food products, drinks, pet food products, food supplements, nutraceuticals, food additives or nutritional formulas.

In one embodiment, the diet may comprise a product such as Optifast® or Modifast®. This may be supplemented with three portions of non-starchy vegetables such that the total energy intake is about 2.5 MJ (600 kcal/day). This may be further supplemented with at least 2 L of water or other energy free beverages per day.

In another embodiment, the diet may comprise, for example, a composition which is 46.4% carbohydrate, 32.5% protein and 20.1% with fat, vitamins, minerals and trace elements; 2.1MJ per day (510 kcal/day); This may be supplemented with three portions of non-starchy vegetables such that the total energy intake is about 2.5 MJ (600 kcal/day). This may be further supplemented with at least 2 L of water or other energy free beverages per day.

In one embodiment, the low calorie diet has a duration of up to 12 weeks. Preferably the low calorie diet has a duration of between 6 and 12 weeks, preferably between 8 and 10 weeks, e.g. 8 weeks.

Combining the genotyping with anthropometric measures and/or lifestyle characteristics

In one embodiment, the present method further comprises combining the determination of the genotype as referred to herein (e.g., determining the presence of a polymorphic marker e.g., SNP/ determining the sequence of the *FAT4* gene or a regulatory element thereof) with one or more anthropometric measures and/or lifestyle characteristics of the subject.

As is known in the art, an anthropometric measure is a measurement of a subject. In one embodiment, the anthropometric measure is selected from the group consisting of gender, age (in years), weight (in kilograms), height (in centimetres), and body mass index (in kg/m^2). Other anthropometric measures will also be known to the skilled person in the art.

By the term “lifestyle characteristic” is meant any lifestyle choice made by a subject, this includes all dietary intake data, activity measures or data from questionnaires of lifestyle, motivation or preferences. In one embodiment, the lifestyle characteristic is whether the subject is a smoker or a non-smoker. This is also referred to herein as the smoking status of the subject.

Subject stratification

The predisposition to weight loss and/or weight maintenance predicted by the method of the present invention may be used to stratify subjects into categories.

Subjects may be stratified into categories which are indicative of the degree of predicted weight loss/maintenance. Such stratification is useful to determine which subjects would benefit most from certain interventions. In this way, dietary intervention and modification of lifestyle can be optimised, and realistic expectations of the weight loss to be achieved by the subject can be set.

In one embodiment, the categories include weight loss resistant subjects and weight loss sensitive subjects.

By the term “weight loss resistant” is meant a predicted degree of weight loss which is less than a predetermined value. In one embodiment, “weight loss resistant” is defined as a subject having a weight loss percentage inferior to a predetermined value e.g. a subject predicted to lose less weight than the 10th, 15th, 20th or 30th percentile of the expected weight loss.

By the term “weight loss sensitive” is meant a predicted degree of weight loss of more than a predetermined value. In one embodiment, “weight loss sensitive” is defined as a subject having a weight loss percentage superior to a predetermined threshold value.

For example a subject predicted to lose more weight than the 85th, 80th or 75th percentile of the expected weight loss.

The “expected weight loss” can be obtained from data of a population of subjects that have undergone the same dietary intervention as the one being tested.

In another embodiment, the categories include weight maintenance resistant subjects and weight maintenance sensitive subjects.

By the term “weight maintenance resistant” is meant a predicted degree of weight maintenance which is less than a predetermined value. In one embodiment, “weight maintenance resistant” is defined as a subject having a degree of weight maintenance inferior to a predetermined threshold value e.g. a subject predicted to maintain a lesser degree of the weight loss following a dietary intervention than the 10th, 15th, 20th or 30th percentile of the subject population.

By the term “weight maintenance sensitive” is meant a predicted degree of weight maintenance which is more than a predetermined value. In one embodiment, “weight maintenance sensitive” is defined as a subject having a degree of weight maintenance superior to a predetermined threshold value. e.g. a subject predicted to maintain a greater degree of the weight loss following a dietary intervention than the 10th, 15th, 20th or 30th percentile of the subject population.

The subject population can be obtained from data of a population of subjects that have undergone the same dietary intervention as the one being tested.

Method for selecting a modification of lifestyle of a subject

In a further aspect, the present invention provides a method for modifying the lifestyle of a subject. The modification in lifestyle in the subject may be any change as described herein, e.g. a change in diet, more exercise, a different working and/or living environment etc.

Preferably the modification is a dietary intervention as described herein. More preferably the dietary intervention includes the administration of at least one diet product. The diet product preferably has not previously been consumed or was consumed in different amounts by the subject. The diet product may be as described

herein. Modifying a lifestyle of the subject also includes indicating a need for the subject to change his/her lifestyle, e.g. prescribing more exercise or stopping smoking.

For example, if a subject is not predicted to lose weight on a low calorie diet, a modification may include more exercise in the subject's lifestyle.

Use of Diet Products

In one aspect, the present invention provides a diet product for use as part of a low calorie diet for weight loss. The diet product being administered to a subject that is predicted to achieve a weight loss by the methods described herein.

In another aspect, the present invention provides a diet product for use in treating obesity or an obesity-related disorder, wherein the diet product is administered to a subject that is predicted to attain weight loss by the methods described herein.

The obesity-related disorder may be selected from the group consisting of diabetes (e.g. type 2 diabetes), stroke, high cholesterol, cardiovascular disease, insulin resistance, coronary heart disease, metabolic syndrome, hypertension and fatty liver. In a further aspect, the present invention provides the use of a diet product in a low calorie diet for weight loss where the diet product is administered to a subject that is predicted to attain weight loss by the methods described herein.

Computer Program Product

The methods described herein may be implemented as a computer program running on general purpose hardware, such as one or more computer processors. In some embodiments, the functionality described herein may be implemented by a device such as a smartphone, a tablet terminal or a personal computer.

In one aspect, the present invention provides a computer program product comprising computer implementable instructions for causing a programmable computer to predict the degree of weight loss/maintenance based on the genotyping of the present invention and optionally anthropometric measures and/or lifestyle characteristics from the user. As described herein, anthropometric measures include age, weight, height, gender and body mass index and lifestyle characteristics include smoking status.

In a particularly preferred embodiment, the user inputs into the device the results of the genotyping of the present invention, optionally along with age, body mass index, gender and smoking status. The device then processes this information and provides a prediction on the degree of weight loss/maintenance attainable by the user from a dietary intervention.

The device may generally be a server on a network. However, any device may be used as long as it can process biomarker data and/or anthropometric and lifestyle data using a processor, a central processing unit (CPU) or the like. The device may, for example, be a smartphone, a tablet terminal or a personal computer and output information indicating the degree of weight loss attainable by the user.

Those skilled in the art will understand that they can freely combine all features of the present invention described herein, without departing from the scope of the invention as disclosed.

Various preferred features and embodiments of the present invention will now be described by way of non-limiting examples.

The practice of the present invention will employ, unless otherwise indicated, conventional techniques of chemistry, molecular biology, microbiology, recombinant DNA and immunology, which are within the capabilities of a person of ordinary skill in the art. Such techniques are explained in the literature. See, for example, J. Sambrook, E. F. Fritsch, and T. Maniatis, 1989, *Molecular Cloning: A Laboratory Manual*, Second Edition, Books 1-3, Cold Spring Harbor Laboratory Press; Ausubel, F. M. et al. (1995 and periodic supplements; *Current Protocols in Molecular Biology*, ch. 9, 13, and 16, John Wiley & Sons, New York, N.Y.); B. Roe, J. Crabtree, and A. Kahn, 1996, *DNA Isolation and Sequencing: Essential Techniques*, John Wiley & Sons; J. M. Polak and James O'D. McGee, 1990, *In Situ Hybridization: Principles and Practice*; Oxford University Press; M. J. Gait (Editor), 1984, *Oligonucleotide Synthesis: A Practical Approach*, Irl Press; D. M. J. Lilley and J. E. Dahlberg, 1992, *Methods of Enzymology: DNA Structure Part A: Synthesis and Physical Analysis of DNA* Methods in Enzymology, Academic Press; and E. M. Shevach and W. Strober,

1992 and periodic supplements, *Current Protocols in Immunology*, John Wiley & Sons, New York, NY. Each of these general texts is herein incorporated by reference.

EXAMPLES

Background information

Diogenes (Diet Genes and Obesity) is an intervention study in overweight/obese patients (with BMI between 27 and 45 kg/m²) (Larsen, T. M. *et al. N. Engl. J. Med.* **363**, 2102–2113 (2010)). To our knowledge, Diogenes is the largest and most comprehensive study on weight management.

Patients followed a low-caloric diet (about 800kcal/d) for 8 weeks. Then participants that had lost at least 8% of their initial body weight, were randomly assigned, in a two-by-two factorial design, to one of five ad libitum diets to prevent weight regain over a 26-week period: a low-protein and low-glycemic-index diet, a low-protein and high-glycemic-index diet, a high-protein and low-glycemic-index diet, a high-protein and high-glycemic-index diet, or a control diet.

The aim of our analyses was to analyze whether genetic markers (SNPs) would be classifiers of weight loss and weight maintenance.

Example 1 – Material and methods

Study design

Diogenes (ClinicalTrials.gov identifier: NCT00390637) is composed of two main periods:

- Weight loss period with a low-caloric diet (800kcal/d) for 8 weeks
- Weight maintenance diet for 26 weeks

A number of clinical measurements and biological samples were taken at different time points. Four time points are of notable interest for the present invention:

1. Screening visit
2. Clinical Intervention Day 1 (CID1): start of the weight loss period

3. CID2: end of the weight loss period, randomization into one weight maintenance diet and start of the weight maintenance period
4. CID3: end of the weight maintenance period

Genotype data

The Illumina 660-quadrant Bead chips were used to perform the Whole Genome Scan (Hypothesis-free approach). The Illumina technology is based on a DNA chip allowing the genotyping of approximately 660'000 single nucleotide polymorphisms (SNPs) per subject. SNPs are distributed over all the chromosomes and are used as tagging markers of the corresponding genomic area. The details of the process and experimental protocol followed the manufacturer recommendations (www.illumina.com).

Quality control of the genotype data

SNPs were excluded from the analysis, if they fulfilled at least one of the following:

- Low call rate (<95%)
- Violating Hardy-Weinberg equilibrium (FDR < 20%)
- Minor allele frequency < 0.28%

Subjects were excluded from the analysis, if they fulfilled at least one of the following:

- Low call rate (<95%)
- Abnormal autosomal heterozygosity (FDR<1%)
- For pairs of subjects with Identity-By-State >0.95, the subject with the lowest call rate was excluded.
- Individuals that were outliers in terms of genetic structure: 6 standard deviation distant from the Diogenes cluster's centroid, based on a principal component analysis (2 first components) performed on genotypes from Diogenes and the Hapmap project (with CEU, YRI and CHB+JPT panels)
- Individuals having gender discrepancies between records from the clinical database and inferred gender from genotype data

The final genotype dataset, after QC, included 516'636 SNPs and 869 subjects.

About genomic coordinates

All genomic coordinates (SNPs, genes) used in this document correspond to the Human genome assembly hg19.

Genome-wide association tests

Genome-wide scan was performed using the following linear model:

$$BMI3 \sim BMI2 + SNP + center + gender + age + \varepsilon$$

In this model, BMI2 and BMI3 refer to Body Mass Index (BMI) measured respectively before and after the weight maintenance period (i.e. CID2 and CID3). Center refers to one the Diogenes center. Age refers to the subject's age measured at the screening visit. ε corresponds to the model's residuals term.

Association was tested independently for each SNP using the *GenABEL qtscore* function (Aulchenko et al., *Genetics* **177**, 577–585 (2007)). The method first regresses on the trait of interest for co-variables then test association between the obtained residuals and a SNP using least-square methods. This function implements both allelic and genotypic tests. Since allelic tests are more powerful than genotypic tests, only allelic tests were considered for data interpretation.

The initial number of subjects (n=869) becomes much smaller when removing subjects with missing values either for BMI or any covariate of the regression tests (including the SNP being modelled). The average number of subjects, without any missing values, that was used for each of the 516'636 models was n=461.

TagSNP identification

We used the *LD select* methodology proposed by Carlson (Carlson *et al.*, *Am. J. Hum. Genet.* **74**, 106–120 (2004)). Tag SNP analysis was performed with the following settings: MAF threshold 10% and R-square threshold 50%.

Haplotype phasing

Genotype data were phased using the *MACH* software (Li, et al., *Genet. Epidemiol.* **34**, 816–834 (2010)) with the following parameters: --rounds 50 --states 200 --phase.

Haplotype association tests

Subsequently to the phasing with *MACH*, association between change in BMI during weight maintenance and all haplotype blocks was tested using the following model:

$$BMI_3 \sim BMI_2 + center + gender + age + AAC + AAT + AGC + GAC + GAT + GGC + \varepsilon$$

Center refers to one the Diogenes center. Age refers to the subject's age measured at the screening visit. ε corresponds to the model's residuals term.

Both additive (number of haplotypes: 0, 1 or 2) and dominant (absence/presence) genetic models were tested. Backward selection was then performed on the fitted model (*stepAIC* function in R (R Development Core Team (2013). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. ISBN 3-900051-07-0, URL <http://www.R-project.org>)).

Additional linear models

Change in a given trait over a period of interest (weight maintenance or weight loss period) was tested using linear models.

These models were used to test either single-SNP or epistatic effect (interaction between two SNPs) with several weight-related phenotypes.

Those models can be written in the Wilkinson-Roger notation as follows:

$$Trait_at_time(i) \sim Trait_at_time(i-1) + genetic\ effect + center + gender + age + \varepsilon$$

The trait can be any quantitative trait like BMI; waist or hip circumferences; fat-free mass or fat mass weight. The time points (i-1) and (i) refer to before and after a given

period (e.g. weight maintenance or weight loss period). Such modeling allows predicting the trait at time (i) while adjusting for baseline values at time (i-1).

Center refers to one the Diogenes center. Age refers to the subject's age measured at the screening visit. ε corresponds to the model's residuals term.

The genetic effect can be either a single SNP or the interaction between two SNPs (SNP1 and SNP2). For single-SNP effect, genotypic models were used. When testing SNP interaction, SNP1 and SNP2, were each coded for presence/absence of a given allele. The ε term corresponds to residuals of the model.

Significance of each term in the model was tested using a type III ANOVA (Fox & Weisberg, *An R Companion to Applied Regression*. (Sage, 2011). at <http://socserv.socsci.mcmaster.ca/jfox/Books/Companion>).

Dichotomizing changes in BMI over time

A recurrent challenge in weight maintenance studies is to define a threshold that allows classifying patients into groups of good and bad weight maintainers. Frequently such classification is made with the two most extreme groups of patients (for e.g. patients that have a response below the 10th percentile or above the 90th percentiles). Yet the decision on which percentile to use is an entirely arbitrary one. One cannot exclude the risk (prior doing the analyses) that different conclusions might be reached depending on the chosen cutoff. Instead of making such an arbitrary decision, we decided to use several cutoffs as explained below.

First, we expressed change in BMI during weight maintenance as:

$$\Delta = 100 * \frac{BMI_2 - BMI_3}{BMI_2}$$

where BMI2 and BMI3 stands for BMI before and after the weight maintenance period (i.e. CID2 and CID3). This difference (Δ) corresponds to the percentage of BMI change during weight maintenance relative to the baseline BMI (BMI before weight maintenance).

Interpretation of Δ is as follows:

- $\Delta < 0$ implies that $BMI_2 < BMI_3$, therefore the patient regained weight (i.e. bad weight maintenance profile)
- $\Delta > 0$ implies that $BMI_2 > BMI_3$, therefore the patient continued to lose weight (i.e. good weight maintenance profile)

Next, we computed dichotomized Δ into groups of “good” and “bad” weight maintainer profiles. Such dichotomization was made by selecting the patients with the most extreme Δ values. This is achieved by selecting Δ above or below a given percentile. For example, using the 10th and 90th percentiles, we defined the following groups:

- “Bad weight maintainers” as patients with a Δ below the 10th percentile
- “Good weight maintainers” as patients with a Δ above the 90th percentile

In this example, subjects with Δ between the 10th and 90th percentiles are not included in the analysis. These subjects can be referred to as those with “an intermediate profile” and for which one cannot decide whether they should be classified to one group or another.

To avoid bias due to the choice of an arbitrary percentile threshold, we analyzed data from several classification schemes:

- Patients with Δ below the 10th percentile or above the 90th percentile
- Patients with Δ below the 25th percentile or above the 75th percentile
- Patients with Δ below the 33rd percentile or above the 66th percentile
- Patients with Δ below the 50th percentile or above the 50th percentile

It can be noted that the first three schemes discard patients with intermediate profiles (e.g. Δ between the 10th and 90th percentiles) and thus only use a subset of the data, while the last scheme classifies all patients into two distinct groups. Therefore classification using the first three schemes can be challenged by the fact only a limited subset of the data is used. In contrast, the fourth scheme uses all available data but the two groups would each have high heterogeneity and since patients with “intermediate profiles” are not discarded, the distinction between those two groups might not be

clear. Therefore this last classification scheme is expected to be the most complex case.

Similar dichotomization was applied on BMI during the weight loss period, using the following formula:

$$\Delta = 100 * \frac{BMI_1 - BMI_2}{BMI_1}$$

In this formula, BMI₁ and BMI₂ correspond respectively to before and after the weight loss period (i.e. CID1 and CID2).

Classification analysis

Following dichotomization of the BMI into groups of “bad” and “good” weight maintainers, we assessed the classification performance with simple contingency tables like:

	Bad weight maintainers	Poor weight maintainers
Protective genotypes	a	b
Non-protective genotypes	c	d

Where a, b, c and d correspond to the number of patients from a given category.

From such table, one can compute the accuracy of classification:

$$ACC = 100 * \frac{a + d}{a + b + c + d}$$

Ninety-five confidence intervals (95% CI) for the classification accuracy are then derived with a binomial test (*binom.test* function in R (R Development Core Team (2013). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. ISBN 3-900051-07-0, URL <http://www.R-project.org>)). A one-sided binomial test is also performed to test whether the classification accuracy is better than the "no information rate," which is taken to be the largest class percentage in the data (see the *confusionMatrix* function in the caret package (Kuhn J. *Stat. Softw.* 28, 1–26 (2008))).

By non-protective genotypes, we aim at identifying subjects with a low Δ (patients regaining weight). Conversely, with protective genotypes, we aim at identifying subjects with high Δ (patients regaining less weight, or even still losing weight).

Protective and non-protective genotypes were defined as follows:

SNP(s)	Protective genotype	Non-protective genotype
rs1509289	A carriers	G/G
rs1509290	A carriers	G/G
rs953211	G carriers	A/A
rs953211 and rs1509290	rs953211 G carriers ; rs1509290 A carriers	Any other genotypes

The same methodology was applied on BMI changes during a weight loss period.

Analysis of imputed SNPs

Genotype from additional SNPs located nearby FAT4 were obtained using imputation. Imputation was performed using the *MACH* software (Li et al., *Genet. Epidemiol.* **34**, 816–834 (2010)) and using subjects of European ancestry from the 1000 Genome Project (Consortium, T. 1000 G. P. *Nature* 491, 56–65 (2012)) (phase II) as a reference data. Imputation was performed following recommended steps from the MACH software. Analysis of allele dosage value was performed using ProbABEL (Aulchenko, et al., *BMC Bioinformatics* 11, 134 (2010)) and using the following model:

$$BMI3 \sim BMI2 + center + gender + age + SNP + \varepsilon$$

BMI3 and BMI2 refer to BMI measured respectively at CID3 and CID2. Center refers to one the Diogenes center. Age refers to the subject's age measured at the screening visit. ε corresponds to the model's residuals term. The SNP term corresponds to the imputed allele dosage values.

Example 2 – Detailed Results

GWA scan for weight maintenance

From the genome-wide analysis, SNPs located on chromosome 4 were found significantly associated with BMI trajectories during the weight maintenance period. In particular, the two following SNPs: rs953211 and rs1509289 (Table 1), both intronic variants in the *FAT4* gene, emerged within the genome-wide list as top ranking SNPs. Since these two SNPs are only in moderate linkage disequilibrium (LD) ($R^2=50.61\%$) and given that there were other nearby SNPs with association pvalues less than 5% (Figure 1), we searched whether the observed association could be due to a haplotype.

Haplotype tests for weight maintenance

To restrict the list of SNPs to be used for haplotype phasing, a tagSNP search was performed. This search identified the following three SNPs: rs953211, rs1509290 and rs13136889 as best tag SNPs for other SNPs found marginally associated with BMI during weight maintenance (pvalues < 5%, see Figure 1). Six distinct haplotypes can be defined using these three SNPs: AAT, GAC, GGC, AAC, GAT and AGC (The order of SNPs in each haplotype is rs953211, rs1509290 and rs13136889).

Next, these haplotypes were tested for association with change in BMI during the weight maintenance. Both dominant and additive genetic models were considered. Results are shown in Table 2-5. These analyses identified presence of the GAC and GAT haplotypes as significantly associated with a more favourable BMI after the weight maintenance intervention. In particular, patients carrying at least one copy of either haplotypes are less prone to regain weight compared to patients not carrying any of these haplotypes. These results were reproduced using univariate approaches (ranksum tests) and with the *Plink* software (Purcell, S. *et al.* PLINK: a tool set for whole-genome association and population-based linkage analyses. *Am. J. Hum. Genet.* **81**, 559–575 (2007)).

Since favourable weight maintenance is observed with both the GAC and GAT haplotypes, the third SNP does not seem to contribute much and therefore the

protective haplotype can be simplified as rs953211-G and rs1509290-A. Conversely, this result also implies the rs953211-A and rs1509290-G haplotype as a deleterious haplotype.

Epistasy tests for weight maintenance

In the light of the haplotype results, we defined the following genotype groups:

- rs953211-G carriers and rs1509290-A carriers
- rs953211-G carriers and rs1509290- G/G
- rs953211-A/A and rs1509290- A carriers
- rs953211-A/A and rs1509290- G/G

The interaction between rs953211 and rs1509290, as defined with the above groups, was found significantly associated with change in BMI during weight maintenance ($p = 7.96E-05$, for details about the methodology see Additional linear models). Full results from the linear model and from the subsequent ANOVA are shown respectively in Table 6 and Table 7. These results show that rs953211-G carriers and rs1509290-A carriers have significantly better BMI profiles than the three remaining genotype groups.

To facilitate genetic diagnostic, the four genotype groups can be simplified as “rs953211-G carriers and rs1509290-A carriers” and subjects from the three remaining group pooled together. Such genetic dichotomization is also significantly associated with the BMI trajectories during the weight maintenance period. Results from the linear model are shown in Table 8. This table also includes the 95% confidence intervals (CI) on the regression coefficient for each term of the model. These 95% CI were obtained by performing bootstrap (Davison. & Hinkley *Bootstrap Methods and Their Applications*. (Cambridge University Press, 1997). at <http://statwww.epfl.ch/davison/BMA>) of the linear model (with $n=1'000$ re-sampling and using the *boot* package (Canty, A. & Ripley, B. D. *boot: Bootstrap R (S-Plus) Functions*. (2014)) in R). Interpretation of these coefficients is as follows: when adjusting for covariates such as age, gender, participating center and BMI before weight maintenance; the effect of being “rs953211-G carriers and rs1509290-A carriers” is -0.76 kg/m^2 on the BMI after weight maintenance. In other words, the

effect on BMI after a weight maintenance period is -0.76 kg/m^2 (with 95% CI = $[-1.1, -0.43]$) for subjects that are “rs953211-G carriers and rs1509290-A carriers” compared to subjects from any other genotype combination.

An even simpler way to look at these results is to only consider the change in BMI, before and after weight maintenance and without adjusting for covariates (age, gender, etc...). Without any genetic stratification (i.e. not knowing the genotype of a subject), the median change in BMI is $+0.38 \text{ kg/m}^2$ (Table 9). This means that subjects tend regain weight. When the genotype is available for rs953211 and rs1509290; subjects from these three genotype groups: “rs953211 A/A ; rs1509290 A carriers” ; “rs953211 A/A ; rs1509290 G/G” and “rs953211 G carriers ; rs1509290 G/G” all regain weight (median BMI changes are respectively $+0.57$, $+0.63$ and $+0.68 \text{ kg/m}^2$). By contrast, subjects that are “rs953211 G carriers ; rs1509290 A carriers”, do not tend to regain weight (median BMI change = 0).

Therefore this combination of these two genetic markers:

- Identifies a group of patients (“rs953211 G carriers ; rs1509290 A carriers”) that has better weight maintenance than the three others groups
- Demonstrates that knowing the genotype of these two markers brings additional information compared to not knowing the genotype. The BMI change for each of the four genotype groups is different from the average BMI change of the global population.

Epistasy tests for weight loss

The same combination of SNPs was found associated with BMI changes during the weight loss period ($p=0.0243$, for details about the methodology see Additional linear models). Results from the linear model and its subsequent ANOVA are shown respectively in Table 10 and Table 11.

As done for the weight maintenance analyses, the combination of these two SNPs was dichotomized into “rs953211-G carriers and rs1509290-A carriers” and all remaining subjects pooled together. Results from a linear model modeling BMI changes during the weight loss period are shown in Table 12. This table shows that subjects

“rs953211 G carriers ; rs1509290 A carriers” have a stronger weight loss (BMI change = -0.20 kg/m² with 95% CI [-0.34, -0.06]) compared to subjects with other genotype combinations.

Computing the median change in BMI before and after the weight loss period, one can observe that “rs953211 G carriers ; rs1509290 A carriers” lose more weight (median BMI change = -3.69 kg/m²) than the other genetic groups (see Table 13).

Epistasy tests for baseline BMI

No difference in BMI at baseline (CID1) was found between the different genotype groups, as defined by rs953211 and rs1509290 (ranksum p=0.93). This indicates that this combination of markers is predictive of weight upon an intervention (e.g. weight loss or weight maintenance) but is not prognostic.

Association between FAT4 SNPs and weight-related phenotypes

Since *FAT4* SNPs were associated with change in BMI, we tested whether the same SNPs would also be associated with additional weight-related phenotypes such as change in fat mass, fat-free mass, hip circumference and waist circumference (for details about the methodology see Additional linear models). And indeed, those SNPs: rs1509289, rs1509290, rs953211; alone or in combination, are significantly associated with change in weight-related phenotypes during weight maintenance (Table 14).

During the weight loss period, several SNPs (rs1509289, rs1509290 and the interaction between rs953211 and rs1509290) were found significantly associated with change in BMI and hip circumference (Table 15).

These analyses demonstrate that *FAT4* SNPs are associated with both BMI and several additional weight-related phenotypes both for the weight maintenance and weight loss periods.

Using *FAT4* SNPs as classifiers of dichotomized BMI changes

In order to estimate the performance at predicting the outcome of a weight loss or weight maintenance intervention, we computed the percentage of change in BMI and dichotomized this value into groups of “good” and “bad” profile (For methodological details, see section Dichotomizing changes in BMI over time). We also dichotomized the genotypes of our genetic markers into combinations that are expected to identify subjects with either a “good” or “bad” profile (see Classification analysis).

Although analyzing dichotomized values results in significant loss of statistical power, such simple scheme gives very conservative estimates about the prediction performance.

We performed such analyses for BMI during both weight maintenance and weight loss periods. Also to avoid introducing biases due to the choice of the cutoff to dichotomize the BMI, we repeated the analysis with several cutoffs.

The predictive performance for the different genetic markers is shown in Table 16 and Table 17. These tables present results respectively for BMI outcome after weight maintenance or weight loss intervention.

These tables include odds ratios with their 95% confidence intervals, and p-value from a Fisher’s exact test performed on the contingency table (derived from the classification). These values assess the association between the classifiers (genotypes) and the true outcome (dichotomized percentage of BMI change). A p-value below 5% indicates a significant association between the classifier and outcome.

These tables also include performance metrics such as the classification accuracy (i.e. fraction of correctly classified subjects) and the 95% confidence interval for the accuracy. A random classifier (e.g. tossing a coin to predict the outcome) would have 50% of accuracy. When the lowest confidence interval is above 50%, it means that the classifier is doing significantly better than the random classifier. Another metric to evaluate whether the accuracy is significantly better than a random classifier is referred as the accuracy’s p-value. This one-sided p-value, obtained with a binomial

test, assesses whether the observed accuracy is better than the no information rate (Kuhn, *J. Stat. Softw.* **28**, 1–26 (2008)).

These analyses shows that FAT4 genetic markers (rs1509289, rs150929 and rs953211), used independently or in combination have a significantly higher accuracy than a random classifier at predicting the BMI outcome, after a weight maintenance period (all accuracy pvalues are < 5%, see Table 16).

Regarding the BMI outcome after weight loss period, the classification accuracy for rs953211 is not better than a random classifier (accuracy pvalues > 5%, see Table 17). This was expected because rs953211 was not found significantly associated with BMI change during weight loss.

For the two other SNPs (rs1509289 and rs150929) and for the combination of rs953211 and rs1509290, the classification accuracies are significantly better than the random classifier for the majority of the dichotomization schemes (Table 17).

Therefore, FAT4 markers used alone or in combination, can be used as classifier of weight outcome following weight loss or weight maintenance period.

Finding additional SNPs as potentially better classifiers

Providing that some candidate regions have been identified, it is straight-forward to refine association signals. Extensive reviews have been written to describe the process of refining association signals (McCarthy & Hirschhorn *Hum. Mol. Genet.* **17**, R156–R165 (2008); Ioannidis et al., *Nat. Rev. Genet.* **10**, 318–329 (2009); and McCarthy et al. *Nat. Rev. Genet.* **9**, 356–369 (2008)). A few strategies are summarized below.

Gene re-sequencing and additional genotyping

With the advent of next-generation sequencing (NGS), it is now possible to sequence either exome or full genome of large cohorts. Following experimental protocols from vendors and using recent analytical pipelines from the community (McKenna et al. *Genome Res.* **20**, 1297–1303 (2010)), additional SNPs, not assayed with classical SNP arrays, can be identified. Genotyping additional markers is possible with a wide

range of technologies. This includes and is not limited to sequencing (exome-sequencing, full-genome sequencing, targeted sequencing, RNA-sequencing, pyrosequencing); genotyping assays (either high-density SNP arrays, custom SNP-arrays, targeted genotyping with Taqman, Fluidigm), PCR-based assays, mass-spectrometry genotyping techniques, etc.

Once additional markers have been genotyped, it is straight-forward to test each of those for association with a trait (e.g. change in BMI) and identify the causal marker(s). Notably by genotyping additional markers located nearby our identified SNPs (for e.g. +/- 100Kb) and repeating the same analyses described above, one may identify further markers or combination of markers useful at predicting change in weight-related phenotypes during a weight loss or weight maintenance period.

Using imputed SNPs

Obtaining additional markers can also be achieved using imputation techniques (Marchini & Howie, *Nat. Rev. Genet.* **11**, 499–511 (2010)). With the availability of public reference datasets (Consortium, T. I. H. 3., *Nature* 467, 52–58 (2010); Consortium, T. 1000 G. P. *Nature* 491, 56–65 (2012); Gibbs *et al.*, *Nature* 426, 789–796 (2003); The International HapMap Consortium. A haplotype map of the human genome. *Nature* 437, 1299–1320 (2005)) and well-established imputation tools (Li *et al.*, *Genet. Epidemiol.* 34, 816–834 (2010); Marchini & Howie, *Nat. Rev. Genet.* **11**, 499–511 (2010)), this strategy is commonly used in genome-wide association studies, to increase the number of markers to be tested.

Such a strategy was applied to our data, leading to the availability of genotype data for 475 SNPs located nearby the *FAT4* gene (+/- 10Kb) (see section Analysis of imputed SNPs). Subsequently, these SNPs were tested for association with BMI change during weight maintenance. The results are displayed in Figure 2. Ninety-two SNPs have a p-value smaller than 5%, indicating that other genetic variants, located nearby *FAT4*, are associated with weight management (see list in Figure 7). Yet none of these SNPs have a stronger association (lower p-value) than the already detected SNPs (Figure 2). This suggests that although those imputed SNPs could act as proxy

SNPs for rs953211, rs1509290 or rs1509289; they are unlikely to have a significantly better predictive value.

Meta-analyses

Meta-analyses aim at combining results from multiple studies so that consistent patterns can be found across those studies. Specifically meta-analysis of GWA studies aim at identifying SNPs associated with a trait of interest that could be missed when analyzing a single study. Statistical methodologies to perform genetic meta-analysis are well established (Ioannidis *et al.*, *Nat. Rev. Genet.* **10**, 318–329 (2009); Evangelou & Ioannidis *Nat. Rev. Genet.* **14**, 379–389 (2013)) and are frequently used in large consortia (Yang *et al.* *Nat. Genet.* **44**, 369–375, S1–3 (2012); DIAbetes Genetics Replication And Meta-analysis (DIAGRAM) Consortium *et al.* *Nat. Genet.* **46**, 234–244 (2014)) to identify additional markers.

By combining, results from several studies and focusing on SNPs located within and nearby the *FAT4* gene (for e.g. +/- 100Kb), additional SNPs may be found.

Multi-dimensional reduction analyses

Another approach, once a region of interest has been detected is to screen all possible 2-SNPs or even higher order SNP interactions (e.g. 3-SNPs interaction) using a multi-dimensional reduction approach (Moore *Adv. Genet.* **72**, 101–116 (2010); Pan *et al.*, *Methods Mol. Biol. Clifton NJ* **1019**, 465–477 (2013)). Multi-dimensional reduction approach (MDR) can be used to test SNP-SNP interactions in case-control studies. MDR is non-parametric, model-free method that aims at identifying the combination of SNPs with the best accuracy at predicting a binary class. When using MDR, cross-validation are recommended to evaluate the accuracies on a training dataset and on a validation dataset. These accuracies are referred to as classification accuracy and prediction accuracy respectively for the training and validation datasets (for additional details see this review by Motsinger and Ritchie (*Hum. Genomics* **2**, 318–328 (2006))). Cross-validation consistency can also be evaluated. That is when doing several random split of the data into training and validation set, how many times the same best classifier (combination of SNPs) would be identified.

We applied such technique onto SNPs located within the *FAT4* gene (+/- 10kb), and aimed at identifying the best SNP or best combination of two SNPs to predict dichotomized change in BMI during weight maintenance or weight loss (see section: Dichotomizing changes in BMI over time). Results are shown in Table 18 and Table 19 respectively for BMI changes during weight maintenance or during weight loss. These analyses essentially found the rs1509289, rs953211, rs1509290 SNPs as being the best classifiers for BMI changes. This is consistent with our previous analyses and shows that these are the preferred markers for predicting weight loss / maintenance.

Example 3 – Summary of preferred embodiment

FAT4 SNPs and change in BMI during weight maintenance

Our various analyses demonstrated that SNPs located nearby *FAT4* were associated with change in BMI during a weight maintenance period. These results can be summarized as follows:

- Patients tend to regain weight during the weight maintenance phase. This observation can be made irrespectively of the genotype of any SNPs
- When a skilled person knows the genotype at *FAT4* SNPs, in our preferred embodiment at the rs953211 and rs1509290 SNPs, the following predictions can be made:
 - Patients that are “rs953211 G carriers ; rs1509290 A carriers” tend to have neutral change in BMI (median change in BMI close to 0)
 - Patients from any other genotype groups tend to regain significantly more weight than “rs953211 G carriers ; rs1509290 A carriers”; and also more weight than the average (or median) change in the population (i.e. all patients pooled together irrespectively of their genotypes)

Therefore knowing the genotype of *FAT4* SNPs, the following predictions can be made:

Group	Predicted outcome after weight maintenance
Overall population (not knowing the	Regain weight (i.e. increase in BMI)

genotypes)	
“rs953211 A/A ; rs1509290 A carriers”	Regain weight
“rs953211 A/A ; rs1509290 G/G”	Regain weight
“rs953211 G carriers ; rs1509290 A carriers”	Neutral change in weight (i.e. median BMI change is 0)
“rs953211 G carriers ; rs1509290 G/G”	Regain weight

FAT4 SNPs and change in BMI during weight loss

Our analyses also found that the same FAT4 SNPs that predict weight maintenance outcome could also be used to predict weight loss outcome. The results can be used as follow:

Group	Predicted outcome after weight loss
Overall population (not knowing the genotypes)	Lose weight
“rs953211 A/A ; rs1509290 A carriers”	Lose weight
“rs953211 A/A ; rs1509290 G/G”	Lose weight
“rs953211 G carriers ; rs1509290 A carriers”	Lose more weight than all other groups
“rs953211 G carriers ; rs1509290 G/G”	Lose weight

FAT4 SNPs and change in other weight-related phenotypes during weight maintenance

FAT4 SNPs were found associated with change during weight maintenance in additional weight-related phenotypes, such as hip and waist circumference, fat mass and fat-free mass. Median changes for those phenotypes stratified per genotype group are shown in Table 20. These results can be used as follows:

Group	Fat mass	Fat free mass	Waist circumference	Hip circumference
Overall population (not knowing the genotypes)	Neutral change	Increase fat free mass	Increase waist circumference	Neutral change
“rs953211 A/A ; rs1509290 A carriers”	Neutral change	Increase fat free mass	Increase waist circumference	Neutral change
“rs953211 A/A ; rs1509290 G/G”	Neutral change	Increase fat free mass	Increase waist circumference	Increase hip circumference
“rs953211 G carriers ; rs1509290 A carriers”	Lose fat mass	Increase fat free mass	Neutral change	Neutral change
“rs953211 G carriers ; rs1509290 G/G”	Neutral change	Increase fat free mass	Increase waist circumference	Neutral change

FAT4 SNPs and change in other weight-related phenotypes during weight loss

FAT4 SNPs were found significantly associated with change in hip circumference during weight maintenance. Median changes for hip and other weight-related phenotypes stratified per genotype group are shown in Table 21. Results for hip circumference can be summarized as follows:

Group	hip circumference
Overall population (not knowing the genotypes)	Reduce hip circumference
“rs953211 A/A ; rs1509290 A carriers”	Reduce hip circumference
“rs953211 A/A ; rs1509290 G/G”	Reduce hip circumference
“rs953211 G carriers ; rs1509290 A carriers”	Reduce hip circumference (slightly bigger change than change occurring in the other groups)
“rs953211 G carriers ; rs1509290 G/G”	Reduce hip circumference

Tables

SNP	chr	Position	allele A	allele B	beta coefficient (allele B)	Beta standard error	allelic test p- value	allelic test adjusted for genomic control	SNP call rate	MAF	Overlapping gene
rs953211	4	126351049	A	G	-0.59	0.13	2.74E-06	3.73E-06	100.00%	36.66%	FAT4, intron
rs1509289	4	126308835	G	A	-0.64	0.14	3.00E-06	4.06E-06	100.00%	25.60%	FAT4, intron

Table 1 Top SNPs on chromosome 4 identified with the genome-wide analysis

	Estimate	Std. Error	t value	Pr(> t)
Intercept	2.997204	0.957387	3.131	0.001858
BMI2	0.928099	0.018983	48.892	< 2e-16
center	-0.122483	0.031351	-3.907	0.000108
gender	-0.256245	0.178685	-1.434	0.152248
age	0.001246	0.013732	0.091	0.927753
AAC	0.201121	0.224391	0.896	0.370574
AAT	0.917214	0.820991	1.117	0.264502
AGC	0.358763	0.206106	1.741	0.082423
GAC	-0.803172	0.293798	-2.734	0.006508
GAT	-0.261936	0.233207	-1.123	0.261953
GGC*	NA	NA	NA	NA

Table 2 FAT4 haplotype additive analysis (rs953211, rs1509290, rs13136889), results from the following linear regression: BMI3 ~ BMI2 + center + gender + age + AAC + AAT + AGC + GAC + GAT + GGC + ε

* Coefficients for the GGC haplotypes could not be estimated due to singularity in the data.

	Estimate	Std. Error	t value	Pr(> t)
Intercept	2.97142	0.6078	4.889	1.41E-06
BMI2	0.92619	0.01891	48.974	< 2e-16
center	-0.12471	0.03117	-4	7.38E-05
AGC	0.21733	0.14177	1.533	0.125973
GAC	-0.96774	0.25632	-3.775	0.000181
GAT	-0.39107	0.17892	-2.186	0.02934

Table 3 FAT4 haplotype additive analysis (rs953211, rs1509290, rs13136889), results from backward selection on the following linear regression: BMI3 ~ BMI2 + center + gender + age + AAC + AAT + AGC + GAC + GAT + GGC + ϵ

	Estimate	Std. Error	t value	Pr(> t)
Intercept	3.5225218	0.9816641	3.588	0.000369
BMI2	0.9276853	0.0190143	48.789	< 2e-16
center	-0.1244909	0.0314629	-3.957	8.83E-05
gender	-0.249386	0.1786981	-1.396	0.163532
age	0.0009298	0.0137588	0.068	0.946152
AACpresent	-0.0634121	0.2412081	-0.263	0.792753
AATpresent	0.6913093	0.824904	0.838	0.402449
AGCpresent	0.1547387	0.2616326	0.591	0.554526
GACpresent	-1.1271817	0.2835424	-3.975	8.18E-05
GATpresent	-0.5652319	0.225268	-2.509	0.012452
GGCpresent	-0.2576433	0.2480019	-1.039	0.29942

Table 4 FAT4 haplotype dominant analysis (rs953211, rs1509290, rs13136889), results from the following linear regression: BMI3 ~ BMI2 + center + gender + age + AAC + AAT + AGC + GAC + GAT + GGC + ϵ

	Estimate	Std. Error	t value	Pr(> t)
Intercept	3.6015	0.64308	5.6	3.71E-08
BMI2	0.92823	0.01892	49.065	< 2e-16
center	-0.12568	0.03123	-4.025	6.68E-05
gender	-0.25106	0.1768	-1.42	0.15628
GACpresent	-1.11961	0.25072	-4.466	1.01E-05
GATpresent	-0.57589	0.17441	-3.302	0.00104

Table 5 FAT4 haplotype dominant analysis (rs953211, rs1509290, rs13136889), results from backward selection on the following linear regression: BMI3 ~ BMI2 + center + gender + age + AAC + AAT + AGC + GAC + GAT + GGC + ϵ

	Estimate	Std. Error	t value	Pr(> t)
Intercept	3.621	0.9464	3.826	0.0001485
age	0.0002888	0.01382	0.02089	0.9833
BMI2	0.9271	0.01919	48.32	1.94E-180
genotype_group (rs953211 A/A ; rs1509290 G/G)	0.247	0.2678	0.9223	0.3569
genotype_group (rs953211 G carriers ; rs1509290 A carriers)	-0.6924	0.2286	-3.028	0.002599
genotype_group (rs953211 G carriers ; rs1509290 G/G)	-0.1202	0.3093	-0.3886	0.6977
gender	-0.2954	0.1797	-1.644	0.1009
center	-0.121	0.03158	-3.833	0.0001446

Table 6 FAT4 epistasis analysis (rs953211, rs1509290), results from the following linear regression: BMI3 ~ BMI2 + center + gender + age + genotype_group + ε

In this model, the term “genotype_group” has the following levels: “rs953211 A/A ; rs1509290 A carriers”, “rs953211 A/A ; rs1509290 G/G”, “rs953211 G carriers ; rs1509290 A carriers”, “rs953211 G carriers ; rs1509290 G/G”

	F value	Pr(>F)
Intercept	14.64	0.0001485
age	0.0004366	0.9833
BMI2	2335	1.94E-180
genotype_group	7.362	7.96E-05
gender	2.702	0.1009
center	14.69	0.0001446

Table 7 FAT4 epistasis analysis (rs953211, rs1509290), results from a type III Anova on the following linear regression: BMI3 ~ BMI2 + center + gender + age + genotype_group + ε

In this model, the term “genotype_group” has the following levels: “rs953211 A/A ; rs1509290 A carriers”, “rs953211 A/A ; rs1509290 G/G”, “rs953211 G carriers ; rs1509290 A carriers”, “rs953211 G carriers ; rs1509290 G/G”

PARAM	Estimate	Std. Error	t value	Pr(> t)	95% bootstrap CI estimates
(Intercept)	3.68	0.93	3.97	0.0001	[1.64 , 6.12]
genotype_group	-0.76	0.17	-4.52	0.0000	[-1.1 , -0.43]
BMI2	0.93	0.02	48.39	0.0000	[0.88 , 0.97]
center	-0.12	0.03	-3.85	0.0001	[-0.18 , -0.05]
gender	-0.30	0.18	-1.65	0.1000	[-0.62 , 0.04]
age	0.00	0.01	0.01	0.9942	[-0.03 , 0.03]

Table 8 FAT4 epistasis analysis (rs953211, rs1509290), results from the following linear regression: BMI3 ~ BMI2 + center + gender + age + genotype_group + ϵ .

Estimates of the different terms have been assessed with bootstrap(with n=1000 resampling). In this model, the term “genotype_group“ has the following levels: “other”, “rs953211-G carriers and rs1509290-A carriers”.

group	median change (BMI3-BMI2)	95% bootstrap CI estimates
Any	0.38	[0.19, 0.53]
rs953211 A/A ; rs1509290 A carriers	0.57	[0.22, 0.93]
rs953211 A/A ; rs1509290 G/G	0.63	[0.3, 0.95]
rs953211 G carriers ; rs1509290 A carriers	0.00	[-0.35, 0.32]
rs953211 G carriers ; rs1509290 G/G	0.68	[0.32, 0.91]

Table 9 Median change and 95% bootstrap confidence interval (from n=1000 replicates) on BMI difference between CID3 and CID2

PARAM	Estimate	Std. Error	t value	Pr(> t)
Intercept	-0.9409	0.4187	-2.247	0.02495
age	0.009702	0.00606	1.601	0.1099
BMI1	0.8855	0.00766	115.6	0
genotype_group (rs953211 A/A ; rs1509290 G/G)	0.1496	0.1197	1.25	0.2119
genotype_group (rs953211 G carriers ; rs1509290 A carriers)	-0.09215	0.1019	-0.9041	0.3663
genotype_group (rs953211 G carriers ; rs1509290 G/G)	0.1945	0.1386	1.403	0.161
gender	0.3858	0.07871	4.901	1.21E-06
center	0.01319	0.014	0.9422	0.3465

Table 10 FAT4 epistasis analysis (rs953211, rs1509290), results from the following linear regression: BMI2 ~ BMI1 + center + gender + age + genotype_group + ε.

In this model, the term “genotype_group” has the following levels: “rs953211 A/A ; rs1509290 A carriers”, “rs953211 A/A ; rs1509290 G/G”, “rs953211 G carriers ; rs1509290 A carriers”, “rs953211 G carriers ; rs1509290 G/G”

PARAM	F value	Pr(>F)
Intercept	5.051	0.02495
age	2.563	0.1099
BMI1	1.34E+04	0
genotype_group	3.157	0.02434
gender	24.02	1.21E-06
center	0.8877	0.3465

Table 11 FAT4 epistasis analysis (rs953211, rs1509290), results from a type III Anova on the following linear regression: BMI2 ~ BMI1 + center + gender + age + genotype_group + ε

In this model, the term “genotype_group” has the following levels: “rs953211 A/A ; rs1509290 A carriers”, “rs953211 A/A ; rs1509290 G/G”, “rs953211 G carriers ; rs1509290 A carriers”, “rs953211 G carriers ; rs1509290 G/G”

PARAM	Estimate	Std. Error	t value	Pr(> t)	95% bootstrap CI estimates
Intercept	-0.83	0.41	-2.01	0.0450	[-1.6 , -0.08]
genotype_group	-0.20	0.07	-2.65	0.0082	[-0.34 , -0.06]
BMI1	0.89	0.01	115.62	0.0000	[0.87 , 0.9]
center	0.01	0.01	0.93	0.3534	[-0.01 , 0.04]
gender	0.38	0.08	4.86	0.0000	[0.23 , 0.56]
age	0.01	0.01	1.61	0.1078	[0 , 0.02]

Table 12 FAT4 epistasis analysis (rs953211, rs1509290), results from the following linear regression: BMI12 ~ BMI1 + center + gender + age + genotype_group + ε. Estimates of the different terms have been assessed with bootstrap(with n=1000 resampling).

In this model, the term “genotype_group” has the following levels: “other”, “rs953211-G carriers and rs1509290-A carriers”.

group	median change (BMI2-BMI1)	95% bootstrap CI estimates
Any	-3.59	[-3.66, -3.5]
rs953211 A/A ; rs1509290 A carriers	-3.47	[-3.7, -3.31]
rs953211 A/A ; rs1509290 G/G	-3.57	[-3.72, -3.39]
rs953211 G carriers ; rs1509290 A carriers	-3.69	[-3.83, -3.58]
rs953211 G carriers ; rs1509290 G/G	-3.48	[-3.64, -3.17]

Table 13 Median change and 95% bootstrap confidence interval (from n=1000 replicates) on BMI difference between CID2 and CID1

phenotype	rs953211 * rs1509290	rs1509289	rs1509290	rs953211
BMI (kg/m2)	7.34E-05	0.000167	0.004939	0.0002769
Fat free mass (kg)	0.008892	0.006536	0.02874	0.1644
Fat mass (kg)	0.01184	0.04789	0.4854	0.00613
Hip (cm)	0.001831	0.002953	0.03591	0.002632
Waist (cm)	2.38E-05	0.006161	0.02719	0.007947

Table 14 Anova p-values assessing significance of a genetic term from the following linear regression: trait_at_CID3 ~ trait_at_CID2 + center + gender + age + genetic_component + ε.

P values smaller than 5% (10%) are shown in bold (italic). Genotypic models were used in these analyses.

phenotype	rs953211 * rs1509290	rs1509289	rs1509290	rs953211
BMI (kg/m2)	0.02755	0.04307	0.04041	0.438
Fat free mass (kg)	0.7917	0.8083	0.5731	0.2791
Fat mass (kg)	0.3087	0.5614	0.6296	0.4783
Hip (cm)	0.008625	0.01202	0.09093	0.08627
Waist (cm)	0.4302	0.5895	0.2597	0.6784

Table 15 Anova p-values assessing significance of a genetic term from the following linear regression: trait_at_CID2 ~ trait_at_CID1 + center + gender + age + genetic_component + ε.

P values smaller than 5% (10%) are shown in bold (italic). Genotypic models were used in these analyses.

genetic marker	percentile dichotomization	Odds ratio and 95% CI	Fisher's exact test p value	Accuracy and 95% CI	Accuracy value	P	Sensitivity	Specificity
rs953211 and rs1509290	0.1	3.36 [1.33 ; 8.85]	0.0063	0.65 [0.54 ; 0.75]	0.0042		0.67	0.63
rs953211 and rs1509290	0.25	2.41 [1.37 ; 4.29]	0.0014	0.61 [0.54 ; 0.67]	0.0013		0.59	0.62
rs953211 and rs1509290	0.33	2.41 [1.48 ; 3.95]	0.0002	0.61 [0.55 ; 0.66]	0.0002		0.59	0.62
rs953211 and rs1509290	0.5	1.99 [1.35 ; 2.95]	0.0003	0.58 [0.54 ; 0.63]	0.0003		0.6	0.57
rs1509289	0.1	0.27 [0.1 ; 0.69]	0.0032	0.66 [0.55 ; 0.76]	0.0022		0.69	0.63
rs1509289	0.25	0.5 [0.28 ; 0.88]	0.0117	0.59 [0.52 ; 0.65]	0.0069		0.59	0.58
rs1509289	0.33	0.46 [0.28 ; 0.75]	0.0012	0.59 [0.54 ; 0.65]	0.0007		0.61	0.58
rs1509289	0.5	0.53 [0.36 ; 0.78]	0.0009	0.58 [0.53 ; 0.62]	0.0006		0.63	0.52
rs1509290	0.1	0.37 [0.13 ; 1.02]	0.0404	0.6 [0.5 ; 0.71]	0.037		0.4	0.8
rs1509290	0.25	0.43 [0.23 ; 0.82]	0.0076	0.59 [0.52 ; 0.65]	0.0097		0.37	0.8
rs1509290	0.33	0.5 [0.29 ; 0.86]	0.0104	0.57 [0.51 ; 0.63]	0.0119		0.36	0.78
rs1509290	0.5	0.59 [0.39 ; 0.9]	0.0123	0.56 [0.51 ; 0.6]	0.0106		0.39	0.73
rs953211	0.1	2.87 [1.12 ; 7.61]	0.0193	0.63 [0.52 ; 0.73]	0.0135		0.53	0.72
rs953211	0.25	2.44 [1.36 ; 4.44]	0.0016	0.6 [0.54 ; 0.67]	0.0014		0.48	0.73
rs953211	0.33	2.31 [1.4 ; 3.85]	0.0006	0.6 [0.54 ; 0.65]	0.0005		0.48	0.72
rs953211	0.5	1.66 [1.12 ; 2.47]	0.0097	0.56 [0.51 ; 0.61]	0.0064		0.46	0.66

Table 16 Performance of genetic markers at predicting dichotomized percentage of BMI change during weight maintenance

Levels of the genetic markers are encoded as follows:

- rs953211 and rs1509290 : "Other" vs "rs953211 G carriers ; rs1509290 A carriers")"
- rs1509289: "G/G" vs "A carriers"
- rs1509290: "G/G" vs "A carriers"
- rs953211: "A/A" vs "G carriers"

genetic marker	percentile dichotomization	Odds ratio and 95% CI	Fisher's exact test p value	Accuracy and 95% CI	Accuracy value	P	Sensitivity	Specificity
rs953211 and rs1509290	0.1	1.6 [0.75 ; 3.45]	0.2149	0.56 [0.47 ; 0.65]	0.1243		0.52	0.59
rs953211 and rs1509290	0.25	1.61 [1.01 ; 2.58]	0.0433	0.56 [0.5 ; 0.62]	0.0189		0.55	0.57
rs953211 and rs1509290	0.33	1.68 [1.12 ; 2.51]	0.0111	0.56 [0.52 ; 0.61]	0.0048		0.55	0.58
rs953211 and rs1509290	0.5	1.47 [1.06 ; 2.04]	0.0173	0.55 [0.51 ; 0.59]	0.0096		0.56	0.54
rs1509289	0.1	0.51 [0.24 ; 1.1]	0.0764	0.58 [0.49 ; 0.67]	0.0457		0.6	0.56
rs1509289	0.25	0.64 [0.4 ; 1.02]	0.0562	0.55 [0.5 ; 0.61]	0.0322		0.6	0.51
rs1509289	0.33	0.61 [0.41 ; 0.92]	0.0146	0.56 [0.51 ; 0.61]	0.0084		0.59	0.53
rs1509289	0.5	0.7 [0.51 ; 0.98]	0.0315	0.54 [0.5 ; 0.58]	0.0178		0.59	0.49
rs1509290	0.1	0.43 [0.18 ; 0.99]	0.0353	0.59 [0.5 ; 0.68]	0.0309		0.4	0.78
rs1509290	0.25	0.55 [0.33 ; 0.92]	0.0208	0.56 [0.51 ; 0.62]	0.0143		0.37	0.75
rs1509290	0.33	0.6 [0.38 ; 0.93]	0.0203	0.55 [0.51 ; 0.6]	0.014		0.37	0.74
rs1509290	0.5	0.8 [0.57 ; 1.13]	0.2048	0.52 [0.48 ; 0.56]	0.1249		0.35	0.7
rs953211	0.1	1.26 [0.57 ; 2.83]	0.5769	0.53 [0.44 ; 0.62]	0.3288		0.37	0.69
rs953211	0.25	1.19 [0.73 ; 1.93]	0.4862	0.52 [0.46 ; 0.58]	0.269		0.38	0.66
rs953211	0.33	1.34 [0.88 ; 2.05]	0.1562	0.53 [0.49 ; 0.58]	0.0941		0.4	0.67
rs953211	0.5	1.31 [0.94 ; 1.82]	0.105	0.53 [0.49 ; 0.57]	0.0611		0.42	0.64

Table 17 Performance of genetic markers at predicting dichotomized percentage of BMI change during weight loss

Levels of the genetic markers are encoded as follows:

- rs953211 and rs1509290 : "other" vs "rs953211 G carriers ; rs1509290 A carriers)"
- rs1509289: "G/G" vs "A carriers"
- rs1509290: "G/G" vs "A carriers"
- rs953211: "A/A" vs "G carriers"

best combination of SNPs	percentile for dichotomization	classification accuracy	prediction accuracy	cross validation consistency (max=5)
rs1509289	0.1	66.77	63.92	4
rs953211	0.25	60.25	60.42	3
rs1509289	0.33	60.59	55.05	2
rs1509289	0.5	58.01	57.11	4

Table 18 Genetic markers identified with multi-dimensional reduction analyses for predicting dichotomized percentage of BMI change during weight maintenance

best combination of SNPs	percentile for dichotomization	classification accuracy	prediction accuracy	cross validation consistency (max=5)
rs1509290	0.1	64.67	62.69	4
rs1509290	0.25	56.99	54.02	2
rs2710559, rs1509290	0.33	58.84	54.51	3
rs1509289	0.5	55.18	50.82	4

Table 19 Genetic markers identified with multi-dimensional reduction analyses for predicting dichotomized percentage of BMI change during weight loss

genotype	BMI (kg/m ²)	fat mass (kg)	fat free mass (kg)	waist (cm)	hip (cm)
Overall population (not knowing the genotypes)	0.38 [0.20, 0.51]	-0.30 [-0.61, 0.20]	1.16 [0.84, 1.3]	0.70 [0.15, 1.35]	0.150 [-0.25, 0.75]
rs953211 A/A ; rs1509290 A carriers	0.57 [0.24, 0.90]	0.45 [-1.10, 1.10]	0.84 [0.20, 1.3]	1.50 [0.00, 3.50]	0.550 [-0.45, 1.50]
rs953211 A/A ; rs1509290 G/G	0.63 [0.25, 0.95]	0.10 [-0.40, 1.40]	1.31 [0.98, 1.8]	1.38 [0.25, 2.25]	1.425 [0.50, 2.33]
rs953211 G carriers ; rs1509290 A carriers	0.00 [-0.35, 0.32]	-0.66 [-1.60, -0.08]	0.96 [0.52, 1.4]	-0.75 [-1.50, 0.98]	-0.450 [-1.50, 0.30]
rs953211 G carriers ; rs1509290 G/G	0.68 [0.32, 0.91]	0.15 [-1.85, 1.72]	1.45 [0.83, 2.0]	1.80 [0.10, 4.90]	-0.087 [-1.00, 1.50]

Table 20 Median change during weight maintenance and 95% bootstrap confidence interval (from n=1000 replicates) on various weight-related phenotypes stratified by FAT4 genotypes

genotype	BMI (kg/m ²)	fat mass (kg)	fat free mass (kg)	waist (cm)	hip (cm)
Overall population (not knowing the genotypes)	-3.6 [-3.7, -3.5]	-7.3 [-7.5, -7.0]	-3.0 [-3.3, -2.7]	-9.1 [-9.6, -8.8]	-6.9 [-7.0, -6.5]
rs953211 A/A ; rs1509290 A carriers	-3.5 [-3.7, -3.3]	-7.0 [-7.7, -6.5]	-3.1 [-4.0, -2.3]	-9.3 [-11.5, -8.3]	-6.0 [-6.7, -5.3]
rs953211 A/A ; rs1509290 G/G	-3.6 [-3.7, -3.4]	-7.2 [-7.7, -6.5]	-3.2 [-3.8, -2.6]	-9.1 [-9.9, -8.0]	-6.5 [-7.2, -6.1]
rs953211 G carriers ; rs1509290 A carriers	-3.7 [-3.8, -3.6]	-7.3 [-7.9, -6.9]	-2.8 [-3.3, -2.5]	-9.2 [-10.0, -8.5]	-7.0 [-7.8, -6.9]
rs953211 G carriers ; rs1509290 G/G	-3.5 [-3.6, -3.2]	-7.6 [-8.4, -6.7]	-2.9 [-3.7, -2.2]	-9.0 [-10.0, -8.0]	-6.8 [-7.8, -5.8]

Table 21 Median change during weight loss and 95% bootstrap confidence interval (from n=1000 replicates) on various weight-related phenotypes stratified by FAT4 genotypes

CLAIMS

1. A method for assessing the predisposition of a subject to weight loss attainable by applying one or more dietary interventions to a subject and/or the predisposition of a subject to maintenance of weight loss following one or more dietary interventions which method comprises determining the nucleotide of the subject at one or more polymorphic positions selected from:

(i) position 101 of SEQ ID NO:1 (rs953211)

(ii) position 101 of SEQ ID NO:2 (rs1509290)

(iii) position 101 of SEQ ID NO:3 (rs1509289)

and/or detecting one or more biomarkers genetically linked to said polymorphic positions.

2. The method according to claim 1 wherein the one or more biomarkers are within the *FAT4* gene or a regulatory element thereof.

3. A method according to claim 1 or 2 wherein the method comprises determining the presence of A or G at position 101 of SEQ ID NO:1, and/or A or G at position 101 of SEQ ID NO:2, and/or A or G at position 101 of SEQ ID NO:3.

4. A method for assessing the predisposition of a subject to maintenance of weight loss by applying one or more dietary interventions according to claim 1 or 2 which method comprises determining the presence of A or G at position 101 of SEQ ID NO:1 and wherein the weight loss is represented by a change in body mass index (BMI), fat mass, hip circumference or waist circumference.

5. A method for assessing the predisposition of a subject to maintenance of weight loss by applying one or more dietary interventions according to claim 1 or 2 which method comprises determining the presence of A or G at position 101 of SEQ ID NO:2 and wherein the weight loss is represented by a change in BMI, fat free mass, hip circumference or waist circumference.

6. A method for assessing the predisposition of a subject to maintenance of a weight loss by applying one or more dietary interventions according to claim 1 or 2 which method comprises determining the presence of A or G at position 101 of SEQ ID NO:3 and wherein the weight loss is represented by a change in BMI, fat mass, fat free mass, hip circumference or waist circumference.
7. A method for assessing the predisposition of a subject to maintenance of weight loss by applying one or more dietary interventions according to claim 1 or 2 which method comprises determining the presence of A or G at position 101 of SEQ ID NO:1 and the presence of A or G at position 101 of SEQ ID NO:2.
8. A method according to claim 7 wherein the weight loss is represented by BMI, fat mass, fat free mass, hip circumference or waist circumference.
9. A method according to claim 7 or 8 which comprises determining the presence of a genotype comprising a G at position 101 of SEQ ID NO:1 and an A at position 101 of SEQ ID NO:2 and wherein the presence of said genotype indicates that a subject has a predisposition to maintain weight loss following a dietary intervention.
10. A method according to any one of claims 7 to 9 which comprises determining the presence of a genotype selected from:
- (i) G/G (homozygous) at position 101 of SEQ ID NO:1 and A/A (homozygous) at position 101 of SEQ ID NO:2;
 - (ii) G/G (homozygous) at position 101 of SEQ ID NO:1 and G/A (heterozygous) at position 101 of SEQ ID NO:2;
 - (iii) G/A (heterozygous) at position 101 of SEQ ID NO:1 and G/A (heterozygous) at position 101 of SEQ ID NO:2; and
 - (iv) G/A (heterozygous) at position 101 of SEQ ID NO:1 and A/A (homozygous) at position 101 of SEQ ID NO:2;
- and wherein the presence of said genotype indicates that a subject has a predisposition to maintain weight loss following a dietary intervention.

11. A method according to claim 7 or 8 which comprises determining the presence of a genotype selected from:

(i) A/A (homozygous) at position 101 of SEQ ID NO:1 and A/A (homozygous) at position 101 of SEQ ID NO:2;

5 (ii) A/A (homozygous) at position 101 of SEQ ID NO:1 and A/G (heterozygous) at position 101 of SEQ ID NO:2;

(iii) A/A (homozygous) at position 101 of SEQ ID NO:1 and G/G (homozygous) at position 101 of SEQ ID NO:2;

10 (iv) A/G (heterozygous) at position 101 of SEQ ID NO:1 and G/G (homozygous) at position 101 of SEQ ID NO:2; and

(v) G/G (homozygous) at position 101 of SEQ ID NO:1 and G/G (homozygous) at position 101 of SEQ ID NO:2;

and wherein the presence of said genotype indicates that a subject has a predisposition not to maintain weight loss following a dietary intervention.

15

12. A method according to any one of claims 8 to 11 wherein the weight loss is represented by a change in BMI.

13. A method for assessing the predisposition of a subject to weight loss attainable by
20 applying on or more dietary interventions according to claim 1 or 2 which method comprises determining the presence of A or G at position 101 of SEQ ID NO:1 and wherein the weight loss is represented by a change in hip circumference.

14. A method for assessing the predisposition of a subject to weight loss attainable by
25 applying on or more dietary interventions according to claim 1 or 2 which method comprises determining the presence of A or G at position 101 of SEQ ID NO:2 and wherein the weight loss is represented by a change in BMI or hip circumference.

15. A method for assessing the predisposition of a subject to weight loss attainable by
30 applying one or more dietary interventions according to claim 1 which method comprises determining the presence of A or G at position 101 of SEQ ID NO:3 and wherein the weight loss is represented by a change in BMI or hip circumference.

16. A method for assessing the predisposition of a subject to weight loss attainable by applying one or more dietary interventions according to claim 1 or 2 which method comprises detecting the presence of A or G at position 101 of SEQ ID NO:1 and the presence of A or G at position 101 of SEQ ID NO:2.

5

17. A method according to claim 16 wherein the weight loss is represented by a change in BMI or a change in hip circumference.

18. A method according to claim 16 or 17 which comprises determining the presence of a genotype comprising a G at position 101 of SEQ ID NO:1 and an A at position 101 of SEQ ID NO:2 and wherein the presence of said genotype indicates that a subject has a predisposition to lose weight following a dietary intervention.

19. A method according to any one of claims 16 to 18 which comprises determining the presence of a genotype selected from:

- (i) G/G (homozygous) at position 101 of SEQ ID NO:1 and A/A (homozygous) at position 101 of SEQ ID NO:2;
- (ii) G/G (homozygous) at position 101 of SEQ ID NO:1 and G/A (heterozygous) at position 101 of SEQ ID NO:2;
- (iii) G/A (heterozygous) at position 101 of SEQ ID NO:1 and G/A (heterozygous) at position 101 of SEQ ID NO:2; and
- (iv) G/A (heterozygous) at position 101 of SEQ ID NO:1 and A/A (homozygous) at position 101 of SEQ ID NO:2;

and wherein the presence of said genotype indicates that a subject has a predisposition to lose weight following a dietary intervention.

20. A method according to claim 16 or 17 which comprises determining the presence of a genotype selected from:

- (i) A/A (homozygous) at position 101 of SEQ ID NO:1 and A/A (homozygous) at position 101 of SEQ ID NO:2;
- (ii) A/A (homozygous) at position 101 of SEQ ID NO:1 and A/G (heterozygous) at position 101 of SEQ ID NO:2;

(iii) A/A (homozygous) at position 101 of SEQ ID NO:1 and G/G (homozygous) at position 101 of SEQ ID NO:2;

(iv) A/G (heterozygous) at position 101 of SEQ ID NO:1 and G/G (homozygous) at position 101 of SEQ ID NO:2; and

5 (v) G/G (homozygous) at position 101 of SEQ ID NO:1 and G/G (homozygous) at position 101 of SEQ ID NO:2;

and wherein the presence of said genotype indicates that a subject has a predisposition not to lose weight following a dietary intervention.

10 21. A method for assessing the predisposition of a subject to weight loss attainable by applying one or more dietary interventions and/or the predisposition of a subject to maintenance of weight loss following one or more dietary interventions which method comprises determining the sequence of FAT4 gene or a regulatory element thereof.

15 22. The method according to any one of claims 1 to 21, wherein the dietary intervention is a low calorie diet.

23. The method according to claim 22, wherein the low calorie diet comprises a calorie intake of about 600 to about 1200 kcal/day.

20

24. The method according to claim 22 or 23, wherein the low calorie diet comprises administration of at least one diet product.

25 25. The method of any one of claims 22 to 24, wherein the low calorie diet has a duration of 6 to 12 weeks.

26. The method according to any one of claims 1 to 25, wherein the method further comprises combining determining the nucleotide at the one or more polymorphic positions, the biomarker and/or the FAT4 sequence with one or more anthropometric measures and/or
30 lifestyle characteristics of the subject.

27. The method according to claim 26, wherein the anthropometric measure is selected from the group consisting of gender, weight, height, age and body mass index, and wherein the lifestyle characteristic is whether the subject is a smoker or a non-smoker.

- 5 28. A method for optimizing one or more dietary interventions for a subject comprising:
assessing the predisposition of a subject to weight loss attainable by one or more
dietary interventions and/or the predisposition of a subject to maintenance of weight
loss following one or more dietary interventions according to the method of any one of
claims 1 to 27; and
10 applying one or more dietary interventions to the subject.

29. A method for selecting a modification of lifestyle of a subject, the method comprising:

- (a) performing a method as described in any of claims 1 to 27; and
(b) selecting a suitable modification in lifestyle based upon the predicted weight
15 loss attainable and/or predicted maintenance of weight loss from (a).

30. The method according to claim 29, wherein the modification of lifestyle in the subject comprises a dietary intervention.

31. The method according to claim 30, wherein the dietary intervention is as defined in any one of claims 22 to 25.

- 20 32. A diet product for use as part of a low calorie diet for weight loss, wherein the diet product is administered to a subject that is predicted to attain weight loss and/or weight maintenance by the method of any one of claims 1 to 27.

33. A diet product for use in treating obesity or an obesity-related disorder, wherein the diet product is administered to a subject that is predicted to attain weight maintenance and/or
25 weight loss by the method of any one of claims 1 to 27.

34. An allele-specific oligonucleotide probe capable of detecting a polymorphic position selected from:

- (i) position 101 of SEQ ID NO:1;
(ii) position 101 of SEQ ID NO:2; or

(iii) position 101 of SEQ ID NO:3.

35. An allele-specific oligonucleotide primer capable of detecting a polymorphic position selected from:

- 5 (i) position 101 of SEQ ID NO:1;
 (ii) position 101 of SEQ ID NO:2; or
 (iii) position 101 of SEQ ID NO:3.

10 36. A diagnostic kit comprising an allele-specific oligonucleotide primer and/or an allele-specific oligonucleotide probe as defined in claim 34 or 35.

15 37. A diagnostic kit comprising (i) an allele-specific oligonucleotide primer and/or an allele-specific oligonucleotide probe capable of detecting the presence of G at position 101 of SEQ ID NO:1 and (ii) an allele-specific oligonucleotide primer and/or an allele-specific oligonucleotide probe capable of detecting the presence of A at position 101 of SEQ ID NO:2.

20 38. A diagnostic kit according to claim 37 further comprising an allele-specific oligonucleotide primer and/or an allele-specific oligonucleotide probe capable of detecting the presence of A at position 101 of SEQ ID NO:3.

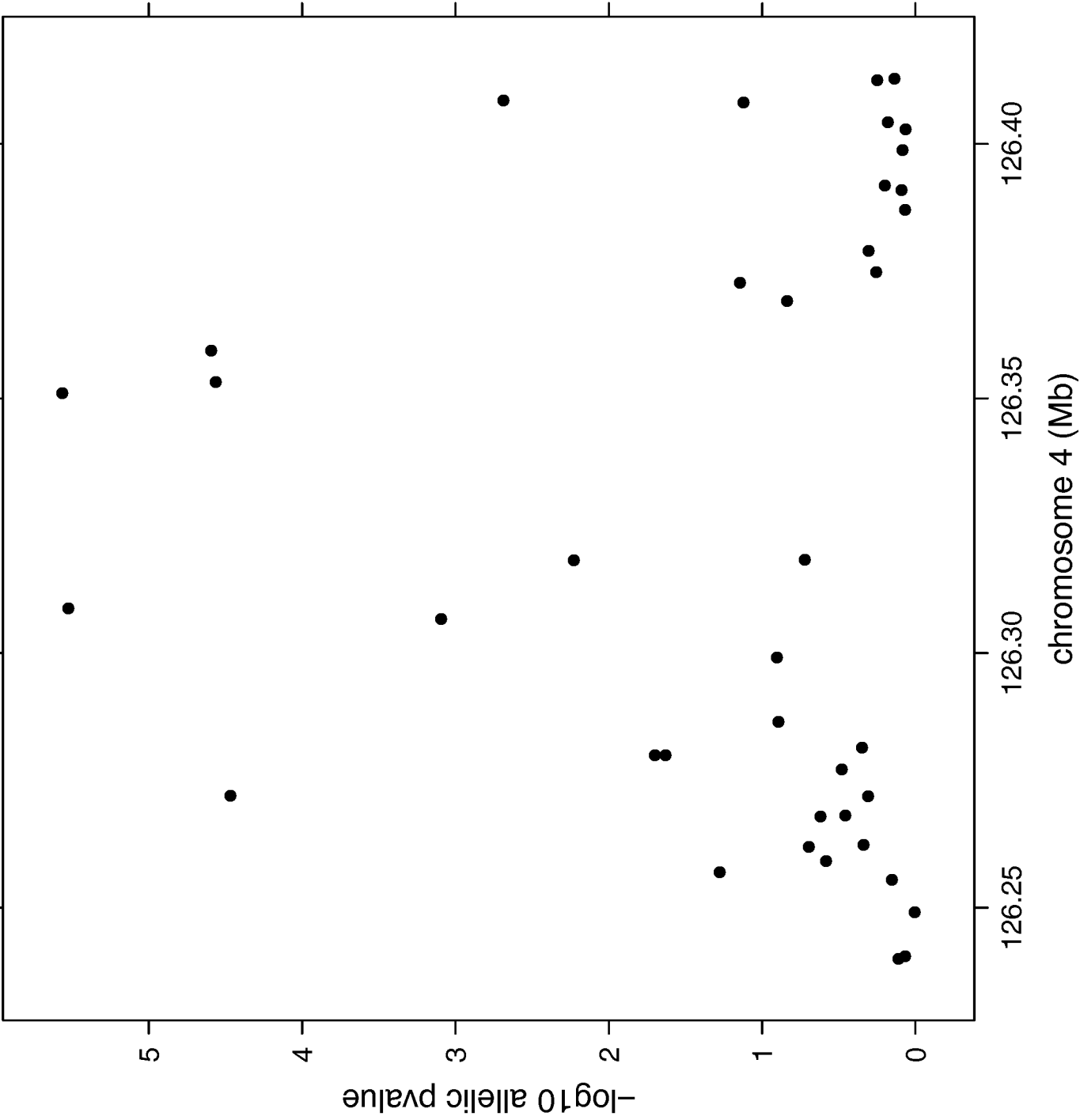


Figure 1

Figure 2

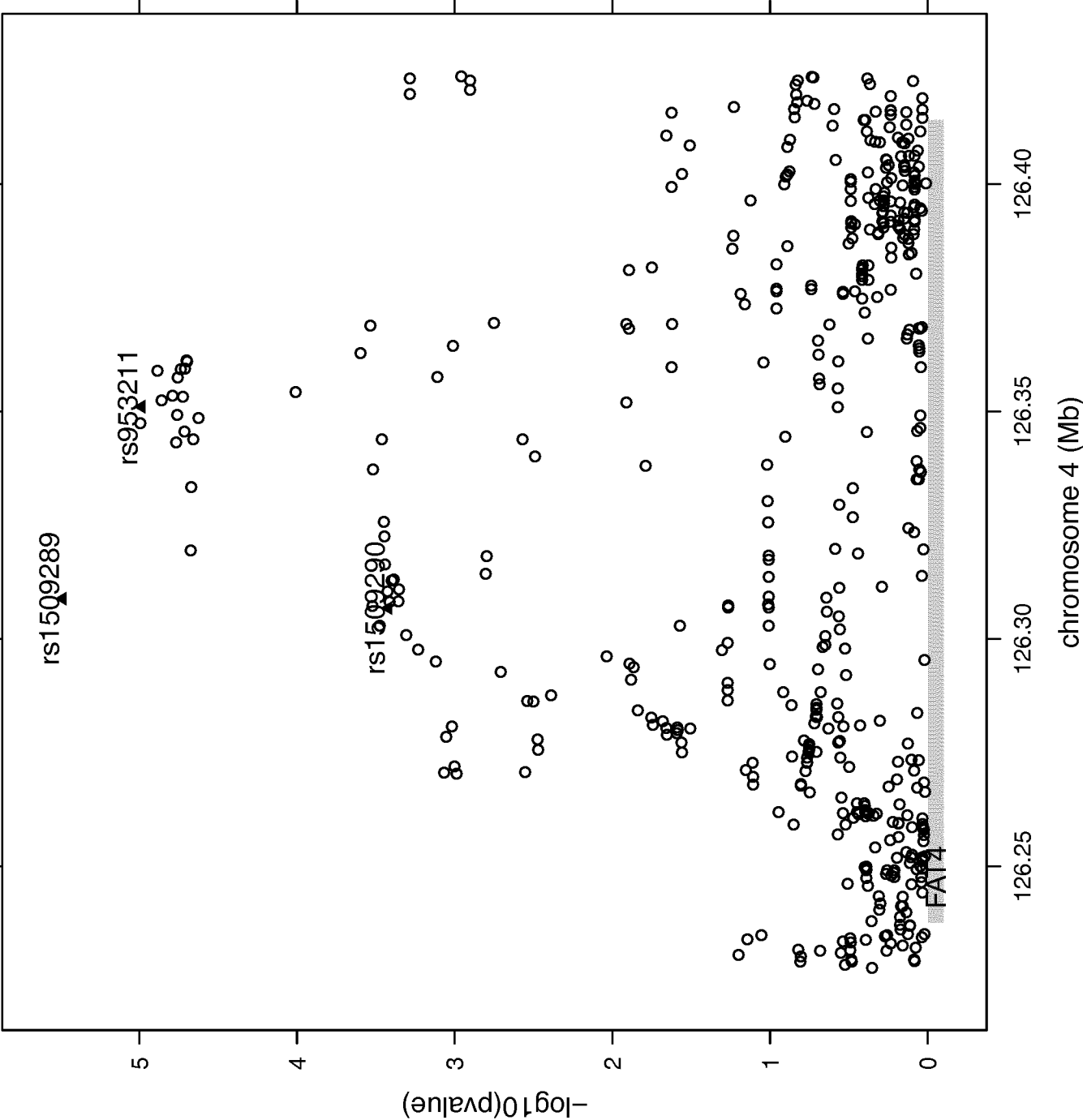


Figure 3**SEQ ID NO: 1 - rs953211 (chr4 126351049)**

ACTCTTCAGTAAC TTGCAAGAGCAGACCAACAAATGGGCAGTTGGATCTGACAGCCCAGAGGCAGCAGAAAAG
CTTTGGACGGAAGATAAAGTAATAGTAA[A/G]CATTATGCAGCACTTCAAATAGGATGTATCCACTACACGGT
GGGAAACAGTAATACTCCGGAGAACCTCTCCACACAGTTAAAAGGAAGGGTTACATCAC

SEQ ID NO: 2 - rs1509290 (chr4 126306772)

ATACCTTTATTTGAAAAC TAAATCAAAGTATCCCTTGATGTCATAGGATACTTTGAAATTATAGATAATCATA
GTTATATAGTCATAAATTGAGGAAGA[A/G]TGAGAGAGTAGTAGAAAAAATCATCAAACCGTATTATTTTCAT
GGAGATGGTTAGTTGTAGTCAGTATTTATAATTGATGGCTTTTTCCATTACTCTGGA

SEQ ID NO: 3 - rs1509289 (chr4 126308835)

CCTCTAATCTTTGGATTGTTGGAGGGGGAGGAAGAACTTGATATGTATTATTTTGAGTTGCCCTGACAGATA
GCAGTATGGCATGGTAAGTGAGAATGT[A/G]TAGCTATATAGGGTAGGAAAAGGTATTAATAGATTTCAGAGA
AATAAAACTCCCAGTACAAGCCATACAACAGATCAATATACATTAGCTTTTTACTCTTC

Figure 4 (SEQ ID NO: 4)

>ENSG00000196159|FAT4|4|126237554|126414087|FAT atypical cadherin 4
[Source:HGNC Symbol;Acc:23109]|HGNC Symbol|protein_coding

GGGAGCCAGGACCATGGACTTAGCACCAGACAGGGCTACTGGCCGCCCGTGGCTCCCGTT
GCACACTCTATCAGTATCTCAGCTCCTTCGAGTGTTTTGGCTACTGTCATTGCTTCCGGG
GCAGGCCTGGGTCCACGGGGCCGAGCCGCGCCAGGTGTTCCAAGTGCTGGAAGAGCAACC
TCCAGGCACTCTGGTAGGCACCATCCAGACGCGCCCCGGCTTACCTACAGGCTCAGCGA
AAGCCACGCCCTGTTTGCCATAAACAGTAGCACCAGGAGCCCTGTACACCACCTCCACCAT
CGACCGCGAGAGCCTGCCAGCGACGTGATCAACCTGGTGGTCCTTCCAGCGCGCCAC
CTACCCACCGAAGTGCGAGTGCTGGTGCGGGACCTCAATGACAACGCCCCCGTTTTCCC
GGACCCCTCTATCGTGGTCACTTTCAAGGAAGACAGTAGCAGCGGACGCCAAGTCATCTT
AGACACCGCCACCGACTCGGACATCGGCTCAAACGGTGTGGACCACCGCTCCTACCGCAT
CATCCGCGGCAATGAGGCGGGGCGCTTCCGTCTGGACATACCCTGAACCCGAGCGGCGA
GGGAGCGTTCCTGCATCTGGTGTCCAAGGGCGGACTGGACCGTGAGGTCACTCCGCAGTA
CCAGTCTCTGGTTGAGGTGGAGGACAAGGGTGAGCCTAAGCGGCGGGGCTACCTTCAGGT
AAACGTGACTGTGCAAGACATTAATGACAACCCCCCGTTTTTGGCAGTTCTCACTACCA
GGCGGGGGTGCCTGAGGACGCGGTTGTGGGTTCCAGCGTCCTCCAGGTGGCGGCGGCGGA
CGCGGACGAGGGCACCAACGCGGACATCCGCTATCGCCTGCAGGACGAGGGGACCCCCCT
CCAAATGGACCTGAGACGGGACTTATCACGGTGCGGGAGCCCCTGGACTTCGAAGCTCG
GCGCCAATACTCGCTTACGGTGCAGGCGATGGACAGAGGCGTGCCTTCCCTCACTGGGCG
CGCCGAGGCGCTGATTAGCTGCTGGACGTGAATGACAATGACCCGGTAGTGAAGTCCG
CTACTTCCCGGCCACCTCGCGCTACGCTCGGTAGATGAGAATGCTCAAGTGGGCACCGT
GGTGGCTCTGCTACCGTGACGGACGCAGATTCTCCCGCGCCAACGGGAACATCTCCGT
GCAAATTCTCGGGGGCAATGAGCAGCGCCACTTTGAAGTGCAAAGCAGCAAAGTGCCGAA
CCTGAGCCTAATCAAGGTGGCCAGCGCCTTGACCGCGAGCGCATCCCTTCTACAACCT
CACAGTTTCCGTCTCTGATAACTACGGGGCGCCCCCTGGCGCAGCAGTCCAGGCGCGCTC
TTCTGTGGCAAGCCTGGTGATTTTTGTTAATGACATCAATGACCATCCTCCTGTCTTTTC
ACAGCAAGTGACAGAGTGAACCTGAGCGAGGAGGCGCCTCCGGGAAGCTATGTGAGTGG
GATATCTGCCACTGATGGCGACTCTGGTCTCAATGCTAATCTGCGTTACAGCATTGTCTC
TGGCAATGGACTGGGATGGTTCCATATCAGTGAACATAGCGGCCTCGTGACCACTGGGTC
CTCTGGGGGCTGGACCGTGAACCTGCTTCCAGATTGTTCTGAATATAAGTGCCCGGGA
CCAGGGAGTTCACCCCAAGGTGTCCTATGCCAGCTTGTAGTAACTCTCCTAGATGTGAA
TGATGAAAAGCCAGTATTAGCCAGCCAGAAGGGTATGATGTGTCTGTGGTTGAGAATGC
CCCAACAGGGACAGAACTGTTGATGCTCAGGGCAACTGACGGGGACCTGGGTGACAACGG
AACAGTGCGCTTCTCCTTACAAGAGGCGAGAGACTGACCGGAGGTCCTTCCGTCTGGATCC
TGTGTCTGGGAGGTTGAGTACTATTTCTCCTTGGACAGAGAAGAGCAAGCCTTCTACTC
CCTGTTGGTTCTGGCCACAGATCTGGGCTCCCCCTCCCCAGTCATCAATGGCTCGCATAAA
TGTGAGTCTTCTGGATATAAATGATAACAGCCCTGTCTTCTACCCGGTCCAATACTTTGC
TCACATTAAGGAGAATGAGCCTGGAGGTAGCTACATCACCCTGTGTCTGCCACTGACCC
AGACTTGGGTACCAATGGTACTGTCAAATATAGCATATCTGCTGGGGACAGGTCTCGGT
TCAGGTCAATGCTCAGAGTGGGGTTATTTCTACAAGAATGGCCCTAGACAGAGAAGAAAA
AACAGCTTATCAGTTGCAAAAGTAGCTACTGATGGTGGCAATTTACAATCTCCCAACCA
GGCAATAGTAACCATCACTGTATTGGACACTCAAGACAACCCACCTGTATTCAGTCAGGT
TGCCTACAGCTTTGTGGTTTTTGAAGACGTGGCGCTGGGATATCATGTGGGTAGTGTGC
TGCATCCACCATGGATCTCAATTCCAACATCAGTTATCTCATTACTACTGGGGATCAGAA

AGGTATGTTTGCTATCAACCAGGTCACTGGGCAGCTTACCACAGCAAATGTGATTGATAG
AGAAGAGCAATCCTTTTATCAGCTGAAGGTAGTGGCCAGTGGGGGCACAGTGACTGGAGA
CACTATGGTTAACATAACAGTTAAGGATTTGAATGACAACCTCTCCCCATTTCTTCAGGC
AATAGAGAGTGTAATGTGGTGGAGAATTGGCAGGCAGGTACAGCATTTTCCAGGCCAA
AGCTGTGGACCCTGATGAAGGTGTCAATGGCATGGTACTCTATAGTCTGAAGCAAAACCC
CAAGAACCTGTTTGCTATCAATGAAAAGAATGGCACTATTAGTCTGCTTGGGCCCTGGA
TGTTTCATGCTGGCTCCTACCAAATAGAGATCTTGGCATCTGACATGGGTGTCCACAGCT
CTCCTCTAGTGTCTTAAACAGTTTATGTCCATGATGTAAATGACAATTCACCAAGTGTT
TGACCAACTCTCTTATGAAGTCACCTTTCTGAGTCAGAACCTGTGAATTCTCGATTCTT
TAAAGTACAAGCTTCTGATAAGGATTCAGGAGCAAATGGTGAAATTGCATACACCATTGC
TGAAGGAAATACAGGGGATGCTTTTGGCATATTCCCAGATGGTCAATTGTATATAAAAAG
TGAAGTGGACCGTGAAGTCAAGACAGATATGTTTTAATGGTTGTTGCTTCTGACAGAGC
AGTGGAACCCCTTAGTGCTACTGTGAATGTTACTGTAATTTTAGAAGATGTAAATGATAA
CAGACCTCTTTTAAACAGTACCAATTACACATTTTACTTCGAAGAAGAGCAGAGGGCTGG
GTCGTTTGTGGGCAAAGTAAGTGCTGTAGATAAAGACTTTGGGCCAAATGGAGAAGTAAG
GTATTCTTTGAAATGGTGCAGCCAGATTTTGTAGTTGCATGCCATCAGTGGGGAAATTAC
AAATACTCATCAGTTTGACAGGGAGTCTCTTATGAGGCGGAGAGGGACTGCTGTGTTTAG
CTTTACAGTCATAGCAACAGATCAGGGGATCCCTCAGCCTCTCAAGGATCAGGCCACTGT
ACATGTTTACATGAAGGATATAAATGATAATGCTCCCAAATTTTAAAAGACTTTTACCA
AGCTACAATATCAGAATCAGCAGCCAATCTGACACAAGTGTTAAGAGTATCTGCCTCAGA
TGTTGATGAAGGTAATAATGGACTTATTCACTATTCTATAATAAAAAGGAAATGAAGAAAG
ACAGTTTGCTATAGACAGTACCTCTGGTCAGGTAACACTAATTGGCAAATTAGACTATGA
AGCAACACCTGCCTATTCCCTTGTAATTCAAGCAGTGGATTGAGGACAATCCCCCTCAA
TTCAACGTGTACTTTAAATATTGATATTTTAGATGAAAATGACAATACCCCTTCTTTCCC
TAAATCAACACTCTTTGTTGATGTTTTGGAAAACATGAGAATTGGTGAAGTCTGTCTCTC
TGTTACTGCAACTGATTCCGATTGAGGTGACAATGCTGATTTATATTACAGTATTACTGG
GACTAACAACACGGAACCTTTAGCATTAGCCCAAACACTGGGAGTATTTTTCTTGCCAA
AAAAGTGGACTTTGAAACACAGTCTTTGTATAAATTAAATATAACAGCAAAAGACCAAGG
AAGACCTCCTCGTTCATCTACAATGTCAGTGGTTATTCACGTGAGGGACTTTAATGACAA
TCCTCCTAGCTTTCCTCCTGGAGATATTTTCAAGTCTATTGTTGAGAACATTCCCATCGG
TACATCTGTCAATTCAGTGACTGCACATGACCCTGATGCAGACATTAATGGTCAACTATC
CTACACAATCATTCAACAGATGCCAAGAGGCAACCACTTTACCATAGATGAAGTCAAAGG
GACTATATATACTAATGCTGAAATAGATCGGGAATTTGCTAATCTCTTTGAGTTGACTGT
AAAAGCCAATGATCAAGCTGTGCCAATAGAACTAGACGGTATGCTTTGAAGAACGTGAC
CATTTTGGTTACAGACCTCAATGACAATGTCCAATGTTTATATCACAAAACGCCCTTGC
TGCAGACCCATCAGCTGTGATTGGTTCCGTTCTGACAACAATTATGGCTGCTGACCCAGA
TGAAGGTGCTAATGGAGAAATAGAGTATGAGATCATCAATGGGGACACAGACACCTTCAT
TGTTGATCGTTATAGTGGAGACCTGAGAGTGGCTTCAGCGTTGGTGCCTTCACAGTTGAT
CTACAATCTCATAGTTTCAGCAACAGACCTTGGGCCTGAAAGGAGGAAATCGACCACTGA
ATTGACCATCATTCTCAGGGCCTTGATGGACCTGTTTTACTCAACCCAAATATATAAC
TATTTTGAAGGAAGGAGAACCATTGGCACAACCGTGATATCAATAGAAGCAGCTAGCCC
CAGAGGATCTGAGGCCCCAGTGGAGTATTATATTGTTTCAGTTCGTTGTGAAGAAAAAAC
TGTTGGACGCCTCTTTACTATTGGACGACATACTGGTATAATTGAGACCGCAGCCATTCT
GGACCGGGAGCAAGGAGCATGTCTTTACCTGGTGGATGTTTATGCCATAGAAAAATCAAC
TGCTTTTCCAGAACACAGAGAGCAGAGGTAATGATTTTGTAGTCATTTATTATTTGTTG
ATTTGCTTTTTAGAAAAATCATTCTCTTTATATTTACTCTCTATAATTGTTTACCTTCAT
TGTTTATTGTTAAATTTGTGAACAGGAACACCTAAAAATGTTCTGTCAAAGGCTAACAGA
GAGTTACATAAACTTTAGTTTTAATCTTGGTTGCACTAAACAACAACTTTCTTTTAC
TTTATATTTTACTTTATAGCAATCACATATATAAGGTTAAGGAGAAATCTTTAGCCATT
CAGAGGGGAAAAAATCCATATATCTAAGCTAAATTGCTGAGGTAATCTAAATACCACTCA
ATAAGGAAGGCTACCAGAAGATGGGCACTTTCAGAATTAAGAAGACCTATTCCAAAATGA
AGAGCTTTGGTAGGAATCAGCATTGTACCATAGCTCTTCAGGAAGAGTGGCCATGGAGGA

TGGGCTGACAGTGTACACCAGGACAGTATTAACCTTTCACATCCTCAGCAGTCTTGGCAGT
TTCTTTATAGACAGTGAATAATTTAATGTGCTGAGCCAAGTTTTGGAAGATTCCTGATT
TCATCTGCCTTAACATTTTAGACACTGTCTTCTGACTTAGGATAATCCTTCCTTTCCCT
CTAAATTAAGGCATGCAATGGGCTGTGAATAATCAGAGACTAGGGATTGTTTCTTGACA
ATACTGAGTTCAATGCCATGGGATAGATACACTCTGTTCTGTTTGTGGTGAGTAAGAAA
TTAGTGTTTCATAGCATAAGCCAAAAGAATCCAAGCTCAGCCTCCCTGGAGTGATTT
TAGGCTACTGCCTCCTTGATCGTTGATTTGCTTTTTAATTGAACTACTTTCAATGTTAT
TTTGATAATCACTAGAAATGATATAGCTATACTCCAGAAAACCTCTGTTTGCTGTTTCT
CAGTTCATTCTTTCCCTCCCCAGGCCCTCAAAGACATTCTAGTGTCAGTCAGCCAAAAA
CACAAACATCAAATGTGGTTTGTGATACTTGGCAGTGACCCAGACACAACATGCAAGTGA
AATTGAGGCTCATGTGCTTGTCTTCTTCTTTCTTTTGGGGGGAGGAGGTGGGG
ATTTTCTTTATTTTAAATGATAATTTATTATTATTATATATTTTTGTATCCTCTGTG
ATTTTTTTTCATAGTAGTTGGTTATGTCTATCTATGGATGGGGAAGAATATTTATGGCTT
AAAGGACCATATTAATTAGAGATATAATTCTAAGGGGAATTCAATTTTATCTTTACCTAC
ATAGCACTGAAAGGATTTCTAAGCCAAATAACCTCTTTTACCTAATTATTTAAAAAATAT
TTAATATAGGGCTTATATGTTGAGCTATTTGGTGATGCTCAGGCCATGATTTATATGTA
ATTGAATTTTGATTTGAAGTTATCCATCTTCTAAACCCACAATCCTCTCTCTAACTTTCT
TCTCTGGAATGAATACTTACATGAAAATATTTGATTAGTTTGAAAACCAAATATTGATT
GAAGGCAGGAAATTAAGTCATTCCAGACTTTAGATGAATTTGTTAACTGTAAACAGAT
TATGTTATTAGATGCTGTTGTTGGTTCACTGTAGTACATTTTATTAGAATACTATGGAG
AATGAGAATAAATGCTCAGTTTTATCATTAGATTTATTGTGTCTTTTTTATTTACCCATT
AGCTATGCAAAGATTGGCTTAGCATGAAAGTATTAAATAGTGCTGCCTCTGCAATAGGCA
AGAAGATTAAAAATGTTTATAAGTAATTTGTTATTAATAGGGGATGATTTGTTTATTAC
TTTTTATAAGTCAAGTAACACCAATATGAAAAGTTATCATATATACTATGTTCTATTAT
TTAAAAATCTGGGGAGAATTCAATGTGATGATTTTTTTAATTAAAAAAAAGTCAGCATAT
CTTCTGTGAACCTAAGTGCTGAAATTGTAAACCCAATTTGAGTTCTCAAGATCCAACCAC
TTTGAAGTGAAGGCAATGTGTTTCTCAAAGAATATTGAAAGCAGTGTTGTGAGCT
AGAATTTTATATTATTGTTGGATTTTTCAAGTGTATACAATAAAGTGCTGTTTTCC
TTCTGCTCAAACAATTAATTTACTGTGATTCTGCAAAAATAAGTTATACATTTCTCTTG
TTATCAAAGGCGATTTTTAAATTGTTTGTGTTAATTGGACTTTGTCCAGCGCATTTTTAAA
AATTATTCATGTACACTGATAAGAGTCTGGGTGCTTACTCAGGTTTCTGGCAGAGTCAT
GCTGATCACATTCATGGGCAGGCAGAGAGTCAGCGGTAAAAGAGAAACAATTTATCT
GCATTCTTTTCTAGCTCTGACATTTGGGGTAAGAGGCTAATGACTATGACTCTGATATT
GTTTATTCCAAAGATGTGTCCAGTTATACACCTTTACTTACGCTACTTGTTATATCCAAA
GATTTGGCATTGGTAGTAATGTCATTGAAAGATTGTGTTGGGTTTCAGACACAAGATTA
ATTACCTTTTTATTTGTCTCTTTATGTTCTCAGAAGAGCTTAGATAGTCTTGATTATGT
TAGAATAGGCCATGTAAAGTTTGTGGCATTCTTAGGTTACCAAAAAATAGATATATG
TACTTCAGTAAGCATTTATCCTTTAATGTGTATTACATAGGAACATGCAACTTAGGAACG
TGGTTAGACCTCATGATGGTCAGGGGCTTGTTTTATTGGTCTTGTTATTTTACAGACCGTG
GCATATTACCTGATGTATAGTAGGTGCTCCATACATGTTTGCTGAATAAGATGGTAGAAG
ACCTAAGATCAGAACATATGTCTTTATAACTTGGGAATAAATCACCAGAGAAAAGCTGAG
GAAATGAAGGAAGTTAATAAATCTGATGCTGCTCATTAAATTGAACTCAGGTCAGAGCATA
ATAATTATCTCTGCTCTACAAATGAATTGATAACTGTCAGGAACTCAACAAGGAAGAGG
AATTTACGTGGGTGTTCTGATATGGAGCTTAGTGTTTAAATGGAAGGAAGCAATCTTATA
CATTGAGGTAGTCACCAGGCCATAGTTCCCAAACCTTGCTACATTCAGGACCCCTTTATGC
TCTTAAGAATTGTCAAGGACACCCCTGGAGACTTTGTGTAAGCATGTCTTGCTATTGAT
ATTTACCACTTTTAAACAGTACAACCTGAGGAAATTAATAATTTGTTAATTCATTTTAAA
ACTACATTATATTTTAAATATATAACATGTTTATTTGTTTTAAAAAAGTTATTTTTTC
TAACTAAAAATTAAGAGTGGCATTATCTTACATCTTTACAAATCTCTTTAATATCTAGC
TCAATAGAATACAGCTGGATTCTCAAATCTTCTTGGGCAATATATTGCAATATGTTGTGT
TTTTGGCTAAAATATACAAGCAGAATCCATCCTTACACAGATATTTTGAGTGGGATAATA
GAGAAATAGTTTGCCTACTGCATCAGAAGTCCACAGTGGCAGTTTCTTAAGACTTACTTG

CAGTGTGGAATATGAAACCCTGTCAGCAAACCTTTTCATAGTCTGTTACATAAAAAATACAT
TTATCTCGCATTTCGTAATGATTTTTTTTTACCTATTCCTGATTTAGAAATATCAGGCATT
GATCATTTCAAATTATTGGTGTAAGTATAAGGAATTTATCATAAAAGTCTTTAATATA
TGACTCTCAACCTGTTGGTGATGGTTAGAAGTTTTCCAAATTTGAATTTTTACTCGAAAG
CTCAAATTTCACTATTAGTAACATATATTGTTGTTTTCTGGAAGTGCAGGCTTCCTTT
GTTTCATGATAAAAAGAAAAGATTATGCATACTCAAATATTTAAAAAGAAACAGTTGCTCT
TTCGAGTAAAAATCGTATTCCACAAATCAAGTGGCTAGTTCAGCTTACAATTCAATTACA
CATATGCATTTCTTTGAGAAAACCAACATACCTAGGTACAGAGTAATGGGTCTTTGTGCA
CATATTGCTTTGTGTCACACAGGATATTGAAAAGACATCAAAGTTGAGTCTAGATTTGAT
AAAATTAATACGTTTTTTGTTTTCTCAAGAAAACCTATTTACCTTTTTAAATGAAATAGT
TTTTTTGTTTGTGTTTTACTGTGAGTATGTGGTGGTGAAGAACACAATTACTGCTAA
AGTACTTTGGATCTACTGCTTTGATTTGTGCTAAAGTACCACCAGTTTTACCCACCATTG
CTTTTGACCTCTAGCATAAATGCCAACACAGTGAACAAAGGCAGAGGATGGTTTGCATT
ATCATGTAAACAGTGTTGATTTCCAGGACTCCTTAAACAGGTCTCTGGTTTGCATGGAG
GTCCATGCATACTCCACAGTGAGAGAACCATTGGTGTGGGTAGTGAGATTTTGGCAGTTC
AGTTAACAACCAGGAAAAAAGAGCCACTCGAAATAATATATTTAAAGTATGTTTGAAT
ATTAGGTAAATGGACTATGATTCATTAATGATTACAAATGAGTTTTAGCAATCTGATAAT
AAATTAATTTATTTTCAACAAGAACTATTAAGATTTCCAAGAGAAATGATGGAGACATTT
GTGAGGTGAGTTTTGGATACAAACGTTAGAAATGATTTTCTTTCACAGGGTTTTGAATCA
CAGTAGTGACCTTAGATTAAATGTCTGTATATCTTGTGTATTGAACCTCACAAGCAGAA
TACAGGCAAGAGAGCTGGATATATAATAACTGTTATTATTATAAAATTTATTGAATATTG
CTATGTTTAGACATAATGATAAGTGCATAGTGATAAGTGCATTTTTAGGGATTTTATTTA
ACCCATACAATACTAATATCATTTGCATTTGTAGCTATGGAACTGAGTCTCAGATAAG
TTAATAAGTCGCTTAAGTTCATATAGATAGAAAGAAAACCATATCCAGACTTGAGTAACT
TCACAATGCATCCTCATAACTACTCTTCTATCAAGCTGGATCAGTCTGTGGTTTTGGTTA
AGAGAAAAGCTCTTTGCCCTATAGCTATGATGATATATGTATGCTTTTAAATAACTTTGT
TTTACTCTCTGATTTGTTGCTTAAAAAGCATTTAAGGCCAGGCAAAGTGGCTCACACCT
TAAATGGGAGGCCAAGGCAGACAATTCCTTGAGGCCAGGATTTTGAAGCCAGCTGGGCA
ACATGGTAAAACCCCATCTCTACTAAAAATACAAAAATTTGCCGGGCATGGTGGTGCACG
CCTGTAGTCCCAGCTACTTGGGAGGCTGAGATAGGAGAACCACTCAAACCCTGGGAGCAG
AGGCTGCAGTGAGCTGAGATCATGCCATTGCACTCCAGGCTGGGTGACAGAATTAGACTT
TATCTCAAAAAAATTCATAAGTATTTTATGTATTGTGTAATAAAGGGAAACAATT
TTTGCCCTACCACAGCTAAGGCCCTCAGCAGATCGGTTACATCCCTAGGCATCATTAGTGG
TGGTAGCAAGGAGCCTAAATTGAATTAGGAAGACTTCCAAGGGTTTCTAGAGCAGGGAAG
AAGATGAGAATTTGAGAGAAGGGAGCTGAAGGCAAATGGAGAGCAAAGGTAGATGAGGGG
CCTCTTCTAACCTACAGCACTATTCACCTTGGGAAGCAGTCACTGGAGTTTAAGAAGGTGG
AGAATTATTTTGAATTTTAGGTGATAAATCATCTTCTTGAATAATGATGGGGTTGG
AGTGGATGGAGTGTGAAGATTATTTTAAATAGGAAAACATTTTACTGCTTCCTATGTGT
TGAAGTCAAGAGTGTTTCTTTAAAAACAGCCTGGGATAAATTTTTGATTTTGTCTT
CCCTATTGGTATGTTTTAAATGTATTGAACAAATGCTGTGAATTAAAGGGCTTTATAA
ATTTTAAGATGGGTACAAATGTGTATGACAAACAGGATTATTGATGGCTAATTATGTTT
ATGCTGCATATTTTATATATATCTTCAGGATGCTTGATTTACTCCTGCTGCTAGATTTCT
ATAGACATAACTCATCTTCCAATGAATTTACAATTTATTACTTTTTATCTTTATTAATA
CCCTAATGATTTTAATCTTTTTGTTTTATTCAATTTGAGGAATCTGCTCTAGGAATA
GTTTTGAAAAATAGTTATTTACTTAGAATTTTGTGGAATCAATTTTTCATTGCATTGTCT
GCAGCTTGCACTTTGTCATCATTAGAGTGAAAAACTGCCTAAGAACCTCATTAGTTGTGA
GGGACTGTTGCATTAGTACTGTAGCAAACGTCATAGGCCCTGAGGTGGGTCTGTATTT
CAAGAATTAATAAATCTAGGCCAGCGCTTTATAAAACCCATAAAAGTAGGTGGTATTCC
GAATTAGGCACTCGTGAGTGGAATAGGAAAAGAATAACTGGCAGGTAATGTGGGTCAAG
ATGAATATAAAGTGCCAATATAGAATATGGTAAATATTTTCTAATAATTTCAAGCTTTA
TGAGTCTGTGACAAAAGTAGCCATTTAATAGTATGTTGACTGAGAAGGAGAGTATAGG
GAATGCAGACAGGTGAAAATATTCTATTAACAAACATTCTGTATAAAATACACACATGT

AATTATATATTAACACGTATGCCCCATTGTACAAAGACTGTTGGCTTTTCTTTGCTCTT
AATATCCTGAGACAAAATTGGACAATTAAGTCATGAAGAGGAAACAATCTAATTGGCAGA
TAATTTATATGTGGTAATTAACAGTGATTATAGGACCACAATCTTCTTCAGTTTCCAGA
CGTGTATGCATTTTTAAGAAACGATCAGTGAGTAAAAACCAAAGAATTTTAAGGCTTTGA
AGAAATGTTGAAAGACATTTAGAAACATGCTTTGCTACTGGCAGGTGGGAGCAAGTGGCA
TTTTTGATGATTGTTACAGATTATTTGACATTTCTCTAAGGCTTTTTATCATTACAGAT
TCTAACATATATAAATCGTTTATGTTATTGTTAGACACTGGTAAACAGTCTTGCCAGGTG
CTGTCTTGCCTTTGCAATGGTTCTGGAGGTAGATACAACATATCATCATTGACAAATGA
GAATACTGAGGCTCATGGAGGTTGCTTATGGAGTTGGTTTATGGTGGGAAGCAGGATTTAA
ACCCAGCAGTCTGCCTCTGAAGTCTGTGCATTTAGTTCCAACACAGCACTAACTAATGCT
ACTTGTAAGAATGATTATTTCTATACATTTGTAGACATAATTCTCACCATGTAAAAAGTT
GTTTTCATATTTCTATACTTGTTTCATGTTAATGATGAAAAAATATAAGATAAAATGAAAT
TTTGGTGATGAACCAGTAGTAGGATTACTTTAGGTCCCTATCAATCTTTGTTTAGGTCCC
TATTAACCTTTATAATCTTTATTAACCTATAATCTGTTATTTCTTCATTTTGCTTTCTAA
ATCCCAAGGCAGGAATATATTTCCATTCTTTCAGTTGCTCATTTATTTTCTCCCTTTCG
AGCAAACTTTTTGAAAGAGTTGCCTGTACCTGCATTTTTTCTTCTCATGATCTCTTAAA
TCTACTCCCATCAGACTTGGCCCTGCCACTCCAGTGAAATTGCTCTTACTGAGGCCACT
ATGATGGACACATTGCTAGATCCAATGGCCTTTCTCAATGCTCATTGTAGCTAATCTAAA
GAATATTTGACCTAGTGGATTTTACTTCCATTAAATGCTTTATTCGGTTGGCTTCCGAGT
CATCATATTCTGTGACTTTTTACCTTTTTTATTTCTTGGACCAATCACTTCTCAGCCTC
GTTTCGCAAGCATCTCACCATGTCCTCAAACCTCTAAGTGTTGGAACATCCCTAAAGCCAGT
TCTTGCACTCTTTCTTTTTACTCTATACTCATTCCCTTGAGGATCTCAATCTCATAGC
ATTAATGACATATATACTGATGACTCCAAAATTTTGCCTCCAGCCCATATGTCTTTT
CTGAACCCTACATTCGTATAACCAATCACTTATTCATTGATTAGCTTCTAACTGATATT
TTAAATTAACATTTTTAAATCTGAGCTGCTGATATTCTCCCAATAAAAACATATTCCAT
CTTCACCCATCTTCTTTTCAGTTGATGGCAATTCCAACCTTCTGATTGATCAGGTCAAAA
ATCTTAGCGTTATCTTTGACTCCTAACTTTCTTCTCACCTACTTACAACCTTTCAGTT
GATCTTGTTGGCTCTGTCTTCAAATATTTCAATTCATATGATCATTTTCATGATAATTT
CTCATCATGCTCACTGTTAGTAACCTGGTCTAAGACACCATCATTCTTCCCTTGATTAT
TGAAGACATCTTCTTGTTGATTTCTGACAGTGTTCTATTGTTCTTCTTCTTACTTGGC
TTTACCTACACTGGCTTCTTCTATTCTCGGAACCTTGCTAGGCACACATTAGCCTTCGGG
CTTTTGCTTGGCTCTTCTTCTGCATAGAACCCCTTCTCCAGACATCAGCCTGGACA
ACAACCTCCCATACTTCAAGTATTTTTTTTTATCTCACATTGCAAATTAGGCTAAATCTT
CCTTTAATAACTTATTATTGTAACATATCCCTCATGCTGCCTGATTTCATTGCCTTGCG
GCATTTCTTCATCTTCTCTCCATAAGGCTTACCAGCCTCCTTCACCAATTTCTACTTA
TCTCCTCACATGTTAAATGTTGGAATGCCCTGGAAGTGTGTTGAATTTTTTCTCTTT
TTAATCAATTTCACTGAGGAGCTCAACCAATCTCATTCTTTATATAAAATATGAACACT
ATATATGTATAGGGGTGGGTGTGAGTGATATAATTTATTGATTATAATGTTGATTATTG
TTTGATCTGTCTTCTTCCACTGGAATTAATTTCTACGAGGGCAGATATATTGATCTGCT
ATGTTCTTAACATATCTTAAGAGTCTAGAACATTACTTGGAACAAACATAGTAGACACA
ATATAAGTTTCTGTTGAATGACTAAGTGAATGAATGAATGAACTGGCATCTCAGCCTTTC
TCCTGTCCCTTCAGTTTAGTCTAGCAACCAGAGTGAGAGTGATCTTTTAGATCATTTTC
ATTTGCCCAAAAACCTTCTATTTCACTTATAGTAAAAGTCAAATTTTACAATGACCCTG
AAGACCCTAGTTGACTGCTTATTAGTTACTGTTTGGACCTTTTTTCTGATTCCCC
TTGCCTGAACCTGTTGAGCAACCATCAGAGCTCCAGGCCCCAGCCTCAGGCGCCCTCCT
TAGGGTCTTTGTGGCAGCTCTGGCCTGGACTGCTCCCTTCTCACTTTCCCCACATCATT
TCTGAGAGTCACCTTGCAAAGTCCTTCTTCCCTCCAGTTTTCGTTTTTCTTTTCTTCC
TTTTGTTTCTGCTTTTTTCTTATCATCACCCGACATAACACATATGTTACTTGTTTATTC
TGTTTATGGTGTGCCTTCCCTTTAGAATATATGTTTCATGAGGGGAAAGCTTTTCATCTG
TTTCTGCTATATGCACAGCACCTACAGTGTGGCTGGCTCTAGGCAGATGCTCAGTAAATC
ATTGATAAGCTAAGGATTTACTGTTGATAATGCTGCAAATATGCTGCTTAAGCTTCAGGA
GCTCAACCAGTGATGCATGCTGAAGTAGGGGAGTCATTTTTCATCTCTTAAGCCAAGACT

TTAGAGCCTCTTCTGAAATTAGGGAAGTAACTGATTGGAAAAGACTGGTTTTCTTCAT
AAAAAGATAGTGGCTACATGACTTGATTGGCTAAGAACGTGTAACCCAACTTCAGAAAC
ATTTATGGTGTCTGTGAAGGAAAGTGGGACCACTAATGCTATAGATGTTTTGGTAAAGTA
GAACATTTTAGAAAAATATATATCACAGTGTATGCTACACCATCTCATGTCTTCTCATCTC
CTTCAACCTTATCTAATTTTGCTTTAGAGAGCAGATCTTAAGTTATTGTTATCGTAAACC
ATGTTGTTTCATCAGAAAACAGGTGAATACATAGAACTTTGAAAACATTACTACTTTTAA
TATTGATAACTTTAATTACTGTCATTCCTTTTTCTAATTTACCATCCTTGTTCAACATT
TCACATCAATAATATCAGTAAACTTGATTTTAAACACGCAGCAAAGAAAATACTGCTGGAC
AATCCCTCTTGCCTTAAGTTTAGTTGAAAGAATGCAGGCTTTTGATTTAAGAGAAGCTTG
ATTCAGATGTTGTCACAGCTACTCTCAGAATCTTATTTTCTCATTTGTAAAATGGTAAG
GATAGCCTACTTCATAGCTTCTTGAGAGAAAACAATGGCACTCTATAAAGTTTATTAGT
GCTCTTCCCTTTTTCTCAAAATATAGATCTGCACAGGACTATTAACATTTAAGAAAAT
GTCTTTCTATTTTTAAAGTATTTAGAGTCCGTTCCATTCTTTTTTTTTTTTTTTTCC
TTTCTCAATTTCTCAACAAGCCTGTAAGGAAGTCAAGCATTTTTATGTTCAATTTAAGG
AAAAGACACAAGGAATTTCAATTATTTCTGTGTGGTCACAAATCTAGACTAGCACCCAGGT
TTATATGACTTTGGTCAACATGCCTGACATTAAACAATACTGCCAGTCTGGTGTTAATG
CTATTTTTCATCCACTATTGTATTGTTGTTGACATAATTTAGTAATAGTTATAACCCCTT
AAGTGAAGTTATTTATGAATTGTGAAACTTTTTAAAGGTTTAGTTGCTCAGGAAACAAA
CAAGTTAGAATATTTGAATATTCAGTGTTTGTTTCATTTTCATTTGATTTAATTTGATT
GATTTCAATCAGTGTTTTGTTTCATTCAGAGAGAAGCCTTATCTCTGATTTAGATGAGGG
ATATTCATCTCTCAATTTTATGATGGTAGTAAATATTGACTATTATGGAATTGTGTG
TGTTTGTTGTGAGCCTATTTAGAAATCGTTTTTGTCCATGACTTAATGCAGTTTTCTT
AATTGAGGTGCACTTGGCTTCTCCAGTCCAAAAAAGGGAAAACTATCTATCTTTCGAAAC
TACTCTTTAACAAAACATATAAATTCTGGTAACTTTTTAAGTGAAGATTTCTAACTAAT
GATTAACACGTTTTCTGGACAGAAAAGTATTTCTTACTTCATAAAATATTCAAAATAA
GCAAATACACAAAGAAGATGGGCTTCTTCTGCTCGGGGTAGTGTTTTATGGTATATACA
TTTTTGTTCTTTGGTTAAAATACTTACTCTTATTTTTATTATACATTGGCTTCATTCTA
CAATAGATTTGAAGCAGTTTACAAAAGTATATATACAACAAAGAGATACAATATTTAAAT
GAATCTCTAAGTAGTAAAAATAAGTGTTACTAAAAATAATCCTGAAATATATAAGATTAG
CATACAGATATATGTAATTTAGGTAACCTCATTGAGTTTATGTTTAGCTTTCTAAAGGCCA
AGTCAAGCAGAGAAGCAAGATCAGATATGTAAGTCATGGTGCTTATACTAAACAAACA
CAGGGTAAACAAAGGAAATACAGATTTTCTAAACCCAAGGAACCTAATAGAATTCGTCCC
ACAGATGCTCAAAACAGACCTATTTTAAAGTGATGATTTTCTTAATGGCATCTTCACTAG
TTCAATGACAGATTTTTAACATCATTTTAAATGTGACGTCTTTCTGTGTGGATTTGTGGCA
AATTGTAAGAGTGACAGTTCTGGCAAATTATTTATTTATGGATCAAAGAGATTCCCCATT
GATAAGTGCTTTTGTTAGCTTTATTTTCATGAAGTGGATTAATATTTTATAACCAAAGCA
AGAATATCCCTACTGGGTTTTTTCACATTAGCATATCTGTAGCACATCACAGGAAAAATC
TAACTAGAGAGGTTTTCTGTAAACTGTAGCTTAATCCTTAAGGAGACTTTATTTAAGC
TATGCTGCAGTGATTAAATGCTTAGCACCAATTTCTAGTAATCTGTGTCTTAGATTGTT
TCCATTTTTCAAGAAATAGAAACAATCATCCTGTGAGATAACAAAATTTGCTATTGAAAA
CATCGGTGCTGTTTAAAAATGTCATATATTTTCAAATATTAATAAATAAAGAAATAACT
ATCACATACACTCTAATTTTCTCTGGTGGAGTCACTAATATCCTAAGGCTAGGAAGGT
GAGGAATCAATACCAAGTAAAGGTCAGAGCTCTAGGATGGGAATGGGAGTCTCAGGTTTT
TAATTCTAGGACAGTCATTTGACACCTCATTTTCAAATGATAAACTGAAACAATAGGGTT
TATGTGGCCCACTCATATAACACACTTAGTTGGCAGAGGAGTCCCAGATTAGAATTTCTT
ACTTACTGAGTATAGTCAACCTATACTCAGTGTTGACTCCAGTCCTTAAACTCGGAGTGA
GAAAAGGAGGCTACAGCTTCTCATGATCTTCACATCTCCATCAGCATCCTCCCAAAGAC
ATCTCCCAAAAACATGGAATTTAAAGTAAAAGAAAGATTTTTTGTATGCAAATGCGGCT
TCAAGATGAAGCCTTTGGACCCCGATTCTTGCTCTTTCCACATGCCCCCTCACCTCTTC
CCATGCACCTGTCCCATCCCATCCATATTGTTGTCCCTAAATCCCATTGCAAAGATCC
TGGATCCACCAACAGCTATAACCTTTCTTTTTTTCATGACACTGCTTCTAAATCCTTTGCA
CAATTCTGAGAAATTGCTTCTATCAGGTGCTAATGGCATTTAACCTTTTAGGGATCTCC

TGCTTCAAATTAATAAATAATAAATGTATTCAATTCTATTGTCATGTTAATTTCAAAT
TTTTAACAAATTTTGGAGATGTTTGACAGTTTCAGGAGATTTGCTTAAACAAGACATGTA
TTTCATATATTACTTTAATACCAAAACCAATTGTGATTATGTCTATCTAATGGCAAATTT
GAAACATAATTCAGAGTTATTAATGTTACTTGAATTGATTATATTATATGGTCATAGAA
TTTTCTCACCAGTAGCTGTATGGCAATCCTTTAATTGCACAAAAGTTAACCCATAGTCT
CTTTTTTTAAGATAGTACTTTAAAATTTCCACTAAAAACATTAAAATACCAATTCATGT
ATAGTATAGCTATGTGGAACAGAACAGCCTGTGTTGCAACGCCAGCTTAATATTTTATTA
CTTCACATAATAAATAGGGAACGTATTTATCCACTGAGGTTGTAATTAGTTACAAGTAA
TGAATCTTTAGTGTTCTAATTCCAGAGCCTGGCAGATTTAGAACACCAGTTGACCCTGTC
TTGCTGGAAAATGAAGGAAGTGGGAGTAGAATTTCTCTGTAGGACAAGACAGCTTTGGA
TGGGAGGGACAATAGAAGCTTGCCAAAAACATGGGTCAAACCTGAACACAGATGGCTGTAG
CTGATAGAGGTGTCTATTATTGTGTTTTCTCTCAGCAGTTTTCTCTTTGTTTGTGAGTA
TTTTTATACTTACATGAAGAAATTTTGTGCTCAGCAACCAAGAGAAAATATACTAATAG
AATCCATTTTGTGGAAGAAAAATGTTGGTGGTAGATGTTGATGATGGGGTTGAGGTAG
TGTTGTGATTGAGCAGTATTAACGTAGGAGTAGAGGTGATTTTCTCGGAGTGCTGTTTAT
TATAAGTGTCTAAAATTAATATATCACATTATCCATTTACTGCTTAGCTTGCCTCTGTC
TTACACCTCCAATACTATTTGGGAAAAAAATGGCCTAAGTAAATGTATTCCATTAGTTAA
TAATATAATTTATAATACACGGAGGAAACATTTGAAGAAATAAACTATAATTTACATAT
TTTTTATAACTTCAGTGTTTCTAAAGTCAATTTTTAAGCTTCATTAAAGGATTTTCATG
TGTATTTCATTTTTTTTCTGGAGGAGTTCTATTTATTATTCTTGAGTACATCTGTTTT
CTGCATGGTGAAATATTAATAAATATATATTTGAAAGTCAGAATAGTTTTGTTCAAAT
ACTGGCTTAACTTTTCATGCTGTGTGACTTTAAGGGAGAAGCCAACTTCTCTGAACCAC
AGTACCTTTATCTGTTAAAAAAGAGAATTCATCCCTTAATAAGTGTGTGAGGAAAA
TGTGCAGTACACATAGCACTGCATATTTTCTAAAGACTGTTTGATTACTTTTGTGA
TGCTACATTCAGTTATTTACTTCTGTGTGGTCCAGAAGGCAATGATAAAAAAATGTAA
CAACTCCTGGTCATGTAAATAGCTACTGTTTCATACAAAAATTGTGATGACATTTTAAATG
ATACCACATAAAGGGAAATCAAGACCAATCTTACAAATTCTGTTTCTGGTTTTAAGGAA
ATTATTAAGGAACTGCATTAAAAATAACTCTGTGGTAATTTCTTCATTGTACTGTATCA
GGTAGAAAAATAATTTTTAAATGAGTGACTAGTGAGCCGCAAGACATAACCAAGAACAGA
AGGGTTATTAGCTAACAAAGGGAAGCAGATGTAATTTTTAAACATTGATTTTGCATTTAT
TTATTTAAGTAACTACAGAATTTTTAAATTTAATATAATGCAAAGGTAGAGTAGCAT
TTTCCAATTTATACACTATGTTTTGATAAGTGTGAGATACTGAAGTTATATTCTAAATAT
AATCCACCCGCTAGGGAAACGAATAAAAAATATAACCTTTGTTAAAAAGATAGGGTAAGTG
AATTGTTAATGACTATTCAGAAGTGAGACTTCAGAACATAGTTTGGCTCTAAAAGACCT
TTCTTTCATTTTAATATTATTTGAAACACTTAGTAAAGATAAATTTTTAAATGTTCAA
TGTCTGATCATTGTAAGCAATGTCATTTGTGAGCTCTATTTCTGGAAGTAAAGGAAATTA
CTTGAAAAGTGTCCATTCTGGTTGTGCTTTTTGAGTAAGTGGTCTTAGTTGTATTTTA
ATAGAGGAAATGAAACAAGGTACCACTCTTTAATGTATTTATTCTGATGTTGAGGCGAT
ATGTTAGAACAAATTTAATTATACTATGACTATGAAAACAAAATTAGGCAGAACTAGAGT
GATAGGCGGGAAGTCAATTGTTGATTTTCACTTAAATATCATATACTTATTAATATATGC
ATTACAAATATATCATTTAATTATCTCAACAACTCTAGAAGGTAAGTAATGGTATTTCCA
TTTTGTAGATGGAGTATCAAGGATCATGAAATTGTCAGTATATTGTTTTGTGGTAGAGCG
CCATTTGAGTTCATTTGGTTCCAAGGCTTTAGTTCTTTCCAGTACACTTCACTGGTCTTC
AATTGTTATAAATCACAGCCTGCTAATTTACAGAAAGGAGATTAAAAGCAAAAGCCATA
AATATAAATACGAAGTATTTGAATGCTGATCTATATCATAACTAGATCTTTCTTTTTGT
TTGGATTATAGTGAATTTTTAACTAGAAAAATATAAGCAAACAGTATTTTTGAAGGATGT
AATAACCACACTCCAAAGTACATCAATGAATCATATTAATTAACCATTAAATTAATCACA
TTAAAAGGAAAAGCATACTTAGGAAACACAGAAAATTTATTTTTAAGGGTTGAAGTTAT
AATTAAGTGAATTAATGAGATGTTAAATTAAGTTGAAAGGCACATTTGATCACTGAT
ATACCTAACTTGCCTCTAATTAATACTTAAAAATAAATGAATCAACATTTGCTTTTA
ATAATGACCCTGAGAGAAGGAAAAATATAGAATATTTAACTACAAGTTAATAACTAATAAT
TAGTGTAGATTTAGTAGTAGAAGAAAAGGTAAGATGGAGCCAATACTGTAACATACATTAT

ATGTTAAAACACTTATGTAAACACAGCCAGATATAATTATATGGAGGTTGCTTTAAGGAT
TACTGTTATTACATATAAAATTTTCCTTACAAGAGTAGGTGAACATAAAAAGACTATTGA
ATTCAAATCTAGGGAACTTGGGAAGAAAAATAAACTCTTTAGAGAGTCTATGTAATAC
ATGGGAAGAGTAAGGACTTTTGATTCAAACACACTTGGGTACAATCATGACTTGGGGAAG
CTGTCTTCCCAAGAGTATCACAGTATCAGTTGCCTCTTTGTGAAATCTATTTACAGA
GCAGCTTTGAGAAACAAACTTAAAAATGCACCCATGATACTACCCAAAATAAGTATCC
ATTCACCTCTCTCATTTTCTTCATTTGCATAGATGCTGGTTTTGTCATTCATCAGACA
AGATTGCCAGGATATAACATTGAGAACTATGTAAATGACACTACATCTTTTCATCCCTGT
TCTTAGATGAAGATAAGTTTGAGAATTTTCTTGGGGTGTTCAGTAGAGAATTAAACCTC
CTTAGGATTTCTGGTTTTGTCTGAAATGCAAGATGGACATGGAAGCAGAAGGGACATTA
ACCTGTTTCTCTGCCATTTGCCTGGATGTATATTTACATTGCTAAGATCTTGGTTCTG
CACACTGTCATTTAGACAATAACTAAGGATTTCCGAATTAGAAGGGATAAGTGTTAACTA
GGACCTTGTTCTTATGTTTTATTGTGGATAATGTGTTGGCCTTTGTACTACCTTCCCATC
CTCAACTATCATTCCAGTATTCAATATGCGAGCTACAGTGTTTCTTACTGGGGATTTAAA
TATGCATAGTTCAAGGTCAGATACACATTTTCAAATATGCATGGTTCAAAGGTAAGCAGT
TACCTTTAACAGGATAGCTTCTATTTATAGCTTTTATCCATGCCCTCAAGAGACTAGCAA
TCTAATAGGAAGACAAACATCACATAAACTATTATCAGAAAATCTAAAAGATTGCTGTGA
TGAAAAAGTTTACCAGCTGATTACGGTAAGTGGTTTCTGTAATCTCAACACAATTGAGA
TTATTTATCCTGTCTGAGCTTTTGGTTTTGCATTTATAAGGCTTTGTCTGCATATTTT
AAACTATTGGAAATGAATTTTTTTAATCTATGTGCAGAAAAAATATCAGGCAAATTATA
CCCACCTTTATTCTTCTGTTTTTAAATACTGAATATGAAATATTACATTCCTATGTAAT
TAAATAGCGTTTGATTTAAAGCATGTGGACCTTGGGCCTCATCCAAGGGATACTCTAGTG
TACCTTGGTCTGAGGCTGCTTATCAGTCCTGATGTGCTTCCCTTCCCTCCTGTTTGAA
TACAGGTCCATTCTGTGCTGTTACCATCTCTGTCCTAAGAGCTTCCTTGGCCTAAGAT
GCCCCGATGTATGTTTGTATTTGATGACATATTTTACATCCTGGTCAGGAAATATAATT
ATTCATCTCTCTACAACATTATCAACATTATCTCCTTTTTTTTGGAGACGGAGTCTTGCCC
TGTCGCCCAGGCTGGAGTACAGTGGCACGATCTTGGCTCATTACAACCTCTGCCTCCCGG
GTTCAAGCGATTCTCCTGCCTCAGCCTCCCGGGTTCAAGCGATTCTCCTGCCTCAGCCTC
CCGAGTAGCTGGGATTACAGGCTCATGCCACCACGCTGGCTAATTTTTTTGTATTTTA
GTAGAGACGGGGTTTACCGTGTTAGCCAGGATGGTCTCGATCTTCTGACCTCGTGATCC
GCCTGCCTCGGCCTCCCAAAGTGCTGGGATTATAGGAGTGAACCACCGCACCCAGCCTCC
AACATTATTTCTATGGTAATAGTTATTAACAATAATAGCATCATTATTAATAATTATGG
AACATTAACAGCAACTACCTCTAAACAACTAAACTAACATTTATTTAAACAAATGGC
TATTTATGCTATTTTATTCAAACCTCAAAATAATGCTATGAAATAGTTATCGTTGTTATT
ACCATTTCACTGATGAGAAAACTGAGGCTCAGGGAAGATTAGTTAACTCCCTTGGATCA
TACAATTAGGAAGACCTAGAGCCAAGATTTAGCCTAAGCAAAATTCATCCTTAGCAATA
GCACATCCTGACCTGGTCATATATAAGAATTTAATAGTAGTTTCTGATAAAGATATCGGT
TTGGAAAAATTTAAAAAATAATATTTTATTGTACATCTATAATATAATTGTATAGTTAAT
TGTATAATTGTATAATTGTATATGTGTATATGAGATAGACAGTTTAAAAAATATTACTTT
AAGTCCTTTTTGAAATGAATCGTGAATAAAAAATAGTTTGAATATAGAAGCAGGATTTAA
TCAAATGAATATAGAAAATATTCTTTAAATCACTGACAGAAAATACAAGAATTTAGAA
AATGAACGTTCAACATATTTTTTCAAGGGCTCTTATTCTTTCTATTTTGTGGATATTCA
ATATAAGCAAAATTTTAAATTCAAAAAATATTTAATTTTATATGTTGATATATTTAGTT
TGATTAATTCTCAAACTTAATGTACATGAGACTCTTAGGTGGATATTTATTTAAAT
GCATATTACTTTTCAAGATTTTATGAAAGTTCTTGAAACATATTTTAAACAAGTCCCTC
AAGGGATTCTGATGCAAATGTCTCGTAGAGCACATTGTAAGAAACAACCTTTTTTTTTT
TTTGAGACGGAGCCTCGCTCTGTCGCCCAGGCTGGAGTGCAGTGGCGTGATCTCGGCTAG
CTGCAAGCTCCGCTCCCGGGTTCACGCCATTCTCCTCCTGCCTCAGTCTCTGGAGAAGC
TGGGACTACAGGCGCCCGCCACCACGCCCGGCTAATTTTTTGTGTTTTTAGTAGAGACGG
GGTTTACCGTGTTAGCCAGGATGGTCTCGATCTCTTTTAAATAGGTTAGGTCATATATA
AGAATTTAATTACACATTTGCAATTTAGAAGCTCTTCTCTAAAGTTTTCCAGTTTCACT
AGTTCTTTGAAGTAGTAGTTGTGTAGCAGTTGCGGTGGCAATAGTAGTAGCAGCAGCAGT

AGTAGTATTAGCAGTAATAGTAACAGCATAGTAACAGTAGTAGTAGTAGGATAATCAACA
CATGGAACACTAAGGGATAGTTATCTTTCTAATGTGGTTGCTACTCAAACACATTACAA
GATTTTGGCATTAGTTGACAAGCTATTGCAAGCAATCATTGAGATAATAAACTATAACTT
AAGTAAAAATGTACACTGTCCTGTTTATTAAGTTTGTGTAATGTGTTATGTGTTGTTAT
GTAGCTTTAGAAACCTTCACTGACTTTTCAGCAATTACCTTTAACAGAATAGTTTTTAT
TTATTTTACATTTATTATACATTTAGAAAGAAGATGAGAGCAATAGTTTTTATTAGTA
TAAGGCAAACTTAACCTGATTAAACCTTCTTAGGAAAAGCAATAGTTCTGAAAGATATGCA
AGAAAAAAAATGACAAAAGTGAAAGAACTCTAGTGTTTCAAGAACAAGGAATGGCTCTAT
GAGCTATCCCTAGGAAAGCATATTTAAATGAACTAAAATAAGGATCTTTGCTTAGCAC
AGAATGTATGAGGTGTTTTAAAGAGGTGGCCTGAGGCAGTGGTTATATGGGAATTCAT
ACAAATGTTAGAGATTTGTTAGTTTTACATTATACTTCTATTAAGTGTAGAATTACTAT
TAGTATAGAGACCTCAAGTGTTTCTTATTTCTGAAGTCTTCTTAGTAGTGAAATGATGAG
GGGTATAGTAATGTCCATTTGTAATAAAAATGATTAATGAAAAATAGAATTTTTATTTT
TTAACTTTTAGGATTCATCATATGCTGAACATCTTTTAAAGTTCTGACTGTATTGTGCA
ATGTCTTTAATTCATGTGTGTTCTTCTATCTAAAAATCATTTACATTTACAAATAAG
AATATTTTACCTGCACCAATCAAGATACAATTAGTAGCTATAAATGTAACATTCTATAT
GTAACAGAATAAGAAAACAAGAGAAAAAATGTAACCTTAGCATAAATTGAAACATGTGCC
TAGCCATCTGGAGCACTTCTGCATAATATAAAGACATTTGACATTTTAAATAAAGGATTT
TGAAATAAACAAGAATCTTTTGTGCTTCCAAAGACATTGATTTATTGAGACTATGTGT
GGCTTTTCATCATATACAAAAGATTAATGATTTCTTAAAGTCCTTGCATTTCTTCATTT
TATAAATGTATACACACAGTTAAGAAAAATGAATCCTTGAAGTCCTGTGAAGAAAGGTG
ACAGGAAAATAGTTCAAAGTATTTCAATTTAAATAACATCAAATATTATAAAATATAAATT
TTCTCAAAGTAAAAAATGAGCTTGGCATTATTGAATGTTGGTTGAATGATAAATGCATA
AGTTTATGATTATCCCAATACTATATATGTGATTTTTATCAAACATATTAAAGAGTACTA
TAAAATAATTTTAACTTTTGATCTATAAATTTCTAAAATTTTCAGCACGGTGATTGGTGTT
GATAAATTTAAAGCATCAAACAGATCTTGTCTTATCAATAAGAAGTAGTTTAAATAAACA
TTTTTGAAAGTAAAATTTTATCAAGCTCAAATAATTTCAAAGCATAGTTCAAGAGATTA
GAAAGCTTTTATGGTATAAAATATGAAATTGATACTGGTTTTGTTGAGAATCCCTTCATT
GACTTTTCAGCACTTACCTTTAACAGGATTGTTTTATTACATATTTTACATTTATTAT
ACATTTAGAAAGAAGATGAGAGCAATAGCTTTTTATTAGTATATGGCAAACCTAAACTGA
TTAAAGCTTCAGTTAAATTTTGCCTTATACACTCATATTTCTGTTAAAAATACAATTTA
AATTTAGATATGTTTACATTTAAACACTCAGCACATTATAAACTTAACTATTGACTTAAA
AATTTTGTAGACGTCATCATATATGTTTGAATTTATTTTTTTATTACAATAACAATATG
GTCAAGAATGAAACACAATTTTATATTACTTTATAGCTAAGAATGTTAAATGAGATAAA
AATTCAGGTGTAATTTTGGTTCATTCTTTTTCACTACTACTTTTATTTCTTAGTTATT
GCATTAAATCAGGATTTTAGAGAAATATCCATCCAATGTACAGTCTTTTGAGTAAATA
TTCCAATGCAATAAATCAATGCAATATCATTTTGAAATTATAAATTGGGTATAATTAA
CTATATTGGCTAATATTAGTTTTATAAGTGTTTTAATAACTACATAGCAAAAGTTCTGCC
CAATTTTAAATGTAATTTAGAAGCTGTGTAAATTTAAGTAATCATTTACGCTTTTAAAT
CATATTCATATTCATATATTTTGGTTTCCAAAATAGTGGTTTTTATAAGGCCTCAATTTT
TTCCCATGTAAATTGAGGTATGCTATTGAGTTCTCTGAATCTGCTCTGTCCATAAAGA
TAGCTTATTCTCCTTCAGACAGGGCGGATGATATTTCCAGAAGCAAGTCAGTGTTAATAC
CTAGTTACGTTAAACCATATCTCTGCTATTTTAGAAACAATGATGAATTAAGCAGCTTCA
GTTCTTGGGGCAGCATCCAGGGCTAGAACCCATAGCACCAAGTCCATGGGCTCCTCCCAC
TTCACCTCCTGTGCATGTTACCAGCCATTTAATCTGTTTTGGCCCCTAAATCAGTCAGGA
ATTTCCATATGATTTACAACCTCCATTTGCTAAGAAGAAAAAATGAAGAACTTAAA
TTTCATCTCTTAATATAGTTTTAATAGCACTTAATAATTTTATCTTAGAATTTTGAACAC
ATTTTAAACTCTGAGTTGAGTATTGACTACCTACTATGTGAAGAACTTTACTGCTCA
AGAATATACGTTAAAAATACATATTGACCCAGCTCTGAGAGAAAAATTTGAGAATCCACAC
TACAGAATAAAAGAAATACAGTAGAAATTGTGGAAGAGGATACAAAGTAAATTAGTTAAG
CATATTATTAGGCAGGTTGATTCGAAAGGGCTTTCTGAAAAAAGTTTGATCTTAGATTT
ACATGAATTGTTAAATATAAATAAAAAAGAGATAAAGCATGAGATATTTCCAAAAGCATAT

TTAATCCAGGCCTGTGCAAAAGGAGGGTGAAGAACAGTAATGAATTGGTCTCTGGATCAT
GTTGTGTTCTAATAGATGATTTGATAAAGACTTGGTATGGGATGTGAGTTAGAGGAATTG
AGCAGGAGGAGTGATTAGGAGAGAGAGCCTTTATTGCTAGGTAAAGTAATTTACATTTT
TGAAGTTGTGGGAACATCTTATAACTCAATTACTAGAATGCAAAAAGTTGCTGATGAATG
TTGAGCAATGCTGTAAGTTTTCCAAAGCATATCCAAGAGAGATTGCATTTGGATTTGCAA
TAAGATTATCTCCTTTATACATCTATTCTTTAATGTATTCTACTATATTCTACTCTTGA
TTCCCTTTTCTGTGGTGTATGGATTTCCCAACTACCTGAAGAATTGAGAAGCAAATTT
ATTAGGTGAATTATTCCAATTTCTAGTAATTAACAGCATGAACATAGTTAGTCTAGGA
GGCCTGGTGTATTTTAATTCATTTTCTTGTGAGTTTACTGAAGTGGAGATTATCCAT
TACAGCCAGAGGCTTTAACGACCAGAAAATTCTTCAGCATACCTTAAACACCAATTTCCC
ATGTTGAAATACTTAATCACCCTCTTGCTTCTTGGGTGCTGAAAAGAAGTTTGATCTT
AGATTACCTGAATTGCTAAATATAAATAAAAAAGAGAGAAAACGAGATATTTTCATAACCA
AATAGTATCTGTGATGCCAATGGGCGTTATTCTGCTTCTCTATGTGGAAGATTCCTTCTC
ATCATTCACTGTTTTGGTCAAGAACCCCTGATGAAAAAATCTTTGGTTGCCTCCAGG
TAGAGTTAGTCTCTTAAGTTCACCATTTTTATTACACCATAATTGTAATGCTTACC
CCATTGATAAATTACTTGCAATTTCTAACTGTCCCCCTGCCCCACCACCATGACTATG
ATCTCTTTGTGCCTGGTGTATTTCTCACTCATCCCTGGGTCCTCCATGTCTTACAGTGGT
GCCTGGCAGATGGCAATAATCAATAAATGCCAAGAGAATGAATACATTGAAATGAATTTG
TGAATGGATGAGTTTTGCTTTCTTGGTACTGTAGTGATTGTTATTTGCAGATTATTTCT
GTCTTTTACCTAATTTAGAAGGTCCATGTGTAATTTGGTCATGGTTTGAAGTCTAGTAA
AAACAAAGGTCATCCTTTATTTAAATTCCCACAGTAGCTGCTGCTTCCATTTACACATTG
TAGATGGTCAACGATTGTTTAAATTTGGTGAGCAGATGAATATCCAGGTGCTTCTGGAG
GAAAAGTGAATGGAGCAGATCATCCTCCAATTAATCACTGCAATGTAATTTTTCATATG
GGAATAGAACAGCGAAAATATTCTCTGCAACGAAAATATTGGACAATTAAGGTGCTAA
GATTGCCTTTTTGTGTTTTTGGTTTGGGTCTCTGTTGAAATGACACTAGTGAGCTTC
AGGTTTCTTCTGTTAACTTTTGTGGAAGGCCAAAGAGGAATGATTAAGGACTTCTAA
AGAAGTATTGAAAAAACAACACAAAAAGTGGTGACAAAAATACTTATTATTTCTT
TAATTTTTTCTGCAATTTTGTGATGTTGTTATTACTACCATTTAAATATAGTTAATAT
TAATGATTACTTTTAGTAGCATTTAAGGATTTTCATCTTCAAATTAATACTCTGGCATG
TATTATTTATGCACTTTGAATTGCTTGCATGTTGAAATTTCTTTGGCCTCTAATTCA
ATTAGAATGCCCTTAGAGTTTTGAAGTTGCAGTTTATATACTTACCTTATTAGCTATA
AATGGAATACAGATTTACCTTAAATGATCTAGTTGTCTATATTTAATCACATATATA
CATGTAGTGCTATAAATGTTAACCAGGTAGATTTTCCCAGCTGCCTAGCCAAAGAGAAC
GGTATTAGTGTCACAGTTCAGTTGAGCTGTTGTTATCTGTATGAGATCAATCTTTGGAG
AAGGCAGTGAAGGTTTTCTATTAAATTTGCTTTCAGCAAGTCTCCCCCTTTTTTTTT
TATATATAATTTAAGTACTGCTCTTAGTGGGTCACTTAGACTTTGAGAATTATTCATTT
GTTAGCCCAAACACTAAAACCTTGCTCTTTAACTCTGATTAGTGACACTTTAATAAAG
TCATTTGAAGTTCAGTGGACTGAATTTTCAAATTTCTGATGTTTCTATGGTCACGGTA
GAGCAACCTGTATTGAAGCTGTACACAACTTTTAAATGCAAATCTTGAAAGCTGTGT
GTAATTTTGTATCTGACTTCAACAGGGACTGCAAAATGTGAGGGATTAAAAATAAAG
CGGTAGCAGTGTTCCTTCTTTTGTTCCTTCAAGTTGGGGTACAGTAAGCTTTGGGAAA
TAGAGAAGTTGTCACCTTGACTAACTTGATTCTCTGAGAAAAAAAACCTGCAGATTAA
ACTTTTATGGCTATACTTTTTTTTGTACAAACCAATGAGCACAAAACCTCATTTTCTCC
ACATGATTAGACAATAAGGGTAATGCAAACTATTGAATCATAAATTTCTTAGAGATAGAG
CCTTGAATTTTTTTTGAAGAAAGTAAAGAAAAAGTATATTCAATGGCTATAATTAAATCA
TGCACGGTGAACCCACTTTGGAGGAATTACTTCATTTTGTATTGCATTGCGACTTGAGTG
AACATTTACAACACGTGAGAATGGAAAGGATGAAAAATTATGGTTGTCTTTCGGTTCACA
AGAATTCAGGAGGCAGGTCATTGAGTTAATTTTTCATGGGAAGACTAACTCTGGCCTGCT
CGCATATTCAGAGGCCAAACACCTGGTATTGACAGCCTCAATTTGGGAGGGGAACATGC
AGCAGCATTGTGCCATGGTTTGTGAGGAAAAACAAGGGAAGATTTAAACAAAGCTGTG
AATAGGAACAGTAGCCCTTGCTGTCTGAAGCTGATTGACTTTTCTTTTGTAGACCTTTGT
GAAAGTGTTACCCTCTCCTTTAAATAAGGGCTATACTGTGGTAAGAGAAATATTTAAGAT

ATAATTCAGTGACTCTAGGAATGGGAGCATTTACACTTCTTGAAAGAAATCAGGTGAGAG
CTATTAATTGCAAATGCCATATGAAAGCATCAGCCTGAGCGGTAGGCTCAGTGCTAGGCA
AGGCATATATAAGAATACTAATACTAATAGGCATTTTTTCCAAACCATAGATATATATTA
CCAATCATATGTTATAAATTATATATTATCATAATATATAATATATGGCATATATTATGT
CTATGTATTTCAATCATATAACCTATTTACATATTTTATATACAGAAACATACACATGTA
GATAAAAAGACCAATCAATTAATGGTACTAACAAAAGAAAGATAAGAAAAATCTGTA
TAGTCATATTTACAGATATTTTTAGAAGTAAAAATAAATGTCAACAGTACATCCAGTGGA
AAAATAGTTTTCTAGAAGTGCCTTCTTTTTCCAGTACCTCTTCAGTTTATTGACCTTTG
AAGAGATGGCTGCTAACACTTAACTACCAACATTTGTTTAAAAAAGAAAAATTAGTTGT
ACTTTTGAATATATATTTGATATATAATTTGAATATTGTATTTAAATATAAAGCATAAA
TATAAATCATAAATAAAAATTACTAATAAATTACAATTTGTAAGTGTGCTCACTGTGTTA
TATTTCCATTTGGATTTGAATCCACTTATCAGACTACAATAGAAATTACATTTATTTTTA
AAAATTAATACAGATTACATAAAAATACTAAGATGATTTAGTACATACTTACTAAAATTT
TAAGAAGACCCAAGACTTTATAGTAGGACCTCTGAGTTATATGTCTGAAAATTAATTGAC
TTTTGGATTTGAATATATTACTAATTCAGTTAGCCAGTTAATTGGATTTATCAGTTGTT
AAGAGTTAGCAGTTTATCATAAATCATATTGATGCTTAATACCTCTGCATCTATTAT
TTGGGATGTCTGGAGTTGAAAACTCCAGACACAATTTAAATGAACTAGAAAAAATCATA
AGGTTTAGGATCAGAAGGCCAGAGTTCAAATTTACATCACTCAGTCCCTGAACTAGCT
CATGATGCTGTAAAAGTTGCACAATATTTCTGAACCTCGATTTCTTTATCCATAAAACAA
TGATGTTAATATTTACATTGTTTAGTTATTGTGTGCTCTAATTAGTTAATGTACCAAAC
ACCTAACATTGTAGTTTCTATACGAAGCATATTTAAGGAAATAATGTTTATCACATAAAT
TGGAACGTATTCTTTTATATATAAAATGCCAATTAATATACAACCTTAGAGTTCAGAGA
ACACAACAAAATAGTAGGGTGCCACATCTGCAATATGAAGAACAATGAAGTTTTTTATG
TAGGGTGTAACCTTCAGAAAGTTGAAGGATCCTTTCTGATCTCATGTGCTCTGCTCATCA
GTGTATCCCCAGCGCTGATCCTGATGCCTGATACCTAGAGAGCAATCAATAATTAATGCT
ATATTGAGGAAGTGAACCAACACCCAGGATTAGAGTGGAGAAAACTAATTTTCTCCACT
CTAGGTATGACCACTCAAGGTAGTACACTAGAGTAGTTCTTCTTTTTTAATATGAATAC
ACAAATTAATAATCCTGGAAAATATGTTGAGATTAAGTAAATAGTCAAACCTGGAGCAAT
TATCCAAGACAGCCATATAAGGCTGTCTGCATGGATAATAGCCATAAATAATGTTGATAAT
TCTATGTTTAATTGTGATCGAAGCCGACATCTTTTTCTAAAAGGGTGTGCTGAGTTTAT
TATGAAATTAATTTAGGATAATTTATATTTTAGTGATCACATCTTAGAGAAAACTGCAG
GCATATTTTATGATGCTAAGGTTGGAGAAATCTAAGAGTTCTCTATAGTTAATTTCTGA
AAATAGAAGTTAGTTTTCAAAAGTCCAAACAAATCAGGAAGATTAGAACTAAAATAAAT
TGTCATATAAGAAATAATGAATCTATGCATTGGGGATGTTGCATTTAGTTTTCGTTACCA
CGATTAGGAAAGATTCTGAAAAGGATTAAATATCCAGAGGGGTTTAGAAGAGTATACT
AAAAATATGAAAATTAGGACTCTTAAGTCTATGGAAGAAAATATAAAAGGCATTTTTGTT
GAAGTTTATTAATGATGTAAATTATTACTGAACTGCATTTGTTTTGAATTTTCCAGTA
TATTAACAATGGCTAACAAATTATAGTTGAGAGAAATATATTTAGGAAAAGTAATGCAT
TATTCAGCATTCTATTATCTATACTATATAACACATGTGTTATGGGCTGAAATTACACC
AGTATCACATGAGGGTAAATGGGTTGAAAGTGTAAGTTTAAAGAGTTTCAAATGAGTTT
GTGAATGGATATCATACCCTCCACAAATGACAGAGATGGACTATTAAATCAGAGTTGGT
AGTTTTTGCTTTGTTTACTGTGTTTCTCATTACCCTAAATGGTCCTATCTATAACAAG
CTTTGGAAAAGCACCATGCACCTGAAATTCCTGCATTCTGATGTTTCATACCTAGAGAGAT
TTATGGTGACATAAGCAGCCAAATAGCACAAGTGAATTTTATATGAAGTATATGACATG
CATGATTCAATATATATGCCCACTTTTAAATATACCAATAGTATATTTGGACTATAATAA
TGAATTCATTTCAAATATTGTCATTTTGCTTGACATTCGTATCATCACATAAGCTAGATT
CCCGTTATATAAAGATGCACAAAGGCTCATTTAGAAATAAAAAACAAATAACTGTTATTA
TTTTTACAAAGGTGAAGGACAATAAAAATTGACTAAAATCCTGAAAAACAAATTCAGAG
TGCTTCAGTTGGGCCCTAACTCAATGCGCAATCTTGACACATATATTGAGTTATAATTA
TTTACTACATTATATTTATTTTGTAACTGTCGTCAGTTTTTATGTATGGATCTATTAAT
TTCAATGAAATTTGGATCCAGTAAATTTCTATACAATGGAGTTTGGTTATTTGGCACTTC
ATAAAAATGTACCTTTACATAATGAATGAATAATTTATATTATGATTTCTCTTGTGTAG

GACAGTTCTTGCAGGAATACAAAGTAATGGTAAATTTTGATTTAAAGTGCAGCAATTCAT
GCACTTTAGAGCCAGTTGGATGCCAAAGTAAGTTGGTTGGTGTATTTCTAGTTACAGT
CAGTGTCTTTCTTTCTTTCTACCAATGAGATGAGATATTTGAAGGCTTTTTCTTTCTTAG
GCCATATCAATTCAAAGAAAATGAGAAACCATAGATTTTGGGTTGGCCTTACAATGTGCT
GTCATTTTCATCTTTCCAAATATAAAAATCAAACTTCATCCTACTTCACTTAATCTTTTC
AAAGCTGTGTTCTTAATGCTGATTTTTTAAATCAATTTCAATGACTTCGTTTCTTGTA
TACAGCAGAAAGAATCCAGTTTGGTCTTTGTAAGGAGTGAAAGACTAGGAAGGAAGTATG
TGTTGTATAGTCAGTGCTTCAGAGTTGGTAGATTTTGCTTTTGTTTACTGAGTTTCTCAT
TCAGTCCGAATGTTCTATCTATAACAAGCTTTGGAGAAGCACCTTTGTCCCAGAGCTG
GCCTCCAGGAAGGCTTGATCCTTACAAGTTTGAAAAATGGTACTGGCGGTCATCCAT
AGGAAAACAGAGCAAGTTTACAAAGTTCCTGCTGATTTCTTGAAAGTACTCCCTCTCA
TTCTCTACAGTAAGCCATTGAATGTTACTAGGGATGGACACTAAGCAGAAAGATTTCTGA
GTATCTATTCATCTTCCCAATCAGACAGTCCTTTAAATTTAAAGAAGAATGCCTGACCC
TTAAGACAGGGAGGTTTCATCATATTTCCCATCTGACAGTTTGAATGAAAGGACACATA
AATTATTATTATTATTGAATTAGAGGTATGGGTATGATGACTGAGGTTTCTCAGCAG
AAGATTTCTGATTCCATGCTTGCATCATTAGACAGCCAACAGAAGCTGCACTTAGTGGC
CGCGTGATGTGATTGATTGGTTAGATTGGAATAAACTTTTTGTTGTTTTTAAATCCA
ATATTACTTTATTTTTATTTAATTAACCTTACATTCAAATGCAATTGATCATATGATTTTC
TAATTTTAGGATTAATAATATATATGAAGATAAGTTTGGTGCCACCAATTTGAAATTAAT
GTACAGATAAAACAATAGAACAATTACTGATACAGGCCATCACTGATACAGTAAGTACTT
TAGAATGCATCATAAATTTCAATTTTCATATGGATTTGGTAAATGTGCTTTTAGTTACAGA
ATTGTTAGTCATAAATCAACTAGCAAAACAGAATTTCAAATTTTGAGAAACCATGAACC
ATGTGATGCATGTTATTTGTTATCCTCTGCTGTCTCTTAAGAAATTATTTTTTCTAGT
CACATTATTTGTATCAGCCTGTCTGCAAACTGAGTCTGTGCATTTCTCTGTCTTCAC
AATAAATTCAGTTCCATTGTATGTGCAAGAGTTCCTTGTTTCATACCATAAGCTTTTTAGCT
GTTTCATGATAGCTTAGTTTTGTTAATATATAGAACCAAACTCCCATATGAAGTGAGGAA
ATAAATGTGTAATGAGTAAGAAGGCAGAAATTTGTTTGATTTTCAAACCTTGTTACTG
AAAGTCAGAAATGTTTGACACATGTTCTCCTGATTATGATCAGTGATTAACTTTTGTA
TTAAGAATCTTCTACCAGAAATACTCATCCTAAGAAAGATGAATTCCTCAGAAATTTTC
CCATTTATTACTAAATTCTAGACACTTCCAACCTCAGAACAACTTGGTTTTGAGGAATAC
CAAGTAGGCACAGGATTTAAGGCAGAAATTCAGCTAATTCAGAACGGTTGATGCTACCT
GTTGAAGCATTTTATAGTGGAATTTCAATAAACAGTAGATATATTATGCCCTTGATTTA
TTGTAGTATACTTTTATTTTCCCAACAAATCCTTTTTTAAAAAGGGATTTAGGTTGT
TTCAAGTATATACTAATTTAATTGTCATGATTTGTCTAGCTTATAGAATACTACTTATGA
AGACTATTATACATTGAAGTTCTGTGCTTAAATAGAATATAGCTCTAAGTAATTACGTTA
GTGGTAATTAATAATTTCTGGAAACATTTTTGGTCACCTGGTGTGATTTTCAAACCT
AGAGCTGAAAAAACCTCAAGGGCCAGGGAAAACTTTGTCACTAGTACTTCTCACCCTCT
TCACCATTTCAATCAGTATAGCTCCAAGTGTAACAGCTTTAAATGATTTCTTCCATGTAA
CATTAGTTATTTTTAATATAATAATTTATTGTTCTCAAAAAATGTTTACACAGAATAGG
TAATCACTAAATGTTTTGTCTGAAAATGCACTAGCATGCAGGCCACCAACATATTTGGGA
AATACATCTCCTGTGCTTGACTGTTCTCTTTAAGTAAAACTTCTTTTTCCATTGTTA
CTTTTTAAGCCTATTGATCAGTGTTTTCTGCACCTTCATTTGTGTACATCACAATGAGGAC
ATTTAAAAAATGGGCTTCCCTAATTTAGAGACAAGTTCTTCAGATTGCTTCCCATATG
TGCAATACTTTCTCTCTGAGAGCTGCCAGTCTTCTTTGTAGGGCTAGCACGCATACATT
GCCCTTTTCTGAAATGAACTAGGGCTTTCTCTGCTTCTTCAGCATATTGCAGCCTTGG
CTTTAAAGAAAAAATGCCAGAGTCAACTGTATAAGCCATAAGACTACACTGAATTCTAC
TGGATGCAGTGATGTATTAATAAATGATTTATTTCCATATTGCTGTTTCTCAGCAGAA
TGCCTTGGACATAATAGGACCTTGATGAATGTGTTTTAATCCTGGTTAGCCCTCTTCT
GTATGGAAATCTTAATAATATTATTTCACTCTAATTTGAAGATATTGTCAAATCTTTGTG
AAATTTTAGCAGATTGTAAATTTTAGAAAGATCCAAAGGAAACATTGTTAATACTAATAA
AGATTTTATGTGACCAAAATCGGATCTTATTTTTCAAGAAATACTCAGTTCTATAGAAAG
TTTGGCCTTCAGTCAGAATGACTTCTTCATTCAATCAGTTTTATAATAATTTGAAAATGA

AAACCAGCCAGCATTACTGATGATAGTTTACAGAAGTTTCACCAAAACATTACTTCATC
ACAAACAAAGAACTATTTCATTGCCTGTTAGGCATCATCTCAACATCTGCCACTATTGG
CTTGTCATTTTTATATTGTTTTAGAATATGATATAAATAATTTTTTATTATTTCTCTT
TAGTTTTAAATTGTACTGTGCCCCAAATTGGTATTGGCTCAGAAATGAGATGAATATGTT
TTAAAGTAAGTCCTTTTCATAATATGTTTAGTATTCTTTGTCAATCTTTAGTTGGCTTA
GAGCTTGATATTATCTTTAAAAACAGAAATTAATACTTGTCTTAGAGTAAAACAGTGCT
GTAGCAGAGCTCACGGTTACATTGATAAACTATACATACATATATGTATTATATATTTAT
CTTAAGTAGAACTATCAGTGCTGGTATTGTTGTAAGGGAGATCTGTGGTTTCTATAATA
TGACTTATATGCATACATACTTTATTAAGAGTGAACATTTGTTACATTTTAATCGTTAGA
GTAAATATTTAGTGACTGAAAAATTCCAAATGAAGACTAAGTAAATATGTTTTGGTTG
AATTGTGAAGTTTGAGAATTTGCAAAGCCATAATGATAGAATCAACCCAAAGGTCCAGA
AATTTTCAATAATCTATCATCTTATTTAAAAATTATTATACAATAAAAAAATTGTGTTTTA
ATCGCATGAGTAGACAGATGTTTATGCTGTTATTAGCGAATCTTGCAAAAGTGAGTGTA
ATTCATAGAATAAAACAATGTTGGAAATATGCTTTCTTAAAGGCAATAAAAGTTGAAGTC
TATGTATCAAAGACAAAGGTGGGAAATTGATTGCATTTATAATATTTTGGAAAAATTC
TGAAACTGCTATTACTAAGATTATTTTATAAGATTTTACCCAGATTTTCATAGGTAAT
AAATGGGCAAATAACTTATCGTTTTCCCTAGTCAGATCGCTGGTGTTAAATTAATATAAA
GTTTTAATATAAGGGATTTTTATTAATAAAGTATTTTGGTAACACTCAACATGTACTTTA
TTTGCTTTTGGATATGTTTTGATTCAAATATAGAAAAGAATAACTAAGATACTTTGGTG
TTATATATGGATATAGTCAACTTAGAAAATTATACACATTGAATCTTTTTATTGTGCTTA
CTCAAAATGAATTGGTTTCATTTCTTTGCTGATGGAATATTGAACACGCTCTCACTCTG
ATGTACAGTTATAGTGATACTAGGTAAGAAAAGAGAGTCCCAGGCCAATTTAAACAATG
ATAGGGTTTGCTTTCTGAATTCTGAGAAAGCTAGTTCAGGGGAAGAAATGAAACCACAGT
GTAGAGGGTCAATGGTGAAGGTGAAAAATTAGTATCAAGCCTCAGTTCAACAGGAAAAT
GTGTGTGGAAATGGAAGAATGAAGGTAATATTGGTAGATGGGAGAATAGTAAACAAGCCT
TTCAGAGTTTAAATGAAAAAAAAAAAAAAAAACTGGTTAGAACAGTTGGGTAAAGAGGAAAA
TAAATCTAAAGTTTAGTTTTAACTTGATCAGAGTCCTGGATCAAACAGTGGACCTCAAA
GGAAGTGTCAAAGCAGTACTCCTAGTATGGTTTCTGAGACTTTCTGAATTTAAGATTC
AGAAACGTGGGAGGAAGTCATACTAGCTTAGCTTCAACTGCACATTTATATTATGACAGT
TTTTCTGTATCCACATATTTTTTAAATTTAGACATGAATATAGAGAAATTTAGTATAG
CCTCTACTTATTAATGTTAGTACTTTACTTTTACCAAATAATCCCTGCATATCATCA
AAAATTTATTTTTAGCCAATTTAATTTAGAGAACCTTCATATGAGGTATTGACACCG
GATAGAAAATTAAGGAATTTTAAATATATATTTCTTTCCAAGAAAATGATTTATACAT
TCATGTAATAATTTGTATTACCCTAAAACATATTTACATCTCTAAAGTAAATTAGTTTC
TAAGGTGGATATGAGAGTTGGCTAGTTATAACAGAAAATTTGGATATCCTCCACATATTT
TAATGTAACAAAAAACAATTTCTTTGATCCATCTCATTACAGAATGTGTTCCAGATAT
AATCCAAATGCATGTAGGTAAATGGAAGAAAAAATTGGATCCTGGAGTTGTACTGATCT
GATGGAAATAATATTACGAACCTGGTTTGAGTGTGAGCTCTTTTTACTAGCTTTGTGCCC
TTGGTCAAGTTACTTGATTTTTGTTAACTTACGCTTTCTTATCTGTGAATGAGGAAACAC
CTATGTTTGGGGTTTTGTAAAGATTAGAGAATGTAATTTATGCATGGTACACATGCCTTT
TATGATACAGGTAAATATTTACATCTTCATCTCATTGTTTCTGGTGATGTAGAGGTG
GTAGGTCAATCTTTTTTCTTTTTTCTCCAATAATCAGTGGACTCAATTGAATTGGA
GAAGGGGTGCTTGGTGGAAGAGAAAAACATATGGCACTGATGATGATGATGATGACAA
AGTTGATTTGCAATTTTTAACAGATTATCTTTCTATAGGGCCAGAAGCCATATTGTCTC
TTCCTTCCCCAGATATTCTTACATTAGAGGATTTTTCTATCACAGTTGCACCCCTTGAT
TGACATAGCAATATCCTATAAGTAGCAGCCCTGCTGTTTGGATCATGTTTTTTTTCTGTC
GGCAGTGTATCACAAGTATTTTCTCAGTGGCCTAAACAGACCCTGAGTGGAAGGCTGGT
AAAAGCAACCTCGTCTGCATGCATCACTTTGAATGATTTCAAAGAGGAAAGAAGCAGCTG
TGACAATGTTACATGAACCACTCAGAGTGGCCTTATCTTTGTAGTCTAACAATAATAGT
ACACCCTGGCTGCATTCTCTGCTTGAGAAGAGCAAAGTTGCCTAAGAGCCATCCATACA
TTTGATTCTTGACATGTCTTAAAGTTGGATGTATGATAAAGCTAATGACATCTTTACA
TCCCTGAGTAATTTGTCTTGAAAGTAAATGTAGAGAAATGCTCTTTATGGATTTATTGCA

TGTGTGGTCAATATTTATTTTATGCAGATATATGAACTAATATGTAACAGATTGTTATTT
ACAAAAGAAATTTGAAGTTTTATTTTACTAGCTAAAGAAATATAAAAAGAAGTTTT
CTACATATGCAGATCATTATAGAAATAATATTCTTCTCTAAATTTGTAGATATAGGGTGT
TTTGTTTTTTGTTTTTTTTTTTTTTTTGGCATTATAGGTTACAAGCTATGTTTAGGTAT
TTCAGAGTGCCCCATATATGAGTTATTTTAAAAAGTGACAATATTACAGGTGACAAGACT
AATATAAGTAGAATATAGTTGAGTTACAGAATATGTTGTAATAGTCTTTACAATGCACAT
CCAATGAACATCATATAGACAGATATTAATATCAATATATCTACACATAATTGATATATA
GTATATATTATAATAAATATAAGATATGATAATATAACAGATAATATAATAGAAATCATA
GATATCTGTATATCAATAGATACAGACTATAAGTCAATGGCGGGATACTGCACATTGCAT
TAAATCTCCACTAGTCTTTGTTGAACATTCATGAATCTAAAAATGTAAAAATTAAGTCC
CCTGAGGGAGTAACTATGTCTTGCATGCCTTCTATTTTAATATCTCAGTATAGCTCCCC
CAACACTTCCCATTATGTGCTTTTATACAAAGCAACCAGTAATAATGCTGAATGAATAAA
AGTGAACATAGCATATAATGTATTCCATATGTATAAAACAATATTCACATGAATGAAATT
GATCCATCAGTGTGTTCAACTATGAGTCTGTGTTTCTGAGTACCTGTAAACAAAAAGAAG
CGTTGAAACCTTTTAGGGAGTTATGAGAAATAATAGAGTAAATGATAAATACATTTTATA
CTGAATAAATATACCTGAATGAGTTATTCCAGTTTTTTCATGAATTTAGGCCAAATGTACA
GTCTCTCGATTGATAATAAAATTTGTCATTTTCTCAGTTAAATTGATACAGATTCTTGTA
GAGCAAAAAGACCTAAAGATAAGATTTGGGATAGATTTATACCTTAACCCAGGTAATAAA
TAGATTATTCGGGTACTTTAATAGTAACAAAGGAATCAAATGGAATTTTAATTGAAATGA
TTTTACTAATATGGTCATTAGCATTAAGTAAATGAGATACATTTGCCATTTAGCTGTAT
TTGTTAACATTAGATTTTCATACAAATACAAGAGATGTTATTTTAACTGCTCATTCTTAT
GGATTTTACTGCTTTCATAAAGAGAAACAAAATATTTTATCTCCTCATTGCAATTTAGG
CTTAGGGAGTAACAACTAAGCATATACATTGTTGAACACTGCTGGCATGTGCTTTGTGAA
TATGTTTGAATCAAGGGCCTTTACAAAGGGCTCAGACCTTCCTCCTAGGGGGTTGTCAAT
TACCGTGGATGCTCTCGTTTGTGTGGTAAACAGCCTCAGAAAACGTCTTGACATTGTCA
ATTCCAACAGATTAATGAAGTAACTGGGCCATACATCCCTTCCCCTTACATATGAAAGG
AAAAGCTAACTACTTCATAGAGCTGTAAGATTGTTTCTTTTACCCCTTGGTATTAGTTT
CCTTTGTAGTCAGTTAAGTATGGTTCTTTTAAAGTAAGCCAGACCAGAATTCTTTAAGTA
AGCCAGCTTGGCGGGGGAACTCCAGTGTGATTATAAGTGAGTATATAGGAAAAAAGAA
ATGAAATTAACCTTTTTTCTTTAGAAATCTTGTGTTTAAATTTATGTTCCAGTGTTTTA
AATAACTGAAACCTTATTATGGACAAATTTACCTGTTATGTTAGGAGAAATGAGTTTCAT
TTACCATCTTCATCAGCGATCCCCAACCTTTTTGGCACCAGGGACCGTTTCATGGAAGA
CAATTTTCCATGGACCCAGGTGGAGGGATAGTTTCAGGATGATTCAAGTGCATTACATT
TATCGTGCACTTTATTTCTATTATTATTATATTGTAATATCTAATGAAATAGTTATACAA
CTCATCATAATGCAGAATTAGTGGGAGTCCTGAACTCGTTTTCTGCACTAGATGTTCC
CATCTGGGTATAAAGGGATACAGTGACAGATCATCACCATTGGATTCTCATAAGGAGCGT
GCAACTTAGATCCCTCACATGCGCACTTCACAATAGGGTTTGTGCTCCTATGAGAATCTA
ATGCTGTGGCTGATCTGACAGGAGGCAGAGCTCAGGTGATAAAGTGAGTGATGGGAAGAT
GGGAAGCGGCTATAAATAGAGATGAAGCTTCACTCCCTTGCTCACTGCTCACCCTCACC
TCCTGCTGTGTGGCCAGTTCATATCAGGCCGTTTCTATCAGGTAATGGTCTGTGGCC
CAGGGGTTGGGGACCCCTTATCTACATCCACGTTTTCTATGTTTGTGAAGATTTGATGTG
GGGTTATGGGTTTGAGGAGCTAAAAATTATAGTTAGTAGAAGGAAAGACAGCTAGAAGTG
GAAAGTAAATCACTTACATTGTACTTTTACTAGGACCTATATTGTAGGTATTATAAATC
ATACAAACAAGTTTGTTATACAAAACATGATTACCTTATCATTGTTTTATTAAGTATTTA
ATTGTGCATGAGTAATCATTGCCATTATTGATTTGTCCATATTAACCTTATGATCAGACT
TAGTGGACAAATTTTCAACAAATAATAGAAGCAGCAGCATAAATATCTATATAGAATTAG
CCAGGTTCTAGTCTGGCACATCATCACATAGTAGCACATTTAATGCCCCAATTATTCTA
TGATATAGATACTACTAGTTTCCCCATTTTCTAATGAGAAAAGTGAGTCATAGTCAGGT
GGAGATAATTCACCCACGTCTTAAGGCCAAATGGAAAAAATCTTCTTACTCTGGAATTA
GGTGGTTAAGTATCTTGATTTTAAATGGATGTTGTTGTTTCTAATAATTGAGTTATTTG
TATTAATGCTAACTGGCAATATATGCCGATGGCCAATTTACCTCCAAATATATTGAG
TTCATACATATTCATTAAGTGGGATATTTTGGAGAATACTGCTTATATGTTCAAATGC

AAATAATTTAATTCGCTGTGATTTATAATACTGTTACTCAGTAAATGGACTAAAGGCAGG
GTAAGATTTATCAGTCTTAAAAATGTAAGTATGAGATCATTATAATCCTATTATCTTCTA
ATTATCCTTTTAAATCAAAAACATACTTTTCATGTTGGTATGAGTATCATAACCAAAAGAG
AAGAGAAACTTCAAAGAGAAAACTGAATTAGTGGAGAGTAACTTAATTTTCAAGAGAAAAT
CGTACTTTTCATATAAATTCATAGTGAAAGGTAACTATGTGATACCAGCATTTCAGGGAACA
AATGCCCTTACGTTTTTGCCTGTGTGTTTGTGGGGAGGGAGGTTGTTTCATTTTGTGTTT
ATTTCTTGCCTGTTTAAATTTCTTTTACTCACAGGCTCCAGCCTGGATCTCTGGGAGGGA
GAAGTAGTTCCAAAGATTACAGTGCTTAATCTTAACTCTGAAAACACTACTTATTGACTC
TCCACTGGATTCCACTCGCCCAAATTCCTAGATGGATTTTCCCTCAGGATGAAACAACC
TAAATCAAGTGTCTTAACTGTCTTCTCTCCCTCCTGCCATTGCCTTTCCTTGTTCT
CTAGTCTAATCCATCTTATCTTTGTTCTTTCTGTTAATCTATTAATCAGGTCTCTGAC
ATTCTAAAAGCTCTCATGCCCTTCGCAATATTTCTCCTTTACGCATTGCTAGCACCAG
CACTTCCACTACTCCAGGAATTAACACCTCTTCTCTCTTCTCAATGGCTAAGAGATC
TGGAGTCATCATGTCTGGGTTTCATATTCCACTTTCCAATTTACTGACTTCGTGACCTTA
CCAAGTCAGTTAACTTCATTAAATTTTCATTTCTCATTTTCAAAACATTTTCATCACGT
TTCCACACAGGCTTGTAAGGAGGACACAATTATGTCATGAATATAAAGTTCTTAGCGGG
GAGTTTGGCACATAGATCACAGATTAGCCGTTCTTATTATTGCTCCCTCGGTAGAGTCCC
ACTGTGAAGTCATTATTTCTCACATAACTACTAATTCAAGGAAGTCTTTAATCAAACCTA
TTATGTCTAAGGACCTGAGTAAACAGTTACTGTTCTCAAGGAAGTCACTGTCTAGAAGAA
GAAGAGGCTGACCAGCAAAGCCATAATTACAATAAACCTATGCTATTTGTAAGTGAACAAT
AATACATATGCACTTAATTGTAGTCATCCCCCTGACTATACTCACAAAACCTTAACATGTC
TTTAGGGGAGGAGGATGGATTGCAGATATGCTATTAGAGGCATAGCCATCTTACTTCAT
TAAAAGTTTAGTTTACTAAAATTTGCAAATGTTTAAAATATGGTCTTGCTTAATTTACA
AATTCTGGGATAAATATTTAAGGATTTAATATTTATTAATTTTTTATTTATTTATTATT
TATTTTATTTATTTATTTTATTATTTTATTTTATTTTATTTATTTTATTTTATTATTATT
ATTTTATTTATTTATTTTATAAATATTTATTAATATTTATTAATGAGTGCAGTAT
GTGTATTGTTTCAAATACATTTTATTAATTTAGTGTCAAATTGCTAGCTACTGTATGGC
TAAATATTACATTTTCCCCAGTGGGGCAAAGTTCAATTCAATTAGCTGCAATGAATATG
TATTAGATCTCAATTCTCTCCTGTGATAAGTGTGGAGGGAATTCAGAAATAATAAAAAAT
ATATCTCTGTTCTTTGGGATTTAGTCTATTATTAAGTCAAGCATCTGGAGCAGTTACACC
TATGAAACAGTTTGGTATGGCATGACAGTGAAAGCAGTAACAAGGTACAAGGGGAATAAA
AAGAATGAGATCCATCAAATTGTTAATCCGGAAGGCACAGGGAGTGAGATGGCATGTGAC
AGTCAATGGTTAGTGATGGGGTAGAGGCCCATATGCTCATGAGAGATTTGAGAAATATAA
AGTCATTGTCTTTGTTTAAAAGGATGGTGTGCAGGTGGTAAATACTGAGAGGTGATCTGA
CAAGTGTTCAATCAAACCTCTGCAACCTTGATTGAGACTGTGCTAGATGATATAAAAATAC
ATATGCCCTAACAGGGAGGATAGGCAACCAACAATTAATTTTAAAATTGTGAATTTACA
AACTGTGGGTTATTATATGCTACAGAAGCCACACAGAGAAAAGAGTTATTTGCTCTGTTTC
AGAAAATAGAATAGAGGAGATGTGGGAAGGCAAGATAGTCCTTATAGAAAAGTGGTCGTT
TTATTACCTGCAACCGTTCTGACCCGCTTGTCATTCTATGTCTTCTACGTCAGTCATGA
GCTCTATTTGTTCTCATGTGCAATCCCAGCCTCACTAGGATGCACTCCAGTTATCCATT
AAGCACGGAGATCCCATGAGCAATGGGACAAAATGACTATTGGACTTCTATCTCAACTG
CTTGTGTAGAATGTTGCCCTGTTTATTTAAGTCCCAGATTCTATTATTTCCCTACTAA
CCATGGGTAGACTCTGGATCAGACTTCTCATTGAAAGACCTTTGAAATTTGCTTATACTC
AATTGCCATTTAGTCCCCTCTCTCACTAGATGTTCTTGACTGCTGTACCACTCTTCAGA
TTCATGATGTGCTGATAACAATGTTTCCTTGCAATTGTTATTTTGTATATTTACCCTT
ATATTATCATGGTTTTTATTAAAAGCGTATGTGTGTGTTTACACATAAACATTTTTTTT
TCCTTTCTCAACTTTTTAGGGATATGCAGACTATATTTCTTTTCAAGAGGGCAAGACT
GTAAATAGATTGAGGGCAAGCATCATGTTCTGTCCAGTGTAAGAGAACATTCTGAGAACC
TAGCCGGACATCAGGTATACATTGAAAGATATTAGTTGAAATTATAGGTAGAGCTGTCAT
GATGACATGAGTAGGTAATATTTTGAAGAAGTTTGGTGGTATGATATTAGAAGAGAAATGA
TTCTTCTCTTCTGATGCAGGGAAAAAGATTTCCCAAAATCTGCAAGCGAAGAATTGGGTAG
AGGAATTATTCAGTTTAGGATCTGGTCTAGAGATATACAGATTTACATTTACTGTTTGGC

CTTTTTACATGGTTGAATACCATATGAATTTTAAATATTAGTAAAATATCCAAAATTAC
TTTTGATAGAGGAAAATGTATTGCACTATATATTCTTCTTTGAATAGAGAACTTTGTCAA
GTAAGAGAATAAAAAATACAGGATGATTTCTATTAAACATACAGTATTCAAAAAGCTATGT
GAGGGAATCCAGCTAGTGTGATTATGTCAAAAGGGAAGATAGCTGGTCTGAAGGTAATGA
GTTATCTCAACTGATTGGTCATGGCCAATTACAGACAGAACTCCTTATTTTACTTCCCCA
CCCCCGACTACTGCACTTGACTAGTCAAAAAATAAAACAAACACCAAAACCAAACTAAA
GGGAAGACAGTCTTTTCTAGCTTGGCATTAGTTGGATGGTTTATATAAATGTGAAACTT
TTAGAACTCATTTGAAAAAATTTAGTAAAGCAAAAAGAAGTTTTTCAAATAGTTAA
AAAATTTAAAAGACTGAAATTATCAAATCATTTTTCACAACAATAAAAATTGTATACAAG
GCAAACATGTACATATATGTGGGTGTCCTTAGGAATAAATGCATAATTTCAAAGACATG
GAATTTGTAAGTGTTAGTCATGTTCTCACCTGTAATAAAGCAATGTGTTAATGAAATTGG
GTGCTTATATATATTTATATATAATTTCTTAGTTTGAGAGAAGCAAATAGAAGTGAATAT
ATGTAGCCACTTTTTAATATTTGTATTGAGCTATAATTCCTCCTGATTGCTCCTCGTTT
TAGAGTGATGTACTGGGAATGGAATCCTAAATTAACCTATTTTAGATTAAATCATACC
ATGTTAGTTTAAATTTTTTATTTTTCAATTCTATATCAATATAGCTTTTTTTAATTT
ATATATATATTTTTTGAGAAAGAATCTTGCTGTATTGCCAGCCTGGAGTGCAGTGGTAT
GATCTCGGCTCACTAAACCTCCGCCTCCTGGGTTCAAGCGATTCCCCTGCCTCAGCCTC
CCAAGTAGCTGGGACAACAGGCGCATGCCACCACTCCTGGCTAATTTTTGTATTTAGT
AGAGACGGGGTTTCACTATGTTGGCCAGGATGGGCTCGATCTCCTGACCTCATGATCCGT
CCACCTTGGCCTCTCAAAGTACTGGGATTGCAGGTGTGAGCCACCGTGCCTGGCCTGTAG
CTATTTTTTAAACTAGATTTGATTTTGAATTGCAACGATTATGGATTATTATATTCA
CTACTTATTATCTCATCTGTTTAGTTTGCAGAAAGGCTTACTTAATATTTCAATTTATA
TGTTCCCTATTGATAGTTCTGGAAAACCTTTAATGCTGGCCATTAAATTAACATATAT
TTGCTTAGAGTCTACTGTGCATTACAATCATTCTAGATTTCAAGGATGCAAAAGTGAGCA
GAAACAGTTGTCCGTTGTTGATGGACTGATGGAGGTTCTTGAAACTTGCTTATTTTTGC
TTACTTTTGTGGATGTTCTTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCC
ACCCCATGTGTGCCCTCACTCTAGCTTCCCCTCTTCATCCTCCCTCTTGCTACAAATTA
AATGTAGTTTTTTCAAATACCTTTTCTGGACTTTTTTCTCTCTATAGTGATTCTTGTA
GTAATCTTATAGCATCATCTGTCACATTTATGTTGATCTCTTTTTACTTCTGTCTCTCT
TCAGCATCACAATCTGTTTATGTGCTGGACCTAGAAATTTAGCCCCCGTGAATTTCAAC
TTCACCTGTCTATTAAGAAAGCCAGTTATTAATAACGTATTTAATAAATTATGATAAG
CATATGATAAGGAGAAAGAATAGGGGACTTTCAGAATATATTAGAAGGGAACCCAACTA
GACTGTGGATCACCAGAGGAGTCACTAAAGGAGTCTCGGTGGAAGTGATATTTAACTGC
GATACGAAGGATCGCTTGAATTAAGTGGCCATCTTCAGTGGTCAGGAGTCAGTTTTCTG
AGCAGAAAGAGTAGTATGCATAAATGCCATGAGCTGGAAACGCATACAACTCTGTATAAC
TGAAGGAAGTGAGGTTTTTTCAGCTGGTGCATGGAGTGCTGAAAGGAACTGAGAAGAGA
CCCTGGAAGGTGAGCTTGGGTGTGAGAGTGAAGAGCACCCAAAGTAAGACTAAAAGTTTG
GTAGTTCTCATACCAAAATGAGAAGCCATCAAGAGTTTTTATCAAATTATTGACTTTATC
TTATTTGTGTTTCATAAAAAGCTTTCTGGCTACATGAAAAGAAAACAGTTAGAGGTTGGG
GGCATTGCGGATTTAGAAATTGAGCATGGAGAACTTGGGGCCCTGGACTAACAGTTGATA
GTAGAGTTGGAGGTACATGCATTGAGTGGAGATGTGTTGAAGATGTGGTCCTGGTATTC
TTGATGACGAATTGAATGTAGATGTGGAAGATGATGGAAGAACCAAGGAAGATGGCTTAG
TTTCTGCCTTGAGCAACTAAGTGGATGATGAGTTAGGGAATACCGGATGAGGAGTCATAA
CAAGAAGACAATAAATTAGTTCAGGACCTTGTTAAATGTGAGGTCACTCTGAGATACCAG
TGGAATATCCAGCAGGCAGATGGATATGTGAACTGGAGCACAACAGAGAAGTCTAGATT
AAAATTTGCATTTGGAGTGTAGTATCCATGAAAGTAGCCACGAGCTTGATATGTTGTCC
AAAAGAATGTGGACTCTTCTCATCATTCAAGCTGAAAACCTCAACTTTATCCTTGAC
TCCTCTTCTCTTTTTTCTTGCTTCTATATGTAAATAAATGGTGAAGTCTTATCAGTT
TTGCTCTCTATTGTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCT
TTCTTGTATTTCTGACGAGAGAGCTATTATATACTTGAGGATAGCAAGACTGGTTGCCA
GGAGATTCATAGACTATTGCAGTAAGCTGGAGAGTTATGACTGCTGTTTAAACAAGATCA
TTAGCTGTAGGAAAAGAGGAAAGTATATTTAAGAAATAAAGTATATGATAAAGTAATAGA

AAATGAATATTTGACTAAACTAGTATGGGAAACAGAAACGCCTTGAATATAACTAAATT
AGAATTATCCTCCTTTATAGATTTAACTTTTATTTAAGTTCAGAGCTAAATGTACAGGT
TCGTTATATAGGTGAGGAGTTCCTCAACCCCGGGGCCACTGACCAGTACGGGTCTGTGGTC
TGTTAGGAACCGGGACGCACAGCAGGAGGTGAGCGGCAGGCTAACGAGCATTACCACCTG
AGCTCTGCCTTCTGTCAGATCAGCCCCTGCTTTGGATTCTCGTGGGAGCGTGAACCCTAT
TGTGAAGTGAGCATGTGAGAGATCTAGATTGCGTGCCCTTATGAGACCTGCCCCACCCTG
CTCTGTGGAACAATTGTCTTCCACAAAACCTGGTCCCTGGTGCCAAAAGGTTGGGGACTG
CTGATATAGGTAAACTTCTGTCATGGGGTTTGTGTACAGATTATTCATCACCCAGGTA
TTAATTAAGGCTAGTACCCATTAGTTATTTTCTGATGCTCTCCCTCCTCCCATCCTCT
GCCCTCTAATAGACCCAGTATGTGTTGTTCCCTTCTATGTGTTTATATGTTCTCCTCAT
TTAGCTCCCACTTATTAGTAAGAACATGGAATATTTGGTTTTCTGTTCCAGGTTAGTTG
GGTAAGGAAATGGTCTCCAGCTCCATCCATGTTCTGCAAAGGACATGATCTTGTTCTTT
TAATGGCTGCGTAGTATTCCATGGTGTGTATGTACTATATATATATTTTAACTCTGGTCT
ACCATTGATGGGTATTTGGGTTGATTCCACGTCTTGGCATTGTGAATAGTGTGCAATG
AACATAACATGTGCATCTTTACAATAGAATGATGCATATTCCTTTGGGTATATACCCAGT
AATGGGATTGCTGGGTGAATGGTATTTCTGTTTTAGGTCTTGGGAAGAATTGCCACACTG
TCTTTCACAATGGTTGAACTAATTTACAGTCCACCTACGGTGTACACATGTTATTTTTT
CTCTGAAAGCTTGCCAGCATCTGTTATTTTTTTGACTTTTTAGTAATAGCCATTCTGCTT
GTATGAGATGGTATCTCATTGTGGTTTTGACTTGCATTTCTCTAATGATCAGTGATATTG
AGCTTTTTGTCTATGCTTGTGGCCATATGTATGCTTTTTTTGAAAAGTGTCTGTTT
ATGTCCTTTGCCCACTTTTTAATGGTATTTGTTATTTTTATGTGTAAATGTGTTTAAGTT
CCTTGTAGATGCTGGATATTAGACCTTTGTCAGATGCATAGTTTGCAAATTTTTTTTGCA
TTCTGTAGGATGTTTGTTCACCTGTTGATAGTTTCTTTGCCATACAGAAGCTTTTCTT
TAGTTTAGTTAGAATATAAATAAACCCAGAAGTTCCCTTTAATTTAGCATCGCAAATA
TGCATCAAATGTTATCAATTTATTTTACCACATTGCTCCACAAAGTCTCATCCACCAATT
ATAATTCTCCAGGTAAAATTTACTGGAAGCAATTATTGGTAGAGCTGGAAATAGCATT
GCCAGACATTTTTCTACACACTGTACATATATTAATCATTTAATATTTATAAACATTCT
ATGAAACATCACATTTTACAGGTGAGGAAATGAAGAACACAAAGGTTATAGAGGGTATTT
TTCAAGGTCATACAATTTGTAAGTGTGAGCAATAGACTTGAACCAAGTATTCTGGTTCC
AGAATCTACACACTAATCCAGGAAAGTAAAGGACTGCGTATGTTTTAAGCACCTATTAAC
GTGCAAGAAGTGTGGAATATATGAAAAATACATAGGAGTCAATATGTAAATACACATAG
TTTAAATAGCAGGTTGGGGGAAAAAATAACATACTCTGTAAGTATTTTTCAACCGTAT
ATCATAGAAAGTTAAGTTATTAGTTGTTCAAAGTCAGTCAGTTTCCATGAGAGATGGTT
AAAATGAAAAACCTTCCTTATAGGTGAAATTTAGGGTGACCATTGCCATTTTTAATCAGA
TATCCCCAAAATTCACCTTCCCTTGACTAGCATTTAAGAAAGTACTGCAAAATAGTATAT
GCAAACATTGGCTTTGGTAACTTTGCCAACTAACTACCATAGTTTTAATCAGGGAAAA
TGGTGAGTTCATGTGTGGAAGTCTACTCTGACTCAGGTAGGTAGAGATTATGAACAAAA
AGGGAAAAGGCAATTTCTACCTGATGGTGTGGAAGTCTCTAAATCTGCCAGTCCAGTTT
TTTTCCCCTTCCGTTTAAAGGTTTTATAAGACTTTCTAAATAGGCAATTTAGTATTTGTT
ACTAGTTTGGAATATTTTTCTGGAGCCATATGAAGTACTAAGTATTTATAGACAAAAA
TGTTGGCAAAGAATATAGAGGTTCTGAAATGGCCTTCTACTGTGGCAGAAGAAGTGA
TACATTCAAGTGCAATCCAGATTTGTAGAGAGTACTGTGGGTTTATGGAAATAAAGCAT
TTGATTGAAAAAGTCATTTTTTCCAGTATGACTTAGTGATTATTAATAACCATGTTTTT
AATCTGACTCACTGGAGGGAAGCTCCATAGCATTAGTGGTAAACAGTTTATGCAGTTAGA
ATATGAAAAAGACAAAGAAAAGCAAATAAAAAGACATTTTAGAGTAGAGTGGGAATTGA
GCCAATGTGCCTGACTGGTAAAGTCTTTGGAGGGAAGCCAGGAAGTCTGTGATATTTCTC
TAGTTAGGATATATATATATATGTATGTATATATTATATATATGTATATATATATATA
TAAAAATCATATTGGATAAAAAATGTTAACCCTTCTATCAAATTCAGACTTTCCTGAT
TCTGAAACTCAAACTGAATGCAAATTAAGATTTTTAAAAAGTATGATTAAAAAAATAC
CGCATACACACATGACATCTGGCAATGCCTTAGATCTCTCTAAAATGTCAAGATGGGAAA
ATATCCAAAACTTTTTTTTTTTGGAGAGAGAGAGAGAGAAAGAGAAAGTTGGCTTCTAGCC
ATAAGCCTGCCGAGGAATTCTTACGAGAATTTCTGGAAACTGTACTTTTTAAGGCAATCA

TGTTCTCCATGCTTCGTGGCCTCAGATGTTACTTGAAGGAATTTAAAGTTTCATCTATT
TGTGCTTTGTTGCTGTACACCCTTTAGACTTCAGTGGTCAAGTTTCACTTTGGAGAACTG
ACAAAAGAAAAATATTGTGTTTGGCACTACACAATCTTAGAATACTTTAAGAATGAATAT
GCCAAGGGAGAGTCATATTATATAGCTTGAATTGTATTTTTCATGCATGATATGTACATC
ACCTTATGTCACACAAATCTCTATCAGCCTTTTGCTTTTCCATTAAAATAAATACCCATC
AGATACTTGATATAGATATTCTGTGGTTGGAGGGCTTAAGTGAGATGCAGTTTCAGGTAA
ATAACATAAAATCAGCAGACCTCTAATCTGAATTGAATGTGTTAAATCTTATCAACCTAG
AGTTTTAAGGAAGAGGGAACAACCTGTCTTCAGTGAGTAATGGCGCGTGCATTAATACCAG
TACTCAGGAGGCTGAGGCAGGAGAATCACTTTAACCAGGAGATGGAGGTTGCAGTGAG
CTGAGATTGCCTCATTGCACTCCATCCTGCCTGGGTGATACAGTGAGACTCCATCTCACA
AAACAAGCAAACAAATAAATAAAAAACAAAAGAAATGGCCAAGAAGAAAAATGCCTAGC
TTTCCTGCAACAATTTGGGAGATTACCATCATCTGTATTAATTCATTCTGTTGTTT
AATGAAAATGGCTAAAGTCTGGCCTTGCCATTGAGGTTTTTAAAAATTCTGGTAAAAATAT
GCATAACATATAATTTGCCATTTTAATATTTTAAAGTGTATTATTCTGAGTCATTGAATA
ATTTCAAATTGCTCTGCAACTGTAGCCGTCATCTATCTCCAGAATGTTTTGTTCCCAA
ACTGAAACTCTTACCCATTAAACACTAACTTTCCATTTCTCCAATCGGCAAGCTCCAG
GCCACCACTGTTCTGCTTTCTGTTCCCATGAAGTTGACTACTTTTGCTAACTGATATAAA
TGGAAATCATACATATTTGTTTTCTGTGTCTGGCTTATTTTACTTAGCATAATGTCCTCC
AGGTAGATCCAAGTTGTAGTAAATGTCAGAATTTCTTTTTTTTTAAAGACCGAATAGTA
TTCCATTGTATGTATATACTACATTTTGTATCAAAAAATGGACACTTGGGTTCTTTCT
CCTTTTTCCATTGGGCGTATTGGGTTTTAATATTACACGTTTGTATAAAGGCAGATATA
GGGTGATAGAATTCATACTAGATTGGAATAATCAAACCTAGGCTTTGTTCTGCCACAAC
TAGGTAAAAATGTTACTTCTTTCTGACTTTTGTAAAATCAGGATGGAAATATATTTTCAT
ATCATTGTTATAGCTAATAGCTATTAAGCACTTGATGTTTCATACTGTGTTAAGGGCTT
TTATATATTTCTCATTGTATTCCGACAGGAACCCTACAAAGTAGAGACAGTTCCAAATTT
CCAGAATGAATGTGAGATTGTGATACATATGACAACTGCTTATTAACTGTACAGCACC
TAACAACATGAGGGATTATGCCTAATCCCTACACAGTGCATGGCATAACAAAGGACTCA
TGAGATGCTGTTGAAGAATAAAAGCAGCTCTACTTTACAGCCATAGGAAGCACATACATA
TTCAGCCATTTGAAAACAGTGTGTCTTGATGAAAGAGGATTGCAGTTGGATTAATATGAA
CAGTCACTAAAAATAAATGAAAACCAACCTCTAAATCACGTATACAGACAATATTCGC
AATATTGATAATATTCAAATTGTGTAAGGTAAACCTGATTACTCAGCAGAATTAAGTTT
CACTGGTGATATGGGGTGACGGCAGTGTCTCTCTGACAAAATTTTTCAAATTTTCAA
AATTTTCAAAGTTTGAAAATTTCAAATTGACAAAAATTTTCAAAAAATTTCAAATTTTA
TAGAAATCATCACAGTTCTCTTTATTAATCAGAGTTTAAATGTTAGGCCAGCCTGGGTGG
CTCACGCCTGTAATCCAGCACTTTGGGAGGCCAAGGCAGGCGGGTCACCTGAGGTCAGG
AGTTCGAAACCAGCCTGGCCAACGTGGTGAAACCTCGTCTCTACTAAACTACAAAAAAA
TTAGCCAGGCCTGGTGGTGCATGCCTGTAATCCAGCTACTTGGGAGACTGAGGCAGGCA
AATCGCTTAAATCTGGGAGGCAGAGGTTGCAGTGAGCTGAGATCGCGCCATTGCACTTCA
GCCTGGGCAATGAGAGCTAACTCCATCTCAAAAAAAAAAAAAAAAAAAGAAGAAGTTTAA
ATGTCTACTGATAGGCATTATTTTATAGGGTATTTTATAGGGACTTAAAAATTTCTACA
TATCAAATATCTAACATAAATATTGGATCACATGGATATATATTAATTCTGCAAATAATT
ATACAAATAATATTAATAATATACAAATAAATTAGTTATACAAATAATATTATACTGTGTATG
CCTTTTTATAGAATTTCTTCAAAAAAGCAACAGTGGATAAGTTGGAGAGAGCCATGAAAT
TCCCCAGGAGAGTGGCTGTGAAGGGTGGCCAGGGATTGAGACATAGGGTATCTTCTAGA
GTCTATCCATGAGAACTGACATGATTTTCATGCCATCTGCTATAAGTGCTATAAGTAATA
ATATAGAAATAGTTGACCTCACAGTTAATTTATTAAGCAAATAGTGGAGAAGATGCTAGT
AATTTCTAGACCTTGCTCAGGGGCTGTGAATATAGGAGGGGATAAGATAAAAAAGTGGCT
CTTTCATTGGAGTATCAATTGTGGGAGAGATTGAATATCCTCAATAATATCTTAATTAA
TATATAAATATATATAAGAAATATATAAATTGAATAATTACAGATAGAGTTTTTGTGAA
TAAACTGAACAAAGTGATGTAATGGAGAATGATAGCAGTATATGGGGCATATCTTTAG
ATGGGGTCATTTAGGGAATGTCTTCTGTGACGGGGGCATCATAAACAACAATTGTTCAA
CTGCTCTATTCCATCAGGGTGGGAATCACATACTCATTGTTGGCTAGCGTGTCTGCAGTG

CCTAGGACAGAACCTGGCACTTGATAGGCATTTACTGAATATTTTTGAATAAAAGAAGA
ACGAAATGGATGACAGTAAATAAGTCTTTAAAAACGTTGAATCAAGGCTGGGCATAGTG
GCTCATACCTGTAATCCCAACACTTTGGAAGGCAGAGGTGGGAGGGTTGCATGTGCTTAG
GAGTTCAAAACCATCCTGAGCAATGTAGTGAGACCTCGTCTCCACCAAAAAAAGAAAAA
AGAAAAAGGAAAATTATCCAGCTGTGGTGGTACACACCTGCAGTTCAGCTAATCAGGA
GGCTGAGGTGGGAGGATCGCTTGAACCCAGAAGATTCAGAATGCAATGAGTTATGCTTAT
GCCACTGCCCTCCAGCCTGGATGGCATAGAGTGAGACCTGTTTCAAAAAAAAAAAAAA
AGATGGATCAACAAAAGTGATATCAATAGTAATGACACTAATAACAAAAAATAGTGAA
ATCATGACTTGCAAGTATAAATCACTTTAAAGATTATTTAATAGAAAACATGTTAATC
TTTAGAACTACCTGAGGTAGTGTGATAGGAACTATTAACATACATTTGATGAATTTGAGGT
ACTTAGAACATATTACTGGTGAATGGGGAAGCTGGCTTAAAAAAGGGAGGGTCTTCTC
AGACAGTTCTCTTTTACATACGTGGCACAATGATTCATGATTTGTTATATTGTGAATGT
TGAATGTGGAATATTTATAGGAATGCAAATCACATTTCTTTACACAATAGTATTAACT
GATTTCAAAGTGTTTGATATATGCTTCTATCCTTACAATGGTCCAGTGAGAAAGAAAAT
ATGATATTCATCATTGTAGACATGGAAATAAAAGTTAAGAAAAGTTGCTTGATCAATAT
CATATGCAATAGCAAGTGGAAAACCCATGTTTTAATTTAGAATTTAATACTAACAGTCT
ATGCTCTCATGGATGTTTTATGTAGTTTAAATGTTTTAAAAAAGTCTAAGCCCGACAAC
TCGCTGTTTAAATATTTGAAATAAAATAGCTTTGCCATTTTTAAATAAAACATTACC
TTTTATTATAACAAAATTCAGAAAATACACAAAATAACAAAACAGGAATGACCACCAGTT
ATCATTTAATGTGAATCATTGAACCTCTTTCTTTCTATAAAATTACAAAGTTGAAATATG
TTTTAAATTTGTGTAAGTTAGAGGATGATTTGATTTAAATCTATTATTTAAATTTAT
TTTAGTCAAGTAATAAATTCAGTGAATTGTTCAAATCAGAAATGCCATGATGCAGGT
TTCACATACATGAAACAAGTTAATATGAGGAATATTCTTCTATACTTTCTTTTTATG
TTGTTTTATCTTAATTACTCTAACAGAGACAAATTCATCTAAAGAGGTGATATCTAAA
GGAAATGTAGAGATCAGAATATAGGACAGATTGTTTTAAAAAGTTTGATATTTATTATTA
GGTGCTAATAAATGCTCCTTCTAGTTTATGAAGCTTTATTTCTAAACTATAATCTATG
TTTATGTGTGTTTATTGAATATTTGTGTTCCGTTGGTAACAAATGAAATTTAAGTGACT
ATTAAGTAATGCTAATACTAATATCAGTTCTATTTTGACAAACACTGTGCTGGCCACTAT
TCCATGTGCCTCACACACTTTTATCTCATTTAAATTTCATAAAAACCCTATGACTGAGGT
ACTTTTCTTATCTAGAGATTACTTGATTGAAGAAACAGGGGCACAGGGAGGCAAAACAAT
TTCCAGGGTCATACAGGTGAACATGAAAAAGCCAAAAGTAACACCCATCAATAGGGCTA
CGGCATTCATGCCTTCTTTAAAAATTAATTGAGGGCAAGAAACCATTGTTAATATGTA
ATTTCAAACATCTAGATGAAGAAAATATCTGTATTAGAAAATAATAAGGACTATGTATAT
ATGATTTGAGACGATTTCTATTTAAATAAATTAGGATAAATGACATATTTGTTATAGGG
TGAAATGTTAGGGAAAATCTCAGTTTTAGTCACAGATCTCTACTAACCTGAAATCAGAT
ATACCAATTTAACTCTTTGGCTTGGGATTTTTTTATTCAAAGGCATCAGATGAAATGAGC
TCAACAGTCTGCCGTTCTAAAGTTCTTTGTACCTTCTGTGTTATCACGTGGTGGTCTG
TGAATCTTACAGAGATTGATGGCTTCAGTCTTCTCCAAATATTTCTCTACATCCCTCGT
TGTAAGGAAACTGAGTGTAAGGAAAGAATGTAAATCCGTAATCACATTTGGATATCTT
TGAAGTTGCAACACTCCAGAAATTTGGTGACAAGCAAATGCCCTATTTTTAAATGATG
AAGCATCAGTGTATTAGTGTAAGTTGATAAGCTTGAGATATTCCATAAGAGATTATTAT
ATTCTTTGAAAAAAGTCTCAGGAGGAGAGGTGCTATCAATAAGAAGCCATCTTGGCTTCAA
CAGAAATAAATATTTGAATAGGATTCACGTCCTTATTCTACAGACATTAATTGCAAAAC
GACCCTTACTTATTTTAAAGAAATTTGAAAAATATAATTCACATGCCACAAAGTTTTCC
CTTTAAAGGGTACAATGTAGTTGTCCACGTATATTCACAGAGCTGTTGAGATTGTCCCT
TATTGAATCATTTTGCTTATTCAAGAGCATCTAACCCAGTGAAGTATGCAGTGATAGTAT
TGCATCAATATTTGCTGAATTCTCACTCAATGAATACAAGGTACAGCAAAAGAGACCAG
ATAATTCTAGCTAAACTCAGATGAAATAATTGTAAGTCCAGAAATAATTAAGTATTGAGA
TATATTCAGATAAAGATTCCAGAAGGATACAAGTAAATGATAAAAAGAGCACATTTATTT
CTAATATTAGCTGTCATATTAACACATAGAAAAAATGTAGGCTTGTTAGCATCAAGTAA
GTTGCCAAATATGATATTGCCCTTATATAACTTGAATAACTTTAGGTGTTACTTAAAT
CATAGGCACATATTGGCATCTTCAGAGCAAGATGAATTAACACTCTGGAGTTTTTATTTT

ATTTATTTAAAAATAGATTATCACTTGAGAAAAGACAGCATCATAACATTTAGTGACAAA
GTGTGAAATTTTCTACAGGTCTTAGTGATTAGCAACCACAAAACCAAAGAAAGGAGAG
TTTAATCATTATTTAGGTTCCCTCATGGTGACTCTAAATTGTAAGTAAGAATAGCAAGA
ACGTTTTCACTGGCAACCTTCTTTATCTTAAAATTTAATGTCATAACACGTTTGGTAAAG
CAGCTAAATTATTTCTAATGTATATGTTTGGCTGAGGCAGTTAATACAAAGTAAAAGGCA
AAAAGTCATGAAGCTTTATTTCTATCTTGTTTCACTTGTCCTCCAATGAGCATTGGC
TTGGAGTGCTTATCGTCATGTCAGTACATTCTTGCCCAGGCCTTGGCAAACACTTGGTA
TACCCTGGTGAGAGAGGTTTCTGGGACTTTGGCCTGGAAATATGCATTTTGAAAATTATA
TCCAGTGATTCTAATTTGTAAGTAGTTAGACATCACTGCACTAAGAGTAACTTTCAGCT
CTCTGGCCTAGTTCAGTAATTTCTTTATCACAAACACGTCTTTCATAACTTGGTTCCAA
AGGCATTCATGACTTTTGATGTCATCCGTAAATGCATTTTAAGGAATTAATTTCTGCTTT
TAACCAATTACAAGATTTTATTAACAATCTGTTTACTGTTTGACAAGTATTAGTCAGCTT
TTATTTTATGTCATTACTGAGATTTGAAGTCACCTGCACTACGTTTAAACAAAACCTATT
CTTATGATTACAATATATTTACCTGACATTATGCAAACTGCATTTTTTTTGCATTTGGG
AACACCATTTTATATATGAAGTTGTTGAGGCTTATAAAAGGTCACAAGTAAGTACTGACTAAT
AGCGTCAAGACTAGAACCCATGTAGTGTTGGCATCTGTTTAGGAACCTGTGTCAGATCCC
ACACTTGTAATGGAGAGCTTAATTTAGAGAACATTAGCCATATCTAGCTATTGCTGTGA
ATTTAAATTGTTTTGAGTGTCATTTAATTTGCAAATTTGTATTGGTTTGTATTGTGT
AAGAATTATACACCTACAAAGATTTTACCAAGTTTATTTTTACATTTTAAAGTAGTGT
TTTAAACAAATAAATTAATTTGACACTTGGTGATGCAAGATTTTATTTTTCTTTTAGA
AAAGGTCTTTACAATATTTAAATTTAAATCAAACAGTTCTCACTGAAATAATTAGGGGTA
AAATGGACCTCTGTTGATGCTATTTGAAAAAACTATTTGAACAATGAGAACACTTGGACA
CAGGGTGAGGAAACATCACACACCGGGGCCTGTCGTGACCGGGGCCTGTCGTGGGGTGAGG
GGAGGGGAGAGGAATAGCATTAGGAGAAATACCTAATGTAAATGACGAGTTAATGGGTGC
AGTAAACCAACATGGCATATGTATACATATGTAACAAACCTGCACGTTGTGCACGTGAAC
CCTAGATCTTAAGTATAATTAATAAATAAATAAATAAGGCCTGGCGCGGTGGCTCATG
CCTGTAATCCAGTACTTTGGGAGGCTGAGATAGGCGGATCACCTGAGGTCGGGAGTTCCG
AAACCAGACTGACCAACATAGAGAAACCCGGTCTCTACTAAAAATACAAAATTAGTGGGG
CGTGGTGCGCATGCCTGCAATGGGCTGAGGCAGGAGAATCACTTGAACCCAGGAGGTGG
AGGTTCCGGTGAGCCGAGATCATGCCATTGCACTCCAGCCTGGGCAACAAGAGTGAACT
CTATCTCAAAAATAAATAAATAAATAAACAATAAATAAACAATAAGAGAAATTGGTTGG
ATGCCACGATTAAATATAGATTTGTTTTGCATTTGTAGGCAGTCAGAGCAAAATGGGAG
CATAGTAAATTTCTCTTATCATAAGGGGAAGAAAAATCTGGCTCCTGAGGTGGTTGTTAT
TTTCTTTGTGTTTTCTTCTTCTAAATCTAAAAGAAAGTGTCATGTGGGGTTTCATATA
AATGACACAGATGTCATAGACCTTTTTCAATATTTTATGGCAATTACAGGCACAAATT
ACCAACGACTATTTGTTATAGAACTTTTATGATCAAAAACCTTACTTCATTTTTCTCTAGA
GGATTTTCAATGAGGAAAAGAAGCCTTTACTATTTACTTTTATTTTCATATGTAGCTAC
AAAGTTGCTTAAATAAAATGAGCATTCTTATCAAAAAAAAACAAAAAGCTATTCACTGA
AACTTTGGGGATACTCATCTTCATGTACAGTTTCCAACCTCTGATTAGACCACAGCTCCTC
CCTATATTTATGATTTGCTTGCTTTATAATCAATATTATTTCTGAACTAGACCCCAAAC
AAGTCAGTTTTGGTTTTGCTAAGATTTGCTTAAATGTAAACCTTTAGAAAACTTATGTA
TATTATTTTATGACTCTTAACTGAGTACATACTTGAGTGGTTATTCTGCTGTTACATTTG
TTCTGAAGAATCATGCACATTTTAATAGGCAAGTTATTAATGCAACCAAACCTTTAAGTT
TTGGAGTTTTATAGGTAAATATGTTTTCTAGAGGTCTGTTTCTAAAGTTAAAAGCTGT
TCTAATAAATAAATAACAGATTCAAAAACCTTGGCAAACCTCTACAAACCAAACAAAAT
TAGGACATTTTATTGATTTTAAATATTACTTTATCTAATAAAAAATAAGTTAGATGCTAT
AAAAATATTTTTAAATGTGGAGGTAATTTAGTTCAAGTTATCACACAAACATTCTCTCAA
TATACACTTGAGTGTAATTATATGTTGTTATTTACTTTAATAACAGTTTGCTCAAGCAG
AAAACCTGAAAAAACTATTGCACGTATGCCAGGGTGTATTGCATATTAACACCTGCAA
AATAAGGCACAATTACCTTTCTATTTAGACAATTAAAAACTTCGATAACATAAGCTTAGT
TATTGCCTGATAAAAAATATGCCAATCCTGCTCCAGATTAACAGATGTCTTATTGATTCT
ATGTATGTACCAAGTTAGACATATAAACCAATGGGTTTAGGAATGGTTAGTCTTCTAAAA

TCTAAACTGTTTGTAGCAAAATGTCATTGTAAAAGCCCAATATAAAGAATAGCTTTAAGA
ATTCATTAAAATGTAAGGTACATGAAAGCGGAGTACGTGGTTGGTTTTGTTTCATTGCTAT
ATATTTATCACCTATAACAGACACATAGTAACTCCTATAGAAATATTTATTGGATAAGTT
AATGAAGTATAATTATGGAGGCATAGTTATTTTTTCAGAAAAGTAACTATACATCACATAT
CAACCATTGTTTATATAAAAATCAGATGTAATTTATATGATTTGGTGAGCTAAGTATGG
TCAAGAAGCATGTGTTCTTATCACAGATAATCATAAAATAATTTGAAAATTATAGAAAA
TCTCAAATTATATCCCAAAATGGACAATTACTTGTACTATATTTTCTCTTAGTAAGA
TAATATTTGTTTTGTTATAGAATATTTGTTGTTCATTCTACTCATCAATGTTAGTACAAT
TTCTCAAATAGATGTAAGCATAACTTCTAAATTTAACAATCAAAATATGGTCTAATAAAC
TAAGATGAATTCCATACTCAATATTTGTCTTTGTAACCTAGAATATTTTCTCAATTGCTA
CTATGAAAATTAAGAATAAAAAGAAAATTTTAAATGTAGGAAGTGCAGTGAAGTGAAGAAG
ATTATTTTCTAAAGGGAAATTCAGTGGCTATGGAGTAACTGGGAAGTCTGTCTTTAT
TGTAACCATTTATGAAAATTGCTTGACTTGCAACTTCATTGGTTGCCTTGGAGAGTTCA
TTCTATAAAAAAAGGTGCATCACGTGAACAAGAAATGTATCTACACAATGCTCAACAGAA
AACCTTGATTAATTGAAGTATAGTAAATGGTTATTGGTCCATTCCAATTTCTTTAATT
TGCAGTTGCTTGAAGCATAAAGCTTTTAAATGTCTTTGTTTTGACAAAGAATCACTTA
AAAGTGAGAACAAATTTAATTTATTAATATAATTTAAAAACATGTTAAAGCAAATTA
AATTAACATGCGGAACAATCTTTTAAAAAGTTTTTTTTTTTTTAAAGTAGGAAGTACACT
GAACTGAGAAGATTATTTTCTAAAGGGAAATTCATTGGCTATTGACTAACTGGGAAGT
CTGTCTTTTATTGTAACACATTTATGAAAATTGCTTGACTTGCAACTTCATTGGTTGCCT
TGGAGAGTTTATAAAAAAGTTATTTATTAAGTTAGAAGTCTTAATAAAAGACTTTTTATTT
TTATTTATTTATTTTTTTGAGATGGAGTCTTGCTCTGTCACCCAGGCTGGAGTACAGTT
GTGCAATCTCGGCTCACTGTAACCTTGGCTCCTGGCTTCAAGCAATCTTTTGCCTCAG
ACTACCCAGTAGCTGGGATTACAGGCTCATGCCACCATGTCCAGCTAATTTTGTATTT
TAGTGGAGACATGGTTTCACCATGTTGGCCAGGCTGGTATTGAACTCGTGACCTCAGGTA
ATCCACCCACCTCGGCCTCCCAAAGTGCTTGATTACAGGTATGAGCCACCGCGCTTGGC
CAGACATTGATATTTAACTCTTTCTTAATCAAATTTGAACTATTTTATACCTTGTATA
TTCTAAAAAATAACACACACATATATGTATACATATTTCTAGCTTATATGCCACG
TGTTTATGGAGTTCACTCTTTTGTGTTTTGAGATGGAGTTTTGCTCTTGTGCCCAG
GCTGGAGTGCAAGTGGCGGATCTGGGCTCACCGCAACCTCCACCTCCAGAGTTCAAGTGA
TTCTCCTGCCTCAGCCTCTGAGTAGCTGGGATTACAGGCATATGCCACCACATCCGGCT
AATTTTGTATTTTATAGTAGAGACAGGGTTTCTCCATGTTGGTCAGGATGGTCTCGAACTC
CCAACATCAGGTGATCCACCTGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGC
CACCGCGCCTGGTGTTCACTCTTAGGGAATTTAGGTGAATGCAGATAGTTACCTACTAAA
AAGATATAAATCGAAAGAGATAAACTTTGGCTGTTGGGAAAATGGTTGAATCAATCAAGC
AGCAATATTAACCTGCGAAGGGTAAGTCACTTTGTCAAATAAAAAAGGCTATGTTGAGG
TTCTTACAGAAAATACTTTTAAAAATAGGGACCTACACAATGTAATGTAGAGGTGTTTTG
GCAGTTTAAGGGAAATGTAATGTAAAAATTTGCATAATGCTTTTACATATGTAATCCATA
CAATATTAACACCGTCAATAAAAAACATGTTGAAAGTCCTTAATCTCTCTTTAGTATTAG
TTTAACAGTTAACAGAGACTATTAAGATTGTAATTTATTCTCTTATTAATAAATTATTATC
TGATTTACTGAAAAACAATCACAGGTTTTGAATATCTAAAAACAACCACTAGAGGAAAG
CAATTGATTTCTGTAACATTTATTAATGTAAGCAGACTGCGAGAATTCTATTAATCTAG
ACAGGAGAACTGTAATGTTTCTGTTGTCTCTTTATTAATTTGACAAATTTGAAATGCT
TGCAATTCTGCACTAACAGGATTTCAATAACTCTTTGCTGACACATTTAATTTTTGT
GCATTTACTGGATATTCTTAAATGCAATCATTTATTATATTTAGGGCAGGAAAACCTA
ATTAGTAGTAAACGATTATATCAAAACATTTGCTTTTTTAATAAAGTGGCTTTATATTAC
CTTATTTAGATATCATGAATTCATATTAGTACAGACTTCTGATTACCTATTACAGAAACA
TTCCAATTTCAATAAACTAACGTTAGTAGTCAAGTAGTTTCTTAAGCAACTGAAATAA
ATTTGCAAGTGATGGACTATGCATTCTAGTATTAAGTGCAGTCATATAAGGCCATCAGT
AACATGGTATTAAGAGAAAACCAATAAATTTACCCAGTTAGTCAGTCTCTTGGTATGTGA
GTAGAAGAGACAAAAAGAAAAAATAATAACAGTTGTCACATATTATTGACCATTTTC
TGCCCTTCTATACTTTTCTAAGCCCATAGGCTGTGGTTATATTGCTATGATCAGTTTGGG

TAGCTACTTGAATTTTTGATCTTTAAATGCAGGTATACCTCTGAGACATTTTCTAGATTTAG
TTCTAGACAACCTGCAATAAAGTGAATATCACAATAAAGCAAGTCATACAGTTTTTTTGGT
GTTTCATTGCATATAAAATTATGTTTATTCTATACTGTAGTCTGTTAAGTGTGCAATAAC
ATTACATTTTTAAAAACAATGTATATACCTTAATTTAAAAATACTTTATGCTAATACAT
GCTAACAGCTACCTGAGCCTTCAGCAAGTTGTCCTCTTCTTGCTGGTGGAGGATCCTACC
TTAATGTTGATGGCTGCTGACTGATCAGGGTGGTAATTGCTGAAGGTTGTGGTGGCTGTG
GCAATTTTGTGAAATAAGACAACAATGAAGTTTGCGGCTTTGATTGAGTCTGACTGTCAT
GAAAGATTTCTCTGTAGCATTCAATACTGTTTGAGAGCATTTTACACATAGTAGAATGTC
ATTCAAAACTGGAGTCAATCCTCTCAAACCTGCCACTCTTTATCAGCTAAGTTGATTT
ATTATTCTAAATATTTTGTGTCATTTCAACGGTATTTACAGCATCTTCACCAGGAATAG
GTTCCATCTCAAGAAACCACTTTCTTTGCTAATCCATAAGAAGCAAATCTTCATCTGTTT
TAGTTTTATCTTGTGACTGTGGAAATTCAGTCACATCTTTGGCTCTACTTCTAATTCTA
GTTTTCTTGCTATGTCTACCACATCCGTGGTTACTTTCACTACTGAAGTTTTGAACCTT
CAAAGTCATCCTTAAGGGTTGGAAACAATTTCTCCAACTCCTGTTGACGTTGGTATTT
TTACCTCCTCCCATGAATCACAATGTCTTTAATGGCATCTAGAATGGTGAATTCTTTCC
AAGTTTTCAATTACTTTGCCAGATTCATCAGAGAAATCACTATCTATGGCAGCTATAGC
CTTACAAGATGTATTTCTCGATCATAAGACTTGAAAGTTTAGATTACTCCTTGATCCAT
TGGCTGCAGAATGGATGCTGTGTTACCAGGAATGTAAACATTAATCTCTTGCACATCTT
TTTCAGAGCTCTGGATGACCAGGTAGATTGTCAATGATCAGTAATATTTTGAATAAT
CTTTTTACTGAGCAGTAATTGTCAACAGCGGGCTTAAGATATTCAGCAAATCATGCTGT
AAACATTTGCTGTCATCCAGGGTTTGTGTTTCATTGGTAGGGAGCAGGTAGAGTAGACA
TAGCATACTTCTGTGGGGCTTCAGGATTTTCAGAATGGTAAAAGATCAGTGGCTTCAGCT
TAAAGTCACCAACTGTACTAGTCCCTGACAAGAACTCAACCTGTCCTTTGAAGCTTCAA
AGCCAGGCATTGATTTCTCCTCTATAGCTATGAATGTCTCATGTGGCATCTACCAGTAGA
AGGCTGTTTCATCTACATTGAAAATCTGTTTTTAAATGAAGCCACCTTTATCAATTATCTT
TGCTAGATCTTCTGGATATCTTCTTGACGCTTGACATCAGCATTTGCTGCTTCACCTTG
TGCTTTTATGTTATGGAGATGCCTTCTCCCTTAAACCTTATGAACCAAGCCCTGCTAGC
TTCCAACTTTTCTTCTGTGGCTTCTCAGCTCTCTCAGCCTTCAAAGAATTGCAGAATTA
GGGTCTTGCTCTGTATTAGGCTTTGCTTTAAGGGAATGTTGTGGTTAGTTTTCTTCGTGT
CAGCAATAAGGCTGTTTTGTTTTCTTATCTTTGTGTGTTCTCTGGAGCAGCACTTTTAA
TTTCCTTCAGTATCATTTCTTTGCATTTACAACCTGGCTAGCTATTTGGCACAAGAGAC
CTAGCTTTTGATTTACCTTGCTTTCAACTTATCTACTTCACTAAGCTTAATTATTTATA
GCTTTTGATTTAAAATAAGAGATGTGCAGCTACTCCTTTCACATGAACACTTAGAGGCCA
TTGGAGGGTTATTTCAATATTGTGCTTCAGGTCTTGTTCATATTGTTGTTCTCAGGAA
TAGGGAGGCCCTAGGAGAAGGTGAGAAATGGAAGAATGGCTGGACAGTAGAGGACTCTGA
ACACACACAATATTTATCCATCCAGTTCACTGTCTTATATGGGTGCAGCTTGTAATTCTC
CCAAGAAAATAGTAACCTCAGTAATCGCTGATCATAGATCACCTTAATAATGAAAAAGTT
TGATGTATTGTAAGAATTACCAAAATGTGACACAGACACAAAGGGAGCACATGCTACTGG
AAAAATAATGCTGATAGAACTTGCTCAATGCAGGGATGTCACAACTTCTAATTTGTAA
CAATATGCAAATATCTGTGAAGCATGATAAAGGCAAGTGAATGAAACATGGTTTTCCAG
TACGTGATATTAAACCATATCATGAAATTCTAGACTCTGAGATTTACAAGGGACTGACAA
CTCAATCAGTTCAGCTTCTCATTTCCACTCTTAAGAGGTACCTCTTTAAATAAAAAAGCC
TATTAAGATCATTAAAATAAATCCATGGAAATCCTTTTATTAAGCAAAATGTGACAAAA
TTGTTGGAATAACCAGAATGAAAAAGTCTATCATTGCTACTGCCCTATCAGACTGACATA
CTTCATTGAGCATAAGAGGGATACTATAAACTGTACTAATATGACTTTATTTCTTTTAC
TGCTGAATATGATTCCATTGTATGAATATATCACATTTTGTGTATTTCATGCATCAGCTGA
TGGACATTTGGGTGTTTTACCTTTTGAATATTATAAATAATGCTGCTCTGAACATTTG
TGTACAAGTTTTTGTGCAACATGTTTCATTTCTCTATGGTAGAATTCCTATGACTGGAA
TTACAAGTCATGTGATAGCTATATTTAACATATTGAGGAACTGCCAAAGTATTTTCCAAA
GTGGTTGCACCATCTTATATTCTACCAACAACATATGAGTGTTTTGATTTTTGTATGTA
CTCACCACACTTGTTATTATCTGTTGTTTTAATATAGCCATTTTATGTGTGACATAT
TGTATTTTTAATTTTCATATCTCAAATGACTAATGAATTTAACATCTTTTATGTGTTGT

TAACTATTCTTACATTTTCTTTGGAGGATTGTATATTCAAATTCCTTTCCATTTTAA
TTGGGTTATTTATTTTATTATTGAATTGTATTAGTTCTTTATATATTTTGGATATAAGT
CCCTTTAGATATATGACTTGCAAATGTTTTCTCCATTCTGTGAGGTTTTCTTCACTT
AATAATGTCCTTCAAAGCAAAAAAGGTTTAAATTGTGATGAAGTCTAAATTTCCAGTCTT
CTATCACTTGTGCTTTTCTTTAGACTCTCTGTAATTTTTTACTTAGAGCAACATGTAGT
GTAATTTTGGTTTAGGTGACTGTGCTTCTACTAGACAGTAAATGTGAACACCTGGGTATT
TTGTATCCTAAGCAACAAGCAAAGGGCCTGAGCTCTAGTAAGATATCAATGAATGTTTGT
TGGATTCATTAATGGATTTTTTGATACTCCTTTTCAATAAGTAAATTTAACACTACTCAG
TAACAAAATAATTTTTACTAAGGAATGACAATATTTGATCTTTGAATAATTAATTTTAGA
AACACACACATATATATATACATATATATATATATATATATATATATATTTTTTTTTTTT
GAGATGGAGTGTTGCTCTTGATGCCAGGCTGGAGTGCAATGGCATGATCTCCACTCACT
GCAACCTCTGCTTCCCGGTTCAAGCAATTCCTTCTGCCTCAGCCTCCTGAGTAGCTGGAA
CTACAGGCTCCCGCCACCACACCTGGCTAATTTTTGTATATTTAGTAGAGATGGAGTTT
CACCATGTTGGTCAGGCTGGTCTCAAATTCCTGACCTCAGGTGATCTACCTGCCTCGGCC
TCCCAAAGTGCTGGGATTACAGGCATGAGCCACTGCGCCCTGCCAATTTTAGAACTTCT
TGGTCATCCTCACACAAAATTCAGATATTGATTCCTTAAATTAATTTTAGTGTGCATAT
TTAAAAGCATGTTTCAATGATAATATTAAGTAGTTAATTGCCTTATTTTATCTTGGAAAA
AGCAGAATGAGTGATGAAGTGTCATCTGTTTTATTTTCCAGTTTTTTCATAGAACAT
ACCTTTATTTGAAAACTAAAATCAAAGTATCCCTTGATGTCATAGGATACTTTGAAATTA
TAGATAATCATAGTTATATAGTCATAAATTGAGGAAGAGTGAGAGAGTAGTAGAAAAAA
TCATCAAACCGTATTATTTCATGGAGATGGTTAGTTGTAGTCAGTATTTATAATTGATGG
CTTTTTCCATTACTCTGGAGTCTAATTTCAAATCTTTATAAGTGTACAGATGTTTTATC
TGATTTTGCACATTATTTCTTTCTACATTTCCATAGTAGTTCAGACTTCTTAAAAGTCA
ATTTTAAAAAAATTCAGCTTTTCGTCCAGCTTTTGTCACTCTTATTCCACTAAAA
ATGTTGGTACTTTGGTTTTGACAATGAAAAATAGAAAACAAATAGCCTTTTATGCTGAAA
CATCTTATTAAGAAAATTTATTTTGTGATTTATTTCTTTATTTTTCATATTGAAAAATT
TTCTCTCTGTTAATTAGTTTTAACTCTGATGATCATCAGGGGATAATTCTTAGGACTTT
CATTACTCAATGTAATTGTAATAGTTGGTTCACCTCCTTCTAATTTGCGTGTGTGTGTA
ACAATAAAATGTACTAGTGCAATGAACAACTGGTTTTTACATCATTGAATAAATGTACA
TTAAATGCCTTCTGTACCCTAGGCGTTATATTGAACTGATCTAAATGTTTCACTGTTTG
AACTTAGAAAAGAAGCAGGCTTTCTGAGTTTTGTTTTGTTTTGTTTTGATTTTTTGGAG
GCGGATTCTCACTCTGTTGCCAGGCTTGAGTGCAAGTGGCACCATCTCGGCTTACTGCAA
CCTCCACCTCTGGGGTTCAAGTGATTCTCCTGCCTCAGCCTCCTGAGTAGCTGGGATTAC
AGGTGCACACCTGGCTAATTTTTGTATTTTATAGTAGAGACAGGGTTTCATCATGTTGGCC
TGGCTGGTCTCAAACCTCTGACCTCAAGTAATCCACCTACCTTGGCCTCCCAAAGTGCTG
GGATTATAGGTGTGAGCCACTGCACCTGGCCCTGAGTTTAGAAAAATAGGATGTCTAAAT
AGAATTAAGAACAATGCATTTCCAAAAAATTGATTTGATAAGTTGAATTTCTTAGAA
CATATACTTTACAATTTATATCACATAAAATTTTATTCATTACTGTTTATTAGTGAGCTA
AAGCTGTTTCATATAAATTAATTTGTTATTGTTTTGAAGTAAAAATACAACACAAGACT
CTAGAAAGAGACTTTAATTTTATAGTTTAAGATAGCTGTTTAAAAGATATAAGGACATAT
AACTATTATAGACCAGTGGTCCCCAACTTTTTGGTACCAGGGACCAGTTTGGTGAAAGA
CATTTTTCCACATACTGGGTGGGAGGGTGGTTTTGGGATGAAAGTGTTCCACCTCAGGCC
ATCAGGCATTAGATTCTCATAAAGAGCGTGCAACCTAGATCCTTCGCATGCACCATTCAC
AATAGGGTCCACCCTTCTTTGAGAATCTAATGCCGAGCTGATCTGACAGGAGGCAGAGC
TCAGGCAGTAACGCTCACTTGCCCGCCCTCACCTGCTGCTATGGGCCGGGTTCTAACA
GGCCACAAACCAGTACCGGTCTGTGCCAGGGGTTGGAGACCCCTGTTATAGACTAATAA
CCAAGTGAATAGAAATAGCATAGCTATGAGTCAAAGGTTTGTGTCTTTGCATCAAAGAA
TAGAAATGTCTGCAAAGGTGAAGACTACTATGCAAATGTGAAATGAGGAAGAGTGATTAT
TTTGACATTGCAGTCATTCCATAAAAGAACTATAGCCAAGTCTCGTGTAGGTTCTAGAAA
ACCACTAAAGATGGCGACCATGTTATCATGGGGCTGCATTGTTTCTTATTGTACTTGTG
CCATTATTTTGTCTTGCAATGTTCTTTGTGTTTTTGTGTTTTGTTTTGTTTAAATT
TTCTATTCTTAAAAAACACAATCTGATGAACCTCCCCAATCTATGATTCGTTCTCTT

GGATCATGTATTCCCACCACTCCTCTAATCTTTGGATTGTTGGAGGGGGAGGAAGAACTT
GATATGTATTATTTTGGAGTTGCCCTGACAGATAGCAGTATGGCATGGTAAGTGAGAATG
TGTAGCTATATAGGGTAGGAAAAGGTATTAATAGATTCAGAGAAATAAACTCCCAGTAC
AAGCCATACAACAGATCAATATACATTAGCTTTTTACTCTTTGTGCTGCTCATGTTA
GACCAGTAATTATTTAGAACATGGAAACAAAGTAAATAACCAAGTTAATGAATTCATTGT
TTTGGCTTTTGTATCTGTTAGCTACTGCCAGAATAATGTTGCATAATAAGAGCCACAAA
AATCTCAAAGGCCTACAAAAATCACTTTTATCCTCACACATTTCTGGATAACTGCAGTT
GGGCTTCTCTAGGCTAGACTCAACTAGGAAGCTTGGCTTCAGTCTAAAAACCTTCCAGCT
GAGATTCCTCTACTCAGTATCTCTAGTCTTTCTGGTAGTAGTGGGCTAGCAGAAACATAC
TGTTCTAGTGACCATGGCAGAGGTAGAAAAGAATAAGTGTATTTTAAGCCCTTCTTG
CTATTTTATAGATAGCCATTGTCCAATCCAAATATTATGAAAGAGCCCCAAAAAAGGCA
AGGAGAAAAATCTCACCTTTAGTGGGAGGGACTGCAAAGTTGTTTATGGGGAGGGGTAAC
GGGACCAATAATTCAGTCTACCGTAGTTTGTACCTTTAATAGAAATCAAACCACTTCTTT
ATTTTCAGTAGTTTGAATAGAACCTTCTTTATTTTCATAGTATCCAGTACACATTAGGC
AAAAAAGAGAAGAAAAATTTAGTGGCATTTTTTGTTGTTGTTTATACTAAAATTT
CCCTTGATATGTGTCTACCACATTCAGATTAACATCTATTGAAAAATATACTACAGGAC
GCATTTGTAGGGTGTTTGTGTTTGAAGAATAGTATAAAAAATTTCCATAAGTTTCTTATGCA
ACCACACATATTTTAACTTGATGTTTTATTCTGCATTTACTTTGAGCATCCTTAAGAAT
TTGTTAAAATGCAGAAATTATGCAGTATTGATTTCAAGAAAAATTGAAGTGGTTACACAT
GGTTGCCTTGGCTTAAAATAAATCCTTATTTGGTTCTAACTGAACAATATTGAAAGCA
CAACAAAACCTAGCTTTTTATTATGTCACCACACATTTAGTGAGTTATGGAAAGCATTTTG
TTTTAAGAATGGAGTTAACTATGTGTTATCCACGCTTCTAGCCATTCTTGTCCTCTGG
CTACTCTCAAAGCCTGCCTGTTATTCATACATATTTCTTCTAGTAAGAAATGCATCAA
ATCCCAGGAACATGTGCTGCTGACTGTTAGAAGAGTTTTAGTGGTGAGAGATTAATGTAA
TTACTTTTGTGTTGAGAAATATAATTGGTCACAGTTATATACATGTAGCTTATATGAGAAG
TACATTCAGTTTTAAACTCATTATGATTAATTTTACTTTCTTAAAAAATGAAACCAA
GAGAATCTAAATGTGTATGCTTCTTTCATTCTTAATATTCCAGAATACTTAGATATTTT
TATGTGAAGTAAATGCCAGATATCTAAATAGATATAATATTATTTAAATTTAAGGTATA
AACTTTTACATGACAAAATGCTTAATAGCCTATAATCTTAAAAACAGAATTATTCCAATT
CCCATATTGTATGTTACTTCATCAAATATTACCATTATATCATGTTTCTTGTTACTAAAGT
GTTTCCTGTGAAATAACGTAATAAAATGGCCTTAGTATGCATGATAATTTTAAATACG
CATTTCTAGTAAAATATAATGCTTATTCATTTTTTCTTCTAGTTCTAAAGAAAAAAAT
GCACCAAATGCATACACTTACTTTATGATAATTTCTGAAACTTAAGTAGAGTTTGGGCCT
GCAACAGACTTGTGTTTTCTAGTAGTTATGTTTCATTTCATGCAGGTGGTAGTGGTCCTAT
TAGTTTTCTTAATAAGTCCCATATAGCTCTGGCCAGTCTTTCATAGAATGAGTTGGTAG
GTCTTCTCCAAAGTTTGATTTCTCCCATTTTTTTCACATTGCAATTTCAAACCTTCAG
TAATACCATCAAGATGAGACAGTAACTATTATTAGAGTTACCACAAGTTTGAACAAAGT
TGATTATACATCGCAAACAAATAAATACTTAAACCTTGTTTCATAGAGATCAGGCCTTGC
ATACCTACATAGTCCAAACATTACATTCTGACATTTAGAACATTTAAATGCAAACCTGTT
CTTTGTTAGGGCTTCTCATAACTGAAATATGAGTCACTTGCAAACCATAATAGATTTTG
GCTCTGCTACATGATGAAGTGTCTGGATGTCGTGAAACATTTACCCAGACTTATGGCA
GTAGAATTTCCAGTGGTCACCCAAAATAGGGAAAAAAATGAAGAACAACTTAAAGGAAA
TATGCAGACTCTGGCACCATCCTTTCGTGGCAATACAGCTCTTTATTGTTGTTAAGAAAT
GGAAATATTTAGAGCCTAAACCCATAAACTATAGTACAATTAGGCGTTGAATTTTTTTT
TGTTCTAATTACGAAATTTAACTCTATACTTGATTCTCATGTTTAAAGTCAAGTTCATAG
AGTGTCTTACACATCACCTGATGCGGTCATACTGAGTTGTCTCCAGCACTGAGCT
TCTCACTGCATTGTGGGCAAACCTCATATTCCACACTCTACACTCATCTCAGGCAGGAAAG
GTGGAGTTTCTTTTCAAGGGCCAAAGGAAGCAACAGCTGAGGCGTGATGGTTGTTACTGA
TATTGGTGTGGGTTCAATTTGGTTAGTTTGCTTCAATTTCAACTCCTCACTTGAGATT
CCATACAGAAAAAGTAAATGGTAGGCTTCCAGCATCTTGTTTCACTCTGGTGAATAAAAAAT
TGTTTTGAATGTAAGATTAGAGTTTTTCTTGCTTAATTTTAGTAGTACCTACACAGCAT
AAACTGAGGCATCATTTAGCAAATGTTATTGAGTTGACATCATAATGACCTATTAAGGG

CAATACACATTTGAATGAGCTCAGTTATTCTTCCAGGTTTACACGTGCCTTTCATGGTGT
TTAGTGTAGCAGCTTTTGAAGCAGAGATGGGCAATGTGTAGGACCTTTTATTCCAGTCTC
CTAAGTGGGAGATATTCTGAACAAAACATATTAAGGATATTTTTCTGAAGTTTTGAAA
TTTTAAGTCATGATTCACTTTTCAAAAAGAAGACATTTATGTGGCCAACAAACATGAAAA
AAGCTCAACATCACTGATAATCAGAGAGATGCAATCAAAACCACATGGAGATACCATCT
CATGCCAGTCAGAATGGCAATTATTAAGGAGTCAGGAAACAATAGATGCTTCTGAGGCTG
TGGAGAAATAAGAACACTTTTACACTGTTGGGGGTAATGTAAGTAAGTTTGACCATTGTA
GAAGACAATGGCAATTCCTCAAGGATCTAGAATCAGAAGTACCATTTGACCCAGCAATCC
CATTACTGGGTATATACCCAAAGGAATATAAATCATTCTGCTATAAAGACATATGCACAT
GTATGTTTACTGCAGCTCTATTTACAATAGCAAAGAAATGGATCCAACCCAAATGCCCAT
CAATGATAGACTAGACAAAGAAAATGTGGTACATATACACCATGGAATACTATGCAGCCA
TAAAAAGGAATGAGATCATGTCCTTTTCAGGGAAATGGATGAAGCTGGAAGCCGTCATCC
TCAGCAAATAACACAGGAACAGAAAACCATATTCTGCATGCTCTCACTCATAAGTGAA
GTTGAACAATGAGAACACGTGGACACAGAGAAGGGAAACAACACACACCAAGGCTTGTTGG
GGGCAGTGGGAGGCAAGGGGAGGGAAAGTTGGAGGTTGGTTCAATCAGTGCAGCAAAACCAC
CATGGCACATGTATACCTATGCAACAAACCTACACATTCTGCCCATGTATCCTGTTTTTC
TTTTTTAGAAGAAATGTTTTGTTTTAAAAGAAAAAAATAGTAAGTCATTATTATGAGTAG
TACTGAATTATCATAAAATATCATTTTATAACATAAAAATTATATATGATAGCATGTTT
CCACACAAAAACTAGGAAATCAATAGGTTTGAATTGCTTTAAATATCATTGTAATAGTG
GATAACTTTGATTAATACATCTTTATATGCCAGTAGAATGCCTATGTTATTATTACATT
GCTGAATATGGGACTTTAATAAAAATGTAAAATGACCTGGATTGCTTAAAAACAGAAA
TATTTCTAGAGGAGAAATTTACATGCTAGACATGGATAAGTTGTCAGAATGAGCAGGACAC
ATTATTGCTCTTGAATCTCAGAATATAGAAGTCTAATTTAAGTAATATAAATGATCT
TCAGTATCCTGAAGATATTTGCAATTACCTATGTTGGTAATATATAAACTTAAATCAGAG
CTACAAAATACTATTATTGAAATAAATATTTCTGACAAAACCTGTTACTTGCTTGATTTA
AAAGCAATCTTGATGGCATTATCTTAATATCTTTAGAGATAACACTTGGAACCTAAAC
ATTATTTTATAGTGCAAAGTTTGTGATAATTTATGTGGTTTAAAGTACAATATTACATGAG
ACAATTAATTTTGGAGTGTCAGTTCCACAAATCCAAAAAGTCAATAAAGTAAATAATTAT
TTTTGCCACTAAACAAAACAAAAAATTAAGCACTATTTGCCTTGATGCATCAGGTGTTAC
TATTTTATAGTTTGTACAGTTTCTGTCTATCCTGCCAACTATTTAAATGTAAGCCATTCT
GAAAATGGGTATTTATATGTTGCATCTTTTAAAGAAAAAGAAATAGCTTTTTGTATACGTT
TTAATAGTAATCACTTTCACTGATATTTACAGAGAATTTAACTATAGTTTCTTTAGTTGT
AATACATACCTATTGTCTTTCTGCTGAATGTCTGTTTTCCAGTGGCATTGATAAGACGAA
CTCTCAGAGATTATTTATCTTAATATAAATATAAAAAGAACCTAAAAATAGGCAAGAAGT
GAATAAAATGTTTTTAAAGTAGCCCATCAAATATTATTTTCATCAGAAATTATTTCTT
GTTGACATAAAATGCATATTTTTATGAAAGATCATTCTCTCTGTGCAAAGATCAGAGAC
ATTGTGTCTTAGGCACATCATTAGCTTGCTCCACAGCCCTGGCTGTCTCCACTACTCTG
GAAAAATCAGTGCCCTCGAGTAGGAGGCTTAACATTGTTTTTCTTAGATAAATCACTTGA
CATTTCACTGCCTTAATTTTACTCTCTGTAAAATAACAGAAATGGAATGGAAATGGACT
TGATGATATTTAACATTCCTACAAAAGTATTAGTATGTTGACTTGCAAATGAATGGATT
TCTGAACCTTCAGTGTACTACAAATCCTACGGTCTCCAAAAGAAAACAAAAGATTGTTT
TTCTTCTTTATTTGAGAACCATTTTATGTAGATTGCAGGAAGGTTGTGAATTAATAATG
TTTAGATTTTTTCATTCCGTTTCAATTAAGAAACATTTGATTTAAGCTGCAGAGAGGATATG
CATTTAAGAATATGTTTGAATTTGTGGTTGAGGTGGCAACCACCATGCAATTATCAGTTT
ATTAACAGGGGAATGAACCTATAATGGACTTTGCTATTTTAGTCATTTCTTTAACTTGA
ATATAATCTTCTACTTTTATAATATCAATTTAAATTGGGGAAATAGCATGTTTTATCATT
AGATCCACAAATATATAATGGTTTGATATTAGCGATTGTTAGGTAATGATTGTTCTTAG
TTATGTAGTTGTATGCTGAAACATTTAAAAAATTAATCCCATGTATAATAACATTCTTG
ATGTAGAGCAAAATAAATGATAGACTGCATATTATAAAAAAAGAGAAAAGCATTATAT
TATTTATGCACTATTTCCACAGAAATATTTTTAGTTTTAAATATCCATTTGACCTT
CAGCAAGCTGAATACCAGGGATTTTATTCCTTCAGCATAAAGTAATTTGGTAACAATATT
TAAAGGCATATTTCTAACTTAAATTTTACTTTTATAAAATTACCAAAGACAGATCATT

GTGAACTAATTGGTTATTAGCTCCTTTAATCTCAGTCATGTGTTTGTCTCTAAATAAAAT
TATTTCAATTTACCAGAGTTTTACTGCTCAGGGCTCAGGTGACTCAGTCAAGAAAGTCATT
CTTGTGAAGCTACCTAAATGGTAACAACGGTAGTGGCAGTGGGTGATACCTTAGCTCAAC
CATTAGCTGCAGCTGAAGTGTTTATTGTAAGTCAAGCACAGATCTACCAACTACATTTCT
TCTAATTGTAGCAGATGAAACCACACACATTTTTAAAGGACCAGATATCTAAGCACAAAG
GTCAACATTTGGTAGGCATGCAGAAAACATGGAAGTGCCTTATCTTAACGGGATCATGAA
TCTTCATCTTTAAAGGGCAGTTTTTACAGATTTTCAGAATTGATACCTTAAGTTGTTCTG
AACTTCAATTACAAAAGCTATTGCCAGATTGTGTTTTGTTTTATTCAAAATGTAGCCAC
TCATGAAGAGAACTTCTGAGTTTGAAATGTGATTTGTGTTTTGCAAAATGTTTATTTG
AATGCAATTTTACCTCCAGTCTAAACAAATGTAAAGATAAATGTAAACACTAAGAGGGG
CAATGCTGGCACTGAAAGCTTAACTATGTAGTAGTATTGGGTTTGCCTTTAATTTTTAC
AACATATGCTTTTTTAGTTTTAGAAATAATATTGTAGACTTTTAAGATCTCAGAATTTTAA
GCTAAACCACTAATAACAACGTCTTCATTATTTAAAGTGATCTAAATTGTATAGAAATA
AAAGGGTTTTAAGAATTAAAAATGTAGTTATTGTTTCCTGCTTTTTCTCTAACTTC
TAATGTTCAATCTTGTTTATATAACGTTTTAAATAAATCACACCAAACCTTAGTC
TAAAGAAGGTATAGTAATGGTTGGTGTCAGATCTGAGAGTGAACCAAGCACATGTTAGGA
TTTAGAATCATCAAGATAAATAGTAACACCAATGGCAACAAGGAAGCAATTTAAAGACAA
ATTTCTGGAATCAAGATGTCAACAGTGTATTTCCCAGGGATGACTGCTTCTGTTTGTA
ATATTGCTATTAAAGTACATCACCTATTTTCTACAAGGGATGCTGACTTGCTTATTTTCT
TTTTATATATTTTGGTGACTAATACATACTTGTTATGTGACAGATTCTAAAATATTCAAT
GAATAAATGTTAGATTTAGTGACCACATCACATGTAAATGGGTTTCAGAATCTTGCAATTC
TTGGTAGATAAAACCATGGCACTAAGGATCTGGATAAGTGAAGAAATGGCAGGATAACAC
TTATCTATGCTAATGAGTTCAGATCTTCTCTCTAGATAATTTAAACCGCAGGCTACTGA
GATAACTTTGCCAAACCATGCTGAAAGCTTTTCAGTTATATCTAAGGAACTGTGGAGTAG
AGAAAAGGGAATGGGCAATTAAGGAAAAATATCTAGATTTTCAAGAAATGGAATATGAAG
TTATTCACTTTTCTTTTTTATTCTTTTTGAGACAGAGTCTCACTCTGTCGCTGAGGCTG
GAGTGCAGTGATGCCATCTGGCTCACTGCAACCTCTGCATCCTGGGTTCAAGCGATTCT
CCTGTCTCAGCCTCCTGAGTAGCTGGGATTACAGGTGCACGCCACCACGCCCACTAATT
TTTGATTTTTCAGTAGTGATGGGGTTTTGCCATGTTGGCCAGGCTGGTATTGAACTCAGG
CTTGTCCTGACCTCAGGTGATTCCCCTGCCTAGGCCTCCCAAAGCGTTGGGATTACAGGT
GTGAACCAACGCGCCCCGGCCATTATTCATTTTGAATGACAAGATGACACTAATTTTGG
GAAAGAGGATAGCCTGATTTATTAATAAATGACCTATGGAATTCTTACTAAAAATATAA
CTTGCATATATCAGAATATAATGATGATGAAATGGTCTAGATCTGTATATACAACCTGGT
CTATATAGATTCATTCAAAAAGGTGTCGTTTTGAACTCAATAATATTTAACTAAATTTAC
TATCTCTACTAAAGCAAAAAGAAAGACTTTTCCGTATTTGAAATGACCAAAATCTCACAG
AGCATACGGGATCACAGACTTCTAGAGCACTATGTAGTGATCCCCTAGTTTAGTTTTTA
AAAAATTTTGACAGAGAGAGATTGATTAATAGTTAGTTAGTTCTTATGTAAGTGATCCAG
ATTCCAGATGTGAATGAAATGCACATTTATGAAAATATATTTGTATAGCTGTAGCATATA
TTTTAAAAACATGATTCATTATGTTTTTTAACACACACGCATGAGACTGTGTAAGTTTT
CTTACTGACTGATTAGCTCTGTGGCACTAGGTGCTTCCTTACCACTGGACTTTTATTAA
CTCACCTATCCAATGGGAGATAAAGTTCTTAGGTCATAGGGCTCTGCTGAGGTTTTTATA
TGTATATATGTGTGTGATGGTGTGTATGTATCTACATACACATATAACCTAAAAAATCA
GGTATGTTTATTAGTTATTTTATTAATACTATTAATAATAGAAATTGGCTTGCTGAATTC
ATGGACCCACAGTTACACTGAGACATCTTTAGGTATACTCAACTTGTTCCTAGTGTGT
GACTCTGTTTCCTGATGTGCCTTTGATGGTCATATTTAATTGGTGTCAATCTAGACCTTC
CTTACGCTCAATTTGATGTTCTTCCCTGCACATACACACTTACATGCACACATTTACACA
CACCCACACATACTTACATAAACACACGTACATTTTTTCAAAAGACATTTACAAAATCA
TACATGCACACGCATGCATGCGAGCACACATGCACACACACACACCCCTAGCATGCACAA
GGGTGGCTTGTTGCTTTCCCAATAAAGTCATAAGATTACAGATGAAAGACAATTTAGAAT
TTTTTAAATTTCTATGAATCTAAAAGTTCAGAGTTGAATTATGATGCATTCAGTTACCTT
TTATTTGTTATTTTTCTTGTTTTAAGGACTATGCATATATATGCAAAAAATTTACGTGT
ATAAAGTGAAGATATTTAGTAATTTCTGAAGAACATTCATTACATATATGTATGTGTATG

[illegible]

ATTTGAAAGTAGCAGCAATAACAAAAAACTCATGTAATTGGCATAGGACAATTGACATCA
AATAATTGAAATTGTAATGACTATTTTCATTGGTTATACTCTAAGAATAGAGCAAATAAAA
CTCATTTATTTGAAGTGATTTATTCTAATCACTTTAAAAGAATGAAGTAATAATCATGTT
AATTATAATAGATATTCTAATGGGATGGCTATTTACTCCATGGAATATTATAATTAGAGT
GGGATTATTTAATAGGAATTACAGGAATCACAGGTAGAATTGCATTTGGAAATTTAGTTG
TTTTAATCATCATACTGCTCTCTTAAGAAATGGTTATTTTCAGAGATTCCAACACTCACCC
CTTTAATACTGTTCTCTTGATACTGTTATAATTTTATTTCTTCCCAATATTTTCTCTT
TAAGAATATTTTCATGTAAGTATTAGTATAAATGCAATGCTGCCAGCATTCTTATTTTTCT
CCATCTGACTTCCGTGTGTGTGTTGTGTATGTGTGCACACACTTGCATTGCCTCCAAGT
TCATCTTTAAGCTATGTTTACCTTTATGATGAGACTAGAGGAAGCCTAGGAAGGTCCTT
ATACATCTAGGTATTTAGACCAACACTGGTTTTTGTGAATTTTTATTTTATTTCTACTGA
GCTTTGTTTTTAAAGTTTAAAAAAAATGTAAGTAACCTTGCAGATGTTATCACTTAGAC
ATGCTAGTTAAGAAAAATACAGAATGTAAAGTGATGATAGCTAGGATATATAAGAAGTAC
TTTTGAGATGAGACAGAGTCGGGTATTAGGGCCAGAAAAGTATAAGGCTATAATGTTGGA
ATGAACAAGAGAATTGGAGGGAAGGCTGTTAGCAATTCAAGGGTAGAGAGGGATGCTGAC
AATATGTATGAGGTGTGACTGTGCCTGAAGGCATAAAAAATCACCACATTCTTATAACTCG
ATTTGTTTGTGTGCGAGTGTAGAAAGGCAGAGAGGATGGAAGGGAGTAAGTGGTGCACC
TACAACATTAAAGGAAAGGGGGGCATTTAGGAAAATACAACCATTGTTTTTAAAGAA
AAAGCTCACAAGTTGTTTGTCTTCTTAAATGCATTTTTCTCTTAAACAATTAATAACG
TTTTAATAACTGCTGACTGACTATAACTCTTGACACGAGGAACTCACATGTCTTTGGTTT
CATATTAAGTAGAATGGCTGCCTATGGCATTAGAATTTTGGGCTGTTTTCTTTTTGTTG
TTGTTTTAGTTGCTTATAATAAATATTAATGCTTTTAGATAAACCTTTGTTTTATTTTC
TACTTTATTCTCAGCTCCTTACCTCTTAGCCAAATTTGGGGAAAATATTTAAAAATTT
TCTCTCTTTCAAATCCTGGCTCTGTTTTCTTCTCATCTAGTTTGAGTAAGACTCGAG
ATTATGTAGGTCATCAGCCAATTGTGTAGATTTTTAAAAATTTATTTATATACTTTTCATT
AATTACTTTACCTAACATATAAGTGTTAGTATGCTATAGGAACTCTGTAGGGCACTGTA
GAACAAAGCCTGGGTAAAGGAATTACAATTTTATAAAACAACATGTACATGTTGAACCTA
ATTTAGATATCATTTGAAATGTGTTGGATCAAGATTTACATGTTTCAGAAGCACATGATT
CCGTTTGTCTCTTGTCCCTTTTATAAATTATGCTAGTAATGGGCTAGGATACTCAAAT
TTGCTTCGTGGTACCATACATGTTTTTGAAAATACTATTTAAGGTTCTAATATGCATTTG
AAATTTATAGCTATTTACTTTTGAATTCCTTCTATGTGCTTTGTCTCTGTGGTTCATC
CGGAGAGCAGAATATTTTAAACCAGCATTATTTCCACTGCAGTGAAGCTGAAACATGATA
TTTGTCTTGTGTTTTGTTGCTGATATGGCATATTTTGAATATTTAGTAAATAGACTTTTC
AAAAGACCTAATTAATCATTACTCTTGCCAGATATTTTCAGACATTCATAATATTAT
GAATTCACCACATCAGCTGATTTTGAATATGAAAAAGATTGTTTTTATCAACACAGCCT
GATATGTTTACCTCTTTTCAGAAAAATTATTACAACCTTAGGAATATTATTATTATTAC
AGCCCATTTGTAGACAGGGCATTTCTAAATATCAAACCATTTTGTAAATAGCATTAATA
GGTTTTGTTTCTTTTCTTTACCTTAATTTCCAAGTACTTACTATTTTCATGGGTCTGAA
TTGAATGTAGCTACTTCCATACCTCACCCACTTTACTAAAATAATGGAATTCCTAGTGAA
ACAGAACAAATGTACAGAGTGTGGTCAGATGAGAATTCTCACATGCTTATTGAAAGTTTT
TGTTAAACCATAAAATTACAATAAATACGTTAGATATTCAATGTACACCTGAATATACAA
GGTAAATGTGGGTAATGTCTTAGACTCAGCTGTTCCATTATTAATTTAAATGTGCTTG
AGGCATTCATTTTACTAAATGTTAAGACTGGCCTGAAGAATGCAGTACAACTAACACTA
AATATAGCGGGAATATTTTGTCTTAGACTGTTAGAAATCATCTCCTTATATGTTTGACC
ATGAAGGAAAAATGTATGTAAGCTATGATGGAAAAGATGTATGGAACTGTGGATGCTG
TAATCCCCACTGTGTCAGCTTTACATGCCTATACACTCCAACTTACCTTCTCCTAAT
ATTCTCATTGAGAGCTCTGTGTCTTTATATTTAATAAATACATTCTTGAGGTAAATTA
CAATAAATGGTATATTTGTTTTAGGTAAGTATATTAAATTAAGAGTAATTTTGAAGTC
AACATTTCTAGCACTACTTATACCTAGTGTCAAGGTCAATAAATACATATAATAGGAAAT
CTGATACTGTATTTCCCATGGATATATGGCAACTCTAGTTATATTTTGATTTAAATTAT
TCATTTGCAGAAGTCTAAGTCATCAAATAAATTTAAGCCATCATGTTTCTTATAAGAA
AATAGTAAGAATAAGAATAAAATAACAACATATCATTTTCTGTGCTTACTATCTGTCAAG

GGTTGTTCTAGGTTTTTAAAATATATGTTCACTAAATTAACCTCCAAAACAATCCTTTTT
GGCAGGTAATATTATCATCCAGTGACAGATGAGGAAACATGGGCTTGGAGAGGTTAAG
TATGTGGTCCAATGCCACATGACTAATAAATGGAGCACAAATCAACCACAAAATATGGC
CCCAGAGCATCATATCTCAATCAGCACAGGGTATATTAACGCAGTATTTTGATTGTAAT
ATACAGAATTAAGAAATATCTCTCTTCTTCTTCTGCCGATCCTTGCTTCTCTTCTT
TTTTCCCATTCCTTACCATCATTAGTCCTTATATGAGTGTTCTATCTCTATCTATTC
TAATTTAATTTCTGAACGACTCTTGTGGCTCAACTGACACCCACATAAAATGACCCCTCA
GATATTTATTTTAAACCTCATTCCCAAATCTCTAATTGCCAGATAACCATTCTATGATG
CTATTCTTTAATCCCTAAATACACCGCAAATAAAATTTCACTTCCTATTTATCCTGCATC
AAAGCAGGTCCTATTCTTGAAATGTCCTCAGTAAGAGTACTCTCTTAATTGCCAGCCAAA
GTAACCTGAAATTTAAAAAGACTTTTTTTTCTTTTTTCTTTTACTTTGCACATGGGGTT
GTTAAAAAAGTGAGAATATATATGGAATGTTGAGCAAATGAGAGAGCTATTAGTATTAT
TTCTATTTTCAATAATCTGTCAAATTTTACTAATTTGTCCCATGAATTGATTCAGAGCAA
GACGGCCAGGATTCCAATCCCTTAATTTCTTTTAAAATGGGCATTCTAATAGTACTTACC
TTGCTAGTTTGCCTTTAACAAATTAATTAGTGCCCTGGAATTGATGTGCTCAAGGTGGCG
TTAGCAGCTAGCAAACACTATGAATATTCTATTTTTCTCTCCGCCATCTCTCTAGTTCA
GAATTTTGAGGGTCACAGCTCAAAGACCTGAGAGTACGTAGGAAATCACCCCCATTTTCA
TTTTCCAGAACAGGGACTTTCATTTTACAGAACTGTTTCAGCAACTTGGGGGAAATGAAG
CCTCAGTCTCTTGGGCCCAACTGTATTCACAATCTGCCTTCTCTGGCCTCTCCCTACAC
TAGTCCATACTGCAATATCAATATCCTTAAAGATTGCTTCCAATTAACAATATTGGG
GTTCTTGCTGTAGAATTGAGGCAAAGTTGTGTTATATTTGAAGTTCTCAAAAAATATA
CCGATACTCTAACATTTTAGCTTGACTTTCTTCTTTGTTCTATATTAATTTGTCCACT
CTAACACACTGTTCAACAGTAAGCCAAGTCCATGAATAGTGAATGACTGTAAAATATTGT
ATTCATTGATACGCTTTTATTTTATTTTATTGTGATAAGAACATTAATGTGAGATCTG
CCCTTTTAAAAGATTTCTAAATGTACAATACAGTATTGTTAACTATAGGCACGATGTTGT
ACAGTAGATCTAGAAATTATCCTCTTGATAAGTGAAGATGTATACCCATGGCTTATAA
GCTCCTGATTTCTCCCTACTGTCTGCTGGAACCAACCATTCTACTCCCTGCTTCTAT
GTGTTTGACCATTTTAGATACTTCATATATATAAATACCTACCAAGCAGCATTTGTCCTT
CTGTGACTATCTAATATAACATCCTTAAAGGCTCATCCATGTAGTCACATATGGCAGGATT
TCGTTTTGTTTTGAGCTGAATAATATCCTTTGTATGTATATACAGGTTGAGTATTTCT
TATCCGAAATACTTGGGACCAGAAGTGTCTCAAATTCCTTTTTTTTTTTTTTAAATTTTG
GAAGTTGCATTATACATGCTGATTTAGCATCCCTAATCTGAAATGTCAAATCTGAAATG
TTCCAATAAGCATTTCTTTGAACATCATATTGGCACTTGAAATGTTTGGATTTTGGGG
CATTTGGATTTTGGATTAGTTTTGATTAGGGATGCTAAACCTATATCACCTTTTTTTATC
TATTCGTTTGTTAATGGCTATTTAGTTTGTTTCCAAATCATGACCATTGTAAAAAAGGA
TTGCTGGATCATACGGTGATTCTATTTGTTATTTTTTGGAGACCTCCATACTGTTTTTC
CACAACAGCTGTATCATTTTGCATTCCCACCAACAGTGACAAGGGTTCCAATTTCCCCA
CTTCTTCACCAACACTTGTTTTGGTTTATTTGTTATGATAGCCATGCCAACAGGTGTGAG
GTGATTTCTCATTGTGGTTTTGATTGCAATTCCTGATGATTAGTGACACTGAGTATTT
TTTATATACTTGTTGGCCTTTTTTTTTTGGAGACAAGAGTCTCGCTCTGTTACCTAGGCT
ACAGTACAGTGGTGCGATCTTGGCTCACTGCAAGCTCTGCCTCCCGAGTTCATGCCATTC
TCCTGCATCAGCCTCCCGAGTAGCTGGGACTCCAGGCTACTGGCTAATGTTTTGAATTTT
TTTTTAGTAGAGACGGGTTTCACTATGTTGGCCAGGATGGTCTCGATCTCCTGACCTCA
TGATCCGCCACCTTAGCCTCCCAAAGTGCTGGGATTACAGGTGTGAGCCACCACGCCTG
GCCACTTGTTGGCCATTTTATGTATTCTTTTAAAGAAACATCTATATAAGACCTTAACC
ATTTTTTTATTGGATTACCAAACCTAATAGCTATTATGTTGTAGGACTTATTTATATATT
TTGAAAATTAACCTTTCTATCAGATATACAGTTTGCAAATATTTTCTCACATCCCATAGAT
TGCCTTTTCATTTTCTCGACTGTTTACTGTAGAGAACTTTAGTTTGATATACTTTCACT
TGTCTGCTTTTGCTTATGTTGCTTGTTTTGGGAGTCATATACATGAAATAATTGCCCAGG
CTGTCTTTTAGCAATTTCAACTAGGAGTTCTATAGTTTCAGGTCTTAATTTTAAAGTCTT
TAATCCATTTTAAATTGATATTTGTGTATAATGTATATTACATTCTTTTGCATATGGAT
ATCCAGTTTTTCCCAACACCCCTTGTTGAAGTGACTATCCTTTCCCCATTATATATCCTTG

GCACCCCTTATGGAATATCAATTGACTATCATGCATGGATTTATTTATAGGCGTTCTAGTC
TGTTTGGTTTGTCTGTATGTGTCTTTATGCCAGCACAACTTTATTCATTACTGTAA
CTTTGTAGTATATTTTAAAATCAGGAAGCACAACTCTAACTTTGTTTATCTTTCTCA
AGATTGTTTTGGCTATTTAGGCTCCTTTGTGGTTTCGTATGAATTTTGAATTGCTTTAC
CTATTTGTATAAAAAATGCTGTTAGGATTTTGATATAAATTGTATTGAATTTGTAAATTG
CATAGATAACATGGACATTTTAAACAATATTAAGTCTTCCAATGCATGAACTTGGGATGTC
TTCCATTTGTTTGTATCTTTGTTGATTTCTTTAGCAATGTTTGTAAATTTGGGGCATA
CAAAGCTTTTACCGCCTTCGTTAGTTAGTAAGTTTATCTCTCATTACCTGTTTAAAGTCTT
ATAATATCATATGAACTTAAAGCCAAAAAGCCTTCCTTTGTCAAATACATGTTCAAAAGA
AAATATAAGGAGCAATGCTTTTCTACTTCCAATAGCTCAGATGCTTGGTCTCTTTTTTTA
GGGTGCAAATGCTCTCGTCACATACACTATCATTAGTGGAGCTGATGATAGTTTTCGCAT
CGACCCAGAATCCGGAGATCTGATAGCAACCAGGCGGTTGGACAGGGAACGCCGCTCCAA
ATATTCAGTCTAGTTCGTGCTGATGATGGTCTTCAGTCCTCGGATATGAGAATTAATAT
CACTGTCAGTGTGTAATGACCATAACCCAAATTTCCAGACCCGTGACTCTTTTGA
CATTCTGAGGACACAATCCCTGGTAGGTGATGGGTCTCTTATGTGTATTTGCAAGAAT
CGTTTTGAACCAAAATTACATACTATGTTTCGGCTGCTCTTAATCAATGATTAGTTTTT
AATCATATACTACTAGTTATAAAAAATATATATGCTGGATTGTTGGATCTTTTCATTAACG
ATCTTTGGTAAAATTCTCAAGCAAATGGCTAAATTTTTTAGGATGAATGAGGTTAGCCAT
TTATGTGTCTGAAAGTATTTGTGACATGGGTTATTAATTTTCTGTCAATCACAGTTTTGG
TACTCTTTCTGCTTTAAAAACGTCTAATGTGATTTGGGGGCTATGTATAAAAAAGAACAGC
AAAAAAAAAATACATGAAAACTGTGAATATTGATTCTAACGCTCACTAGCTGTGTGACC
AACGGCAAGTTAATTCATTTCTCTTAGTTTCAATTCTCTATCCTGTAAATGGAAACAGTA
ATTCCTGTTAGAGTTAAGGTAAAGGATAATTTAGAAAGTACATTGAGTTTGCTAACACAG
GGCTTGGGTATTAGCAAATGCCATTAAGTGTTATAAGAACTGAATCTTTAATTATAAT
CTTGCTCTTTGAACATATTATATTGTGATTTTTTTTAGTCTGAGTACTCAATATCCATG
TTTCTGGTGTGTGTGTGTATGCTTCATTCCATTATTGGAAATTTTTATGTAAAATTTAA
ATTTATTCTGAATTACATTTGGAATGATTATTCATGATAAGCCATACATTTTAGAACT
CCATTTGGCAAAGGAATTAAACATCTACAGGAGACTCCTTCTACCTGAAGTTTTTCTTC
ACTCCTCAAGATATCTTGCAAGTCCTTTATGGAAATCCCATCACACTTATTTCTTGAC
TTAGTTATTGCAATGACCACATAAGTTCTAGAGTAGTATCACCAGGGCATAAGTCTATAT
ATTTTTGGAATCCTCAGTTCCTGACACTAGCAATATGCTACCTTAAATGTTGATTGAAT
TCATCAGTATATTTATGGATAGGTACTGCTAGATGGAAACATAACATCAGATATATTATT
AATTCCTCAGGAAATTTATGCTGAAACCTGAGGTCCACTGGATATCTGATATGTCACATA
CTGTATTCAAATAGGGAAATGGTAATATCAAATCTGCAGAATGTTATGTTCACTGTATT
TTCATAGCGGTTTTAGTTAAGATATTTTACTGTACAAATACATTTTTTGGTCTCTTTCT
ATATGTTCTCTTAGTAATACTTCTTACTTCCTTGATTTTATACTATTAATTTATTCTTT
GATAGGTTCTTTGGTAGCAGCCATTTAGCCACGGATGATGACTCTGGTGTGAATGGAGA
AATTACATATATTGTGAATGAAGATGATGAAGATGGCATCTTTTCTGAATCCTATTAC
TGGGGTCTTTAATTTGACTCGATTATTAGATTATGAAGTACAGCAATATTATATCCTCAC
TGTTTCGAGCAGAAGATGGTGGGGGACAATTTACTACCATCAGAGTTTATTTCAATATTCT
AGATGTAAATGATAATCCACCTATTTTCACTTGAATTCATACAGCACATCTTTAATGGA
GAATCTACCTGTGGGATCTACTGTTCTTGTTTAAATGTTACTGATGCAGATGATGGTAT
GTATTTTATTTAATATAATTTTTTAAACATCTATAAACTGTCATCAGATTTATATTACAT
TTATTTATTGTGTTGAGCTGTCACAAAAATGCATTTTGTGAATATAGGTTGGAAGTTGAG
GAATAGAATTATAACTGAACTGTAGAGGATTTTAAAAATTAAGTACTTTATCGGTTAAAT
TCTTATTTATAACAGAAAACATACCTTGATTGTTTTATAAACTTTATCTTATTTTTCCC
CCTAAATGTAGGGTCGTGTTTCAATTTAGCAATGTAGAAGTCATAAGACCACTTTTTTTT
GTATAATTTTGTAGATAAATAAAAAATATTAGGTTTACATATGTTATTTTAACTTGAAAA
GGATAGAATTTCAAAGCAAAATGAAACCAAGACTTAAGTAAAAATACTTACGAATGCAA
AAACTAAGTTTACATTTTTTGGCTGACAAATAGCTAATAATTTTTTTTTTTTTTGGAGAC
AGAGTTTCACTCTTGTTGCCAGGCTGGAGTGCAATGATGCAATCTCAGCTCACTGCAAC
CTCCACCTCCAGGTTCAAGCAATTCTCTGCCTCAGCCTCCCGAGTAGCTAGGATTATA

GGCATGCACCACCACGCCTGGCTAATTTTGTATTTTGTAGTAGAGACGGGGTTTCTCCATG
TTGGTCAGGCTAATCTCCAACCTCTGACCTCAGATGACCCGCCTGCCTTGGCCTCCCAAA
GTACTGGGATTGCAGGCGTGAGCCACTGCACCCAGCCCAGCTAATAATATTTTAACTAGG
TTTCATTTAGCTCGAACAGTCTCAGATCTGTTTAAATTTATGCTAATGATCAAGTTAAAA
TTTTGCATTAAATTTATACTTTACATGTGTTTGATTTGTATTTATTGCAAAAGCAATTGG
CAAACCTTATTTTAAATAGCTGACTCCTTTGGCCTTTCTTCTAACACCTGTTTGTAAAGTA
TACATATCATATAATATAGCATTAGAGAAAACATTGTATGGATTATCAACCTTTAACTGA
ATTGTCTGGAAAATTAGTACGTGTTTTTCCCTTATGTTGGATGCAACTAAATTGTCTCAT
CAATATATAAAACAAGGGACAGTACTTTGAAGAAGAAATAGGTCTCTATTGACAGGCATA
TCTATCTCAATTTAGAATTGCCTTATTCTTATGACTTGGATGATTTGTGAAATCTCAGAA
TACTATTCTATTTTAACTTCTATTCTATACTTACTTTCCTTCTCATAGTGTCTATAAAT
GGCACTTGGAAACGATATGAGAAGCAAAAAGGACAGTATTTTATATATGTTTCAATAAGTA
AAATGGGAAACTTTTCTTTAGAAATTCATTGAGTAAGAGCATTTTGATGTTTCCCTCCTCT
AATTTAAGTGCAAGTTAAATTTGGGCACAAAGATATATCTAAATAGATACAGCTGTAATG
CTAGTACTACTACTATTACTACTACTGTTGCTAGTAACAATACTTTAATGTTAACGATGT
TAATAAGAATCTCAAGAACTGACATCTGCCAAGTGTTTTGCATGTACCCAGTCCTGGCCT
AAGAACATTGCACACTCTATTTTATGTACCTCATCCAGGTCTGTGGATTGGCTCCAGTT
AGATATCTGTATATAATTGAGGTTAGTCCCTATTTTGGAGATTGGTTTATCTGCTATAAC
TTTTAGTTAGTCTACCTATTCCATAGATAAGAATATTTTCAAAGCTAATCATGTATTCTT
ATTTGCTCTGTGACTGTGCTCAACTTTTCTACAGAGAAGAATTTTCCACCATGTTTCTTT
TTGATTTATTAGTTATGTATTAGAGAGAGCCCATGTTTTCATAGAATTGTATGTTTTCT
GGAATAAGTTTTATTTACCATCATAACTTAAATATAGGGAACTGCGAAGATACCAAAA
AATTAAGAAAGAAAAGAAAAGAAATTTGTTTGTCAAAACCTGCTGGAATATCCATGCA
CATGTAAGCACAGAAATACATTGACCATTGTCTCTAAGTAAGTTTTGTGATATTTTTTC
TTAATTGCATTGAGTAAAGTTTTCAAGCTATATTTATTCATTGTTTTAGTTTTGAATAC
GTTTATCAGTGTAAATTTCTGCACCTTGACATAAAATATATGACACAATTCCTATTCTTT
CTGAATTTCAAGGACAGTGATAAGGCTATACAAAGGTAAGCTTGTGTGAAAACCTTTCCA
GCTCAGTTACACAAAAGGCTCTCAAGTGTTTACAGACAATATTAGTCAGACATTTTTTA
AAAATAACAAATTAACAAATAAATCTCAATCACTGATCAGAAGGTTCCAATGAGGTAATA
TTGTCATCTTTTTAGATGAAGGAATTTTATATGAAAATAAATGTCACAATCTGTTATCTG
TCTATGGATTCTGTCAGAGTTTAAATTTAGCTTACATGATGATTTTATAAACATAAAATC
AGATCTTTTACTGTTTTTACAAGAAGGGTAATACCTCTGTTAGCATCAAGACTACTAAGC
ATGCGGTATTACATTGAGGAAATATCGGAGCATCACGGAAATATTCTGGCTTTGATGGTT
ATTTCTGTTATCCTATAAAATTTTACACTTTAAATATTGGGAAGTCATATTAATGTTT
TGCTAATAATACAATTGGAATTTTGTGCTGAATAAATGTAGCTATATAATATTGGTGTACA
ATACAGACCATTGAGTTTCATATATTCCAGTGACCTGATGACCTGTTGAAACTGCTTTA
TAAAGATGGGTGTTATTCAAACACTTCTATGTGTTGCAGCTATGTGAAAAGTTGACAAA
TATTAGTTCTTTATAGAAATTAGAAGATAACATTTATAGATTGTGAGTAAATATACATAT
TTTATAGCATGAACTATACACCTATACTTTTAAATATATTTTACTATTTATATATATT
TTTATATATTTATAATATATATTTTATGTGCTGTGCTTCTTAGAACAAAATTATTCATGA
GACTGAAATACTATATATAGATATCTACATATCTATATATAGTGTGTGTGTATGTGTGTA
TATATATATATATATGACGAAACCATAAAACCATATGTATGCAATAAAACTGCCAGGAAG
AGTCATGTAACATAAATGACTTGGAGAACATTGAACACAAATGGTTCACAGTGGGCTGTTT
GAAGTTTAAAGATCTGGTGGGCCATTAAAGCCCACTAAATTTAAATTGCAACACTTATGG
CTAAAGCTTAGAATTCAAACAATGTAAAAATAATAATTTTACAATAATGTGTTTACTGT
CTCATGGTTCAGATATTTGTTGAAAAAATAGAAAAAATGGTCTGAGCTTAGTATTTTTTC
AGTATACTTCAAATATTCCGGGAGAAATTTGAGTTTTGCTATGTCTGCATGTATTTTTTA
GATGTAGTGTATGTGGCCAAAGTCACTTTTACTTGTGCTGAGAAATGAAAAGTTATTTTC
TTTACAGTAAAGTAAATGCAGATGGATTCCATGACCTGTAATTGCAGCAATTAATTTTCA
GTTTCTGAGATGAGAGCTACTTCTTCTATAATATGGCAATATTTTATGTAAAAATAGTTA
TATTTTTTATTTGTTTTCATCAACAATAATCTTCAGTTTATTTTTAATGTTGTTACTTAAT
ATATTTGTCATTATGTATTTGAATATAAAAGCAAATTTTCTTTTGTATACTTTTAGTT

AGCTTAAAATTTATTACTTCCCTTACCCATTCATCTACCAAACCTTTTGCCTTTATAAAA
GAGGCTGTTCTGCTGTTTACAACAACGCTATAAAATTTTGGGATCGTGTTCTCTTTTGC
CTCTGCAATTTAGCTGTTTACTCAAGGAAGTAGCATACATGATGGACTAAGGATGATCAG
ATACTTGATTTAATTGCTCCCATTCCTGTTGATTTATGTAGAAATGTTAGGCCATGTAAA
ATGTCAGTATTTTAAATGTATTTGATCTTAGATATGAAAGATTTTATATGCTTCTCTAG
AATTAATTTTATATCTTTGCTTGTTGGTATTTATTTTCATTCATGTGTTTTCATAACTG
CATTTCTCAATAATAGTCATGTCCCAAAAGAATGGGGATTCAATATTTACTGATGAACT
TTTTTGTAGGAAATGCAGAAAATTTCTTAAAAAGTAATTAACGTAACATATATATGTAG
ATGTTAATAGAAACACACGTATACACATAATTAATAAATTCTGTGTGTATATATAGA
TACTCAAATATGTATATGTTATAATGTTTGAGTAAATATATACACACACAATATAATG
TATATACGTATATTTACGTTGTAATGAAAGTCCTAAAAGCTTTATATATATATATGTGAA
GATAGTGGAATTTTTATCCTCTAAAGCCTGTGGAATTTTAAGACAAGGGGTTGAAATAA
GCTGTTAACCTTGTTCTAGTCAGATTCTACAATTCTGTTTCTTCTCCTGCGGGTGAATTGA
CCTCTGACACCTATTAGCTTTATTTATTCATATTTTCTGATCTTCAGACTCCTAAGTA
TTCTGAACCTTGTAATCTCTTCTGTTCACTTGAGTAGTCTTAAATAAACTATAAAG
ATTAAGTCACAACCTCATAATGAGGGGGAAAAATAAACTACGCTTCAACGATTTACT
CAATCATTGTTTATCCTAGAAATTTTGTAAATAAGTCATTGTCTGAAAGTTATATTCAT
AAATATTTTCCCATGTTTCAAATTAGGCAAAGGATATTAGAGACAGTAAAGTCACAGAA
TAAGAGTAAGTGTGGCGTTTTTAAAAACATTGAGTTCTACATGGTAGAAAAAATCTCAT
ACTCAAGTTAAATTTGACTTCTTAAAGAACTTGATGAAGTTCAAAAAAGGCCAAAAGTTA
ACTGAAGTATTGATAGAATAATGAGAAAGAATTTTTTAAAGAAAAGAGTAAAGGGTGA
TTAAATTGTTCTAGACGACTTTTGCCAAAAGTGAACATCACTTCTCATAGGTAGAATTCA
GAAACCTGGATAGTTGAAATTAATGTTAGAAATATAGAAGCTAATTGTAGGTAATTCAGG
TAGTCAGTAGATATTTGCTAGTCCCAGAATATACATCTTTATTAAGATAGATTACCTG
GATGTACAGTACGTTTTTATCATAATATCCTGTAATTTTCCAATGTCATTAGGATAAGA
TATAAAAATGCACATCGTTACAGGCCAGAGAAGAAAACATCACTCTGAGGCAGAACTGA
CTTCTTTCTGTTTTCACTGCTTATTTGTTATTTACCTTTAGTTACTAAAACAGTAAGATG
ATGTATATGCTCCACATCATTTTTGTTATAAGACTCTCTGCAATCATTTTCTGAAGTGAG
GATTTAGAAACAATTTTTAACTAAAAAATGACACATGATCCTAAGAAAAATCAACAGTA
TCTAAATACAGTTCAATAATAGCATGAGCATTATATTTGGAAAGTTTTATGTATAATTT
TACTGCTAACAATTTCTTTAAAAATACTTTTAGAACTTTAAATATGTTTAATAAAATTT
TGAAAGAGAACTATTGTCTCAAAGGTCCATTACTTAGCTAGACACTTAATAGGAATTAAT
AAGTATTTATTGATTTTGACACGAAATATAGAAGTACACTTACAGCATTTCATGACTAATG
CCATACATCAGAACATTTTATTACCCTTTCTTGAAAATTGGTGTGAGCCTCCCTAAATTA
CTAAAGTTACAAATGTTTGACTAATAGTATAGCGTGTGGCACTGTTAGTGTTGGACCATC
AGGAATTATGTGATAGAAACAAGGAAATATATAGAAAAATATCTGCTCTCTGGAATATTT
TTCTCCTCTTACTTTTGTAATTTAACATTTCAACACCCTAGTAAATAGCAAGCAGTATA
TAGATCATTTGTTACAGGATTTTCTAAAGTGTTTGGATGCACGGCATATCAACATG
CCAAATTACTTGCTAAAAGTTTTGGTATAGCTTGTTCTGCAATCAGCATATGTTTAAGAA
AATTTTTCTTCCCTTTAATTTAGGCATCAACTCTCAATTGACTTATAGCATTGCTTCA
GGTGATAGCCTTGGGCAGTTTACTGTTGACAAGAATGGTGTACTCAAAGTCCTAAAAGCT
TTGGATCGGGAAAGTCAGTCCTTCTACAACCTGGTTGTTCAAGTGCATGACCTGCCACAG
ATTCCAGCCTCCAGATTCACAAGCACTGCTCAAGTCTCATTATTTTGTGGATGTAAAT
GATAACCCACCGACATTTCTTTCCCTAAATTGACATACATTCCAGAAAATACACCTATT
GATACTGTTGTTTTCAAAGCTCAAGCAACTGACCCAGATAGTGGCCCAAACAGCTATATT
GAGTACACTCTGCTGAACCCCTTTGGGAAACAAGTTCAGTATTGGGACCATTGATGGTGAA
GTGAGGCTCACTGGAGAACTGGACAGAGAAGAAGTTTCTAATTATACTCTAACAGTGGTG
GCTACAGACAAAGGTCAACCATCTCTCTTTCATCTACAGAGGTTGTAGTTATGGTACTT
GACATCAATGATAACAACCCCATCTTTGCACAAGCTTTGTATAAAGTGGAGATTAATGAA
AACACACTTACTGGAACAGATATAATACAAGTGTCGAGCAGATGGAGATGAAGGCACA
AATGGACAGGTTTCGCTATGGCATTGTTAATGGTAATACCAATCAGGAATTTTCGGATAGAC
TCTGTCACAGGTGCCATCACTGTGCTAAACCTTTGGATAGAGAAAAGACCCCTACCTAC

CATTAACTGTT CAGGCAACAGATCGAGGCAGCACACCCAGAACTGATACCTCCACGGTC
AGCATTGTTCTACTGGATATTAATGACTTTGTTCTGTATTTGAGCTATCTCCATATTCT
GTAAATGTCCCTGAGAATTTAGGGACACTACCCAGAACAATTCTTCAGGTCAGTATATTT
AAATAAAGCAAGTATTGTCTTAATTATAAGACATCTATTTGAAAACCTCCCCTCTTCTAC
AGCGTTTACGTTCCCCTGTTCTCTCCTCATTCTCATCCATAAATGCTCAATTGCAGATA
CAGCAAATTTTGAAAAGGAAAGGTTTATAAACATCATACCTAAGAACCTCTTAATTTCT
CATTGATGAACTTTTGTATTTTACTAGCTTTCTTTGTGTATACTCATGTTGCACACAT
TTATGTATTTGTGTTTTGAATTTTGTTCACAAGGATAATATCTGCACATAGTAAAAA
CTAAATGATGGAAATGTTTGAACCTTCGTTATAAATATTGTTCTACTCTTTCTTCAT
ATATTTAACTACCTAGGTGAACTGCTCTTAAAAATTTTATGAAGCCTTCCAAAAATGC
TGTGCATTAGCTTTACACATATTTTACACAAATAGACTCGGGTGATATATACTATAGTG
TGCCATTTTTATTTTTACTTGAAAATCTAAAAATATATCTTTGGAATCTCTTAACATAG
TTTTACCTCATTTTTTTAATGGAGGCATTTATTTTATGAGATGCATTGTTTGTTTA
CTCACATCTTGGTATGTACTGTTCTACAGGTGGTGGCAAGAGATGATGATCGAGGATCTA
ACAGCAAACCTCATATGTTCTGTTTGGTGGTAATGAAGACAATGCTTTTACTCTCTCAG
CCAGTGAGAACTTGAGTAACACAGAGTCTGGATCGGGAAACAAAAGAGCGCTTTGTCT
TAATGATTACAGCTACAGATTACAGGTAAGTCCATTACACCCTTGTTCAATTTGTAGATAAT
TTCTAGGCCAGGCACGGTGGCTCATGCCTGTAACCCAGCACTTTGGGAGGCCAAGGTGG
ATGGATTACTTGAGGTCGGGAGTTCAAGACCAGCCTGACCAACATGGTGAAACCCCATCA
CTACTAAAAATACAAACATTAGCTGGACATGGTGGTGCCTGTAATCCCAGCTACTC
AGAAGGCTGAGGCAGGAGAATCGCTTGAAACCAGGAGGCGGAGGTTGCAGTGAGCCGAGA
TCACACCACTGTTCTCCAGCCTGGGCAACAAGAACGAACTCGTCTCAAAATAAACAAAT
AAATTAATAATAATAATTTCTTCATAATATGAGTATGAAGTATTTTCTGTTTGCCATTA
AATGAAATATTTGTTCACTTTTACTAATGCTTGAAATTCTGATTGCCTCTATGTTATTGA
TGGCACATCATTCACTTTATGACATTTATATATAAGTGGCAAGGGCTTAAGGACATCGCC
ACCTAAGCCCTATTCCATAAAACAGAATGAATTGTTGCCCTATAAGCTTATTGAGTACC
TCTGGATGTGACCTTACACTCTACTTCCTGAGCTAGGGGCATTTAAAGTACTTTAGCTTT
GGAAACATGTAGATGGTTCCAACCACTTCTCTTCTGATAGACATGGGTGAGTGAGTCTGT
TAGGAGGAGCTTTCACTAGAAGGTGGCTCAGTATTCAGTGAAGCATTGGTCTAAATGTGC
AGGCTGCTCAAGAACAAAGTCTGGTTCCAGGGAGCCAACTATAAGTTCCTGATGCCAT
CAGCCTTGAAATCAGGGTCAGGGGGAAACCAGGACTTGGAATTATTAGTATAAGTATAA
ATAACAGAAGTCTAACCTAATTTCTATTAAATAAGAAATATGCAGATCAGATGTGTGAA
GATTCTGCCCAATAGAGTTATGGAGGATTCTAAGTTATGGAGGGTGAGCAATCAGATTAT
CAGTAACATTATGATATGTGGAAGCCTGTCACTCAAAGCTTTAAAAATGATGCTGAAGAC
CATGATGGGAGGCACAAATGAGTTTCAGTGACATTAGTGTCTAAGTCATGGTGTGTTGG
CAGCTCTAAAAATGAAAGCATTAAATTAACCTTGTTTCAAAGCACAGCTCTCTATGGGCA
CTGTTTTTCGAGTCGCTCTGAAATAGACTGGCATTCTGAGGCCACTGGTGGATAAATAC
TCAATTAGATGTCTGAAGTTCATTTTATGAGTGATACAGAAAACAGAAGTTGTGAGGAA
AGTTGAACTGGGTGATCTTGAAATTAATCCCTTGGATACTCTTGATATGAATAACCACT
TTTTTCAGGAGAATGTGAGTTTTAGACATCCGGTTTTAGAATCTACAGTTTAATCTTATT
TTCCAAGAATGAGATCTTTGACAGAGGACTTAAATTACATATTCACTGTTTTCAATCAA
AGTCAAACCTGTAGATGACATGAGAAATTTCCGAAAAATATGGCAGCTATTAGATCCCAG
ATGCAATGTTTTCTCAAATCTGTAGTGTCTAAGGGCCTGGAAAATATCAAAGTGTTTC
AAAAAATTTTGAGAGTTTAATCTTTATCTCACAAATCACCTTTCTTTGCATTTTTTT
TGAATATTACCTTAGCCAGAGATAGGTCAACTTCATCAGTATGGCACAGATTGCAGTG
GCAGTTTTTAATCATGCAAACTACTAAATGTTTCAATGTGGGAGGGAGAAAACATTACCA
TTTAACTCTCATCATATTTTTATTTACTGACTGCATGGTTACAGAGTAGCACATTTGGA
AACTCTAACTACTCCTGTCTACTGCTCCAGTAAGCTACAACCACAGTATCATATGTATGC
AGTGCTAAAAGTTACATTACTAAATTACAAAACCGGAAGAGGGTATAATAATTATATCTC
ATTTTCTGTAGATAATTAAATTGCTAAACAGACTACAATTCCATTACTGATGATATGT
TGCTTAGCTATAACAGAAAGTATGGATATTCGGCCTTCATTATGCATTACTTATAGTTAT
TTCTTCTGGAAATATTTACTGTACCAAGTAGAACTCATAGGAGGCTAACACATCCACCT

GGTATAGTAATGCAGGTACTACTACATGGTTTAAAGGAGAATTTGCTCAAAAGCAGTTAT
GTCCTTCATATGGGTTAGGCATTCTACTCCTAAGTAGCCTTTCTTACAAGAGTTTGCCTT
ACCATTTTCTCATATGTGCAATAAATAAATAATGTTTTAAATGGAGCAAGTAGCAGGAA
ATTATCAGGGAACTAGAAGAGTATACTTTAAAAAATGAATTCAGATAATTAATTTAGAA
ATGGAAGTATATCATGTAGTTAAATACATAGACTTTATAGTTAAACCCAGTTCACATCC
TACCTCTGACATTCCCAGCTATATGACCTTCAACAACCTTACTATTCCCTTCATGTTTGT
TCTATGATTGGAAATACTAATATCTATATGAAAGTTTATTGATCAAATAGATAAAAAGGA
ATACTTATTCTAGCTATTAATGTCAGTCAGCATGTTTACTAGACATTTCAAGCTTAGTAA
GGCCAAAGTAACACTTTTGACTTCTATTACCTCCCTACCTTAAATGAATTGCTTCATAG
ATCATTTACAAATTGCTGAAGGCAAACCTTGTTATTATTCTTCATTCCCTCTCCTCTGTA
CACCATATCCAACAAATTCATTAACAAGGAGACTCAGCTTCAAAAATGTCCAAAAGTGTC
CTGAATTTATCCACTTTTCTTTACCTCCAAAACGACCTCCTTAGTCTAAGCTGGGGTAGT
ATGATAGCTTGCTAACTGCCTATCTTTTCTCCTGCATGGTGCATTATTCAACAGGCAACC
CAAGAACATTTAAACTATAAATTAGATAATCATACCCTATCTCTTGCATAGACAGCATG
CAGTGATTTCTAAGAATAAAATTTAAATGTCTTACCATTGACTACATGGGATTCAATAAC
TTGGTCTCTGTCCATTTATCTGAACCCCTCCACCACCAGCTGCCACCTTTATTTTGA
GCCAGAGTCGTGCACTGGCCCCAGCTCACCCTTTGTCTCCTGTCAGTTCTGCATTTAGTA
TCATCACATTATTAGATTGTAATTGGCCAACATGGAAGTATTACACCCTGGAAATCAGT
AAGTGCTTTGAATGTAGTTGGCCTGTTTCTGAAAGCAGTTGCTAAACATTTACTGAATA
CTGCCAATGCCAACCAATCAATCAGGCTTCCTTAAAAATGCCAACCTTTCTGCCATGTTG
GCCTTTTGCACTGTAGTTCTCTCTGCCTGGAATTTTCTATTCTACAGCGAGCTGTTTGG
TTTGGTTTGGTGAGGGAGAAGGGCATCCATGTCATGGTCATTTTGTCAATTATTTTAGATA
AAATGTCAACTTCTCAGAGAGGACTTGTCTGACCAGTAATGTTATGTTTGCCTTTCCCT
TTCCAGTGTCCTCTATCAACTTCTCTTTATGATTTCTTAACACAAATTCCTATCTA
AAATTGTGTTCTTCTACATAAAATATATGAGTATATAGAGTTTGTTTACCTTATCCTTCT
CTATCAGATTTCCAGAGAAAGTAACTTCTTAAGTCTTATTCAAAATGGGATTCTCAGAA
ACACTTAGAAAAGGACCTGCAACATAATAGGTGCTTAATAAATATTTGTTGAATGAGTAA
GTTATATATGTTGAATAATGATAGTTGTCATTTGAAAGACAACCTATTATTTAATATGC
AACTGTTATTTATATTTATTTAACATACTTATATTTAGTTTATTGTTATATATTCATTGT
TTGCAGATTTTTTTAAAGAACTTCCAAAAGAAAAAAGTGCAAATCATTTTTAATTCATG
GCTGAAATTCAGAAAGTTTTGCTACATTGGCTGTGGTCATTCAAAGTGACCTCTCTTT
GAAAAGCAGCACAAGTGTTAAAGCTTTGTGGTGTTTAGTGTGATGTGACAAATTGCAGT
CACATGTAAGGACCCAGTGAAGCATTTTATGGCTTTAATTCAGTTTCAAGTGCTTAAAT
ACTGCTTGAGCTATATTCTCATGACTTTCCCTGAACCTTCTGGCTCTGATTCAATTCTG
TTATCTATTAGACGTTTCTAGACAGGTCGATTGCTACTCTGTGCTTTACTATCCACCTT
TTCTTACTCTGGTTCATAAGATTTAATTCAAAACCTGCATGAGCAGAACTACATGCTTC
TGAATAGTTTTTGTGTTGTTGTTTGGAGAGGGAGTCTCACTCTGTTGTGCAGGCT
GGTGTGATGTTGGCATGATCTTGGCTCACTGCAACCTTCGCCTCCCGGTTCAAACAATTC
TCCTGCCTCAGCCTCCCAAGTAACTGGGACTACAGGCACATGCCTGGCTAATTTTTTTT
ATTTTAGTAGAGACAGGGTTTACCATGTTGCCAGGCTGGTCTCGAACCCCTGAGCACAG
ACAATCCATCTGCCTTGGCCTCCCAAAGTGCTAGGCGTGAGCCACTGCGCCTGGCCTGAA
TAGTTTCACCATTCGACAATTCTTTATACCTGGTTTTCCCAAAGCAAACAATTGTGAAT
CTTCCATATCTCCACATATCTAAGCACTTTCTAAGCACACGTGGCAATTGGTTTCACAT
AGCTTAAATATAAGGGCCCATCATTTACACCAACTTAATATGAAAAATTTGCTTGTTTT
AAATTTTATTATGGAAATTTTGGTGTTACATAAATTATTCCAACAGATATATACTTACG
CAAGTAATTTGTCCAGACCTTTTAGAATTTTTTAACTCAAGATGAGATTATACCCTCAA
AAATAAATTTAAATGCTGTGAGGCATTAATATCTGCCACTACTCTTTCAGGGAACTGAAT
TAATGTGCGAGAAAGCAGTAAACAAACTGGTATGACACTTTGGGGATGCTACAGTTATA
CTCAGAGGAGTTTTTAAAGAAAGCTACATATGAAAAATTTAAGTTAGAGAAATCTGAC
ATTAAGTGATGGTTTTTTTTTGGCCAGGAGGTTTCTTGAGATGAGCCAGTCCACTTCCT
TTATTTTCCAGATAAGAAAATTGAAGGCTGGGATAGATAAGCAGTGTGCTAGAACTTGCA
GACCCAGGTAGTAGCAAAGTCAGGTATAATTTAGAATTTCTGCCTTTCAACTAAATTC

TTGCTCATCCATATCATATTTATTAAATTTTTTTAAGGAAATCAGGATATTCCTTAAAAT
ATATTGCTGACTCTCTCCATGAAATAAATTTATAAATATGCAATTTAAAAATATTTTCT
TTTTACTTTATTCAATTCACTTTAATAAATGAAACATTCAACTGCTATTTTCTTTCCC
CAAATAAATAAATGTTTGAAAACATTTTTAAATGAAGCCAAATTAAGTGGAATCAGTAAT
TTCAATATTGGTATTTTGAAAATAAGCTTAAATTTAGACATTGTTTAAATTTAATTGTTA
AATAAAGAAGATATAAAGAATTTGTTAGGCTTTATGCCTAGAAGATGATAATATTGGTAA
TTATCACTGCCAATTATCATTTTGCATTAATTAATAAATCAAATGCTGCTAATTTAATG
CACTTTATAAATAAGTTCTGATTACAGTTAGTGATATGGTTTGCCTGTGTGTCCACCAAA
TCGCATCTTGAATTGTGGTCCCATAATCCCATGTGTCATGGGAGGGACCTGGTGAAA
GTTATTGAATCATGGGGGCAGTTACCTCCATGCTGTTCTCCTGATAGTGAGTGAGTTCTT
ATGAGATCTAATGGTTTTATAAGGGGATTTTCCCCCTTGTCTCAGCACTTCTCTCTCTG
CCACCATGTGAAGAAAGACGTGATTGCTTCCCCCTCCGCTGTGATTGTAAGTTTCTTGAG
GCCTTCCCAGCCATGCCAACTGTGGGTCAATTAAACCTCTTCTTTATAAATTACCA
GTCTTGGGTATGTCTTTATTAGCTGCATGACAGCAGACTAATACAGGTTACTGATATCAG
AGAGAGTAGGGCACTGCTGTAAAAATACCAAAGTGACTTTGGAAGTGGGTAAGTGGCAGA
GACTGGAACAGTTTGGAGGGTTGAGAATAAGAGAGAAAAATGTTGGAAAGTTTGGAACTT
CCTACAGACTTTTTGAATGGCTTTGACCAAAATGCTGAGGTGTTATGGAAAATGAAGTCC
AGGCTGAGGTGGTCACAGATGGAGATGAGGAACTTCTTGGAACTGGAGCAAAGGTCACT
CTTGCTATGCAAAGAGACTGGCAACATTTGCCCTGCCCTAGAGATCTGTGGAACCTTG
AACTGGAGAGAGATGATTTAAGGTATCTGGCAGAGGAAATTTCTAAATGACAAAGGATTT
AAGATGAAGCAGAGCATAAAAGTTTGAAAATTTGCAGCCTGAGATTGCAATATAAAAGA
AAAACCCATTTTCTGGGGAGAAATTCAGCCCACTGCAGAAATTTGCATGAGTAACCAAG
AGCTGAATGATAATCACCAAGACAGTGGGAAAAATGTCTCCAAGGCATGTCAGAGACCTT
CTCGACAGCCTCTCCCATCACAGGCCTGGAAGTCCAGGAGGAAAAAATGGTTTCTTGGG
TGGGCCCAGGGCACCCCTGCTGTGTAAACCTAGGGATGTGGTGCCCCACATCATAGTCA
CTCTAGCCATGGCTAAAAGGGGCCAAGGTTGAGCTCAGGCTGTTGCTTCAGAGGGTACAA
ACCCTAAGCCTTGGAAGTTTCCACATGGTGTGAGCCTGCAGGTGCACAGAGGTCAAGAA
GTAAGGTTTGGGAACCTCCGCCTGAATTCAGAGGATGAAAATAAGCTTAAATTTATACA
TTGTTTAAATTTAATTGTTAAATAAAGAAGATATATGCCTGCTGGGGCATTGCCTCATGG
AGCTGTGAGAAGAAGGCCAGCATCCTCCAGACCCTAGAATGGTAGCTCCACTGACAACTT
GCAGCTATGCACCTGGCAAAGCTGCAGGCACTCACCAACAGCCTGTGAAGGCAGCTGGGA
GTGGGACTGTACCTGCAAAGCCACAGGGGCAGAGCTGCCCAAGACCATGGGAGCCCATG
TCTTGATCAGCATGCCCTGGATGTGAGACATGGAGTCAAAGGAGATCAATTTGGAGCTT
TAAGCTTTAACTGCCCTCTGCATTTTGGACTTTCAGGGGCCTGTAGCCCCTTCATTTTG
GCCAATTTCTCCATTTGGAATGGGTGATTTACCTAATGCCTGTACCGTATTATATCTA
TGAAGTAACTGCTTTGCTTTGATTTACAGGCTCATAGGTGGAAGGAATGTACCTTTTC
TCAGATAAGACTTTGGACTTGGACTTTTGAGTTAATGCTGAAATAAGTTAAGACTTTGGG
AGACTGTTGGGAAGGCATGATTGTGTTTTGAAATGTGAGGACATGAGATTTGAGAGGGGC
CAGGGACAGAATGATATGATTTGGCTGTGTGCCAGCCAAATCTCATCGTGAATTGTAGT
TCCCTTAATCCCCATGTGCTCCTGAGAGGGACCTAGTGGGTGGTAATTAATCATGGGGGC
AGTTACCTCCATGCTGTTCTCCTAATAGTGAGTGAGTTCTCAGGAGATGTGATGGTTCTA
TAAGGGCTTACCCCACTTCACTCTGCACATCTCATTTTCTCTCCTGCTGCCTTGTG
AATAAGGACATGTTTGCTTCTGATTCTGCCACGATTATAAGTTTCTGAGGCCTCCCCAG
CTCTGGGTTAATTGTGAGTCAATTAACCTCTTCTTTATAAATTGCCAGTCCCAGGT
ATGGCCTTATAGCAGTGTGAGAAGGGATTAACACAGTCAGTGAGACTATTATACTTCTAT
GGGCTTATTGATATTTAACAAGTCTCTTAATATTGCTTTTTACAAAATGTTTATAGAGC
ACTCTACTCCAGATATTCTTCTAGGTGCTGAAGATAGGCTGGTGAAGAGGTCTCTGTCTT
TATACAGCTTAAATTACAATCACAAAAATAGACAGTAAAAAATAACAATATAGTATATA
GATTGGGAGTGTTATGAAACATGATGCGGTTAAATTAAGTGGCGAGAGAGTGTTAAGTAC
TTACGTATTTTACCCATTTTGAAAGTTGAATCTTTGGACTTGATGGTAGAATCGGAAGGA
TAGGAAGCTGCAAAAAGGCACGAATCAGGCATGAGTCCTAGAATATTTGGATGAACAATT
TGGAGATGGGGAGAAAAAAGATTTTAGGGCAAATTACCAAGACTTAGTTTTTGGACATAT

TACGTTTGAAATATTATACTAATTGAGATGTCACGTAGAAAGTTAAATATAAAAGTTTA
GTTCTCAGGGAAGACATTCAAGTAGAGATACATCTTAGAAAGTCATAAACATTAGATGAT
ATTCATTATATGCACACTTAGTGCTTGTAAGTTCCAGAATATGTATTATATTATCTCATT
TAATCTCACAATAGCCCTGAAAGTTAGGGACTAGTATCTCAATTTTATTGATTTATAAAA
CAACCAACAAAAATTTGTGTTATAAAAACTAAACAACCTGTACTGCCCATTCAGCTGTTT
GTCAGTGACTACAGGATTTGAGGCCAACCCACTTAACAGGTGATGATTTCTTAACAATTA
TTTACCAATCCCAAATGTCAGCCTGTCTACCATATTCTGTTTTATATAGACTATGTTTA
TACGAATTTCTCCCTTTGGATTAAATTTTATTTTATATTAAGAGAACATTGGTTTAG
GAAGCAAAAAATCTTGTTGTTCTCTAAGTAAATAGCTGGTAAAGTCATAATATTCAT
GAATTAGAAATCACAGCATTATCCCCTCAATAAAATAAAAAATATGTATCCAAGGGTTTT
ATTAAGTATAAAGTACAAAGCGAATCTTAGATATTATACTATGAACGTACAATACATATG
ATATGCTCATACCTGCATAGACAATGCAGTTAGTTGGGCTGTATGTTTGCATTGAATTTG
GGGGTAGGAGATTAATCTGCGCACAAATTAATATGTTATCCTTTATCCTTTATAGATAA
TTCTCAGTCTGTTGACTAAAGGGATATAGAGATTCTGTCTCTAGATTTGGCACAAAAGT
TTAGTTATAAAGTATTTGTGTGTCAGCATAAATAGTAGGTCTTCAGGGAACAGTTCAGTT
ATTAGCATTCTAATTAAGGGCATTATCATCCAACCTGAAAGGGAATATATTTCAATCTT
ATGCAGGGATTGAAAATTGCTTTTAAATGGAGGGGAAACATGCTGTTTTTGCAAAGTTAAT
GCTAAAAGCTAAAAGGAGTGATCATCATGCTTTATTTTATTGGTGAGCACCTGGTAACAT
TTTGAATTGTTGTCTGTCACATTATTTAGTTGAAGCTGGTCATTGCATTATAAATGGCTC
TGTAATCAAAAGAGAGGTCAGAATTGTGAATATGACATTTTACATCCGAAGATAATTGT
TTTTAAATATTCCAGAAAGATCACATTTTGTCAATATTATTTGTGGGAATGTATGATAGA
AAAGTTTGCCTTGCTGTTATGATCAACATTTTAAATAATGAAAATTGCTTGAAACTTT
TAAGGCCCAATAATTCTATAAATCAAATCATGCTAGAGTTGCCTTCAATTACCAGACAT
GAAATGCATTTGACTTAATTTTATTTTGTGCTCGGGCAGCTTTTGTTATTTCCATTGG
CATATTTGTCATAGATGGGAATCTTGTTTCCAAAGTTGATAACTGGTTATTGTTTTAATT
CCTCTTATTTGTAGCAGACTTTCTATGAAGTTTGTTAGTGATCTAAATATTATTCTAAAT
CATTTATTTAAATAGCATTCTTTAAATCAGCTACTCTTTAGTCAGAAAAAATATTTCT
ACATAGAATTTTATTTGTGTTTTCTTAAGATAAAACTCCAGAAACATTTAATTTCCAAAA
TTCCATTGAATAAGAGCTAAAGTTGCCATCAGGTTCCATAGAATTGAAATTTGATAAAAC
AGTTTCAATCTATTATCCATTTACTCCATGTGAGCTACAAATCTGAGTATACAAAGTAAA
TTAACTTTGAAATGGCAATAAACTATGATTAATATTTATGATAAAATTTATAGAACTG
AATGATAAAGATTATATAAAATCAAACCAACATGATTTCAATTATGAGGATTTCAATTAT
TTCAAAAAAGTTTTCTAATTCTATCTTTTGAACAAACCTTTTTTAAAGCTTATTTTGA
TAAGTATTCTAAATATATAATTTGATATTTTCACTCAGGAGGCAGGCAGAGGTAGGTTG
AGTTTAAAATTAGGTGGTAGCCTCTAGTGTTTCAAGAGTTTCAATAACTGTGTTGAAATTT
TTGGGTTTCTTTAATGCTCCTCAAATAGTAATTCCTCATATGTGCTTTTGCAGGCATAA
AATATTTGGTTATTATTATTTTATTTTATAATTTTAAAAATTATGATAAGATGTACT
TATCATTACATTTCTCATTTTAACGATTTTTTAAGTGTATGGTTTATGATTAAGTATAT
TCACTTTGTTGTGCAATTTTTCAGTGCCATTGTCATAACTTTACTAAAGTAATTATTTTA
GTTTTACTTCATGCCTTTATTTAGTATGTAATTTATCTTAAGGAAATATAGTGTTTTGA
TAGATTCTATGCAAAAATAATGAAAAAATATTAAGTGTGTATATATCTAATTTATATA
AGCATATATGTAGAACTAATTAGCAGCAATACATTATTTTATAAAACAGAATTTTTAAAA
TACAGAAGTGTTGTTAATATTTAAATTGTTACATACCTTTTGTTTTATGTATTTTTGTA
TTCAAATTTAATCTAACACATAATCTCAATGCTAATATAGGATGACTGAATTTCAAT
ACATTTTTTAGTGGATGGCTTACTTACTGTGAGAAAAATGAGTTTACTTCATGGGGAAAA
AAAGAAGCTAATACTTTATTACAACAAACACACCGCTAGTCAGGGGACCCATTTACCAA
TATTTGATGTCAAGAAAGAAAATGGCTTTGTTGCAAAGCAACAGAATTAAGTTAAGCAGA
ATTCTATTTCTGCTGAATAGCCTTTTATGTTTCAAGAGAAGTATTTTTGATTTATAGTTGC
TATTATAAAAAATATAATCTTCTGACATTTGAACTTCAATCGTTTAAACTCATTCAATTA
CACTTATTATCTGTGTATATTCTGATAGAGCAGTGACCTGAAACTTTTTTCTTTTTTCAA
ATCTTATTTTAAAGTTTTAGGCCAGGTGCGGTGGCTCACACCTGTAATCTCAGCACTTTTG
GAGGCTGAGGCAGGAGATCACTTGAGGTCAGGAGTTCGAGACTAGCCTGACCGACAAGGT

GAAACCCCGTCTCTACTAAAAACACAAAAATTAGCCAAGTATGGTGACACATGCCTGTAA
TCCCAGCTACTTGGAAGGTTGAGCCAGGAGAATCGCTTGAACCCGGGAGGCGGAGGTTGC
AGTGAGCCGAGATCACACCGCTGCTCTTCAGCCTGGGCAACAAGAGCGAAACTCCGTCTC
AAAAAAAAAAGTCTTATTTTAAATTTTCTTGAACCTTCATTTGATATATTTGAGCTGACTA
AGCTACCAGTCTTAAAGGCAATGCTAGTTATTAGTTAATGGTTTTTCATACTTAAGAGT
ATAAAATGTGACTCACACAAGGCCAGGGTTAACTGTGGTATCATAAATAATTGGAAGAT
TAACCTGTGCACAGTCTCTCTCTCTCTGTCTCTTCCCATGAGTGTGTGCATGTGCA
CAATTTGGTTTGTGTAAATTTTAAAGATATGCCATTGAGAATTTGGGTTTTCTTTTTGGC
TATTTTATGTGAAAAGTGAAGAAGAATTTTATCACTTTTTCCATGTTTATGTTATATTTA
TGTTTATATGAATACATATGTGCATACATATGTACACACACTACATACAACTTTACAAAT
TTAAATTTGAAATTTTTTCATCTGACTACTAATTGTAATTAGGTTTTTGACTTTTCACTG
GAGTTCTGACTTCTAATTCAAATATCCACTGCATCTTCTTAACCTCTACAATTACAAGTT
TCTGAGACCTTCACTTTTAAATTTTATTTGTATATTTTACCCCTTTCATTGGCTCACTGTC
CTCTATCAGGAGCCCGTGTCATTATATCCTGCCTCTTTGTGATTGCATCTGGTTTTCATA
AATCAATCCCAGGTGGAATTGAACAATTTGCCCTATTACACCACTACCTATATAATTCA
TCATTATCAGATCTATTTGAGCTAAACATTGGCCCTAGTATTCTGACTCTTCTCATGGGA
TTCACGTTTAAATTGGGACCTTCTGTTTCTAAGTAGTACACTATCTGCAAACTTTGACCT
TTGTCTGTAGTCTTGTTCTCTGACCCAGCCTTAGGCTAAGTCCCAGACTATAAAAGTAT
AGTCCTAGATTGTATATTTCTAGAAGTGTCAATTATGTGAACCTTTCATCCATGTAGACC
AGGTTTTCATATAGAAAATTAGAGAAAGAGTTAATACAGACAGAGCACAAGACCTAATGG
TATGCATTATGGGCTAATATAAAAAATTAATTAACATAATTATTCCTGTTTTCAATTAAC
TTATAACTTAATAGGACGTGACTGGAGTACGTTGATAATTATAATAATATAGAGCAAAAC
ATCTGCAATAAGAGTGGCAGAGTTTTATCTGAGCTTAATTAACCTTAGAAAAGATTTTTT
TAAGAATTCAAACTGGCTCTCTGTCTATTCTGGCTAAATGGAAATTGGTTCAGTTCTTT
GGGTCTTAAGTTGTTTAAACAAAATCAAACAAGAATACCTACTTTATGGAATCTGTGCATT
AAATGAGCAATACATGTATAAAATATGTATAGATCTGGTATCAAATGTGTTCAATGAAAT
ATGTATAACACATGCATGTATGTATATGCACCTATATTTCAATTTAGATATAAATATATG
AGCAAGGTTTACAGATAATGACTCTGATTTTCAGTTTTTGACACACTAATGTTGAGACTCT
TCAGTAACTTGCAAGAGCAGACCAACAAATGGGCAGTTGGATCTGACAGCCCAGAGGCAG
CAGAAAGCTTTGGACGGAAGATAAAGTAATAGTAAACATTATGCAGCACTTCAAATAGGA
TGTATCCACTACACGGTGGGAAACAGTAATACTCCGGAGAACCTCTCCACACAGTTAAAA
GGAAGGGTTACATCACACACCGGGTTCTGTCTGGGGTGGGATGAGGGGGGAGGGAAAGC
ATTAGGAGATATACCTAATGTAAATGATGAGTTAATGGGTGCAGCACACCAACATGGCAC
ATGTATACATATGTAACAAACCTGCACGTTGTGCACATGTACCCTAGAACTTAAAGTATA
AAAAAAAAAAAAAAAAAGCAAACACACAGACACAGAAAAGCAACAACAAAACACAGCGTCT
TCATTCAATTAGCACATAAAAGAAGTGCCAAGATCTGTGGTCGCCAAGGACTAGGGAGTT
TGTGTCACTCATCTGGCACAATGCAGTGAATAAAGATTCACTTGAAATTAAGAGACAT
TCCATTTTTCTCCCTTGATTTTCTGTGTAAAGCTGATTTGGAGGTTATGCTATC
AGTCAACAAGCAAGATGTTGTAGTGGGATGGAGGGTTGGTAAGCCCCATTACAGGAATA
ATAGTCAAACACATTGGAGGCACGATTCAAATTTAGGTTAATTAAATCTCAGTAAAAGG
CTTAGAAATGTAGAACAAAATTTCTGTAAGGTTTCTATGAAAAAAATTTTAAACTA
ACAAGACTTGTGTGCACATTTCTGGGGTAATAAGAAAGTTGAGACAGTTGAAGAAATTG
TACTTCACTTTTCTTGAGGTGGGAAAAAAAAAATAAGAAGAGAACTCCAAGTGCTTATGAA
GTGGGTTGTGGCTGATAATAAGGGGAGAAAAGGGATACTCTGGAGAAAGTTCTTGCTTG
AAAACAGACTCATATAGATGTAGAATCACCTATGGGGCTGATCGTGGCTTAAGGATCATC
TGCCAGTCTTGAGAATCATTTACTAATCTCAAGGATCAACAAATGATCCTCAAGCCAGAA
TTGTCTGTTGTACCTGAGTGCTTTGAAAATCATCTGGAAAAATAAGTTGATATTCTTTG
GTATGAACACAGTGAGACTGAACTTGCTGTAAGCTTCTTGATAAACAGGGCTCATTTT
TACTCCCCCAGCATTTGCTTTCTACAGTATCTACAGTAATGTATCAACAGTAGTAATG
TATCTACAGTAATATATGGTTTACAGACAAAGAAAGAAATCACATATTCTGTCCAAATG
AGTCAGTCATAATTTAATGTGGTTTTCCATATGTGTATCACCAGACACTTTAGAATACCA
AATATTAATGTAAAGACTTTGACTGGCGGTTACTTATTTCTAATTGTGAATTACAGCAC

AATGTGTATATCAGAAATATTGAGATCTTTCTTGAAATCTCACTGTAAGTCTTAAAATAC
CACATTTAAAAATGTCCAATTTACTATGTCTTCCATAAAGCTGTGAATTTTATAGAGAGCT
AAATGTCTCATGATTTTTACCACAAGTGAATCATTGAGATGAATTATTATTCAAAATAT
TTTCTGAATAATATGAGACTGAATTGAAAGGTTTGGGGAGGGGGCAGAATCCTGAGAGC
TGTAATACAGAAAACTATATAAAAAAATGACTTTTTATAGTCAATTTCTGTGAGTTTT
TTGGTCTCTAAAACAAGTACAAGAAGAACAATGGGTAACATAGAATATAATTTATGTGCT
AGGTAGTGTCTAAGCACATTACATTTTTCTCAATACCCCTTTGGGGTAGAGTCTATTAT
AATTCTCATTTTATGGATGAAGATTGATTTTTAGTGAGTAGAGTGAAATATCAGTAAAAG
AGATTAAAGAACCCTGCATCTCTCCCATCCTTTGCCTCTCTGGAACCTTGATTAATGTA
TCCCCTCTTTCAGTTTCTCTCTCTTCCATGACACCTCCTTTTGTCTACACAAATGCAC
ACATATTCCCTAGGTAATTTTTTTTTATGCAACTGGTGGGAATTCTACTAACATTATTC
AGAGCATTAACTTCCATTTCAAAAATTGTATATAGTGAAACACACATTCAAGAAATTTA
AGCCAAACATTGGTACTCAACAATACACTCCAACTGTTATTTAGCCTTAATATATTG
CTTGAGAGAAATTTAAATCTATGCCAAGATTATTGTGCTCAAATGTCCACAACTTAA
GCTGGCCAGTAGTGAAGGTCCCTCCCTGTTGGGCTCTTACCTCCTGCCTGGTGTCTT
CTAGGCTCAGCGACAGAGCTGCTGTCCAGACCCCCAAAGCAGCGCAGGAAGCAGCACTG
TCCCCCTACTGGCAGTACCTTCCAGCTTCTGTGCTAGGTAAAGACTCCAGGGCTGCTT
TACATGGGTACATCTCAGTGACATTCTCACTAGGTCTGTGGCCTTGAAAAAGCTACTT
AACTTTCTAACTTGAGCTTACTCATATACCAAATGGAGATGACAGCAGTGCTGATTTA
TGGGGATTAGATAAGACAGTTTATGTAACTTCTTAAACCAGTGCATGCATATCTAAGGA
CTAAACAAATATTTACTGTTATTGATATTTCTTCAATATGTTGCATGGAATTTTGACAG
TCTTATTTGATGTGTTTCTTATCGTATCCTACATTCATATCTATTTGTGTGTGTGAAAT
ATTTGTTGCATAATTTACCATTGCTTACAGTAAGCAAGTACTAAAAAGGCATTACATT
TTTTTTAGTTTATAGTTTATTATGCATATTACCAATAGATTGAGGGCTATTTTCCCTT
TAGTGTA AAAATCAAACACTAATAGGTAAGATTTCTGAAGTCATAAACTTTATGTTAAATT
TTTAGATATTTCTTAGACGTCAAATTTTTGACTTTGTATGTTAATTTAAATGAAACAC
TTAATATAAAATATCTTATGATATATATATATATATGGCAACAATGATCAGTGTGCAGTC
TAAATTTAATTGCATCATTTTCTGGGAGGTATCATGCTTCTTATTGTGCTCTGCTCAAC
TGGGTATACACATTCTTTCATCTAACCTAGAATTCACAAAAATAACAGATCTCCAAAACC
ATTTCAATCCATAATTTCCCATCTGTTGATTTTGGTTCTATACACACATCTGAGCATA
AAAGCTCATTGGTACTAGGCCACGAGTAATTACAATCTAAGAACATAGAAGAATGATTGA
ATAGTGGTAAAGGAAATACCAGCAAATCACTTGACTATTAGAAAATAATATGGTAAGGTT
GTGAATCTCAATACCATTCTGTGATAATGAGGGCACTCCATAAACATTTTACAAATAAAT
GAATGAGTGGCTTTATTTACAGAATATTGAATGGTAAAGTTAAGTAGAATTTAAATGTCA
TATTAAGGGAAATAACTTTATTGAAGGTAAAGTAGTATCTTAAGCAGAAAAGGAGAGTAT
CTGGGGTTTTATTTATTTTACATAAATGCAGTTAAATGGATCTTCATTGTTTCTATTTA
GAAGAGTTTGAGTTTGAAAAACGGTTTTGAAAAACAACCAACAGCAGATAATTTGTCTT
TCAGTTATGGGGACAGCCACAGAATTCACACATATGGCATCTAGCCTTCACCACAAA
ATTAGTCTAGTACAGATAGTGTGGCCCAAGTGTTTGGCAAATGTTGGGTTTTACCATAT
ATTGATAGCAGCTGGAACAGGAAATAAAAAATGAATCATTTACGTTACATTGAATTTTAA
GTAGAAGCAGCACACATGATTCTGAGTTAGCTCATCATTATGAAGTTATTCTAGCACGTA
GAAGATAACACTTTTGAGATATAACTTGAAGCTATTTTTTGTTCACACAGACAGTATGG
GAAAGGGATTTAAATACCTCAGAGACTCTGGAATTTGTGATAGTAACAATGATAGTCACA
GCTGAGAGTCCAGTTTTTAACATTGCCTTGTTAGTTGGCCAGCTCTCCATGCCTGTGGG
TATCTTCAAATCTGGTTTTGTGCTATTTAATGTAATTTAGAGAAATTACCGGCAGTG
CCTTTTTGTGGCATTCAAATGATATTGTTGTGTTCTACATTGTTGAATCAGCACCTTTA
AAATAGAATAAGAGCATGACATATACTTTTCGTGCAGAGTTACTAGGAAAGAGTTGAAAT
TCTAGTTCACAAATGAAAACATTTGTCTTGTAACAAAATTAATAATCACTCAATCACTTA
TGTGTTCAAGAAATTTACTTTGATGTTTCTTAAATTTCTTTAGTAATTCTGTCTACAGC
TAATTTTTGTTAAATTTGTTATTTTTGTTTATAAACATTGAGACTTGATTTTCTTTTCT
TTTTAGGATCCCCTGCCTTGACTGGAAGTGAACAATCAACGTCATAGTAGATGATGTCA
ATGACAATGTCCCAACATTTGCCAGTAAAGCGTATTTCAACAACATTCCTGAGGATGCAC

CAACTGGAACAGATGTTTTATTGGTAAATGCCTCAGATGCTGATGCTTCAAAGAATGCAG
TTATAAGGTCAGTACATTTTCCTTTGTAAAGTTTGTCTGTTTTCTCATTAAACATTAGTT
TTTGAACATACATGAATATAATGTTAATTTAAATGAACGTCATATTAACACATATCCTCT
TCTTGTTATCCATTGCTGATAGCCAACAATTCATTAAATGAAGATTCAAACAGTAAACAT
TTTACTTATTACTCTAAGATTTTATTTAATTTTATTTTATTTATATTTTATCATATCT
CATGGTTTTGTGGTTTGGGACTACACTGGGTGCTTCTGTCTCATGAGGTTGACTGGTGGC
ACTTCACAGTATTTACATGGTGACTGAATGATCTGGAGGGGCCAAGATGACTTTGCATGC
CTGCTGCCTTGGCAGGGTTGGTTGGAAGGTTCAAGGATCATCTTGCCCCCTCTGTCCTCA
AGTAGTCTCAGAACTTCCTGATGTGGTTCTTTAGCAAAGTAGTTGGACTTTTTAGTTGGT
GGTTCTCAACTCCAAGAGCCACAAGTGAAAGCTCCAGAACTCTCAAAGGTCAGACTCAG
ATGTGCCATAGCAGCACTTCTATAACTCTGTTGGTCAAAGCAGTGGTGACCAGCTCAG
ATTCAGTGTGAGGAGAAACATGCATCACTCGTTGATTGGAGAAATGTCAAAGAATTTTGA
CCATTTTTATTCCACTACTAGCTCTAATAAGAATATTTGTGTATTCTTCATTTAGTAAAT
GTATTTTACTTTGCTTAAATCCTCTTAAAATTGAGAACACAAATATGATAACTTGTTTCAG
AGAGGATGTGAAAGAAATTTGAGTTGCAACATTTTATCAACCTAGATTGTCCCCTTCTTC
CATATCTATTCTAAACTACAAGAAATGAAGATTTCCAAAGGTTCTAGAGAAAACTCACA
CACATAAATATTTTATACCCCTCCTCCACTTTCTATAGGCTGGTATTAGGTAAATTAGAG
TTGGTTAGATGGCTATGAAAGTAATGGAGCAGAAGATAAAATTTGAGACATTAAGAATTA
TCAGCTATGGGTACCAGATATACGGATATGGTAATGAGCTGATTCATGTCTTATTTTGT
GTTTGTTACCAATTTTCTTTTAAACAAAATCATTTTGGAAAATGTTTTCCACCACAAAA
TTTTAAGAAACACATTGAGACCACAATACTTGGTCTCTCTAAGAAATGACCTTTAAGCTG
AAAGGACTGAGCTATGGAATGGAATTAATCTCGTTGTTTTATCTAAGAAGGTCAGCATGT
CTGGACCAGAGTGAGAAAGGAGTCAGAGAGGTAGGCAGGGGCTAAATCATGCAGGCCATA
TACAGGCCATATATGTCACGATACAGAAATGGGGTTTTCCAATTTACCTTTAGGTGAGAA
ACTACTGGGGAGTTTTAAACAGAAGAGACACATAAACTGGTCTACATTTGGATAGAATCT
GATGAGAGAGGATTTACGGAGAGAAACAGTGCAACATTTAGGCACTAATTAATATAGTT
ATCCAAGTAGAGTAACTTTGTACTTACGTGGAGAAATGAAAATTGAGTAAATAGATTTGG
GGCATACCTTTGAAATTGGATGTGAGACAGGAAGGGGAACATCACACACCGGGGCTGTC
ATGGGGTCGGGGGAGGGGGGAGGGGATAGCATTAGGAGATATACCTAATGTAAATGATGA
GTTAATGGGTGCAGCACACCAACATGGCACATGTATACATATGTAACAAACCTGCACATT
GTGCACATGTACCCTAGAACTTAAAGTATAATAAAAAAAAAACAAAGAAATTGGACG
TGAGATCAAATGAAAGAGAGAAATCAGAATCATCTAAGTTTTCACTCAAACACCTAGGC
AGATCATGATATGATATCATTTACTGAAATGGGTAGCATTGAAGGAGGAACAGTTTTGTG
AGAAGTCAGAAGTATTCTATTTGAATACAGTTTCAAATGACTGTTACTCATTCAATTAGA
GATACCAGTTAGGAAGCTGGAGATATGAGTGTGGAGCTTAGGGTTGGGGTTAGGGCTGGA
TATACACATTTGAGAGTCATCAGTGTTTAGAGGACATTTAAACCAATAAACTGAATGAG
AACACGTTTGC GGAGTGATTAGTCTGTTCTCATGCTGCTAATAAAGACATACCTGAGAC
TGGGTAAATTTATAAAGAAAAAGAAGTTTAATGGGCATATAGTTCCACATTGGCTGGGGAG
GCCTCAAATCATGGCCGAAGGTGAGGAAGAGCAAAATCACGTCTTACATGGTAGCAGGC
AAGAGAGCTTGACAGGGGAACTCCCATTTATAAAACCATCAGTTCTTGAGACTTATT
CACTACCACAAGAACAGTATGCTCGAAGCTGCCCCATGATTCAATTATCTCCACCTGAC
CCTGCCCTTGACACATGGGGATTATTTTTATTTATTTATCTATGTATTTTTTTGAGATG
GAGTCTTGCTTTGTACCCAGGCTGGAGTGCACTGGCACAATCTCAGCTCACTGCAGCCT
CTGCTTCCAGGTTCCAGTGATTCTCCTGCCTCAGCCTCCTGGGTAGCTGGGATTACAGG
TGCACGCCACCACACTCGGCTAATTTTTGTATTTTAGTTGAGATGGGGTTTACCATGT
TGGCCACACTGGTCTCCAACCTCTGATCTCAGGTGATCTGCCACTTCCGCCTTCCAAAG
TGCTGGGATTACAGGCATGAGCCACCATGCCTGGCCGACACATGGGGATTATTACAATTC
AGGGTGAGATTTGAGTGAGGACACAGCCAAACCATATCAGAGAGAGTATAGCAGGATAAG
GAAAGAGGCACTAGAACCAGTCACTGGGAATCTCCAACACTTTAAAGGTAGGTTTAGGA
GGAAAGGTCTCCAAGGAGACTAGGAGTTAAGGTAGGAGTTAAGAAGGTCTGAAGTTAAGG
AGGCCTGGCTAGAGACAACAGAGGAAATGCAGGACAGAATGAATTATTTGCATGCATTGC
AAAAGGATGGAAAGCTATATACAAATTTCTTTCAGTGAGCTACATACAGATTTCTTCAG

TGGACCAAGACTTATTCCAAGAGAAGAGTTGAGTTCTCAGAGTCCTGTAAAGTCAAATCA
TAGAGGACTGAGAAATTTCTGTCCAGGGTCATAACCCGTTTGAGTCATTGTACTTAGCAC
CAACCAGAGAGAGGCAGGTACAACTGAACCTCTCCAGGTTATGAGCTTCAAAGGCCAC
TAAATACCCTTTCTTTTACTTGTCTTATACCAAAGCATAGAAATAATAAAAATCATATCA
TAAGATTCAATCCAAAGTCTTTAGCTTAACATTAAGAGTAGAACCTTGGGAATTAAGTTG
TGTGGAATTGAATCCTGACTCTACTATTACTATTGCATTAGTATGGGCAAATTAACATTT
CTGGACCCGGTTTTAGTGGATTAAGCAGAGTAATAATGAACTAACTTTAAAGAGAGTA
AGTAAAATAATTTAAGTGAGCTGGTTAGAATAGCACCAGGAACAAAAACAATGCTCAAT
AAATGTCAACCCATATTGTTCTAATCATGCAAAGCACCTAGCCCTCTACCTGTCTATCAT
TTGTTAGTGCTAAATAAGTTTCTGATAATGATTTTGGAAGAGATGCCCTATCTATTGTAA
TGTTATAATCTAATAATCTTTATCTGCCATGCAGATGCTGTTTCTTAGACAGTATATAG
AATATTACCAATCAGATATAGGGAAATTCTCTTGTATGAGATGTATAAATTCCTGAATAT
GAAGTTGAATGTTTACAACTTGATCCTGTCTTCCATTGAGTCATTCATTTATTTCTATA
ATAAAGTAAATGCTGTGATGACCTGCTGTTTTTTCTAGTGCATGTTAAAGATTCATTGC
AAAATGCTATCCTATGCTTGTGAATTATGCTTGTAAATTTGGTCTAGAAAAATTGTATTC
ATACTCTCAAAGTGTGTTTACAAAGCTGTACTGGTAGGTCTGATGGGATTGTTTTGCTTG
GTAGTATGTATTTTGGTTATTTGATTGGTTGATTAAATTTTCTTCTTTTAACATGAGAAT
TAACATTATACTTTTACATACATTGAAATCCAAAAACCCATCAGTGAAAAATCTAAAT
GACTCTACAGACTATCATATATTCAGTTAAATGAAAATTGAAGCTATTTTGTCTGTG
AATAAAAAACATTCAATTCAGTTCGAAATTAACAGGGCAAACAATTATTGCAGCTTAAAT
AGAAAAATATTTTACAGACAAAAGTAAATAGTTATTATAACCTCACTTTATTTACTCTGG
TTTGATAAAATCTTAATGGAATATAATGTATTTTATGGTTGGTGTTAAATACTCCTTGCT
ATTCATGGTATCCTGAAGAAAAATCTATCTTCTTCAGATTAAAAGAGCTATTGGTTTAA
TTATTTATCTCCCATTTAAATTTACATGGTTCCGTTATTTACTGAACTACTGTTGGGAT
CTCCAGGAGCATAACTTTTTATGTGTCTTATAAGTTAATTTTTTCCAATGATCTAGCAT
GATTTTGCATATAGCATCCAGCCAACAATGTTCTTTTTTACTTCTACCTATTTGATCAA
ACTTTGTATTTCTACAAATGGTGTACTTACTTTATGTTATACATTTTACTTCACCTTAG
TATTTTCCCTTATAGAAAATCAGACTGTATTAATCTTAGTCTTCTCTATCCAGATTAT
GTCTTTGCCTTCCACATATCTATTCCAGAGCTTAGCTTTTACAGATATGTATCCCTTTT
CTCCCAACTGGACCAAATCTCTATTCAAGCCCCACTTCTAATTCTTCTGTATCACAACCC
TGGAGACAGCCACAACTCCACTGACAAAGTCAACATTCTAAGGAAGATTTCTTTCTTT
TTTTTTTTTTTGGAGATGGAGTCTCGCTCTGTACCCAGGCTGGCGTGCTGCGTCGTGAT
CTCAGCTCACTGCAACCTCCGCCTTCCAGGTTACGCCATTCTCCTGTCTCAGCCTCCTG
AGTAGCTGGGACTACAGGCACCCACCACCATGCCCCGCTAATTTTTTTTTTTGTATTT
TTAGTAGAGATGGGGTTTACCCTGTTAGCCAGGATGGTCTCGATCTTCTGATCTCGTGA
TCTGCCTGCCTTGGCCTCCCAAAGTGTGGGATTACAGGCGTGAGCCACCGCGCCCCGGC
CAGGAAAATTTCTTAATATGTGCTATTAATCTCTTCCATTCAATTTCTCCAACCTCTTT
AATTCAAAAGTTACTCATTTTTCTTGTGTTTCTTCAAGTTCTCTCTCTCCTGAACCAT
GTAGATATCTATATAAATGCTCATTTACATAAGTTAGCGTATCTACAGAAATGCTCAGAA
TTTCTGTTGAATCTGGTTCTTTATTTGCCTCCCATGGCCTAGGAAAGTCATTTAGTG
CCTCAAAGGCTTAGTTTCTGCATCAATAAAAAATGAACATAAAAAATTTATACTTTACAGTT
TGTGAGACAAACATTTACTAACCACCTACTATGTATCAAACAGTATGTATGGAATCAGTT
AATATCCATAAATGTCTCTGGCATAATTATTAGGACATAGAAGTCACTAAATTAATTCAA
GGTTTCTTTTTCTTTTTATTCTTCTCATATCATCTTTTTTACTCCTAATATATTCTTTC
TTTTACAATATCTGGTACATAACAGTGGTTGTCACTTAAATAAATGCATTGAATGAACGA
TTTTAATATTCTCTGGAATGGCTGCTTTTACTCATTCTATTTTTACTACAACATTCTTGA
AAGCTTCACAACCTGTTTTCTTGACCATTTATTCCTGAAAATCTTTAGTCTGATTTTTT
TTTTCTTCATTGCTTTACTAAAAAAGGCCCTGTCAGAAGACTACTGAAATTTTTCAAG
TCCAGTGACTTTTCTAAGTCCTTATTCTCCTTTACTTTTTGCAATGTTCACTACAGGC
CAGGCCATCTTTCTTTTTGGCATTTTTTCTGCTCAATGTCTATATAAATATTATTCT
TATCATCCTGCATCTCTGATCACACAGTTTGTCTTCTGTTTCTCTTTCTCTCTCTGG
AAAGTAATTTGAATACTTCTCACTGCATTATTTTCTCAGTACTTGTGTGTGTGTGTGT

GTGTGTGTGTGTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAATTTATTCCATTGC
TGCAAGCATCAATTCTGTGAACAAAACCTCCAAATCTGTACTATCAACTCTGATTCCACT
CCAAAATTTTGCACCCATATTTATAACTCGCTGATAGACATATTACACTGGAGGTTCTGT
TGGCATCATAAACACAGTGTACCTAAAATTCTTTGCTTTTCTGTTTCTCATTTTGGTTT
TCTGCTTTGTTTTAATAATATTGTCTTGTTTGTGTTTTACCACACCTTGCAGCTAAGGG
TCATCCCCTCTCTTATACTCAATCAGTGGACAAATTCTCATGTTTCTTCTTTCTAATGC
ATCTGGCACCCATTCTTTTCACTGTCATCCCTTCTGCCAAGATCCTAGTTCAGTTCATAAT
TACATCATGCCTGTACTATTATAATAAGAATTAACCTCACTTCCACGCCTCTAGTTTCTAA
TCCTTCCAATCTATGTAGTACACTGTCCTGTAAAATTATGAAGCCCTGACTATGCACCAA
AAATTTATTAACTCTCAGGAGTTTGAACTCTAGGGCCCATAGAAGTGCAATTTAATA
GAAGAGATAATTTTGAATTTCTTAAGTGTAGTACCGTATAACAAGTATAGTTTAAGCAC
AGAATAGGTGGAAAGAATAGTATGGCCAATGATCCTTCAATGATACTAAGTAGAAGTAGT
TTATGGAGAAATAAAGGAATGAAAGATATTCTAGGCAAAGACAGTATCAGGTACTAAGGC
AAAGAGCTATGCAAAAACATGGCATTAGAGAAAGAAAGTATTTCCATATGGTTGGTGTG
GGTTAGGAATGGACTTTGTATACCATATAAAAAATTCAAATTTCTTCTGCATCTAAGG
AGAGAAACAATGGAAATGTTTTAAGCAGCAAGCACAAAACATGCCTAGTTATATTTTAT
AATTATTTCTTTCCAGCATTATAGGAAATAATTTGTACAAAGCAAAGCTGGAGTCAGTG
AATTAAAGGGCAATGGCAGAAGTATGCATCAACATGAGCATCTCTGGCTCTGCTTTAAC
AATTATACTTCCTTCTCAAATCTTTCAATTCCAGTTTGCCTATGGTATAACCCCCAGT
CTTCAAATTCTAGTCACCCCATAAATGGCCCCAGCTAATTCTGCAAACTCTGCAACATA
TGGCCAAAAGTTCAGTATTACTGGATCATTTTCTGCTCATGGGACAAGGATCTGTGCTTT
CCCAAGCCTTATAGGTTTGCTCAATTTATTCTATATCTTTGACCAGGGCTTGGCAAACCTA
CTACCTGCAGGCCAAATTTGGGCCTAGTGCCTGTTTTGTAAATAAAGTGTATTGGAACA
CAGCCATGCCCATTCATGTACCTATTGTCTTTGGCTGCTCTTGCCATATGATGGTAAGCT
GAGTATTGCAACAGAGAATATATGACCTGTAAAACCTGAATATCTTTACAATCTGGCCCAT
TATATAAAAGGTTTGCTGACCACTAGCCTAGACCTTCTTTGTTTCTGCCTTTTTGAACA
CTATTGAAAGATGGGTAGCCCCCTTACAACCTATGTAAATTTACCTTTCTCTGAGGAAG
CTTTATTTTAATCATTCCAGTCAAGAGTGTTCTGTCTTCTGAATACCTACAGTGACACCT
CTTACTGTTTCATAGCACTTACTGTTTTGTAATTACCTTTTTTTTATATCTTTCTGTC
ATAAAGGACATAAACTTGAAACCAGGATTTTTTTTAACTACTTAACCGTGTCTCTGTTT
TGAATTTTTAGTCCCTTATCCATTTAACTATCTAAATATAGGTTGAGCATCCCTAATCT
GAAAGTCCAAAATCTAAAATGCACCAAAATCCTAACTTTTTGAGCATGAACATGATGCC
ACAGGTGGAAAATTCCACACCTGATACCTTGCTTTCTGATGTTTCAATGTTCACAAACC
TTGTTTCAAGCAATTATCAAAAATATTAGATAAAATTATCTTCTGGCTATGTATATGAGG
TATATGAAACATAAATGAATTTGTGTTGAGACTTGAGACCCATCCCCTAGATCTCTCAT
TATGTATATGCAATATTCTATCCAGAGAAATCCAAACACCCCTGGTTCCAAGAATTTTG
GATAATGGATACTCAACCTATGTATAGATAGATATGGATAGATTGTATGTAATAGACTAT
TACGTTATACATATATATTATATAGGTCCTATTATGTTGGTAAACTTAGACTTTTAAAGG
CTCACCATTATCAATTACAATGCCAAGTGCTCTTTATACAAAATATTTTAATAGTCAA
AACTACCAAATAAAAAGTAAAATATGACCTCCACTTTACAGATAAAGAAAGAAGGCTTAA
AAATGTTAAGAAATTTTTGTGAATTTAAGTGCTATTCATGGGGTTTAAATTTATGTCCAA
GTGAACCTATGTTCTAAAGTCCAGTCTCTTAACCTAAATGATCATATTCTCCAGCAGACAG
TATAATGCCTATAACCCTAGTAGATCTCAGGAAGAGGCAAAGAAGTTTTACAAAATCAAA
TGGGGATATTTTAACTTTACAAAAGCAATAGTTGATTTAGGGTTCAGATCACAGTGGTCT
CTGTTTATGCAAATAATTTGAAATAGTAATGTATTCTCAAATTAGAAAATAATTTAACGT
GTTTATTGATTTTCATTGAACTAAATGTGAACAAATTCTATATTGACACAACCTGAGCAA
GAGTCCATGTTGGCCTTCGCAATTGGTACATTTTCCGTCTTCACTACATTCCCTCAGTTG
AGTTTTACCTTCTTCTACTGTGGAATAATGGGAAAAGTGCATGGTGAAGTCATAAAGAC
AGAAATTCAAACCTAGATCTGCTATTTATAGATTGTATGTTTCTTTGTGCAACTACTTT
AGTCTCTGTTAGATTGAGATTCAATATCCCTAAACAGTCAAACTAAACTAACTATAA
GGATAGTTTTGGGATTTAAATAAGAGCATATATAAATTGCCAGTAGTGTGCTTGACATG
CACTAAGAAATCAATAAGCTCCTGGAAATATTTAAGTAACAGCATAAATGTTTAACTGTT

AAGAAGATACCACAAGACACAATCTAATAAAGTTTTTAACTTTACAAAAATTAATGCAGG
CCAGAGAAGCAAGAGAGGTCATCAGGAGGGATGAGAATAGAACCAAGCCTCAAGTAAGAG
ATGTGGCAAAAATCTAGACATATTATCTTAACTGTCGATCTACGTACAGAGCTTATTGTG
TTTCTTCTATTTTTAAAATTAGAAGTATAAATTTTCATCCAAGTGGTGTATAGAACATC
TCATATTTAAAATATACTTTTATATGCTTTAGAATCTAGTGAAGTCTAGAAAAAATTAAT
TAGATATTAATGACTATTTGCTCATTCAATTTAAAAAATACTAAATATATTACCTACTTT
AAAATAGACAGTCATACGGGCAATAGCATGTGCAATAGCATAAAATTAATAAATCAGAAT
TTATACCATAGGTTTCTTGTCTGTTTTGTGCTGCTATAGCTACAGACTGGGTAATTTAT
AAAGAATAGAAGTGTATTTGGCTCACAGTTCTGGAGGCTGGGAAGTCTAAGGGCATGGGG
CCTGCTTTTGGTGAGTGCTTCTGTGTGTTATTTTCATGGCAGAAGGGCAGAAGGCATCAC
ATGGTGAGCAATCATGTGAGACAGAGAGAGGGAATCAGGCTGAAGTCACTTTTATCAG
AAGCTCACTCCCTCAATAACTAACTCCCACTTCCGTGATAATGGCATTAAATCCACTCATA
ATGATGGAACCTGATGGTCTAATTCACCTCTTAAAGGCCCTACTTCTCAACATTGTTAC
AACACTGTTACAATGACTAATTTCAAGGAACATTTAAATGATAGCAAGTCTTTTGAATG
GATCATTTAGTGAACTGGACTAAAGGCCACACCATTTGCCTATCAACACATTACGCTTA
ATAATACACCATGGTCTTGGCATATACAAAACATCCAGATGAAAATTTATGTTTTTATC
AATCTCATTTTATTTTTATTTGTGAATATTTATAGGAATAAATATTTGATTGAACCTTGA
TCCTTGCCATTATAAACTAAAAAAGTTTATGGCAGCATGGCTTACTTTATTTTCTATT
AAATTATTTGATTATTTCTACATCCACTGACAGCAACAAGGTTCCAAAAATAAAATTACA
CAATTCTCAAATCCAGTTTTCTACACTTTGTAAAACGTTAAGGTATTTGATTATTTGT
GAGTCCTGAATTTTCAAGTTTTAAGAATTCATGTATAAACTTGATATTTATATTTTATG
AAAGAGAATATATATTATCTACTGTAAAGGGCAATAATTATACCTAATAGTCACTTCTGG
CCCAATAACTATAGTTAATGCTATTTTACACATGCCTGATTCTGTCGTGTGATTGGCA
AGCATATTAATAAATCTGAGTGACACAAAGTATTTTATCAATACTGAAGCCATTTCTCAAC
CAAACCACTTCTCTATTCTTTCCCTGTTTTGCTATCATTTTATAAGACTTCTAATAGTTT
TAAATATAAGGTCTCAACAGTTGATTATTTCACTAAAGTAGGATAAAAAATGCTGAAAT
ATTTGTTTTAAGCTGTGAGCATAATAGGAGAATGAACATACTACTGGCTGCAATATAGTT
TTTTCCCTGCAGTTTATATTAGATATATGCTGTTGCTATGTTTATATAGACACAAAGCA
AACTGTAGAAACATGCAGCCAAGTCCAACAAGGGTATCTATTTGTTGGTATAAAAGAAGA
AACTTTTTAAAGATATCTATTTCCATGCTATCTTTCACTTTAAAAATTACGGACCATAG
CCAATTTCTGAACCTTCAAGCTTAGCTACTTCTTCTGGCTGATCTTTGGGACCTCACC
TTATACACAAAATCAGGAATATATGCAGACAAGTACTCTTCAGAAAGAAGAGAGAAGC
TTTTCTCAGTGGAACTCTTGCCCGTTAACCTATCTGGTTAGCATCAAAACATCCATGAA
GATGTCATACCTCTCCTGACAAGAAAGCAACAAACCATATGAGGAATGACAAAGACAGA
ATTAATCACTAGAAAGGTCTTTGTATAAATAATCAGTCCTTGAGTTGTTCTGAGAAGCAG
ATACATGTCAAATACAGGTTTTGTCTTAAAGAATAACAATTTTCAACTGATCTTCTCTGG
TTTATTATGGTATACAGCAGAAAAATAATTTTTAGTTTCATTTAAAAGATATTCATTTGT
AATCCTGGCTACTAACCACAATATTAGAGCAAGTCCCCTGATTTATGCTTTTAGGCTCAT
TTATTTAAAGCCTTAGGGGTTTGTGTTGGTGGCCTTGCACTTAAGAGTCCTAAAAACC
TTGTGAAGACTTCTTGACATCACTGGACATCTCACGATAAAGACTGTCAATGTGATGTT
CACAGAAAAATTTGAAATATTTATTAGCTAGACTAGTTGTATTCTTTCCAACATTGTTGTA
TGATCTTTCTTGTAACGTTTTCTTGCAATTTCTACCTCAGTTTTTTAATTATAGTAAATAG
AAGTTACGATATTTAACTATATGACATATCCCTATTTCTGCTTTCTGCTTTAGTTATAG
GATCATCGGTGGAACTCTCAGTTCACGATCAACCCATCGACAGGACAAATCATCACCAG
CGCATTGTTAGATAGGGAAACAAAGATAATTATACTTTGGTAGTGGTCTGCAGTGATGC
GGGATCCCCAGAGCCTCTTCCAGTTCACCAAGTGTGCTGTCACTGTGACTGATGTCAA
TGACAATCCACCAAGATTTTACGATCACCCATATGTCACTCACATCCCATCTCCTACTCT
TCCAGGTAATCAACCAATTCTGAGGCCACATGGATATAAACAACTATGTATCAGACAT
TTCTATAAAAAATATTTATGATATTTTACATACATATTTCTGATATAGCCTAATTTTGCAA
ATCCTCTAAAATTCAGGTTGTTTTGTCTGATGGAAATGAAAAAATGCTTGAACTTGAAA
ATTAACCTTTCTTGCTAGACTAATTGTGTATAATGTTTTATAATTGTTATGTATTATTA
TTTCTTAATATACTTGAATATTATAAATAATTAACATATATATTACATCATCGTTAATG

ATGTTTATGGCCTGAGGTATAACTTTGTGTAAGTTTGCTAAGAGGAGGGGCATTGTCTCT
ATTTTGCATGCCATATGCCACTACCTGAAACATGATATGGGAGATAATAGGCATTCAACT
ATGTTTGTCAAGTGGAAAATGAATATTTGACTTCAATTTTTATAGATATGTTTTCAAAAA
GTTTAATAAATGGATAATTCTTGTTAATATTTATTTATCCAGTTTTACAAATGAAAA
CTGTTCTGTTAGCAAGTTTATGGATCCATTTATGAATCATTTTCATATTGACAATATGCA
TTTATCCTTCTGTATCTCTTTAAATTTAGTTTGACATTTGCTAAGAAAGGCATACTCTAA
GAACTGCACAAATCTGCCATTTTAATTTTTAAATGAGTTTTCAAAGAGGAAAATATAGA
AATATAGCTCATTATTGATTTAATCTTCCTTGCTCGGAAATATTTTTAATTATTAGAAGA
AAAACCTTAACAGATAGAGTTAACAGATCCTCCTTCAGTGATCTTGATCTTCTATTAAT
CTGAGAATGATACCAATCTAAAATATAGGATTCATAAATTTATGTGCCAACTTTCTATCA
AAGGAAATGTCAGTATCAAAATGATAAATACCTGCTAAAGGTCTTCAGATGAAATGATGT
TGGCAGGCATGGTTCTAATTACATCCAATGTGTGGTGGTGCAAGATAAAATTTCTATGT
AAAATGAGGTATGCTTAAGCATCTTTTCTCATTGGACTTATAACCACTGGCCTTTTTAA
AATTAAGATATTTTACTTTTGTACCGTTTCTTCTGTAGGGGTGAGAGTGCAGGTTTGG
GAATGGTTTCTGAATGAGTAGATTGAAAATATGTCCTTATGGCAGCTTTTCTGCATATTT
TTACGACAATCTGTTTCATTGGCACTCAGTCTAAGCACTAACTTTTGGAGTCCAAGTTGA
GTCCATTATCCCTCAATTCTTATTTCTTACTACTTTACAATTATTTAATTGGCTTATGT
ATATATCTGTGTATGTATATACACACACATATAAACATACACATATGCACTTTTTTTTCC
ATCTGATAATAGTTCACGTATAAAGGAATTTTGTCAAAAACAGTGGGGACAAGGAATAA
ATGGTAATGAACATGATTTTTGTTGACAAGATTACATATAAAGTGATTGGAAGATATTTT
AAGACACACTAGAGCAACGGTATCATTGCATTGGGTAGAGGCATAGCACTTTGCAGAGCT
CGCATATTATGTTTCTTGAATGTTGTTTTATGTGCAGATTTTTCTCCTAGAACTATGA
TTTTTGAACGATTAGCAAGTTCTTTCCCTAGGCTTCTCTCAAAGGCATACTGAAAAGTA
TTAAATCCAACAGACTGTATAAATTTAGTTAGAAAATGGCAGGTTAGTCTCTGAAGACA
ATCATAGAGCAGATTTGACTTGTGAACCTCGGAGAAAATATAGGAGATACTGTTCTCCCT
AGTAATCATGAGAAAATAAGGTCACATCAAGCAGCAATAGAGTGTCTTATATGCACTTAT
CTGCTACCAAATATTTTATTTAAATCCACGTGAGTATAACTGCACACTTTCTCTTTAT
AGGTTCTTTGTCTTTGCGGTTACAGTCACAGATGCTGATATTGGACCAAATTCTGAAC
GCATTATTCTCTTTCGGGTAGAAAATTCTGAAAAATTTACATTGACCCACTGAGGGGAGC
CATTATGGCCGCCGGACCACTAAACGGAGCTTCAGAAAGTACATTTTCTGTGCATGTA
AGATGGTGGCTCATTTCCAAAGACAGATTCTACAACAGTGACTGTTAGATTCTGTAATAA
GGCCGATTTCCCTAAAGTGAGAGCCAAAGAACAAACGTTTCATGTTTCCTGAAAACCAACC
AGTCAGCTCTCTTGTCAACCATCACAGGATCCTCTTTAAGAGGAGAACCTATGTCATA
TTATATCGCAAGTGGGAATCTTGGAATACTTTCCAGATTGATCAGTTAACAGGGCAGGT
GTCTATTAGTCAACCTCTGGATTTTGAAGAGATACAAAATATGTTGTATGGATAGAGGC
CAGAGACGGTGGTTTCCCTCCTTTCTCCTTACGAGAACTTGATATAACAGTATTAGA
TGTCATGATAATGCCCAATTTTTAAGGAAGACCCATTTATATCTGAAATATTGAAAA
CCTTTCCCTCGAAAAATACTTACTGTTTCGGCAATGGACAAGGACAGTGGACCCAATGG
ACAGTTAGATTATGAAATTGTTAATGGCAACATGGAAAATAGTTTCAGTATCAATCATGC
TACTGGTGAAATTAGAAGCGTTAGACCTTTGGACAGGGAAAAAGTATCTCATTATGTCCT
AACCATAAAATCATCAGACAAAGGTCCCCGTCTCAGAGTACTTCAGTAAAAGTCATGAT
TAACATTTTAGATGAAAATGATAATGCCCTAGGTTTTCTCAGATATTTAGTGCCCATGT
TCCTGAAAATTTCCCTTAGGATACACAGTTACCCGTGTCACAACTTCTGATGAAGACAT
TGGGATCAATGCAATTAGTAGATATTCTATAATGGATGCAAGTCTTCCATTTACAATTAA
TCCCAGCACAGGGGATATTGTCATAAGCAGACCTTTAAATAGGGAAGATACAGACCGTTA
CAGAATTCGAGTTTCCGCACATGATTCTGGGTGGACTGTAAGTACAGATGTCACAATATT
TGTGACAGACATCAATGACAATGCTCCAAGATTTAGCAGAACTTCTATTATTTAGATTG
CCCTGAACTTACTGAGATTGGCTCCAAAGTAACTCAGGTATTTGCAACAGATCCTGATGA
GGGATCAAATGGACAAGTGTTTTATTTCAAAAATCCCAATCAGAATATTTAGGATTAA
TGCCACCACTGGAGAGATTTCAATAAACAGATCTTAAATACCAAAATGTCACTGGCTT
CAGTAATGTGAATATCAACAGGCATAGTTTTATAGTGACATCTTCAGATCGAGGTAAACC
TTCCTTAATTAGTGAGACAACAGTTACCATCAATATAGTGGACAGTAATGACAATGCACC

TCAATTTCTTAAAAGTAAATATTTCACTCCAGTCACCAAAAATGTTAAGGTTGGTACGAA
GTTAATCAGAGTTACAGCAATAGATGACAAAGATTTTGGACTGAATTCAGAAGTGGAGTA
TTTCATTTCTAATGATAACCATTTAGGAAAATTTAAGTTGGACAATGATACGGGGTGGAT
TTCAGTAGCATCCTCCCTGATTTCTGACTTGAACCAAACTTTTTTATCACAGTCACTGC
AAAGGATAAGGGAAACCTCCACTTTCTCCCAAGCAACTGTTACATAACTGTCACTGA
GGAAAACCTACCATACACCTGAATTCTCTCAAAGCCACATGAGTGCAACCATCCCTGAGAG
CCATAGCATTGGGTCCATTGTCAGAACTGTTTCTGCAAGAGATAGAGATGCAGCGATGAA
TGGCTTGATTAAGTACAGCATTCTTCAGGAAATGAAGAAGGCATTTTTGCAATCAATTC
TTCTACAGGTATATTAACACTAGCCAAAGCTCTTGATTATGAGCTATGCCAGAAACACGA
AATGACGATTAGTGCTATAGATGGAGGATGGGTGCAAGAACTGGTTACTGCAGTGTGAC
CGTAAATGTGATTGATGTGAATGATAATTCTCCAGTATTCCTCTCTGATGACTATTTCCC
TACTGTTTTGAAAATGCCCCAAGTGGAACAACAGTTATCCACCTAAATGCAACAGATGC
TGACTCTGGAACAAATGCTGTGATTGCGTATACTGTACAGTCATCTGACAGTGACCTCTT
TGTCATTGACCCTAACACAGGAGTCATAACCACTCAAGGCTTCTGGATTTTGAAACCA
GCAGAGCTACCATCTTACTGTGAAAGCCTTCAATGTCCCCGATGAGGAAAGGTGTAGCTT
TGCCACTGTTAATATACAATTAAGGGACAAATGAATATGTGCCCCGTTTTGTTCCAA
ACTTTACTATTTTAAAATCTCAGAAGCAGCTCCTAAAGGTACTATTGTTGGAGAAGTGTT
TGCTAGCGACCGTGATTTGGGCACTGATGGGGAGGTACACTATTTGATTTTGGTAATAG
TCGAAAGAAGGGTTTCCAGATCAATAAGAAGACTGGACAGATTTATGTTTCTGGAATTCT
TGATCGAGAAAAAGAAGAAAGGGTGTCTTTGAAGGTATTGGCCAAGAACTTTGGCAGCAT
TAGAGGTGCAGATATAGATGAGGTCACTGTAAATGTCACCGTGCTTGATGCAATGACCC
ACCCATTTTACTCTAAACATCTACAGTGTGCAGATCAGTGAAGGGGTCCAATAGGAAC
TCATGTGACCTTTGTAGTGCCTTTGACTCAGACTCCATCCCCAGCTGGAGCAGGTTTTCT
TTACTTCATCGGATCAGGGAATGAAAATGGTGCCTTTTCTATTAATCCGCAGACAGGACA
GATCACCGTTACTGCAGAATTAGATCGAGAAACCTTCCCATCTATAATCTCTCAGTTTT
GGCTGTTGATTACAGGGACCCCTCAGCTACAGGTAGTGCCTCTTTATTAGTCACCCTGGA
AGATATAAATGATAACGGGGCCATGCTGACTGTGAGTGAAGGAGAAGTCATGGAAAACAA
ACGGCCAGGCACCTTGGTGATGACCCTCAGTCCACTGACCCTGATCTCCCTCAAATCA
AGGTCCCTTTACTTATTACTTGCTGAGCACAGGTCTGCCACCAGTTATTTCACTCTGAG
CACTGCTGGAGTTCTGAGCACAACCAGAGAGATTGACAGAGAGCAGATTGCAGACTTCTA
TCTGTCTGTGGTTACCAAGGATTCTGGTGTTCCTCAAATGTCTTCCACAGGAACTGTGCA
TATCACAGTTATAGACCAAAATGACAATCCTTCACAGTCTCGGACGGTGGAGATATTTGT
TAATTATTATGGTAACTTGTTTTCCCGGTGGGATTTTAGGCTCTGTGAAGCCACAGGATCC
AGATGTGTTAGACAGCTTCCACTGCTCCCTTACTTCAGGAGTTACCAGCCTCTTCAGTAT
TCCAGGGGGTACTTGATCTGAATTCCCAGCCAAGGTCCACAGATGGCACGTTTGATCT
GACTGTCCTTAGCAATGATGGAGTTCACAGCACAGTCACGAGCAACATCCGAGTTTTCTT
TGCTGGATTTTCCAATGCCACAGTGGATAACAGCATCTTACTTCGTCTCGGCGTACCAAC
AGTAAAGGACTTCTTGACCAACCACTATCTTCATTTTTTACGCATTGCCAGCTCACAGCT
GACAGGCTTAGGGACTGCTGTGCAACTGTACAGTGCATATGAAGAGAACAATAGAACGTT
TCTTTTGGCAGCTGTGAAGCGAAATCATAATCAGTATGTGAATCCCAGTGGCGTAGCCAC
CTTCTTTGAAAGCATCAAAGAGATCCTTCTCCGGCAGAGTGGAGTAAAGGTGGAATCTGT
GGATCATGACTCCTGTGTGCATGGCCCATGTCAGAATGGAGGGAGCTGTCTACGAAGATT
GGCTGTGAGCTCCGTATTAAGGCGGTGAGAGTCTTCCAGTCATCATCGTGGCAAATGA
ACCTCTGCAGCCTTTCTTATGCAAGTGTCTGCCAGGATATGCGGGTAGCTGGTGTGAAAT
AGATATAGATGAATGTCTTCCATCACCTTGCCACAGTGGTGGAACCTGTCACAATTTAGT
GGGAGGATTTTCATGCAGCTGCCAGATGGCTTCACTGGTAGGGCGTGTGAGAGAGATAT
CAATGAGTGCCTGCAGAGTCTTGCAAGAATGGTGCCATCTGCCAGAATTTTCCAGGAAG
CTTCAACTGTGTTTGCAAACTGGATACACAGGTATGACAACGTTTGTACTTTTCTCACT
AAGACTTTAGCCATGTCAAGTATATTGAAACGAAATAATTTTATCATTTTCCAATGATTT
TCATATAAATGAGCATAATAGTAACAAATGTTTTTAAACATTTACTGTTGGTCAAATACT
GTTCTAAGCACTTTTTATGTATTTGTTTGTCTTCTTACAAGAAAACCTTATGAGGTA
GGAATATTTTCCAGTTTCTATAGGCAAGGAAGTTGAAGTAGAGAGTAAGTAATTAGGTTT

TCTCAGGTGATTGAGTTACTTTGCTGTAATGTCAGTATTCAAGTCTACACAGTTAAATCC
AGAACTTAAGTGCTTAATCTCGTAGCGTCTCTTACAAGAGCAAAAAAGAGAATAATATCT
ACTTAAAGAGTATTCTAGATATTAAGGATAAAATATATACAAAACATAAGATTTGGAC
CATTTTGTGTGTTAAATAATTGTTAACAATGATTGTTGTTGATTCTTTATCATCATCGTT
TTTGTGACCTTTTAAATCATAGTCGTCATTATTATCGAAATGTGATCCACATCGTGAGA
AGAGCGAGAATCATGTTTTAGATTAAATGATGTGTTATTGGGCCAGGCAAGG
TGGCTCATGCCTGTAATCCCAGCACTTTGGAAGGCCAAGGCGGGCAGATCACGAGGCTGA
GAGATCGAGACCATCCTGGCCAACATGTGAAAACCCATCTCTACTAAAAATGCAAAAT
AACTGGGCGCGGTGTTGTGCGCTGTAGTCCAGCTACTCGGGAGGCTGAGGCAGAAGAA
TCACTTAAATTCGGGAGGCAGAGGTTGCAGTGAGCCGAGATCGCGTCACTGCACTCCAGC
CTGGCAACAGAGCAAGACTCTGTCTTAAAAAAAAAAAAAAAAATGGTGTGTTATTCCTAAT
GGTTGGGTAGAAAGCACAAATAGGCTTATTTCTCAAGAAAGCTAGAACACAAGTGAAGCCAC
AGCTTATCTTGACAGACTAGAAAGCAGCATTAAACATAGCAGTAAAAATTTGAACTAGT
CTTTGGCACCCTAGTGGGATATGATGTCCATATATACATAGATCTCTACCTATTTCTACT
CCATGTCTATATCATTATTATCTATCAACCTATCTATTAGTTAATCAGTGGTTGATGTT
CTTCAAATGTGAATAAATGTTATGCTATTGATAAGTTTCGAGGAGAGCAAAATCTATCTT
ATAACTGCACATTATACATTTGTAAAGCATGCATATTACATTGAGTTACTCTGCAGTAT
TTATAAACATAATTTACAGTACTAGTAGTATAGGTAGAATCAAGATAGATTGCTTTAACT
TTGTAGATGTATTACAGAATAATTTTTAAGCAAATGCATTTCTATGTTATTTTTCAA
AAGTGTCCATTATGTGTATACTGATGGTTTTATTTGGAGAATTGAATCACTTGAGGAA
AATATAGAGCAAGTTTGAAAATGTTGAAACAGAACATGCAGTCTTTGCCTTCTAATGAAA
TAACTTTGAAATGTAAATGAAGAAAAAGTGGCAGAAAACATGTGTAATAGAAAAAGTGAT
AGATTTACAGAATCTGATTTAGCTATAGCTTTTGGGAAGTCACCTAACCTTAGCTGATT
CTTCATTTCTGTCCACAAAATGGGAATAATCATAAGTACTTTAGGGTTTTTGTAAATG
AGTAAATATAATGTTTGTAACACCTAGTACAGGCCAGGTGCAGTGGCTCACGCCTGTA
ATCCAGGACTTTGGGAGGCTGAGGCAGGTGGATCACCTGAGGTCAGGAGTTCAAGACCA
GCCTGTCCAACATGGTGAAACCCATCTCTACTAAAAATACAAAATTAGCTGGGCGTGGT
GGCAGGTGCCTGTAATCTCAGCTACTCAGGAGACTGAGGCAGAGGAATTGCTGGAACCCG
GGAGATGGAGGTTGCAGTGAGCTGAGGTGCGGCCATTGCACTCCAGCCCAGGCCGACAAC
AGTAAGACTCCATTTCAAAACAAACAAACAAACCCACGTGGTACACTGTGCAGTATTCA
GTAATTGCAGTCTAATTAGTAGTAGTAATAATGGTATTAGTATAGTGGTAGTAATAGAGG
AGTACCACAGAATTTTTAAAAAGACATGAAACCTGTGTAGCGGAAGTTAACTGTGAGTCT
TATGAGAGTTATTTATATGCTAAGATCATGAATAATAGAGCTATATACATGCTGAGGTCA
GGATTTCTAGAACACTTCCCTCACTCTTTCTTACCCATCCCCAAAATTACTTTATCGGT
GGGAATTCAACAATAAGAGTTTTTATATTCTACATTAGTCTAATGCATTTATTCACACTT
AGGTTTAGATTGAGTTACATTTAGTCTAGAATGAAGAAAGTGCAAATGTATTAGGTAT
GGATAAGAAACATGGAAAGTACTACTGGTGTGAACAAAGGCACCATTTGCTGATTTTATG
ATAAATGATGAGTAAGTTACTCTGTCTGGCTTGTTTATTTCTTTGTTTCATTTCAATTA
AATATACATTGCATACTTTTCTAAACGTGATAGTTGAACTCTTAAAAATGCCTTTCCTT
ACATCATAAATATTAATAACATTTATCAAGCAGTTATGTAAAGCACTTTTAAATCTCC
TTGCATTATAGACATTATTACATTTAGTTCTTACAACTCTGTAAGATGGATATTATGATT
ATTGTTCCAATTTTGAAGACCAAAAAATTAAGTCTTCGAGTCATTAAAAGAGATTAGACA
ACTTGCCTCCAGCCATGGCACAGAAAGTGTCTAACTAGTTTTTTACTAGAACTTGGCT
CTGGTGCCTCTGCTATTTATATACATGTCGCACTCATCACACTTTGATTTGCACTTGCTA
TGGAGTGTTATGGTGAGTTCTATGGTGATATTATTAAGAATGTTTTGTCCATCATTCTA
TTAATACTTAATCCTCACAGAAAGCCTATAAGACAGTGTATTGTCTGAGACTGATCAGAA
ATCGGAAGTACTCTCAGACTTTGAGGCAGGAAAGTATTTGCTACAAGGAAACAGCTTACA
AAATCTTCAAAGTGGCTAAGAATACAGGTCAGGAACATTCACCAATGGGCGCAGCAATAA
AGACATGGCAGGCATTGCAAGACACCGCTGCTGATCCTCTTGCCACCTGCAGTGCTGCA
CCAAGTGATCTGAGGAGAATGGTTCCTGCTTTGCTTTACCATTCAGATATCATCACAGT
CTTTTTGCTGGCAGAATATAAAGTGAACCCCGCTGGAAGGGAGTCTGGAAGAGGTAGT
TTTCAGACTTCAGCCCTTGCAATATGGAAAGGTAGGAACGATGCTGAATGTCAGCAGAT

GATATGTGGCTCAGGAAGATGTTATTATTCTTCTGTTTTACACTGTAGGAAATTGAGCC
TACAGTCTGGTGACTCCAGGGCCAGAGCTGCCAAAGTCTATATCATAAACTCTTTCTAGG
GAAGGTTGTTTGAAGTTATACATTAACGTTACATACTTCTCCTCAGAGTTCAC TTCAGTC
TTCATTTGCATAGTAGGAGATAATCCAACCTGATCAGGAATGATATAAAACAAACATAAAAT
TGAATGATTAAGATGAATCTTACATTTTTTAAATCAAGTTTCAAATTCTGTATGAAAAAA
ACCATCCAGTAAACTGGCAGATAATTAATGTCTGACAGTTTTATTCCTTTTTGTATTT
TG TAGGAAACAATATGAAAAAGCATAGTGAGTGGCAAATGTTAATCCATACTTTAAAT
AGAAATGTATTGCTTAAATTTCTATAGTTTTGTTAATTTTTTTGTAGAGGTAATCTCTGA
AGGATCATTCTGAGTTATTCTTTTTACCTAGTCTCTGCCAGATAGCCTGGCTCAGGAAGA
CAGAGCTAATATACCAAAACATCTTAACATCTAACCTAGTCAGAGCTAATAAACCATAG
ACAAAATTTACACATAACTGTATGTGTGCCTCATAGAATGATTTTTTAAAAAATTACTCA
TAATAGCTAGATTTTACTTCAGTTAACATGAATTAATTTGTAGTGCCTTAGTAAAGCTTC
ACTTCTTCAAGGTCTGTATATAATTTTTGGCCATCAGAATTATTTTAAATTAAGTATTT
TTCATACTCTACTTTGTGGGCTTCCACCTGCATTTTATCAATAGGTTTCAAAGTCTGTG
AAATTACAAATTGGAGCTGCACAATTTCTGAACTTTCTGCTTAAAATAATCCTCAGCCA
CTACCCATACCCAGTTTCTCTCATACACACACACACACACACACACACACACACACCA
CTGAGTATTTTATGTGGATTTAGAAATTGTGTTAAGGATTAGAAGAGTAAGTGGCTTATG
AGTTGATGCAAACTAAGAGACTTTATCCCCAGAATCCCCTAGGGTGTGATTAAATGTTAG
CTGAATGGAGATTTTATGTAGAGAACAACCTATAAGGACGCAAGTATGAAAATGATAATC
ATGGAACAAAAAATAGGAAGGGATATAGTTATTATCATACTGTCACAAGTTTATTTCTGA
AATATTCTTAAAGTTTATTTTCAAGTCTGTAACCATGCACATAAGTATAAAACAACATA
TTTTTAAATGAATGAGTGATTTAGAGGGAATGAATTTGTATAACATGTATTTCTTATCTC
TTTTCTTAGTTACTGGAAAAAGAACCAAAAGAAAATTGAAAAAAGTAACATATTCAGT
TATAATCATTTCATATGTTTCATTATTAAGAAAAATTTCTTATAATTTTTATATTAATAT
CACCATATGAAGCTTTGATTAACCTGTAACATAAATATTAGAAAAGATGGATAAAGTTTA
TTATAGTATAGGCCATGTGAAAAATTAATTTCTAAATTTTACAAAAATGTAATGACACCA
AAAATTAACATCAGTTGTCAGTATGCCTCAGTGAATAAAAACTATTATTCCTGCCACATA
AGTCTAGGGGTTCTAGAGGAAAACCTTAGCCTAATAACGACACATGTAGTATTTATTTT
CATATACAAATGAAAATGTCTTGCACTTAATAGAACACTAATTAGAAAGTACAGTAATAG
TAACCACATCAACATTTGTCTACTGCTGCCAGGTTTTCGCTGTTTGCATCACATTCCTGG
CATTAAATCCTTCATGGGAATGGATGGTGTATAAAATGCAGCATTTTGATAGAGCTTAT
TTATAAATCTGGCTATCTTATAACATAATTAGTTCATAGTCTCTTTAACCTTTTCCATTC
ACTTTCACACATCTGGATGCATTTCAGGTGTAGTATTTGGAATAATGCCGGGGGTTTATT
ACCTTATGGAGAAGTTTTCTATGTTCTCAATTAAGTCCCGATATTTCAGGAAAAGATGAG
GTTTGTTTATTTCATCACTTTTATGTCATTTGACAGTATAAACAGTAAAATTTTTTCAGAC
ATACCAACTTATATACAGAATATGCATAGTAATTTTACTGAGAACTTGCCAGATATTTG
CTTTCATAAAGATGAAAAGAGTTACTAAGAGTGATTCTTTTAAAATTACTACGGTCATGT
ATTGGTGTTGTTGATGATCATGTGACCGGAAAACCATATAATATAAAAAGAAATTTAGTAA
ATATATATGAAATTAATTTTTGTTTGAGATAAAGAAGAGTGGCTCATGTAAGAGACAATA
AAGAGTGCAATTATTTTTATTTAATTTGATTCTGAAAGCAGAATTAGGCAGTTTACATT
AGGTAATACATTAACCTTATAAAAGCATTAAACGTATGTTTCTAAGAAGTAGCTTAAAT
GCTTATTTCTGTAGAAAATAAGCATATATTTATAAGCTTATGAACATTATGTGTGTAATC
ATATGTAATCATTTGTAGTCTCATTGAGGTTGTGTTTGTGCTTGTTTTACAAGACAAAGG
TAAAAACTTTTTTGGTTGTTGCTTTTGTACTGGCAGCCCTTATTAACATGGTATTT
TTGCTTTTGTTCATGCAAAAAAGCCATAAGGCTATTGAACAGGATACTTAGACTATCT
TCATAGCTCCTTAACAATAATGGGAAACATTTGCATACTGTGAAAAGACAGCTACTTTT
TGCTAAAATAATTTGGAAAAATATAAGATAAATGCCTAGAATGAATAGCATATATTTAT
TATAGAATTTCTTTATTAATAACATAATCAATTTAGACCTAAAATGGATTTTTAGAGTTG
CACATATTCCTCCATCTCCTCTGTGTAGAAATACAGGAGATTTAAAAATAATATTTATGG
TAGTCTAATATGTATATATAATCTAAGATCTTAAATTGAAGGCTACATGTATCATAGGGT
ATCAAAAATTATCGTATCTTCATGGAGTGGTCCAATTTAGCAGTTGAGAATAAATTTAGC
TCTATTTACATAATCCAACATTAAATGTGCTTGGACAAGTGAACTTGAATATACATT

CTTGTTGAAAAGACCATAGGTGATTACAATAGATTCAGTTTATGTTCAACACGTCATCAC
ATCTTCTGCCCCAAACATGAAAATAGACACAAAATTTCTCCTGTAAGTTTAGGAAAGTC
TGCGGATACCATGGATTCTATTATGCATTTATTTTCACCTTAAGCTATTCCCACTTTCC
ATGTGCTAAGAATTTACACTTCTTCAAGCACATCTCCTTCTAGTTATGATAAATAGTGTA
TGGCAACACAATTAATTGATGGATGTCAAAGCAATGAGATCAATTTATTCTTCTAAACAG
CTGCTATGGCAGTAAACATATCTTAATGGAAGGAGGCCTCTTGAGTTCAAGAGGAATAAA
TGCCTGTCTTTGTGCAAGTCCTATCAGCATACTTCCAAGCCTGAAGGCGTTTGGCAAGTA
TTGTTAATTGACTTGTAGCATTAAATTAAGTTAATGATCCAAGATTTTGTTCACAGTGCT
TCAACACATCAGATTATTGTACCAAGAGCATGTTAGAGTAATTCAAACACTGCACTTCTC
TGATACTCATTATGCTATTAACACTACAATTTAAGTAGATAGACTTGCACAAAACAATTC
AGAATTTTGTAAATTTCTAATTGGGTAAAAAGCATAACTTTCCAAACCTGAGAAATAT
GCATTTAGAAGCTTTCTTTTGATTCTAAGTAAATTATGGAATCCTTTTCTCACACAAA
GACACAGGTGTTTTAAATAATAATTTAAATTTAAATCTGTTTTCTACTATGTCTTTGAA
TTCAAGTATCTGCTATGGCAACCTCTGAGTTCATGAATTGTAAAAATTTTACTCTTTA
AATGGAGAACTCAATTTTAAATAGTAAATAATTTACATACTCTACCACCAACAGATAAG
ACTATTTTTTCCAAACTCAACAACAAATTCCTTTATTTAACCCCAAACAAAGCCATTTTA
TCTATTTTTTTAACTTATATTTTAGGTTCTGGGTACATGTGAAGGTTTGGTACATAGGTA
AACTCATGTCACAGGGTTCGTTATACAGATTATTTTCACTAGGAATTAAGCCCAATA
CCAAATAGTGATCTTCTGCTCCCCTCCCTCCCTCCACCTCCACCCTCCAGTAGACCC
CAGTGTCTGTTGTTTCTTCTCTGTGTCCATGTGTTCTCATCATTTAGCTCCCACTTATA
AGTGAGAACAGGTGGTATTTGGTTTTCTGTTCTATGTTAGTTTGTGAGGATAATAGCC
TCCAGCTCCATCCATGTTCCACAAAAGACATAATCTTGTTCTTTTTTATGACTGCATAG
TATCCATGATGTGTATGTACCACATTTCTTTATCCAATCTGTCATTTATCAGCATTTA
GGTTAATCCATGTCTTTGCTATTGTGAATAGTGCTGCATTGCACATTCATTTGTATGTG
TCTGTATGGTAAATGATTTATATTCCTCTGGGTATATACCCAGTAATGGGATTGTTGGG
TCAAACAGTAGTTCTGCTTTTAGCTCTTGAGGAATAGCCATTATTAATTATTTGTAATTA
TCCACTAAGACAAAGTAAAAAGGAACAACCTTATTTTTAACTGAAATACTGAATGCAAG
GTTGAATTTGTTTTTCTTAACAATTTCTATTTCTATTTGTGTATACTTGAAGAATCAGA
TTCTATTGAGAATTTAAGTTTTATAGGAAATTCGTTCTCAAATTAGTATTTTATTGGTT
TGTAACATCTTCTGCCACTTTGTAATCACTGTATGTTTTAATAAATGAATAAGTCTTATT
TGTGTTAGGATATATTTCCACTCCTCACTCTGGAGTAACTGCAATAGCCTGTATTTATA
TTAAATTAAACTCAGATGTCTATGTTAAATATTTTATACAGGGTTAAATAAGAATTGA
TTCATATAATTATACACAAAAAGAACAACACGTAAATTTCAATTTGTTGCTATTTAACTCA
AGATTTATAAAGGTAGTATTTGTAATGAAATTCAAAAACATATAGTAGCTTTATAGGA
ACAATGACTTGGGATTTATACTCATATATTTTTGTCAGAGAGCACATATGTCCAATTATT
TGAGTAAGTATACATAGCAGTACCCTCTACATTTGTTACTTCTTATTTGTTCTCATTTT
CAGTCGTTAAGAAGTGAAGGTGGCAATTTGTAACCCACTAACATGTTTTCATGATAACA
AGGCTATATTGAACACACTTATAAATACATATATAAGTCTATGTATTTTATACATGTTAC
TTTTAACACAACCTCTAAAATAATTTTTTGATAAAGAAAGGAATGAAAGAAAGTAAACT
GTACCTAGTCAAAAAGCACAAAGTAAAATTATGTGTGCTTTACAGTGAAAACCAAATGG
AAAGAGTAGAATATTACTTTATTGATGACAACTAATCAAAAATATGGCCAGTAGACCTTA
TGTATTTGCAACTGGGAAATACTGTGCTGTAAAGAAAAAATCTACATCACTAAAATGG
CCTTCACATAATCAGTTGAAAAACAAAACAGGAAAGAGTTCTGTGAAACCGCAACTCTCT
GGTGAGAAATCAAGCACTATTTGAAGTTTTCTGCCTATTTCTCCAATGTAGTACACTGC
TACAATACTTAAACCTGATTTCTGTGCCATAAATTTGTAACCTGTTTATTTTCATGCC
CTTGCCCTTAACAATACAAAGGTATTCTGAAATTGTTAGCTCAATGTTTTGCCTTATAAGG
AGGTTCCCAATTTATTTATAAGGGAAAAAATGTTGTGTTTATGATTCTGTGATGTACAGA
AATGGGCTTAGTTAGCATCATGAGATCTGACTCACACTTATAATTTAGACCAGAATAAG
TGTGGCTCCGTAATCAAGCCACAAAACAGAACCAATTTAAACAAAATTTTACTGTGTT
TTAAGCAAAGTTAGTATGATGAAATGAAGTATCTATGCTCAGCAGTAGGTCTCGTTGTGC
ATATAGAATGCATATCATTTCTGAGCTATCTAATAAATGCATTAGTGAAATTGGGCTGG
GAAGTAGAAAGTAACTTCCAGAAACAAATGATGTAGTATTTACAATCCTACTCTCAATGA

AAAGAAATTAAC TAAGAATTCTGTAACATCTCACTGCATTATGAAATTTGAAAATTAGAT
CCTAACGAATGTATCAAATGATTGCAATACTTTAAAGTTATAGAACAGTGGTATTAGAAC
ATGTTTAAAGTTTAGGTAAAAATAAGTAACAACAACAAAACAAGTGGGACTTATACTCCA
AGTTTTATACACCACGTGATCAACTACCATAGTTTTGTGAAACCTGGATATGGGAGCAGA
AGCCCTAAATTGGTCTGTGTCATAGTTTTACAGTTTCACAGACAATATATTAGCCTCCAA
GAGGCTTTTATTCTTCACTTTTGAAATGTAAATATTTCTTTGTATGGATTAATACTCCC
TACTGAAATGGAAACACAGTCTGAAGACACTTGTTTGCTTTCTTCACTGCCATATCCCC
TCCATTATCATGTCTGGCCCATATAAAGCACTCACTCAATATTAGTTGATTCAATTTAAC
AAGATCATGTATGAGAAAAGTCTTTATAAACTGAAAAATATGCTGTTTAGGTATTATCGC
TTCAGACAAAAGACAAAGTATACATAATCTGTAGTCAAGAATAAATTTTCATAAGCATT
GAAAATATGATGTGTTTTCTTATTTCTTATTCTGCTTTACAACAGATATGTGTAATTCAA
GTGATATTTCTTAGTAGTAGAAAGAGTGTAGTTTGATAAATAAGATAAGTTATTATCTTT
GAAATACCTAAGTCAAGAAAATCTCTGCAGTGAAAAGAATACTGTAAGTTTCACTTTCT
ATCTATAAAATATAAAAGATGAAGGGACATTGACACAGAAAATAAATTCAGTGAAAGCAT
TTAAATATGTTTATCATGTCAATTTCTCTGCAACAGTATTTTCTTCCAAGATGATTATGT
AAATTATTTCTAAGTATTATAATGCACATTTTACAATAGGACAACATAACAAGATTTTA
AATTCTAAGATATTATTCTAATTTCTTATGTCAAGTAAAACGTTTTTATATTTCTTTTC
TCCGTGATATGCCTTAGGAAAGATTTTACGTATGGTAATGGTGTAAACGGTGTTAATATA
TTTATGTATGAGATTTAAAAAACTGAATTTGATATATTTTAGGGAAAATGTGTGAATC
TTCAGTCAATTACTGTGAATGCAACCCCTGCTTAAATGGTGGTTCCTGCCAAAGTGGTGT
GGATTCTTATTATTGTCATTGTCCATTTGGTGAGTAAACTTATTTGTTGATATAAAATA
TAAGTTTATTTTGCACACAGTTTAGCAATTTGTTTTATTATGAGTATGAAAGACCAAA
AAATTATTGTTTTACATGGAAGGTTTTATTAATAAAATCTTAAATGTTTAAACATTTGT
AAAAGTTATGGAAATCCCATGAATACATTGCATTGGTCACTACTAGAAAAAGAGTCAAC
TCAAGATAATTGAATTAATATTGTTTCCATAGGATATTTCCCCCAAAGATTTATGGATA
TCTTCTTTTCAGCTGAGAAGTTATGAAATAAAAAAATTCTGTAAGCACTTTTCACGTCA
CTCTCTATTTCAAATCTTAAAGAGTAGTCAAAGTAAGGTTTTTGTGTTTCACTTTTG
TGAATTTTGCTTATTTTTATTTTTGTTTTTACATTAGTTTTTAATTTGTTTTTAT
GTTAATTCAGCCACTTTTATTAGAAGGACTTAGTAACATATACCTGACGTTTTTCATAATAG
GCTTTTTGTAGCTGATACTACCTGACTAATAAAATTTAGACTAATCTGTCTTTGGATA
AGAAAAATTGTTAAAAAGAACTTTTTGTATACATACATATTTATTCACCCTAGTGGAAT
GAACTAAAAGATTCCCTCCAGGTCTTATCCAGCTGTTACCCATTACTGTGCCAGCCAAAA
ACCATGAGATTGAGAGGAAGCATTGTATTAGCTTGGCTGTTTCATAAGTTTGTGATTA
TTCCATTCTTTTTAAAGGCTGCTTACACCACAGCATAGAATCCATCTCCAAATGACTCT
GTCTCTTTCTTTTTTTTTTGTCCCCTTGTATATCTATTTATTTATTTTTTATTATA
CTTTAAGTTCTAGGGTAATGTGCACAACGTGCAGGTTTGTTACATATGTATACATGTGCC
ATGTTGGTTTGCTGCACCCATCAACTCGTCATTTACATTAGGTATTTCTCCTAATGCTAT
CCCTCCCCCTTCCCCACCCCATGACAGGTCACGGTGTGTGAAGATCCCCTCCTGTGTC
CAAGTGTTCTCATTGTTCAATCCCACCTATGAGTGAGAACATGCGGTGTTTGGTTTTT
GTCCTTGCGATAGTTTGCTGAGAATGATGGTTTCCAGCTTCATCTATGTCTCTTTCTTA
AGCAAGAAAGAGCAAGGATATTTTCTAGTCTTCTTTGGGCATATAACTGTGCTATATG
GACCTGAACAGTAAAGCTCAATCTATAGTAGATAATAGAATTTAAAGACATACGCAGTT
CCTAATAACCTGTATAATTTACTAGGTATTTTTAATTTCCAAACAACCTCATGACTATCT
GTTTTTATTAAGCACATCCATAGAATGATAAGACAAACAAAATAGAAAAATATCTAATT
TTGAGGAATGTATTTACCAATGGTTTTGAGGCCAGAAATTGGCTGATTTGCCCAAAGT
CAAAAAATGAAGTTGAGGCAAAACTACCCCAAGACGATGTAGCAACTAGAACACAATTTT
TTATTTTCAGTCCAGTATGACATTCACAGAACCCCTTTTATACAATTTCTTTGAAATTC
TAACAATGCCTGTGAAGTAATGAAAGGTATATCAAGGTCAAAATAACCACAACCTTGAGAT
GTCCAAAACTTTTTCTTTCTTCAATGGTGTCTCATCATTTTAAGTGGTGCTGCTTTCT
ACAGATAACCACAGTCAAATTCATGGTTTAACTTAACATTTTGAGATAAAAGATAAGGG
GATTAGAGTGTAAACTAGAAATGATTTTCAAGTGACTGAACAGAGATGTTTCATATTTTAA
GGGATCCCTTTGCAAAATTTAAGGATTTAAGTTTGGAGGATTTGAGTTGCAAATTTGGG

GATTTAAGAAAATTGATACACAATAAAAAACAAGTTGCTGCTGCAGTGCTAGTGGTACAAC
GTCGTTGCCTATTAAGTGGAACACTTGAGGGGCCAAATGTACCTTCTTGCTACTCTGTA
GACATCGCCAGGGGAAGAGGAATAGCACAATGTAAATTAAGACACAAATCACACAT
AGCCGGCAGTGCAAATTTCTCCCCCTATTCCTTCAGGGGGCAAAGACAAAAAACATTATC
TAACTTAGATATTGTCAGTTGACAACATAAGCACTTACAAAAGAAAAACAAAAATCACTG
AAACACTGCTATGTAATTTGAACTAAAGAGATAGAAGCAGAAACAAAAATGATTTTTGT
TCTCAAATGGAATGTGGATGAAAGGTACAAATAACCATGTCAGATGGCATGCCTCAAATA
AATAGCCAGAGGTAGGTAGTTACACTTGCATCCTTTAAACAAAACTTTATCATTTTTGAA
GTTAGAAAAAAGTTTTTGCAGTGTTAGCTTCTCATCAATAAAAGATTGGCTATTTGGA
TTTCAAAAAATTTTTTCGATACTTAGATTTTTTAATTTAAATTACATCTTAGGAAAAACA
TAGTGCTTCAGACATTATAAAGGCGACATGTATAATTATAACTTCTTAGAATTAAGATGC
GACCTTTCTGTGAAAACAGTACCAAAACCTTTTAAGAATAAATATTTTTAAATTCATAAA
GAAATATTTTCATGTTTGAAAATACAGTATCAATTTGAATTAAGTATCTATAT
ACTTTCTCCATATATTTACACTCAAATATTCAGCACATTGTTATAGATTTATTGAAGTTT
ATTCAGAAGAGACCTAAGTGAACACATAATACAAATTTTTTCAGTAGTATTTTTATTCA
TTTATATGCTTATTTTTCTTTTACTTTAACTTCACTTACTCTTCTGCATAGATAGCA
TATTTATATACAAATTATTAATACATACAAATTATAAATATTAATATAGATGCCACAGA
AATGTATAAAATACAAATACAAATCTACAGGATAGATATAAGTATATAATGTATAAGAT
TATACTATGTATAAAATATTATCTCTATATATCATATATATGACATAACATATATATCAA
TAAATATCATTTCTATAATTCCTTTGCCTTTCTTCACTTTGGTTAAAGATTAATAAAT
AAAAATTATGTATAATTTCTTTTTTTTTTTTTTGGAGACGGAGTCTCGCTCTGTCGCCCC
GGCTGGAGTGCAGTGGCATGTTCTAGGCTCACTGCAAGCTCAGCCTCCAGGTTACAGCC
ATTCTCCTGCCTCAGCCTCCCGAGTAGCTGTGACTGCAGGTGCCTGCCACCATGCCGGC
TAATTTTTTTTTGTATTTTAGTAGAAACGGGGTTTCACCGTGTTAGCCAGGATGGTCTT
GATCTCCTGACCTCGTGATCCGCCCACCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGT
GAGCCACCATGCCTGGCCAAAATGATGTTTAATTTCTACTCATTTATAATAAATATTATT
TCAGTCTGGACAGAAAAGGAAAAGATAAATAACACAACTTTTATAGCACTTCTAGGCT
GTTTTAATTTTAAAAATGTTCTGATATAACATGTGGTAGTCAAAATAGCTAGACAATCAG
TAGATCTGGCCTCAAATTTTGGCTGTTTCTCTTGTTCTGTGACCTTAGGCAAGTTTTAA
ATACTCTATAAAATAATGGCATTGGTTCCTTCTAGCTGAACAATTCTCTCACTCTAAAT
TTATGCATTTATGGGACATATAAAGCCAAAATTAAGAAATGAACTTTTGCAAGTTAATA
AGAATCATGAGGTATTGGCATGGGTTAATTTCCAATCATTTGCCACAGTCTACTAATAT
TTGTGGGAAAAGAATTTTGGCATAACATTGTAACATCAATAAACTCATTTTTCAAGTTT
GAAAAAGAACCAGCACAAACAAATGGGAATGCTGACTTTCAGAAAAACAGACAGCTATTT
TAAAGTAGCCTGCTATAAATCATACCCACAGAGGTATAAAACAAGAAAGAGATAAAAAAC
TTAAAGACAGTTATTTCTTTCTAAACCAATGATTCCACTTGTGAGATTTTGTGGCCC
TTGAAAATAACATGAATATAGTACTGATTTTAAAAAATCAAAACAAATGCATTTGCCA
TCTTCAATTGAGTTGAAATAGTTTTTAAGAACTATATATTATGAAGGAAGTATGTTGGCT
GAAAATTGTAGCATAATACAACTTTTAAAGATCAACAAATTTGGGCCGCTTGCAGTAGC
TCATGCCTGTAATCCCAACACTTTGGGAGGCTGAGGCAGGCGGATCACCTGAGGTCAGGA
GTTCAAGACCAGCTGACCAACAAGGTGAAATCTCGTCTCTATTAATAAATACAAAATTAG
CCAGGCATGGTTCCCGGCACCTATAATCCAGCTTCTCGGGAAGCTGAGACAAGAGAATC
GCTTGAACCCAGTAGGCAGAGGTTGCAGTGAGCAGGCACTCTAGTCTAGGCAACAAGAGC
AAAACCTGTGCCAAAATAAAAAAATAAAAAAATCAATGAATTTTGAAACGTTTCT
GGGAAAGAAATCTCTCAGACATACTCCATCCACTAAGCCTTTCATTTTGAGAAACAAA
ACATACTTAGATATGTTCCCTAATTAGACAATGAAAAATAATTACATCAGTTAATCATTT
CTGCCATGTTTTAAAGATCATTCATTCATAAAGATCATTAACATTTTTAATTTAGTTTA
GATGAAATTTTTGGAAAGTAAAAAAGTTGTTAAAGATATCTCATTTTATAATTCAAA
AATATTTAATCAAAATATATAATAAATTTTCATGAAATTTATGCCAGTTTGTCAATT
TTCCCTCCAACAGGTGTCTTTGGAAAACACTGCGAGTTGAACAGTTATGGATTTGAGGAG
TTATCATACATGGAATTTCCAAGCTTGGACCCCAATAACAACTATATTTATGTCAAATTT
GCCACGATTAAAAGTCATGCCTTATTGCTTTACAACTATGACAACCAGACAGGCGACCGG

GCTGAGTTTTTGGCCCTTGAAATTGCCGAAGAAAGACTAAGATTCTCTTATAATTTAGGC
AGTGGTACATATAAGCTCACCACCATGAAGAAGGTGTCAGATGGACATTTTCACACTGTG
ATTGCCAGGAGAGCAGGAATGGTAAGATATTTCATTTTATTGTTGTTGTATATCCAAGT
GATCTTCAAATAAAGTATGAATTGGGGTGCAAATCATGTTAAATTAGGTTTATTCATTAA
ATGAACACTTTAGTTATGAAAACTTAGACATAATATTTTTCTTTGCTCATGACAACCTC
TGTTCAAAAACAATAAAAAGGAGAACAAATTGAGAATATAGCCTAGTGCGTGAAATAATTT
CATTGATATTTTTGTATGTTTTAAGGCCATGTCAGGACTATACTTAAAATAACTACCT
TTCTTTCCTAAGTATTTCTGCCTTGACTAAGTATTTCTGCCTTGACTGAAGAAACAATTT
AGGAACAGAGGAGACTTTTCTACAAAATCTACATAAAATAACTTAATCAAAAACACTTTA
TTGTTAAAAAATGGTAACAATAGTCTTAGCTAGTCATAGTCTTTTTGCTGGTGGAGGGTC
TTGCCTTGATATTGGTGGCTCCTGACTGAGCCAGGTAGTAGTGGCTGAAGATTCGTGGTG
GGGGCTATGGAAATGTCTTAAATAAAACAACAGGAAACGTTGTCACATTGATTAAGTCC
TTTTTCATGAAAGATTTCTCTGTAGCATTTGAGGCTATTTGATTGATACCATTTTACCCA
CAGATGAAATTGTTCAAACCTGAAGTCAAGCCTCTCTCAAACCTTGATGCTAATTTATT
AATTAAGCCTATGGAATATTCTAAATCCTCTGTTGTCATTTCAACAATGTTACAGCATC
TTCACCTGGAGTAAGTTGTATCTTAATAAACCGCTTCCTTTGTTTATCCCTAAGAAGCAG
CTTCTCATCCTTTTCATGTTTGTGTTTGAAGATTGTAGCAGCTCAATCACATCTTCGGGCT
TCACTTCAAATTCTAGTTCTCCCACTGTGTCTACCACATTGGCAATTACTTCTCCATTG
AAGTCTGGAAGCCCTCAAGCTCATCCATGAGAGTCAAAAATCAACTTCTCCGAACTCCT
TTAATATTTGATATTTTGACCTCCTTCCATTAATCATGAATGTTCTTCATGGCATCTAG
AATGGTGACTCCTTTCCAGAAGGTTTTTAATTTACTTTGCCAGACCTATCAGAGGAATC
ATCATCTGTGGCAGCTATAGCCTTATGAAATGTATTTTTAAATAATAGGACTTGAAAGT
CCAAGTGACTCTTTGATCCATAGGCTGTAGTCTGGATGCTGTGTTAGCAAGCATGAAAA
AACACTAATCTCCTTATACATCATTGTCAGAGCTTTTGGGTGACCAGGTGCATTGTCAGT
GAGCAGTAATATTTTGAAGGAATCTTTTTTCCGAGTAGTAGATCTTAACAGTAGGCTA
AAAAATATTCAATAAACCATGCTGTAAACAGATGCACTGTCATCCAGGCATTTCTGTTTA
CTGATAGAGCACAGATGCAGTAGATTTAGCATAATTCTTAAAGACCCTAGGATTTTAAAT
ATGGAAAAGGAGCACTGGTTTCAATTTCAAGACACCAGCTATATTCACCCCTGATGAGAG
AGTCAGCCTATCCTTTGAAGCTTTTAAACCCAGGCATTCACTTCTTTTCTCTAGCTATGAA
AATCCTAGATGACATCTTCTAATAAAAAGGCTGTTTTTTACATTGAAAGTCTGTTCTTTA
GTGTAACCACTTCATCAATGACCTTAGCTAGATCTTCTGGATAACTTGCTGCAGCTTCT
ATATCACCATTCACTGCTTTGCTTTGCTCTACTACCTTACAGAGATGACTTCTTTCCTTA
AACCTCATGAGCCAACCTCTGCTACATTCCAATTTTCTTCTGTACTTTCCTCACCTCTC
TCAGCCTTCATGCAATGGAAGAGAGTTAGTGCTTTTTCTAGATTAGATGTTGGCTTAAG
GGAATGTTGTAACAGTTTGATCTTCTATCCAGACTGCTAAAACCTTCTCCATATCAGCA
ATAAGGCTGTCTTGCTTCTTATCATTGTATATTCACTGGAGTAGCACCTTTAATTTCC
TTCAAGAACTTTTACTTTGCATTACAGCTCGGCTAACTATTTGGCACAAGAAGCCTATT
TGGCCTATCTTGACTTTCGAAATGCCTTCGTCCTAAGCTTATTCATTTTTACATTTTCA
TATAAAGTGAGAGAAATGCAACTCTTCTTCACTTGAGCACTTAGAGGCCATTGTAGGG
TTATTCGTTGGCATAATTTCAAGTAGTGTGTTTATCTCAAGGTACAAGGAAGCCTGAGGATA
GGTAGAGAGACCAGAGACAGATAATTGCTGGAACAGCCAGAACATAAATAACATTTATCA
ATTAAGCTTGCCATCGTATATGGCACGGTTCATGTTGCCACAAAATAATTATAATAGTAA
CATCCAAGGACACTTCACTCATCACAGATCACCATACCACATAAAATAATAATGAAATAT
TTGAAATATTGTGAGAATTATTCAAATGTGACTCACAGTCACAAAGTAAGCACATGCTGT
TGGAATAAATGGTGCTGATAGACTTGCTGGATGCAGGATTACCAGAAACCTTCAATTGGTA
AAAAATAAATAATCTGCAAAGTGCAATAAAGTGAAGAGCAATAAATGAGGCATGCATGT
ATTTATAGATTATATTGATTTTATTATGTGGCTTTCATGTTACAAGAATGACATATCTAT
TTAGGACTTGTTTATTAAATAAATACTTTTCTTATAAAGGAAAATGCATCACATCTT
TTCTTTATTAATGTTTGAAAATATTTGACATAGTATAATAGAATGGAATGGCTTATTTAT
TTTTTATTCTTTATTTATCTTCACTATCTCTCCATATTTCCCCATCTCTAACAGCT
ATCAAGGATTTTTAATAAGAAAATGCTAACAAATCTGTCTTAAAGTATTTTTGCACTTTA
ACTTTGAGCCTTTAAAAGTGTAGTTACTGGTGGCCAGGCGGGTGGCTCACGCCTGTAAT

CCCAGCACTTTGGGAGGCCGAGGCGGGCGGATCACGAGGTCAGGAGATCGAGACCATCCT
GGCTAACACAGTGAAACCCTGTCTCTACTAAAAATACAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAATTAGCCCGCATAGCGGTGTGCGCCTGTAGTCCCAGCTGCTGGGGATAGGC
AGGAGAATGGCGTGAACCTGGGAGGCGGAGCTTGCACTGAGCCGAGATCTCGCCACTGCA
CGCCAGCCTGGGTGACAGAGCAAGACTCTGTCTCAAAAAAAAAAAAAAAAAAGGGTAGTTA
CTGGTAAGATTTATAATTCACCCTAGATAAAGGAATTGTGTAAAATGTTAAATTGTCTGT
TAAAAAGAAAGCCTAGCCAAAACAACAAAATAAGTGCCCTTAAATCATTTTAAATGAAAA
AAGTTGGTATGTAAATGATTATAATTGTATTTCTGACTTCATGGCAATCTTTAAATATA
TGACAACCTTATATAGTCCTTAGACTGATCATATGAATCATACATTTGTGTGACTATAGAG
AAATTTTGGCACTAAATGTATGGAATATGTTATATTGCTGAATGCATATCAGCAATATT
CAGAAGTAATATTTAAATGTTTTTAACCAAGCTTTTGCTAGTTTTTTCCCTATGACAC
GTAGTTAATTTTAAAGGCTAAAATTTATGCAATCTATAATTACCAATTTTATAAGGGCAT
AAGACAGAACTACCTTATAATATTAATTTATTTTGACCAGTACACATAACAGACAATCT
ATTATGAAAGAACAAAATTTGTCATTTGATCTCAGGAATATTTTATAAATCCATGTTTAT
TTTGAATTGGCATCAGATACAATGACATTTCTCTCCTCCACTCTAATTTACTACAACATT
AAAGGAAATTTAAGCAAGTTTTAAATACAGAACTATTTTAAATTATGAGGGGGAAAAAG
AATAATGATTAGCTTTAAATATAACCAATTGATTGTGTCAACATGGTCAAGGGTAGCTGC
TCAGACATGTCATTACGGATATCGCCACATCCATCAAAGTGCATTGAGGGTCTACCAG
GTTATTAATGTATGTTACTTGAAATATTGGTGAGAAAACAACAGAAATATTGTATGGTT
TTTATCAATCATTTTAGTTATAGATGGTTTTCCATTTCTTTTGAAGTTAGTGTTAATAT
TTTCCAGCTGGAACATTTTTCTAATATATTTAATTTATATAGTGTTTACTTAATAAAAT
ACCCCCAACATTTCAAAAATGTTGTCAAGACATAATGTTATATTTTATATTTTAAATTCTA
ATATGCCACATTTCCATATTATTGTAAAGTTAATATTAATCATAATTAATTTTATTT
TCTGTGAATTAGGTGCTTAAACAGGTGTTGGTCACCCTGAATTATCACCAACACAACCCA
CATATAACCTTTGAAGTAAATAATGGAATATTTTACTTGATCTTGGTCTCAATGAAGT
TTACATTATGAGTAGTGCCTAAAAATCCACCTGACTTTAATGAACATTAGTAGAGGTATA
ACAAACAAATCTTGATAAAATATATTTCTGATTAGTATAGGTTACTGCACTGATTTTT
GCTTGAGATTTTAAAAATCCAGCATTCTCTGGAAGAATATAGATTTAATCAATTCTAGTA
TTCCTGATGATTGATGTAACCAGAAATATTGGGCCTTAAAGAATTAGAAAAACATTTAGA
GATTGATATATATAGATTGGGCTCACATTAGCCATAATAATATCCTAAAAGTATGAGTA
ATAGTAGACATCACCTCACCCCATTTCTCCACACATATGTAAGATAACCATATTTCTGAT
ATGTTGTCAAGTATACTATAATGTAAATAAACGATTTTACCTGATGACCTCCAAGGTCT
CTTTAACTTCATGAGCATTTGATTCTATCAGACAAGGACATGGGATCAAGAGGTGAGTG
GAGAAGGATGCAGTTTCATTTGTATTATTGTGACCATAGTCATCAATTTTAAATAATACC
AAATGTGAAAAAACTCTGTCATTATTACTTGAGTCATAGGAAAAATGTCTTCCTGTTTC
AGAAAAACATCCAAAATAAGGCCCTACTGGATTCTGAATTTGTCATTTTCTACATTTCAA
AATAATTTTGGTTGGAAGTGGCAAAATCATTAACCTCTAAGCTTTAAGTCATTGCATAG
TTGGGATAAAACATTTTAAATTTATGGTGGTAAAGCTATAAAAATTCAACAGTAAAAGAGA
ATTTAACTCTGAAGATTAAATTGCATAAGCTTACTATTAATAATAAACATCTCCTCCATT
ATCTTTCTTTGAGTTGTATCAGCAAGCTTTTAGATGTATACGAAATATTAACAATGACT
AAAATATAATTATGTTATCCAAGGTTATTTTCTAATTGAGGCATTTATAAATATCCATG
TGGTACTTTCTAGTTTATGATACTTTTAGGGATCTCTACAAGGATACTTGCATAATATAT
GTGGAGAGATGTGTTCAATCAAGTAGTCACCTAAGCAGCAGAAGTTGAATTATAAAAAACC
TAATACTGCTTTTGAGATTGGATGTCACCGCATTTTACAGATAACTGAAAATAATCATAA
CTATCAAAAGAGTAACTAAATGGGGCATGAATGACTTGCCAGAGAATTGGAAGTATAAA
TTTTCTACAAATGTTAGTATTTATTATAATTTACTTGAAAAAATGGCAAAAAAAT
CCATGTGGCTCACAAGAGTTTACTGTATAGAGCTTATAATAATTAAGTATAGAACATTTA
AGAATATGTTAGCCAGTAATATTTGATAACAATTAATAAATGGATTATACATTCACCTC
AGTCTTTGTTTTTAAATGTGAGATACTTCAAGATAAATTTTACAAGTCTCCATTTAAA
TATATGTTTTATGGATACTGCCTAAAAATCATAAGCAATATTGATAAAAGTAGGATATTA
AGGAAATTAATCATTTTCATTCCTAATGAAAGTGGCCTGATTTTTTAATACAGAAAATTT
GATATCCAAAACCTTGCATTTAAGTTGGCATGTTATTAGTCAACTTGCTTAAGTCTCTG

CACTGTTTTCTACATTTGCTTTGCTCTTATTAACTGAAATGATAAGCATCCTGATAAAT
GAATAGTTGCATTGTATTTATATTTCTCTGCTACATATGTAACAAATTTGGATTAACCT
GTCTGTGGCATTGTAATTTAGAATAACGCTTTATTGTCTGCATTGGGAGAAACCTTTC
AACCTCTTGTCATTTGGATAATGAATTATTGCTATTCCTGTGATATACTGGCACTACAC
TCCATCCTTCTTACAATTTAGCAAGTAAAGTGTGCAAAGTTTGCATTTGTCAAATTTT
AATGAAGTTTGGGGAACAAAGGAGGTGTATCACAATAGCATTGGAGATTACACAATAATA
TAGATATACAACCTTTGGTCTTAGACTGCACTGCAGCCATCCTCACTTGCTGGTACTCATT
ATACAGGACTCTGACTTGTATGGTTATCATGTTCTGAGGCCTTTTAACCATAAATTTATG
ACTTTGTTTATCAATCAAAGGAGTATTCATATGTTCTACTAAACAGAAGGCTTTTGTCT
CAAGGGAATACGCATCCCTTAGAATGCAAAAATACTACTTAGTCATTATTTAAATACTAT
TGGGGATTTTTTACTGTAAAGTGATCTACAGTAATACATCCTGATTATACAGAAATATGC
TGTAATGTTATTTATAAATAATTATTCTTAACAAAAATGAGAGGAGCACTTACTTGATT
AACAAATTTCAAATTTTAAATCCAAATATTTAAATTTTCATAGATTGCTATATAGTATTTA
TATTGTATTTTCTAATCTTTTGTAAATGTGGCTGAAATCATATTAGAATAAGACTTTT
GAAAATCAAAAATTAAGTGTCTTTTGTAAACATAGCTTGACAGTACAATAAACACGTTTC
TTAAGATTGTAATCTACAGGAAGATGTTTCAGACCTATTGTGTATTATTCTAAAAAAGAT
TAACGGCATTTTTATCTTTTTTACCTATAAAACAGGGGAGCAGGAGAGGATTTTTAAAG
GTACCTTTTACCTCTCATAGGTATAGATAGTCATAATTTTAGTTTGAGATATCAAAGAA
ACATGTGCCCATGATTCAATATTATAATTATGTGATTTATACATTAAATCAAGATGTTAT
CATAGTTTCTAAGTCATGTTACATAGAAGCAAGTCATGGGTAGTGTTGGCTGGAAAGGC
TAATAGGGACGGTAGAACTCAAAGTTGAATGTTTCTTTCTCTTGCTTCGTAGGCAGCCTC
CTTAAGTGTGGACTCCTGTTCTGAGAACCAAGAGCCAGGATATTGACTGTCAGTAATGT
GGCAGTTTCAGATGACTGGTAAGGAATAGGATTAGTTTAATTTTTATTACTTAAAT
TTTTTAAATAAACTTTATACCTAAAAATAATTATAGGATGCTAAGTAGTACATAAAGCT
TAAGATATTTTATTTCCCTCTCCAAATTTTCATAATATAAAATAGTCAATAATTACTGTG
CAAAATGTGTTAAAATGTGTGAAATGAAGTGGTAGAAATAAGGATAAAATTGGAGAAAAG
GAAATTAATATAGCCAGTAGTCTTTGGAAAGATTGATGAAATAATTGCATATGACCTTC
ATTCTGAAAAACATGTAGGATAAAGACCTCAGTTCTTTCAAATGCGTTTCTAAAAGTTTA
CGTGAAAAATTATTAACAGATATTTTTCCATAGCACTTAAAGCTGAGCACAGCAGTAATCT
ACCAGAAAATAAGTGATTTTAAATAGGAAAAATGATAAACAGAGAAAAATAAGTAGTCAG
CATCATGATGCATCATTCATTGCCTCAATCAACTTATTGGCATCCCTTGCAATTGATCAAC
TACTGATATTCTTTATCATCTCTTCAGGGAAGGAGCAGTGAATCTAACGTAAATATTA
GAGTTGCTACTAATTCTACAGCATTTTATTTTCCCTCTGAGAGTATGCTCCTTCTTGTTG
ACTCAGTATTGTGATAATATACATCTAAGTACTAATTGAAAACATAATTTCCATAAAT
ATTATTATTTTTCATAATTCGGAAGTCTAACAACCTCTGTGTGTGATTGGACACTCTTCT
ACATATTTTCCATTGAAATTTATCACACTATAATAAATGTCAAAAAAAGCTATATTCAC
TCTTTTTCGAACTAAACATTATACTAAAAATGTAATCTTTTGACACTAATATTTATATCT
TCCATTATTTATTTAGGACTCTTGATGTTGAGCCAAATAGAGTTACAGTTGGAGGTATCA
GATCTCTAGAACCAATCCTTCAGAGAAGAGGACACGTGGAAAGCCATGATTTTGTGGGT
GTATAATGGAGTTTGCAGTCAATGGAAGGCCTCTGGAACCCAGCCAAGCTTTGGCAGCAC
AAGGCATCCTAGATCAGTATGGCGATTTTATTTCTTACTGTTTTAAAGAAAAAAATGCA
AAAAAGTATGCTTCAGTGAGCATCAAAGATGAAATTATTATGCTCAATCTCTAAAAAT
ACCAATGATTTACATTGTTTTGAATTTTAAATACTATACCTTTGAAATTTTGGCATAAA
GTATGATATTTAATTAGAAAATTAATATGTTTCTAGATTCTTATACATATATATATAT
ATATATGCATGTGGGCATGTATATGTTTATCCTCTTACAGAGAGTTGTGAAGATTAAAT
TAGTTAAGTTGGTAAATTATATAAAAAAGGGTCCAGCACAGAGAGATATGTAGATGTTA
GCCATCATGGACACATAGAAGCTTTATTTACATTAAATAGTTTTACTTATAGACATACAT
ATTCCTAAAACTTGATACAGCTTTAAAAACAGGCAATAACTTGATTAATTATGAAGTGT
AAGGCTTTTTTATTTGATTATTAATTAGGTTTCTAGCAATAACTTAGGGATGTTAGAAAT
TACATATTTTATTTTAAAAATCCTTTTGTTCATTATCGAAGTTTGAAAAATCTGAAAAA
ATACAAGGAAGAAAACAAAATTAACCTATAATCTAACCACCCAGAGACAACACTACTCTTAG
GTTATTGTCATGTTTTGACTGCTTAGTATCCCAAGATGTGAATGTGCTATATTTAACTG

TTGCTATACACTTTAGTTATTTCCAATTTTATTAATATACCAATTACCCTGTGATGAACA
CATTTTCACAAAAATCTTTGCTCACATTATTTTTGGATGAGATTACCAGAAATAAACT
ATTAAGGCCAAAGCTAGGAATACTTTCTAATGTTTGTAACCTAAGTATTTAATAACATT
TTCTATTTGCCTTTCTTTTCTACATGTTGTTACTGTTTTGTTACAAAGTCACACTAGTT
CGTTATTATTATTAATCAAACAGTACAGAAAAACAAAGGATTGGGATTGCCACCATGTT
AATACTTCGGTGTGCATCCTTTATATCTCCGTGTTACACAAGTACTTTTTAAATATC
AATTTTTTTTTTCATTTAGAGATATTTGTGAACATCTTTTAGGTCAAAACCTACTGAA
ACAAAACCTTTAGACTTACCTTTAACTCCTCTGTTTCTGTTAGACCTTATGTCCAGAATG
ATGTTTCTGTTTGTGTTGTTGTTGCTTTTTGAGACAGAGTCTTGTTCTGTGCGCCAGGC
TGGAGTGCAATGGCGGGATCTCGGCCCCCTGCAACCTCCACCTCCTGGGTTCAAGCAATT
ATCTGCCTCAGCCTCCGGAGTAGCTGGGATTACAGGTGCCTGCCACCACGCACAGCTAAT
TTTTGTATTTTATAGTAGAGACGGGGTTTACCATTGTTGACCAGGCTGGTCTTGAACCTCT
GACCTCATGATCCACCACCTCAGCCTCCCAAAGTGCTGGGATTATAGAGGAGAGCCACTG
CACCCAGCCTAGAATGGTTTTTAAACATAAGTCAGTTAACTTTTCACTTCTTGGCTCAA
AGTGCTTCAATAGCTTCCCATCTCACCCAGCTTCAAAGCCAAAATCCTGACCCTGAATGA
AAACATTTTTATGATCTGCCATCTCCCTCACTTCCTGAACATATCTAACTATTCTTCTT
CTTGTCCTGAGCTCCAACCATGTTGGGCCTCGGTGTTTCTCAAACATGGCAGTACGCT
TTCACTTCAAGGCTTTCTCACTGGCTGTTTCTCTAGCTGAAAAGATATTCTACCAGATA
TACTTCATTCCCTTATTTTATTTAGGTCTTAACAAAGATTAAGATTAATTCAGTGCCTAA
TCTAAAGATTAGCAAAACCCGCAAACCTCACTATACCCTTCTCACCTTGATTTTCTCTAT
AGCTATTTTTTTCTTTATTTTCTGCCTCTTCCACAAGAAAAAATAAGTACTTCCTCAGTA
CACGGTTATTTTTTCACTTTACTTCCATGCTTAGAACAGTGCTTAGCATATGGTAGG
CATCAATAAACATTAGTTGCATGAGTATCCTGATAGACATGTGTCAAAAAATATGTGGT
CCCTGGATCATATGTATTAACCAAAGTGTTATTTGACCAAGGTATTTTATTCAAGTAAG
AATTAATTTAAGAAGAAATTGTCACAGCTTTCTCATTATTATATAAGACATAATTTTTT
TTGAATCTTCTTAGTGTGAGGCAGACTATGTTTCTAGGAAAACCTCTGGTTTGATTAG
TTTCTCAAATGTAGTTGTAACCTGAGCTTCAAATAATGGAGTGCTTGAAATTAACAAG
CTAATAAAAGTGATATTGAGTTTTAGCAAACCTCTCCTCATCTTTATGTGCGTTATTG
TTCTCATTATGATTTATTTTATAGATGCCCTAGGCTGGAAGGCGCTTGTAAGTGCAGCCCAT
GCCAACATGGTGGCACATGTATGGATTACTGGTCATGGCAGCAGTGTCATTGCAAAGAGG
GACTCACTGGGAAATACTGTGAAAAATGTATGTAAGGTCTTCCGTCTTCCCCTGGAAATT
TTAATAACTATGAAAAGTAAATATATGCACCCAAGTATGTAATCAAATTAATAATTATG
CTTTCATTCTAAATATTAATAATTAATAATGGACAATAATTGGTAAATACAGTGACATTT
TAAAAATTATTTTTGTAACTGAAGAAGAATGATATCCTTTTAAAAAATCGTTTACTAAC
TAAATCTCTAGCTTCCACTTTAAAGGTATTTTATTCATTATTTTTGTTGTTTTATTTT
TTAGAATTCTAGGCAATCTAAAAGATCAAAGGTTATAGTTAGGCTTTTTTTCATATTATC
TGCCTTTGGGGGATATTTTTCTGGTGAATTTTTGTGCATAAAAAGGTATACACACTAAAT
CACTCAACACTGAGATCAAAACATCATACAGAGCCATCATAATATGTTAAAATTAATGTT
GATACTTTCATTTTAATGTACAAGTAGTAGAATTAATTTTGAATATTACTTTTTAAATC
CTTTCATCATTGTCTTCTAAGCCTAATGTTATTATTTAGACATTAATGATGTTTCATATCA
TCATTAGAAAATGGTGCTCTCTAATTTGAGCTGCACATCTCACTAACTAACCCTAATGG
TTCCTCTTTTGAAAAATTCTTCATTTTCAAACAAGTGTTTACTACTTAACTCCATTGCA
GGTATCTGACTACATTTAAGGAGTCATTTGATTAAATTATATTATGAAAACAAATAGAAA
TGCATAATAAAATTGAGGATATAATATAATCTAAAAGGTCTTAGCAGAAAGTGTAATTGT
GTGTAATAATATTAGATATAATGAAAACATAGAAAATATATACTGTCATGTGATTTTCAA
TGTAATAAATATTTATTAAGGAGCCTAATTATATCTGAAATATGAGTCATTGGCTAGATA
AATACCAGAGACACTTTTTCTTAAATCATGATATAACTCACATACTATAAAATGTATTCT
TTTAAAGTGTATCTTTCAGGGCTGAAATCCATTTGAGCTCATTTTCTTAATATTCTTTCT
TTAGCTATATTATTTGTTTCTATAACTTAAGCTTCAATATTTCTGGAATGTGGATTTTTT
TCAGATTACAATAAACTATAATATACATACTGATTATACATGATGATAAATTATATGTGA
TGATTACTGAAAATAAAGTTAGTTACCGATGTAAATACTTGATTGAACACTTCTTTGTCC
TAATTTATAGCATACTAGAGACTAAAGATTACAAATCATTTTAACCATGCAAACGTATAT

TTTGAAACACAGTGAAAATGATTACAAACAAATTTTTCAAGTACATATTACCAACAAGT
GCCTGTCTTTAGATATTCATAATTTACGTAATGTGGCAAATAGTTTAGTAAAATATTTCC
CAAATGGTTAATGACTGTCATAGAGTATTTAAGTTCATGGTTCTGAAATGCATTTAAAC
ATGTGAAATCAACTTATATAATGATTCATAAATGGAAATTATTTTTTAAGAGTAGAGTTG
GGGGACATTAATCCCCAAAACGACATTTTCATTGTCCTTTTTATATTTTTGTCACTATAG
AAAACACTCCAAGAAATGCCAAATGAATGCATTATTTCCCTTTTTCTTTGACTTCC
AGCTGTTACTCTGACACTGCCTTATCATTAGAAGGCCAAAGGGCGCTTGGACTACCACAT
GAGTCAGAATGAGAAGCGGGAATATTTGTTAAGGCCAAAGCTTACGAGGTGCCATGTTGGA
GCCTTTTGGTGTGAACAGTCTGGAAGTAAAATTTAGGACCAGAAGCGAGAATGGCGTTTT
AATCCATATCCAAGAAAGCAGCAATTACACTACTGTGAAGGTGAGATAAAAGCTAATGGT
GACTTCATTTGATTAGACCGCTGCCGTGTAGTGGTTAAATCACTTCCCCCATAATTTTC
TGCCTTTTTCTTTACAACCCATTAGAGTCCGACTAATGCTGGGCACTATTCCAATGTCA
TCTATCTTAACTATTCCCCAGGCATTGGCCAGAGTAACAAAGATCTGAATGGTTTGGTTT
CTACACACTTTTGTGTTGCTTAGAGTAGAGAACCTGCCAGGTAGGCCAGCACACAAAG
AATTAGTTGCAATCTATTTTTCTGGTAAGAATTTATACACTTCTTTCTTACTTTTAGA
CAAAGCAAACCAAAAATATAATGTTTGGTTGAAATACAAAATATTTTTCTCCAACAATT
ATTTCAAATATTGATATGTATATGTCAATTGACAGGATTAGAATAAGGAAAAACATTTTG
AAATAAGCAAAAACATTTTGAAATTATATGATTTCTGGAGCATATATTCAATTCTCTATA
TAACTCTGTGGAGTAAAGTATATTTGGAATTCATTATAATTTTACTTAACCTTTCCAAA
TAATTTTTAAATAATCTTAAAAATTATGCTTCATGAGACAATGGATTTATCATTAGGCT
TTTACATAATTTGTTTTTTCTTATCTGTAAATAAGATACTAGACTTATATACAGATGAAT
AATTTCATTAGATATCCATTTTGCATCGGCCCTTAGCTTTCTGAAGTTTTAAACCTATG
TCTGCTTTCTTTCCACAAATAAGTCATCTCCTAGACCAACAGTTTCTTTAGTTTAGTT
ATATTTACTGCCTTCCATTAATATTACTTTGTATCATTCTACTGATAATTTTTATATAA
ATTTTAGTAAATTCTTAAGATAACAAATCCAGATTTCTGAATTATTTTCATCTATTAGT
CAATATTTAATACTACTCCAGGGATAGTTCACAGAGAAAAAGAGCAATTTGTTTCAGAAA
AATTATTTGGTTTAATTCACATATAATACTAAAAATAAAAAATAGATGTTCACTTCTAAC
TTCAGCCTCTTTCATCCTCAAAATTTTTCTCTGTGCAAGCCAACCATGATTATGTTGCAT
ATAAATATATTTAATAAGTAGTACAAAAACCAATATTTCTTACCTTCTCAAATGATAATT
CCTCTAGTCCAGTCATTTCCAACCTAGGATAGATTTTACCCCATGGGACATTTGGCAATA
TCTGGAGACATTTTCAATTGTCACGGTTAGGAGTTGGGAGAGTACTTCTGGCGTCTAGCG
GTAGAGGTCAAGAATGCTGCTAAACAGTAGCACTTCACAACAAAGAGTTATCTGGCCCCA
AATATCATTAGTGCCAAATGGCAGACACTCTACCCTTTCCCTTACAAGAGAACATCTTC
AGGTTTTAACTTTACCTCTATTGAAGCAAAGGACCCAGTTCAGAGTTAATAAAACAAC
GTAAAAGAGAACACATAAGCCATTGTATTACATTATTATCTGGTACTTATAATTTTCATT
GAAAATGGTATTAGAAGTAAACAAAGTAAAGAAGCAAAAAAAGAAATAGATCCTCATCTT
CTATAAGAAACATATTTTATATGGTTTGAGAGGCTTTGACATTGAGGTCTGTGTGTTATC
TGTTAAGTTGCTTCCAAGTCTTCGTGCCATTTAAATGACATATGAAATATTTCTGTACTA
ACGTACACTTAAAGCCAAGGAATTCAGTCAAAATACAATGTGGTTGAAAAAATCAGAGA
CACATTTTTTTCTTCACTAAGGAAAAAGCTGAATGTCAGGATCCATTTTGTACCATAA
ATTCTTCTACTTCCAACAGGACAGCGCATACAACTCCAGATTTTGTAGCTTGGTAGCAA
TAACTTAATTTTTTCTGAAAGGAAAGTAAGTGCAAATTAATAAAAAAATGAATAATAC
AGACCAAAATGCATAGTTTTATATGAAAATTTTGAAAAGAAGCTTTTCAAAGGGGCTTGG
CAGGTAAAGAGAATAGGTAAAGAAAAATAACAACAGTGAATTAAGAATAACTAAGTAAAC
CAAAAGAAAGTGGCTGTTGTAAGCAGGCAAATTATTTGGATGATAGGAGTATCAAGTGCT
TATACAGACTAGGAAGCTAGTTAGGATGGACTTTTACTTATCAATTAGCTTATTGGTCAC
CAAGACCCCAGGGTCCGTTTTTTTTTTTTTTTTTTTTGGCTCCTTTTCTGATCCTTTCT
TTAACTCTTCTTATGGTTTGCATTCTCTCTCTCATTCTTTTCTATCATTCTTTCT
CTCTCTCTACAGACACACATACACACACACACACACACACACACACACACACACGC
AGACAGAAGATGAGGACATTTTGTGAAAAATGAGGAAGGGTGTGGGTAAATGGGATTCC
ATGTGGCTAGAAGAGAGAGAGGGGTGTCAGTGTGAGGTGTGGGCAGCAATAGTGATGAGAG
GAGAGAGAAGAATATGTAGAATCAATTGGGTCTATTCAGAAAAAGAAAAAATTAAGAAAA

GAAAGTTTCAGAGAGAAAGGCCAAAAGGAAAGCATAATTGTGTAAACTTTGTAGGCCAAT
ATTTAACTCATTTACAAATCTCTTTCATTCATGGCATGCCCTATAGCTCCATATTTGA
TGTTCTGTAATAATAGTAATGTGATGGACTTTATTTCTACTCTAAATCAGTTCTTTTGTG
TTTGTCTGGTTTTTTTAAAGTGGGCAACATAGGTGATACAGAATAATTGGAATAAGGAATT
CAAAGCTCTATAGATTCAAATTAATAAATGAACAAATAAATGCAGTCATGAGTTGCATA
ATGACAGGAATGCATTCGATAAATGCATTGTTAGGTGATTTTATTCTTGCGAAACATC
ATAGAGTGAACCTTGCTCAAACCTAGATGGTACAACCTACTATACACCTAGGCTATATGGA
ATAGTCTATTGCTCCTGTGCTATAAACCTGTATGGCATGTTTACTGTACTAAATACTGTA
GGCAATTGTGACACAGTGGAAAGTATTTGTGTATATAATCATATCCAAAAATAAAAAAGG
TACAGTAAAAAGGCTGCATTGAAGATTTTTGGGGGGATGGGGGACAGCCTGGGCAACAGG
GTCTTGCTCTGTTGCCAGGCTGGAGTGCAGTGGCATGATCTCGGCTCACTGCAGCCTCT
GCCTCCTGGGCTCAATGTATCCTCCCACCTCAGCCTCCCAAGTAGATGGGACTACAGGTG
TGCGTAACCATGCCGGGCTAACTTTTGTATTTTTTGTAGGGATGAGGTTTCACATGTTG
CCTAAATTGCACTTACTGTGACTGAAGCTTGTAGGACTGAAAGTTGCTCTGAGTCAGAGA
GTCATTAAGCAAGTGGTGGGTCAATGTGAAGGCCTAAGACATTATTATACACTTCTGCAG
ACTTTATAAACACTGTATGCTTAGGTTACATTAAATTTATCAAAAATATTTTTCTTCAAT
AATAAATTAACTTTAGCTTACTGTAACCTCTTTAGTTTATAAACTTAAAATTTTTAACTT
TTTTCTCTTTTGAATAACAATTAACACAAAATACATTGTACAGCTGTACAAAAATATT
TTCTTTCTTATACCTTATTCCATAAGCTTTTTTCTATTTTAAAAGTTTTTTATTCA
TTTTATTTTTACTTTTAACTTTTGCATTAGTAAGTAAAGAAACAAAAAACACATTAGCC
TCAGCCTACACAGGGTCAGTATCATCAAATCCCTGTCTCCACCTCCACATCTTGTCCTCA
GTGGAAGGTCTTCAGGGACAATAACACAGATGGAAGTGCATCTCCTATGATAACAATGC
CTTCTTCTGGAATCCCACCTAAAGGACCTGGATGAGGCTGGTTTACAGCTATTTTTTATA
TCATTAGAAGCAGTACCCTCTAAAATAATGATTAAAAAACGGTGTAGTAAATGCATAAA
CCACTAATATAGTCATTTATTATCAAATTGCATGTGATATACTTTTATACAACTGGCAGC
TCAGTAGGCTTGCTTACACCTGTATCCCCGCAATGAGTAATTCGTTGTGCTATGACATTA
CAATGGCTACTAGGTCACTAGGCAATAATAATTTTTCAGCTCCTATGGTTCATCATTGAC
TGTTTATTAATAAATAAAACCAAGCAAAAATTAGCATGATGTTTTAAAAGTGAAGAATTA
TATAAGTGTTAAGTACAGTACTGCCAGGGAGAAGGAAAACATTAAGAATGTTATAATGGG
AACTTATATTCTTATCCACCCCAATTTGTGGTATATTCCAAGTGCTCTTTCATCAAAAAT
TTATTGAATAAAAGGATGACATGATGAAATCAATTAGGAGGAAAGAGCTGGGAGAAGGCT
TTTCCTTTTTTTTTTTTTCAAAAAGGACTCCAGCTATAACCAAAGAAAGTTGCTGTTTTT
ACTGTGTGTCATGAGATGTTGCCCATTTGATGAAATGTTATTGTCATTTAGCTAGAATTT
TCTGTTTTTTTTTTTTAGTTTGGTACTGAAATATATTATTATCTGGAAAAATTGGCTTTA
ATAAAATATTGCTATATGAATAACATATGTAAATGTGTTAGACATCTTTTCGGTAAAGTA
CAAATGAACTGATTTTTAGTTTTACCAGATGTGTTTGTACATGTAGAAATAGCATTGTA
TCTGAGTGACAAAAATAAAGTATCCATCTTTTATTCCCGTTATTTGAGGAACAGTGCCA
CTGCATCCCCCTGCCAACACACCAGCTCTGTCTGGCAGTGGTAACAGGATTATGCTCCCT
GAACCAAATGTTTCATCTTGCTCATAAATTATCTCATTTTCTAAAATGGTCTACTCAGGA
TACTGGAACTCGGTAGCTGGAACTGGAGTGGGAGCACCTGTTACCCAATGTTCTCCT
GGACAAAATAAAATAAACCAATATCCTTTAGATAAATTGTAAAAGACAGCCAAAGTGAA
GGCTTGCCAGACACCTCATTAAGAATCACTCTTTGTTTCATCATAGTTTTTGTCTCAA
TAAATGATATAAACAATAGGCATCATTTTTTCTAAAATTTGTGTGTAAGATGAGAGG
TAAAACAATTATTTTCTCTTTATTTTTAACTATGCTTCCCTTTTAGCTGAGCATTCTT
TTTCTTTTTGCAAGTGGTTTTACAATTTTTAGTACTATGGGCCTTTTACTAAACGAAC
CAGCATAACACACTCCAATGGCAGGTTGTCATTGGAATACAAATAATTTAAAAAGGTATA
ATTTAATTATCTTAAATGGACATTCGCCCTTTATTATTTCAATTGTGTTCTGGAAAATA
ATTCATCAAGTTTTGAGAAATTAGGTATACATATAAGAATACGTTGAAAACCATTGAAAC
TTAAATGTAAAAGTACATGTTGCCTAAAATTAGAGACAAAGTGTGTAAGTATATTCTAAT
ACAACCAGATTCTTCAGCTATTCTATCTGCTGTGGACTGGTCAAAAATTTAAGTTTAGTT
TTGTTAATGATTTTTATTTAAGCATACCATATTTTAATTGCATACTATTTTTAATATGTT
TTACAGATTAAGAATGGCAAAGTATATTTTACATCCGATGCAGGAATTGCTGGGAAAGTG

GAGAGAAATATTCCTGAAGTATATGTTGCAGACGGCCACTGGCACACTTTTCTAATTGGG
AAAAATGGAACAGCAACAGTATTGTCTGTTGACAGAATATATAACAGAGATATTATCCAC
CCTACTCAGGACTTCGGTGGCCTTGATGTGCTTACTATATCACTTGGAGGAATTCCACCC
AATCAAGCACATCGAGATGCCCAAACAGGTAAATGCCTTTATTAAGTAGAGTCACAAGGG
AAGTAAATTTGTTCTTCAAAAAGTAATTGCTTTTTCTTGTGGCAAGACTACACATTTAAC
ATGAATCTCATATACAGAACAATTTCAATCAATAAAATTTATGTTTAAAAAGTAGTTTG
ATGTCTGATAATATCAATTATAAATATCCTAAGAATGTCATAACTATCTTCAGAAAGTTT
GTAATAAACTATTAGCCACCCTTTCTCGAGAGCTTGCATCTTTCTTACCAAGGTTGTAA
TTCAGTCCATAGTGTGTTTGATGCTTTGCTTGTCCACCAAGCATTTTCATATACATTTGTTT
ATTTATTTATTCATTACAGCCACTCTCTTCATAGACCATTAATGGAGACAAACATTAAT
CAAATCTTACACAAGTAAGTGCATTATTCTAATGTGTGATAAATAATACAAATGAAGAA
TGTAAGAATTCTAAAATATAGTGAAAAAGAGAAAGGAAGGGGAATTTTGCTGTGGAATTG
ACATGTATACATAAATCTGAATGATGAGGAGGATGAAAGTGTACGAAAGGTTAATTTATG
TTGATAGGAATTTTTTAAAGAAATCGTTTAAAGCCAAAGTTATAGAAGACAACACATTGG
AGGCTAACATCATAGGCAAATGATGAAGTTGGAGAATGAAGCAACTTCCTGACCATGTTG
CAGTTTTGGTCTTATTTACAGAGCAATGGGAAGTAATTGAAAACTTTAAATCACAGTAGGA
TCAAGTTAGATATGCAGTAATATTACAGATCATTACAGGCTACAGCATGGAGAATGAATTG
GAGGAGGACACGAGTGGATCTACAGAAATGAGTTGGGATCTGGGCAAGATGTCTTCTGAG
CTCCTACTAGTGTGGTGGCTGAGGAGTTAGAAAGAAATGGATAGGCAAGAAATATTCTGG
GAACTAAAATCAACCAAAGTGTAGTGATTATGGTAAAATTCAAGGAGGTTTCTACTTCT
CAACTCAAAGAAGGGTAGGTCAGCAAGAGAGGAACTGCAGAACCCTCCAAAAGCAGCAT
ATGTCTGAGAAATATTAGATTTGGTTTGGGACATTTTGGATTTGAAGCATCTTTGAGAAA
ATCCTTTGGATGGATGGGCTGGAAATCAGAAATAGACTTTAGCTGGAAATATATATTTAA
GAGTGGTCAGTGTCAAGCAGGTAAGTGAAGTACTGGACATGGATGTGATCACCTAACATG
AGGGCGTAGAGTGAAAAGAAAGCCTGGGACGTCATCTTGATTAACCGTAAGAGTTAATGG
TTATGTAGAGGAGAATAAGTCGGAAGAAAGACTAAGTAATAGGAAGAAATCAGGAGTA
TAGGAACAAAAAGAAAAGATGTCACAAAAGCTCATGGAAAAATATATCAAGAATGAGAA
TGTCATATGGTAGAATGATGCATTAATAAGAGGAAAAAAATGCATGTGAGACTAATAG
ATTTAAGGCATAAAAGTTAAAGTCCAGGTCATAAGTCCTTTTTATATGGTTATTATAGAA
TGTTGTGAGAAAACAAACCAATGGAAATTACGCTTTTTGTAGTGTCAAAATAGATTGTTG
GGCCTGAGATAGGAATATCAGCACTGTTAACACACTCAAGTGAATGAAGTGTTTCTTA
ACTTTGCATTTTATCTTTATCATTCCCCTAAGGAGACACTTAATATAGTCTAACTTTGC
CATCCCCAAGTCATAAAATGTTAACACCAGAGGTATGTTTTATCTGCCTTTTAGAGGCC
CACAAACCATTGTAATAGCTAAGATTTTTTTGTTTTGCTCCCCAAGAACCTATGTTCCAC
ACCTTTGGTGTATTATCACCTTCAATGGGAATGCATGATTAGTAGTTGAAGCCATTGGC
CTATTTTCATGTTCTTTACAAATTTAAAAATATATATTTTATTTGTATGTATGCAATTT
TGGTATATGGGATGTAAAAGGAAGGAAATTGATAAATAAATGAGTAAGAAAAAGAAAAAT
TCAGCCTGCCAAGTCATTCATAAATCTTCAGAATGAGTGGGATTCAAGCAATCTGACCC
ATGTTTGGTCATGGTAATCTTAACGCACCTTGCTAAGTTATAAGATGCACAGCTTAATTA
TCTTCAGCTGGATGATGGTTCTGAGACTGAGGTTTCTGTATTCATGTATTCATATGAGG
TGATTGTGGAGCTTCTCTTTACAAGAACCCAGCAGTGTAGTATAAGCTCTTTTTTTTTT
TTTTTTTTTTGTAAGAGCCTTACTCCTTCTTCTCTCCAGCAGGTTTTGATGGCTGCA
TTGCTTCTATGTGGTATGGTGGAGAAAGTCTTCTTTCAGCGGGAAGCATAGCTTGGCCT
CCATCTCAAAAACAGATCCCTCAGTGAAGATTGGCTGCCGTGGCCGAACATTTGTGCCA
GCAACCCCTGCTGGGGTGATTTGCTGTGCATTAATCAGTGGTATGCCTACAGGTGTGTCC
CTCCTGGGGACTGTGCCTCCCACCCGTGCCAGAATGGTGGCAGCTGTGAGCCAGGCCTGC
ACTCCGGCTTCACCTGTAGCTGCCAGACTCGCACACGGGAAGGACCTGTGAGATGGTGG
TGGCCTGTCTTGGCGTCTCTGTCTCAGGGGAAGGTGTGCAAAGCTGGAAGTCCTGCGG
GGCATGTCTGTGTTCTGAGTCAGGGCCCTGAAGAGATCTCTCTGCCTTTGTGGGCTGTGC
CTGCCATCGTGGGCAGCTGCGCAACCGTCTTGGCCCTCCTGGTCCTTAGCCTGATCCTGT
GTAACCAAGTGCAGGGGGGAAGAAGGCCAAAAATCCCAAAGAGGAGAAGAAACCGAAGGAGA
AGAAGAAAAAGGGAAGTGAGAACGTTGCTTTTGATGACCCTGACAATATCCCTCCCTATG

GGGATGACATGACTGTGAGGAAGCAGCCTGAAGGGAACCCAAAACCAGATATCATTGAAA
GGGAAAACCCCTACCTTATCTATGATGAACTGATATTCCTCACAACCTCAGAAACCATCC
CCAGCGCCCTTTGGCATCTCCAGAGCAGGAGATAGAGCACTATGACATTGACAACGCCA
GCAGCATCGCCCTTCGGATGCAGACATCATTCAACACTACAAGCAGTTCCGCAGCCACA
CACAAAATTTTCAATCCAGAGGCACAGTCCCCTAGGCTTTGCAAGGCAATCCCCATGC
CCTTAGGAGCAAGCAGTTTGACTTACCAGCCTTCATATGGTCAAGGTTTGAGAACCAGCT
CCCTAAGCCACTCAGCATGCCCAACTCCCAACCTCTGTCTCGACACAGTCCAGCCCTT
TCTCCAAATCTTCTACGTTCTATAGAAACAGCCCAGCAAGGGAATTGCATCTTCCTATAA
GGGATGGTAATACTTTGGAAATGCATGGTGACACCTGCCAACCTGGCATTTCCTCACTATG
CCACAAGGCTGGGAAGGAGAAGCAAGAGTCTCAGGCCATGGCATCACATGGTTCTAGAC
CAGGGAGTCGCCTAAAGCAGCCGATTGGGCAGATTCCACTGGAATCTTCTCCTCCAGTCG
GACTTTCTATTGAAGAAGTGGAGAGGCTCAACACACCTCGCCCTAGAAACCCAAGTATCT
GCAGTGCAGACCATGGGAGGTCTTCTCAGAGGAGGACTGCAGAAGGCCACTGTCTAGAA
CAAGGAATCCAGCGGATGGCATTCCAGCTCCAGAATCCTCTTCTGATAGTGACTCCCATG
AATCTTTCCTTGCTCAGAAATGGAATATGACAGGGAGAAGCCAATGGTATATACTTCCA
GAATGCCCAAATTATCTCAAGTCAATGAATCTGATGCAGATGATGAAGATAATTATGGAG
CCAGACTGAAGCCTCGAAGGTACCACGGTCGCAGGGCCGAGGGAGGACCTGTGGGCACCC
AGGCAGCAGCACCAGGCACTGCTGACAACACACTGCCCATGAAGCTAGGGCAGCAAGCAG
GGACTTTCACTGGGACAACCTTTTGAAGTGGGGCCCTGGCTTTGGCCATTATGTAGATG
TTTTTAAAGATTTGGCATCTCTCCAGAAAAAGCAGCAGCAAATGAAGAAGGCAAAGCTG
GGACAACCTAAACCAGTCCCCAAAGATGGGGAAGCAGAACAGTATGTGTGAAGTTTATGTA
CTGGCACTATAAAATATAAAAAACAAGAAATAATACTCAAACCATTGTAAAGTTGCTGACT
AGGTTGGGTACATTTGAAAAACAGGCCAGTATGGACTAGTGGTGGAGGGAAAACCTTTAA
AAATAATAACCACAATGCTGCTGAAACAGACTCACAACAACCTTAATTTAAACATGTGT
GGTTGAATTTATTTCCCTGCATGCATTGTGTTTTGTAAGTATGTGGCATGCAGCAT
TTGGAAAATTTTTCTTATTTACCAGTGTGTTGATTGTTTAAAAATTGATACCTTT
ACCATTCAGAAAAAGAACTGTGCTTTCCAGTGGCGTATGTGTATTGTTTCACTGTAT
TATTATAATTATTTTTGCATTGCAAGATTCTTGATGTTAAACCAATCCTTGTAAGTGT
AAAAAGGAACCCCTCCTATCGTGGAATGAAAGATTAAGTATATTAACACTTTTCAGAATGA
TAGTTTCTGTATTTGATGTTGCTCAGAAATGTCTCAGTATTTGAGTAAGTTTTACATGAC
AGTGGGTACTGAAATTAAGTATTTTGTTCAGCACTTTAACGCTTTCTATAGAATTGTC
TAAAACTTCTGGATCCTTGAGCAAATGATTATAGTCTCCTGACTTTCATGAGGCTTCCA
TTAGGAACAGAATGATTGCATGTTGTCCCCAGAACACTGCCACCTTGCTATGCGAATGAT
GTTCTCAGCAGCACTTCTAAGAAACACTCTTAAAGTTATTTATTGAAAAATTTTCGTAT
GCTTTTAATATTTTAAAGAATTGACCTAAGGAAAGCTTATGATTGGACTTATTTTCCAAC
CAGATAACATTTACTCTAAGTACCCAGTTTTTATAATTTATATGAAATCAGATTTCAACA
CTTACTTTGTCATTTTGTAGATCATTTTTTAAATACTGTGTAAAACTTTTTTTACAC
CTAAGCTGTGTTTTTGATACTGATATTTTCCTATGCTGAATAGTTTTCTTACTTTTCAGGG
AAGGTAAGAAAATACTTTTTTTATATTTGTTACTTATGTAACATTCATATTTTCTCATT
TTGATATTTGTAACATACTGTATGCTTCTACTTGTAATGTCAACAATAGAATTAAAT
ATTTATTTAAAATA

Figure 5A (SEQ ID NO: 5)

>ENSG00000196159|ENSP00000377862|ENST00000394329|FAT4

GGGAGCCAGGACCATGGACTTAGCACCAGACAGGGCTACTGGCCGCCCGTGGCTCCCGTT
GCACACTCTATCAGTATCTCAGCTCCTTCGAGTGTTTTGGCTACTGTCAATTGCTTCCGGG
GCAGGCCTGGGTCCACGGGGCCGAGCCGCGCCAGGTGTTCCAAGTGCTGGAAGAGCAACC
TCCAGGCACTCTGGTAGGCACCATCCAGACGCGCCCCGGCTTACCTACAGGCTCAGCGA
AAGCCACGCCCTGTTTGCCATAAAACAGTAGCACCGGAGCCCTGTACACCACCTCCACCAT
CGACCGCGAGAGCCTGCCAGCGACGTGATCAACCTGGTGGTCCTTTCAGCGCGCCAC
CTACCCACCGAAGTGCGAGTGCTGGTGCGGGACCTCAATGACAACGCCCCGTTTTCCC
GGACCCCTCTATCGTGGTCACTTTCAGGAAGACAGTAGCAGCGGACGCCAAGTCATCTT
AGACACCGCCACCGACTCGGACATCGGCTCAAACGGTGTGGACCACCGCTCCTACCGCAT
CATCCGCGGCAATGAGGCGGGGCGCTTCCGTCTGGACATCACCTGAACCCGAGCGGCGA
GGGAGCGTTCCTGCATCTGGTGTCCAAGGGCGGACTGGACCGTGAGGTCACTCCGCAGTA
CCAGCTCCTGGTTGAGGTGGAGGACAAGGGTGAGCCTAAGCGGCGGGGCTACCTTCAGGT
AAACGTGACTGTGCAAGACATTAATGACAACCCCCGGTTTTTGGCAGTTCTCACTACCA
GGCGGGGGTGCCTGAGGACGCGGTTGTGGGTTCCAGCGTCTCCAGGTGGCGGCGGCGGA
CGCGGACGAGGGCACCAACGCGGACATCCGCTATCGCCTGCAGGACGAGGGGACCCCTT
CCAAATGGACCCTGAGACGGGACTTATCACGGTGCGGGAGCCCCCTGACTTCGAAGCTCG
GCGCCAATACTCGTTACGGTGCAGGCGATGGACAGAGGCGTGCTTCCCTCACTGGGCG
CGCCGAGGCGCTGATTAGCTGCTGGACGTGAATGACAATGACCCGGTAGTGAAGTTCCG
CTACTTCCCGGCCACCTCGCGCTACGCCTCGGTAGATGAGAATGCTCAAGTGGGCACCGT
GGTGGCTCTGCTACCGTGACGGACGCAGATTCTCCCGCGGCCAACGGGAACATCTCCGT
GCAAATTCTCGGGGCAATGAGCAGCGCCACTTTGAAGTGCAAAGCAGCAAAGTGCCGAA
CCTGAGCCTAATCAAGGTGGCCAGCGCCTTGGACCGCGAGCGCATCCCTTCCTACAACCT
CACAGTTTCCGTCTCTGATAACTACGGGGCGCCCCCTGGCGCAGCAGTCCAGGCGCGCTC
TTCTGTGGCAAGCCTGGTGATTTTTGTTAATGACATCAATGACCATCCTCCTGTCTTTTC
ACAGCAAGTGACAGAGTGAACCTGAGCGAGGAGGCGCCTCCGGGAAGCTATGTGAGTGG
GATATCTGCCACTGATGGCGACTCTGGTCTCAATGCTAATCTGCGTTACAGCATTGTCTC
TGGCAATGGACTGGGATGGTTCATATCAGTGAACATAGCGGCTCGTGACCACTGGGTC
CTCTGGGGGCTGGACCGTGAACCTTGCTTCCAGATTGTTCTGAATATAAGTGCCCGGGA
CCAGGGAGTTTACCCCAAGGTGTCTATGCCAGCTTGTAGTAACTCTCCTAGATGTGAA
TGATGAAAAGCCAGTATTTAGCCAGCCAGAAGGGTATGATGTGTCTGTGGTTGAGAATGC
CCCAACAGGGACAGAAGTGTGATGCTCAGGGCAACTGACGGGGACCTGGGTGACAACGG
AACAGTGCGCTTCTCCTTACAAGAGGCAGAGACTGACCGGAGGTCTTCCGTCTGGATCC
TGTGTCTGGGAGGTTGAGTACTATTTCTCCTTGGACAGAGAAGAGCAAGCCTTCTACTC
CTGTGTTGGTCTGGCCACAGATCTGGGCTCCCCCTCCCAAGTCATCAATGGCTCGCATAAA
TGTGAGTCTTCTGGATATAAATGATAACAGCCCTGTCTTCTACCCGGTCCAATACTTTGC
TCACATTAAGGAGAATGAGCCTGGAGGTAGCTACATCACCCTGTGTCTGCCACTGACCC
AGACTTGGGTACCAATGGTACTGTCAAATATAGCATATCTGCTGGGGACAGGTCTCGGTT
TCAGGTCAATGCTCAGAGTGGGGTTATTTCTACAAGAATGGCCCTAGACAGAGAAGAAAA
AACAGCTTATCAGTTGCAATAGTAGCTAGTGGTGGCAATTTACAATCTCCCAACCA
GGCAATTATAACCATCACTGTATTGGACACTCAAGACAACCCACCTGTATTCAAGTCAGGT
TGCCTACAGCTTTGTGGTTTTTGAGAACGTGGCGCTGGGATATCATGTGGGTAGTGTGTC
TGCATCCACCATGGATCTCAATTCACATCAGTTATCTCATTACTACTGGGGATCAGAA
AGGTATGTTTGCTATCAACCAGGTCACTGGGCAGCTTACCACAGCAAATGTGATTGATAG
AGAAGAGCAATCCTTTTATCAGTGAAGGTAGTGGCCAGTGGGGGCACAGTGAAGTGGGA
CACTATGGTTTAAACATAACAGTTAAGGATTTGAATGACAACCTCTCCCAATTTCTTCAGGC
AATAGAGAGTGTAATGTGGTGGAGAATTGGCAGGCAGGTACAGCATTTTTCCAGGCCAA
AGCTGTGGACCCTGATGAAGGTGTCAATGGCATGGTACTCTATAGTCTGAAGCAAAACCC
CAAGAACCTGTTTGCTATCAATGAAAAGAATGGCACTATTAGTCTGCTTGGGCCCCTGGA
TGTTTCATGCTGGCTCCTACCAATAGAGATCTTGGCATCTGACATGGGTGTCCACAGCT
CTCCTCTAGTGTCTATCTAACAGTTTATGTCCATGATGTAATGACAATTCACCAAGTGT
TGACCAACTCTCTTATGAAGTCAACCTTTCTGAGTCAGAACCCTGTGAATTTCTCGATTCTT
TAAAGTACAAGCTTCTGATAAGGATTAGGAGCAAATGGTGAAATTCATACACCATTTGC
TGAAGGAAATACAGGGGATGCTTTTGGCATATTCAGATGGTCAATTTGTATATAAAAAG
TGAAGTGGACCGTGAACCTCAAGACAGATATGTTTTAATGGTTGTGCTTCTGACAGAGC
AGTGAACCCCTTAGTGCTACTGTGAATGTTACTGTAATTTAGAAGATGTAATGATAA
CAGACCTCTTTTTAACAGTACCAATTAACATTTTACTTGAAGAAGAGCAGAGGGCTGG
GTCGTTTGGGGCAAAGTAAGTGCTGTAGATAAAGACTTTGGGCCAAATGGAGAAGTAAG
GTATTCTTTTGAATGGTGCAGCCAGATTTTGAAGTGCATGCCATCAGTGGGGAAATTAC
AAATACTCATCAGTTTACAGGGAGTCTCTTATGAGGCGGAGAGGACTGCTGTGTTTAG
CTTTACAGTCATAGCAACAGATCAGGGGATCCCTCAGCCTCTCAAGGATCAGGCCACTGT

ACATGTTTACATGAAGGATATAAATGATAATGCTCCCAAATTTTTAAAAGACTTTTACCA
AGCTACAATATCAGAATCAGCAGCCAATCTGACACAAGTGTTAAGAGTATCTGCCTCAGA
TGTTGATGAAGGTAATAATGGACTTATTCACTATTCTATAATAAAAGGAAATGAAGAAAG
ACAGTTTGCTATAGACAGTACCTCTGGTCAGGTAACACTAATTGGCAAATTAGACTATGA
AGCAACACCTGCTTATTCCTTGTAAATCAAGCAGTGGATTGAGGACAATCCCCCTCAA
TTCAACGTGTACTTTAAATATTGATATTTAGATGAAAATGACAATACCCCTTCTTTCCC
TAAATCAACACTCTTTGTTGATGTTTTGGAAAACATGAGAATTGGTGAACCTGTGTCCTC
TGTTACTGCAACTGATTCCGATTGAGGTGACAATGCTGATTTATATTACAGTATTACTGG
GACTAACAACCACGGAACTTTTAGCATTAGCCCAAACACTGGGAGTATTTTTCTTGCCAA
AAAAGTGGACTTTGAAACACAGTCTTTGTATAAATTAATATAACAGCAAAAGACCAAGG
AAGACCTCCTCGTTTCATCTACAATGTGAGTGGTTATTCACGTGAGGGACTTTAATGACAA
TCCTCCTAGCTTTCTCTGGAGATATTTCAAGTCTATTGTTGAGAACATTCCCATCGG
TACATCTGTCATTTCACTGACTGCACATGACCCTGATGCAGACATTAATGGTCAACTATC
CTACACAATCATTCAACAGATGCCAAGAGGCAACCACTTTACCATAGATGAAGTCAAAGG
GACTATATATACTAATGCTGAAATAGATCGGGAATTTGCTAATCTCTTTGAGTTGACTGT
AAAAGCCAATGATCAAGCTGTGCCAATAGAAAAGTACGCGTATGCTTTGAAGAAGCTGAC
CATTTTTGGTTACAGACCTCAATGACAATGTCCCAATGTTTATATCAAAAACGCCCTTGC
TGCAGACCCATCAGCTGTGATTGGTCCGTTCTGACAACAATTATGGCTGCTGACCCAGA
TGAGGTGCTAATGGAGAAAATAGAGTATGAGATCATCAATGGGGACACAGACACCTTCAT
TGTTGATCGTTATAGTGGAGACCTGAGAGTGGCTTCAGCGTTGGTGCCTTCACAGTTGAT
CTACAATCTCATAGTTTCAGCAACAGACCTTGGGCCTGAAAGGAGGAAATCGACCACTGA
ATTGACCATCATTCTTCAGGGCCTTGATGGACCTGTTTTACTCAACCCAAATATATAAC
TATTTTGAAGGAAGGAGAACCATTGGCACAACAGTATCAATAGAAGCAGCTAGCCC
CAGAGGATCTGAGGCCCCAGTGGAGTATTATATTGTTTCAGTTGTTGTGAAGAAAAAAC
TGTTGGACGCCTCTTTACTATTGGACGACATACTGGTATAATTGAGCCGACGCCATTCT
GGACCGGGAGCAAGGAGCATGTCTTTACCTGGTGGATGTTTATGCCATAGAAAAATCAAC
TGCTTTTCCAGAACACAGAGAGCAGAGGTAGAAATAACACTTCAGGATATCAATGACAA
TCCACCAGTATTTCCAACGGACATGCTGGATCTCACGGTAGAGGAGAACATTGGAGATGG
CTCTAAGATTATGCAGCTGACAGCCATGGATGCTGATGAGGGTGCAAATGCTCTCGTCAC
ATACACTATCATTAGTGGAGCTGATGATAGTTTTCGCATCGACCCAGAATCCGGAGATCT
GATAGCAACCAGGCGGTTGGACAGGAAACGCCGCTCCAAATATTCACTGCTAGTTGCTGC
TGATGATGGTCTTCAGTCTCGGATATGAGAATTAATATCACTGTGAGTGTGAATGA
CCATACACCCAAATTTTCCAGACCCGTGACTCTTTTGACATTCTGAGGACACAATCCC
TGGTTCTTTGGTAGCAGCCATTTAGCCACGGATGATGACTCTGGTGTGAATGGAGAAAT
TACATATAATTGTGAATGAAGATGATGAAGATGGCATCTTTTTCTGAATCCTATTACTGG
GGTCTTTAATTTGACTGATTATTAGATTATGAAGTACAGCAATATTATATCCTCACTGT
TCGAGCAGAAGATGGTGGGGGACAATTTACTACCATCAGAGTTTATTTCAATATTCTAGA
TGTAATGATAATCCACCTATTTTCACTTGAATTATACAGCACATCTTTAATGGAGAA
TCTACCTGTGGGATCTACTGTTCTTGTTTAAATGTTACTGATGCAGATGATGGCATCAA
CTCTCAATTGACTTATAGCATTGCTTCAGGTGATAGCCTTGGGCAGTTTACTGTTGACAA
GAATGGTGTACTCAAAGTCTAAAAGCTTTGGATCGGGAAAGTCAGTCTTCTACAACCTT
GGTTTCAAGTACATGACCTGCCACAGATTCCAGCCTCCAGATTCAACAAGCACTGCTCA
AGTCTCCATTATTTTGTGGATGTAAATGATAACCCACCGACATTTCTTTCCCCTAAATT
GACATACATTCCAGAAAATACACCTATTGATACTGTTGTTTTCAAAGCTCAAGCAACTGA
CCCAGATAGTGGCCCAAACAGCTATATTGAGTACACTCTGCTGAACCTTTGGGAAACAA
GTTTCAGTATTGGGACCATTGATGGTGAAGTGAGGCTCACTGGAGAAGTGGACAGAGAAGA
AGTTTTCTAATTATACTCTAACAGTGGTGGCTACAGACAAAGTCAACCATCTCTCTCTC
ATCTACAGAGTTGTAGTTATGGTACTTGACATCAATGATAACAACCCCATCTTTGCACA
AGCTTTGTATAAAGTGGAGATTAATGAAAACACACTTACTGGAACAGATATAATACAAGT
GTTTCGAGCAGATGGAGATGAAGGCACAAATGGACAGGTTGCTATGGCATTGTTAATGG
TAATACCAATCAGGAATTTCCGGATAGACTCTGTACAGGTGCCATCACTGTGCTAAACC
TTTGGATAGAGAAAAGACCCCTACCTACCATTTAACTGTTGAGGCAACAGATCGAGGCAG
CACACCCAGAAGTATACCTCCACGGTCAGCATTGTTCTACTGGATATTAATGACTTTGT
TCCTGTATTTGAGCTATCTCCATATTCTGTAATGTCCCTGAGAATTTAGGGACACTACC
CAGAACAATTTCTCAGGTGGTGGCAAGAGATGATGATCGAGGATCTAACAGCAAACTCTC
ATATGTTCTGTTTGGTGGTAATGAAGACAATGCTTTTACTCTCTCAGCCAGTGGAGAACT
TGGAGTAACACAGAGTCTGGATCGGGAAACAAAAGAGCGCTTTGTCTTAATGATTACAGC
TACAGATTGAGGATCCCCCTGCCTTGAAGTGGAACTGGAACAATCAACGTATAGTAGATGA
TGTCATGACAATGTCCCCACATTTGCCAGTAAAGCGTATTTTCAACAATTCCTGAGGA
TGCACCAACTGGAACAGATGTTTTATTGGTAAATGCCTCAGATGCTGATGCTTCAAAGAA
TGCAGTTATAAGGATCATCGGTGGAACTCTCAGTTCACGATCAACCCATCGACAGGACA
AATCATCACCAGCGCATTGTTAGATAGGGAAACAAAAGATAATTATACTTTGGTAGTGGT
CTGCAGTGTGCGGGATCCCCAGAGCCTCTTCCAGTTCACCAAGTGTGCTTGTCACTGT
GACTGATGTCAATGACAATCCCAAGATTTGACATCACCCATATGTCACTCACATCCC
ATCTCCTACTCTTCCAGGTTCTTTGTCTTTCGGGTTACAGTCAAGATGCTGATATTGG
ACCAAATCTGAACTGCATTATCTCTTTCGGGTAGAAATCTGAAAAATTTACATTGA
CCCCTGAGGGGAGCCATTATGGCCGCCGACCACTAAACGGAGCTTCAGAAGTGACATT
TTCTGTGCATGTAAAAGATGGTGGCTCATTTCCAAAGACAGATTCTACAACAGTGACTGT

TAGATTTCGTGAATAAGGCCGATTTCCCTAAAGTGAGAGCCAAAGAACAACGTTTCATGTT
TCCTGAAAACCAACCAGTCAGCTCTCTTGTCAACCACCATCACAGGATCCTCTTTAAGAGG
AGAACCTATGTCATATTATATCGCAAGTGGGAATCTTGGCAATACTTTCCAGATTGATCA
GTAAACAGGGCAGGTGTCTATTAGTCAACCTCTGGATTTTGAAAAGATACAAAAATATGT
TGATGGATAGAGGCCAGAGACGGTGGTTTCCCTCCTTTCTCTCTTACGAGAACTTGA
TATAACAGTATTAGATGTCAATGATAATGCCCCAATTTTTAAGGAAGACCCATTTATATC
TGAAAATTGGAAAACCTTTCCCTCGAAAAATACTTACTGTTTCGGCAATGGACAAGGA
CAGTGGACCCAATGGACAGTTAGATTATGAAATTGTTAATGGCAACATGGAAAATAGTTT
CAGTATCAATCATGCTACTGGTGAATTAGAAGCGTTAGACCTTTGGACAGGGAAAAAGT
ATCTCATTATGTCCTAACCATAAAAATCATCAGACAAAGGGTCCCCGTCTCAGAGTACTTC
AGTAAAAGTCATGATTAACATTTTAGATGAAAATGATAATGCCCCTAGGTTTTCTCAGAT
ATTTAGTGCCCATGTTCTGAAAATTTCCCTTAGGATACACAGTTACCCGTGTCACAAC
TTCTGATGAAGACATTGGGATCAATGCAATTAGTAGATATTCTATAATGGATGCAAGTCT
TCCATTTACAATTAATCCCAGCACAGGGGATATTGTCTAAGCAGACCTTTAAATAGGGA
AGATACAGACCGTTACAGAAATTCGAGTTTCCGCACATGATTCTGGGTGGACTGTAAGTAC
AGATGTCACAATATTTGTGACAGACATCAATGACAATGCTCCAAGATTTAGCAGAACTTC
CTATTATTTAGATTGCCCTGAACCTACTGAGATTGGCTCCAAAGTAACTCAGGTATTTGC
AACAGATCCTGATGAGGGATCAAATGGACAAGTGTATTTATTTATAAAAATCCCAATCAGA
ATATTTTCAGGATTAATGCCACCACTGGAGAGATTTTCAATAAACAGATCTTAAAAATACCA
AAATGTCAGTGGCTTCAGTAATGTGAATATCAACAGGCATAGTTTTATAGTGACATCTTC
AGATCGAGGTAAACCTTCTTAATTAGTGAGACAACAGTTACCATCAATATAGTGGACAG
TAATGACAATGCACCTCAATTTCTTAAAAGTAAATATTTCACTCCAGTCACCAAAAAATGT
TAAGGTTGGTACGAAGTTAATCAGAGTTACAGCAATAGATGACAAAGATTTTGGACTGAA
TTCAGAAGTGGAGTATTTCAATTTCTAATGATAACCATTTAGGAAAAATTTAAGTTGGACAA
TGATACGGGTGGATTTAGTAGCATCTCCCTGATTTCTGACTTGAACCAAACTTTTTT
TATCACAGTCACTGCAAAGGATAAGGGAAACCTCCACTTTCTTCCCAAGCAACTGTTCA
CATAACTGTCAGTGGGAAAACTACCATACACCTGAATTTCTCTCAAAGCCACATGAGTGC
AACCATCCCTGAGAGCCATAGCATTGGGTCCATTGTCAGAACTGTTTCTGCAAGAGATAG
AGATGCAGCGATGAATGGCTTGATTAAGTACAGCATTTCTTCAAGAAATGAAGAAGGCAT
TTTTGCAATCAATTTCTACAGGTATATTAACACTAGCCAAAGCTCTTGATTATGAGCT
ATGCCAGAAAACAGAAATGACGATTAGTGCTATAGATGGAGGATGGGTTGCAAGAACTGG
TACTGCAGTGTGACCGTAAATGTGATTGATGTGAATGATAATTCTCCAGTATTCCTCTC
TGATGACTATTTCCCTACTGTTTTGGAAAATGCCCAAGTGGAAACAACAGTTATCCACCT
AAATGCAACAGATGCTGACTCTGGAACAAATGCTGTGATTGCGTATACTGTACAGTCATC
TGACAGTGACCTCTTTGTCAATGACCTTAACACAGGAGTCATAACCACTCAAGGCTTCTT
GGATTTTGAACCAAGCAGAGCTACCATCTTACTGTGAAAGCCTTCAATGTCCCCGATGA
GGAAAGGTGTAGCTTTGCCACTGTTAATATACAATTTAAAGGGACAAATGAATATGTGCC
CCGTTTTGTTTCCAACTTTACTATTTTGAATCTCAGAAGCAGCTCCTAAAGGTACTAT
TGTTGGAGAAGTGTGCTAGCGACCGTGATTTGGGCACTGATGGGGAGGTACACTATTT
GATTTTTGGTAATAGTCGAAAGAAGGGTTCCAGATCAATAAGAAGACTGGACAGATTTA
TGTTTTCTGGAATCTTGATCGAGAAAAAGAAGAAAGGGTGTCTTTGAAGGTATTGGCCAA
GAACCTTGGCAGCATTAGAGGTGCAGATATAGATGAGGTCACTGTAATATGTCACCGTGCT
TGATGCAATGACCCACCATTTTTACTCTAAACATCTACAGTGTGCAGATCAGTGAAGG
GGTCCCAATAGGAACTCATGTGACCTTTGTGAGTGCCTTTGACTCAGACTCCATCCCCAG
CTGGAGCAGTTTTCTTACTTCATCGGATCAGGGAATGAAAATGGTGCCTTTTCTATTAA
TCCGCAGACAGGACAGATCACCGTTACTGCAGAATTAGATCGAGAAACCTTCCCATCTA
TAATCTCTCAGTTTTGGCTGTTGATTCAAGGACCCCTCAGCTACAGGTAGTGCCTCTTT
ATTAGTCACCTGGAAGATATAAATGATAACGGGCCCATGCTGACTGTGAGTGAAGGAGA
AGTCATGGAAAACAAACGGCCAGGCACTTTGGTGTGACCTTCAGTCCACTGACCTGA
TCTCCCTCCAAATCAAGGTCCCTTTACTTATTACTTGCTGAGCACAGGTCTGCCACCAG
TTATTTTCAGTCTGAGCACTGCTGGAGTTCTGAGCACAACCAGAGAGATTGACAGAGAGCA
GATTGCAGACTTCTATCTGTCTGTGGTTACCAAGGATTCTGGTGTCTCAAATGTCTTC
CAGAGAACTGTGCATATCAGATTATAGACCAAAATGACAATCCTTCACAGTCTCGGAC
GGTGGAGATATTTGTTAATTATTATGGTAACCTGTTTCCCGGTGGGATTTTAGGCTCTGT
GAAGCCACAGGATCCAGATGTGTTAGACAGCTTCCACTGCTCCCTTACTTCAGGAGTTAC
CAGCTCTTCAGTATTCAGGGGGTACTTGATGATCTGAATTCCCAGCCAAGGTCCACAGA
TGGCACGTTTGATCTGACTGTCTTAGCAATGATGGAGTTACAGCACAGTCACGAGCAA
CATCCGAGTTTTCTTTGCTGGATTTTCCAATGCCACAGTGGATAACAGCATCTTACTTCG
TCTCGGCTACCAACAGTAAAGGACTTCTTGACCAACCACTATCTTCATTTTTTTACGCAT
TGCCAGCTCACAGCTGACAGGCTTAGGGACTGCTGTGCAACTGTACAGTGCATATGAAGA
GAACAATAGAACGTTTTCTTTGGCAGCTGTGAAGCGAAATCATAATCAGTATGTGAATCC
CAGTGGCGTAGCCACCTTCTTTGAAAGCATCAAAGAGATCCTTCTCCGGCAGAGTGGAGT
AAAGGTGGAATCTGTGGATCATGACTCCTGTGTGCATGGCCCATGTGAGAATGGAGGGAG
CTGTCTACGAAGATTGGCTGTGAGCTCCGTATTAAGAAAGCGTGAGAGTCTTCCAGTCAT
CATCGTGGCAAATGAACCTCTGCAGCCTTTCTTATGCAAGTGTCTGCCAGGATATGCGGG
TAGCTGGTGTGAAATAGATATAGATGAATGTCTTCCATCACCTTGCCACAGTGGTGGAAC
CTGTGACAATTTAGTGGGAGGATTTTCTGTCAGCTGCCAGATGGCTTCACTGGTAGGGC
GTGTGAGAGAGATATCAATGAGTGCCTGCAGAGTCTTGCAAGAATGGTGCCATCTGCCA

GAATTTTCCAGGAAGCTTCAACTGTGTTTGC AAAACTGGATACACAGGGAAAAATGTGTGA
ATCTTCAGTCAATTACTGTGAATGCAACCCCTGCTTTAATGGTGGTTCTGCCAAAGTGG
TGTGGATTCTTATTATTGTCAATTGTCCATTTGGTGTCTTTGGAAAACTGCGAGTTGAA
CAGTTATGGATTTGAGGAGTTATCATACATGGAATTTCCAAGCTTGGACCCCAATAACAA
CTATATTTATGTCAAATTTGCCACGATTAAAAGTCATGCCTTATTGCTTTACAACATATGA
CAACCAGACAGGCGACCGGGCTGAGTTTTTGGCCCTTGAAATTGCCGAAGAAAGACTAAG
ATTCTCTTATAAATTTAGGCAGTGGTACATATAAGCTCACCACCATGAAGAAGGTGTGAGA
TGGACATTTTACACTGTGATTGCCAGGAGAGCAGGAATGGCAGCCTCCTTAACGTGTGGA
CTCCTGTTCTGAGAACCAAGAGCCAGGATATTGTAAGTGTGAGTAATGTGGCAGTTTCAGA
TGACTGGACTCTTGATGTTGAGCCAAATAGAGTTACAGTTGGAGGTATCAGATCTCTAGA
ACCAATCCTTCAGAGAAGAGGACACGTGGAAAGCCATGATTTTGTGGGTGTATAATGGA
GTTTGCAGTCAATGGAAGGCCTCTGGAACCCAGCCAAGCTTTGGCAGCACAAGGCATCCT
AGATCAATGCCCTAGGCTGGAAGGCGCTTGTAAGTGTGAGGAGGAGGAGGAGGAGGAGGAG
ATGTATGGATTACTGGTCATGGCAGCAGTGTCAATTGCAAAGAGGGAGTCACTGGGAAATA
CTGTGAAAAATCTGTTACTCTGACACTGCCTTATCATTAGAAGGCAAAGGGCGCTTGGA
CTACCACATGAGTCAGAATGAGAAGCGGGAATATTTGTTAAGGCAAAGCTTACGAGGTGC
CATGTTGGAGCCTTTTGGTGTGAACAGTCTGGAAGTAAAATTTAGGACCAGAAGCGAGAA
TGGCGTTTTAATCCATATCCAAGAAAGCAGCAATTACACTACTGTGAAGATTAGAATGG
CAAAGTATATTTTACATCCGATGCAGGAATTGCTGGGAAAGTGGAGAGAAATATTCCTGA
AGTATATGTTGAGACGGCCACTGGCACACTTTTCTAATTGGGAAAAATGGAACAGCAAC
AGTATTGTCTGTTGACAGAATATATAACAGAGATATTATCCACCCTACTCAGGACTTCGG
TGGCCTTGATGTGCTTACTATATCACTTGGAGGAATTCACCCCAATCAAGCACATCGAGA
TGCCCAAACAGCAGGTTTTGATGGCTGCATTGCTTCTATGTGGTATGGTGGAGAAAGTCT
TCCTTTCAGCGGGAAGCATAGCTTGGCCTCCATCTCAAAAACAGATCCCTCAGTGAAGAT
TGGCTGCCGTGGCCCGAACATTTGTGCCAGCAACCCCTGCTGGGGTGATTTGCTGTGCAT
TAATCAGTGGTATGCCTACAGGTGTGTCCCTCCTGGGGACTGTGCCTCCACCCGTGCCA
GAATGGTGGCAGCTGTGAGCCAGGCTGCACTCCGGCTTACCTGTAGCTGCCAGACTC
GCACACGGGAAGGACCTGTGAGATGGTGGTGGCCTGTCTTGGCGTCTCTGTCTCAGGG
GAAGGTGTGCAAAGCTGGAAGTCTGCGGGGCATGTCTGTGTTCTGAGTCAGGGCCCTGA
AGAGATCTCTCTGCCTTTGTGGCTGTGCCTGCCATCGTGGGCAGCTGCGCAACCGTCTT
GGCCCTCCTGGTCCTTAGCCTGATCCTGTGTAACCAAGTGCAGGGGGAAGAAGGCCAAAA
TCCCAAAGAGGAGAAGAAACCGAAGGAGAAGAAGAAAAAGGGAAGTGAGAACGTTGCTTT
TGATGACCCTGACAATATCCCTCCCTATGGGGATGACATGACTGTGAGGAAGCAGCCTGA
AGGGAACCCAAAACAGATATCATTGAAAGGGAAAAACCCCTACCTTATCTATGATGAAC
TGATATTCCTCACAACCTCAGAAACCATCCCCAGCGCCCTTTGGCATCTCCAGAGCAGGA
GATAGAGCACTATGACATTGACAACGCCAGCAGCATCGCCCCCTCGGATGCAGACATCAT
TCAACACTACAAGCAGTCCGACAGCCACACCAAAAATTTTCAATCCAGAGGCACAGTCC
CCTAGGCTTTGCAAGGCAATCCCCATGCCCTTAGGAGCAAGCAGTTTGACTTACCAGCC
TTCATATGGTCAAGGTTTGAGAACCAGCTCCCTAAGCCACTCAGCATGCCCAACTCCCAA
CCCTCTGTCTCGACACAGTCCAGCCCCCTTCTCCAAATCTTCTACGTTCTATAGAAACAG
CCCAGCAAGGGAATTGCATCTTCTATAAGGGATGGTAATACTTTGGAAATGCATGGTGA
CACCTGCCAACCTGGCATTTTCAACTATGCCACAAGGCTGGGAAGGAGAAGCAAGAGTCC
TCAGGCCATGGCATCACATGGTTCTAGACCAGGGAGTCGCTAAAGCAGCCGATTGGGCA
GATTCCACTGGAATCTTCTCCTCCAGTCGACTTTCTATTGAAGAAGTGGAGAGGCTCAA
CACACCTCGCCCTAGAAACCCAAGTATCTGCAGTGCAGACCATGGGAGGTCTTCTTCAGA
GGAGGACTGCAGAAGGCCACTGTCTAGAACAAGGAATCCAGCGGATGGCATTCCAGCTCC
AGAATCCTCTTCTGATAGTGACTCCCATGAATCTTCACTTGCTCAGAAATGGAATATGA
CAGGGAGAAGCCAATGGTATATACTTCCGAATGCCAAATTTATCTCAAGTCAATGAATC
TGATGCAGATGATGAAGATAATTATGGAGCCAGACTGAAGCCTCGAAGGTACCACGGTCG
CAGGGCCGAGGGAGGACCTGTGGGCACCCAGGCAGCAGCACCAGGCACTGTGACAACAC
ACTGCCCATGAAGCTAGGGCAGCAAGCAGGGACTTTCAACTGGGACAACCTTTTGAAGT
GGGCCCTGGCTTTGGCCATTATGTAGATGTTTTTAAAGATTTGGCATCTTCCAGAAAA
AGCAGCAGCAAATGAAGAAGGCAAAGCTGGGACAACCTAAACCAAGTCCCAAGATGGGGA
AGCAGAACAGTATGTGTGAAGTTTATGTACTGGCACTATAAAATATAAAAAACAAGAAATA
ATACTCAAACCATTTGTAAGTTGCTGACTAGGTTGGGTACATTTGAAAAACAGGCCAGT
ATGGACTAGTGGTGGAGGGAAAACTTTAAAAATAATAACCACAATGCTGCTGAAACAGAC
TCACAACAACCTCTTAATTTAAACATGTGTGGTTGAATTTATTTCCCTGCATGCATTGTGT
TTTGTAAGTATGTTATGTGGCATGCAGCATTTGGAAAAATTTTCTATTTACCAGTGTGTG
ATTTGTGATTTTAAAAATTTGATACCTTTACCATTGCAGAAAAGAAGTGTGCTTTCCCA
GTGGCGTATGTGTATTGTTTCAACTGTATTATTATAATTTATATTTTGCATTGCAAGATTC
TTGATGTTAAACCAATCCTTGTAAGTGTAAAAAGGAACCCCTCTATCGTGGAAATGAAAG
ATTAAGTATATTAACACTTTTCAGAATGATAGTTTCTGTATTTGATGTTGCTCAGAAATG
TCTCAGTATTTGAGTAAGTTTTACATGACAGTGGGTAAGTAAAGTCAATTTGTTCA
GCACTTTAACGCTTTCTTATAGAATTTGCTTAAAACTTCTGGATCCTTGAGCAAATGATT
ATAGTCTCCTGACTTTTATGAGGCTTCCATTAGGAACAGAATGATTGCATGTTGTCCCA
GAACACTGCCACCTTGCTATGCGAATGATGTTCTCAGCAGCACTTCTAAGAAACACTCTT
AAAAGTTATTTATGAAAAATTTTCGTATGCTTTTAAATTTTTAAAGAATTGACCTAAGG
AAAGCTTATGATTGGACTTATTTTCCAACCAAGATAACATTTACTCTAAGTACCAGTTTT

TATAATTTATATGAAATCAGATTTCAACACTTACTTTGTCATTTTGTAGATCATTTTTTT
AAAAACTGTGTAAAAAATTTTTTTACACCTAAGCTGTGTTTTGATACTGATATTTCC
TATGCTGAATAGTTTTCTTACTTTTCAAGGGAAGGTAAGAAAATACTTTTTTATATTTGTT
ACTTATGTAACATTCATATTTTTCTCATTTTGATATTTGTAACATACTGTATGCTTTCTA
CTTGTAATGTCAACAATAGAATTTAAATATTTATTTAAATA

Figure 5B (SEQ ID NO: 6)

>ENSG00000196159|ENSP00000335169|ENST00000335110|FAT4

ATGGTAACAACGGTAGTGGCAGTGGGTGATACCTTAGCTCAACCATTAGCTGCAGCTGAA
GTGTTTTATTGTAGAAAATAACACTTCAGGATATCAATGACAATCCACCAGTATTTCCAACG
GACATGCTGGATCTCACGGTAGAGGAGAACATTGGAGATGGCTCTAAGATTATGCAGCTG
ACAGCCATGGATGCTGATGAGGGTGCAAATGCTCTCGTCACATACACTATCATTAGTGGA
GCTGATGATAGTTTTCGCATCGACCCAGAATCCGGAGATCTGATAGCAACCAGGCGGTTG
GACAGGGAAACGCCGCTCCAAATATTCACTGCTAGTTCTGCTGATGATGGTCTTCAGTCC
TCGGATATGAGAATTAATATCACTGTCAGTGATGTGAATGACCATAACCCAAATTTTCC
AGACCCGTGTACTCTTTTGACATTCCCTGAGGACACAATCCCTGGTTCTTTGGTAGCAGCC
ATTTTAGCCACGGATGATGACTCTGGTGTGAATGGAGAAATTACATATATTGTGAATGAA
GATGATGAAGATGGCATCTTTTCCCTGAATCCTATTACTGGGGTCTTTAATTTGACTCGA
TTATTAGATTATGAAGTACAGCAATATTATATCCTCACTGTTGAGCAGAAGATGGTGGG
GGACAATTTTACTACCATCAGAGTTTATTTCAATATTCTAGATGTAAATGATAATCCACCT
ATTTTCAGCTTGAATTCATACAGCACATCTTTAATGGAGAATCTACCTGTGGGATCTACT
GTTCTTGTGTTTAAATGTTACTGATGCAGATGATGGCATCAACTCTCAATTGACTTATAGC
ATTGCTTCAGGTGATAGCCTTGGGCAGTTTACTGTTGACAAGAATGGTGTACTCAAAGTC
CTAAAAGCTTTGGATCGGGAAGTCACTCCTTCTACAACCTTGGTTGTTCAAGTGCATGAC
CTGCCACAGATTTCCAGCTCCAGATTCACAAGCACTGCTCAAGTCTCCATTATTTTGTG
GATGTAAATGATAAACCACCGACATTTCTTTCCCTAAATTGACATACATTCCAGAAAAT
ACACCTATTGATACTGTTGTTTTCAAAGCTCAAGCAACTGACCCAGATAGTGGCCAAAC
AGCTATATTGAGTACACTCTGCTGAACCTTTGGGAAACAAGTTCAGTATTGGGACCATT
GATGGTGAAGTGAGGGCTCACTGGAGAATGGACAGAGAAGAAGTTTCTAATTATACTCTA
ACAGTGGTGGCTACAGACAAAGGTCAACCATCTCTCTCTCATCTACAGAGGTTGTAGTT
ATGGTACTTGACATCAATGATAACAACCCCATCTTTGCACAAGCTTTGTATAAAGTGGAG
ATTAATGAAAACACACTTACTGGAACAGATATAATACAAGTGTTCGCAGCAGATGGAGAT
GAAGGCACAAATGGACAGGTTGCTATGGCATTGTTAATGGTAATACCAATCAGGAATTT
CGGATAGACTCTGTACAGGTGCCATCACTGTGCTAAACCTTTGGATAGAGAAAAGACC
CCTACCTACCATTTAACTGTTCAAGCAACAGATCGAGGCAGCACACCCAGAACTGATACC
TCCACGGTCAGCATTGTTCTACTGGATATTAATGACTTTGTTCTGTATTTGAGCTATCT
CCATATTCTGTAAATGTCCCTGAGAATTTAGGGACACTACCCAGAACAATTCTTCAGGTG
GTGGCAAGAGATGATGATCGAGGATCTAACAGCAAACCTCTCATATGTTCTGTTTGGTGGT
AATGAAGACAATGCTTTTACTCTCTCAGCCAGTGGAGAATTTGGAGTAACACAGAGTCTG
GATCGGGAACAAAAGAGCGCTTTGTCTTAATGATTACAGCTACAGATTGAGGATCCCT
GCCTTGACTGGAACCTGGAACAATCAACGTCTAGTAGATGATGTCAATGACAATGTCCCC
ACATTTGCCAGTAAAGCGTATTTACAACAATTCCTGAGGATGCACCAACTGGAACAGAT
GTTTTATTGGTAAATGCCCTCAGATGCTGATGCTTCAAAGAATGCAGTTATAAGGATCATC
GGTGGAAACTCTCAGTTCACGATCAACCCATCGACAGGACAAATCATCACCAGCGCATTG
TTAGATAGGGAAACAAAAGATAATTATACTTTGGTAGTGGTCTGCAGTGATGCGGGATCC
CCAGAGCCTCTTTCCAGTTCCACCAGTGTGCTTGTCACTGTGACTGATGTCAATGACAAT
CCACCAAGATTTTCAGCTACACCCATATGTCACTCACATCCCATCTCTACTCTTCCAGGT
TCCTTTGCTTTGCGGTTACAGTACAGATGCTGATATTGGACCAAAATTCTGAAGTGCAT
TATTCTCTTTGCGGTAGAAAATTCTGAAAAATTTCACTTGACCCACTGAGGGGAGCCATT
ATGGCCGCCGACCACTAAACGGAGCTTCAGAAGTGACATTTTCTGTGCATGTAAAGAT
GGTGGCTCATTTCCAAAGACAGATTCTACAACAGTGACTGTTAGATTGCGTGAATAAGGCC
GATTTCCCTAAAGTGAGAGCCAAAGAACAACGTTCTGTTTCTGAAAACCAACCAGTC
AGCTCTCTTGTCAACCATCACAGGATCCTCTTTAAGAGGAGAACCCTATGTCAATTAT
ATCGCAAGTGGGAATCTTGGCAATACCTTCCAGATTGATCAGTTAACAGGGCAGGTGTCT
ATTAGTCAACCTCTGGATTTTGAAGAATACAAAAATATGTTGTATGGATAGAGGCCAGA
GACGGTGGTTTCCCTCCTTTCTCCTCTTACGAGAACTTGATATAACAGTATTAGATGTC
AATGATAATGCCCAATTTTAAAGGAAGACCCATTTATATCTGAAATATTGAAAAACCTT
TCCCCTCGAAAAATACTTACTGTTTTCGGCAATGGACAAGGACAGTGGACCCAATGGACAG
TTAGATTATGAAATTTGTAATGGCAACATGGAAAAATAGTTTCAGTATCAATCATGCTACT
GGTGAATTAGAAGCGTTAGACCTTTGGACAGGGAAAAAGTATCTCATTATGTCCTAACC
ATAAAATCATCAGACAAAGGTCCCCGTCTCAGAGTACTTCAGTAAAAGTCATGATTAAC
ATTTTAGATGAAATGATAATGCCCTAGGTTTTCTCAGATATTTAGTGCCCATGTTCT
GAAATTTCCCTTAGGATACACAGTTACCCGTGTCACACTTCTGATGAAGACATTGGG

ATCAATGCAATTAGTAGATATTCTATAATGGATGCAAGTCTTCCATTTACAATTAATCCC
AGCACAGGGGATATTGTCTATAAGCAGACCTTTAAATAGGGAAGATACAGACCGTTACAGA
ATTTCGAGTTTCCGCACATGATTCTGGGTGGACTGTAAGTACAGATGTCACAATATTTGTG
ACAGACATCAATGACAATGCTCCAAGATTTAGCAGAATCTTCTATTATTTAGATTGCCCT
GAACTTACTGAGATTGGCTCCAAAGTAACTCAGGTATTTGCAACAGATCCTGATGAGGGA
TCAAATGGACAAGTGTTTTATTTCAATAAAATCCCAATCAGAATATTTCAGGATTAATGCC
ACCACTGGAGAGATTTTCAATAAACAGATCTTAAATACCAAAATGTCACTGGCTTCAGT
AATGTGAATATCAACAGGCATAGTTTTATAGTGACATCTTCAGATCGAGGTAAACCTTCC
TTAATTAGTGAGACAACAGTTACCATCAATATAGTGGACAGTAATGACAATGCACCTCAA
TTTCTTAAAGTAAATATTTCACTCCAGTCACCAAAAATGTTAAGGTTGGTACGAAGTTA
ATCAGAGTTACAGCAATAGATGACAAAGATTTTGGACTGAATTGAGAAGTGGAGTATTTCA
ATTTCTAATGATAACCATTTAGGAAAATTTAAGTTGGACAATGATACGGGGTGGATTTCA
GTAGCATCCTCCCTGATTTCTGACTTGAACCAAACTTTTTATCACAGTCACTGCAAAAG
GATAAGGGAAACCTCCACTTTCTTCCAAGCAACTGTTACATAACTGTCACTGAGGAA
AACTACCATACACCTGAATTCTCTCAAAGCCACATGAGTGCAACCATCCCTGAGAGCCAT
AGCATTGGGTCCATTGTGCAAGTCTTCTGCAAGAGATAGAGATGCAGCGATGAATGGC
TTGATTAAGTACAGCATTTCTTCAGGAAATGAAGAAGGCATTTTGAATCAATTCTTCT
ACAGGTATATTAACACTAGCCAAAGCTCTTGATTATGAGCTATGCCAGAAACACGAAATG
ACGATTAGTGCTATAGATGGAGGATGGGTTGCAAGAAGTGGTACTGCAGTGTGACCGTA
AATGTGATTGATGTGAATGATAATTCTCCAGTATTCCTCTCTGATGACTATTTCCCTACT
GTTTTGGAAGTATGCCCAAGTGGAAACAACAGTTATCCACCTAAATGCAACAGATGCTGAC
TCTGGAACAAATGCTGTGATTGCGTATACTGTACAGTCATCTGACAGTGACCTCTTTGTC
ATTGACCCTAACACAGGAGTCATAACCCTCAAGGCTTCTTGGATTTTGAACCAAGCAG
AGCTACCATCTTACTGTGAAAGCCTTCAATGTCCCGATGAGGAAAGGTGTAGCTTTGCC
ACTGTTAATATACAATTTAAAGGGACAAATGAATATGTGCCCGTTTTGTTTCCAAACTT
TACTATTTTGAATCTCAGAAGCAGCTCCTAAAGGTACTATTGTTGGAGAAGTGTGTTGCT
AGCGACCGTGATTTGGGCACTGATGGGGAGGTACACTATTTGATTTTTGGTAATAGTCGA
AAGAAGGGTTTTCCAGATCAATAAGAAGACTGGACAGATTTATGTTTCTGGAATTTGAT
CGAGAAAAAGAAGAAAGGGTGTCTTTGAAGGTATTGGCCAAGAAGTGTGGCAGCATTAGA
GGTGCGATATAGATGAGGTCACTGTAATGTCAACGTGCTTGTGCAAAATGACCCACCC
ATTTTTACTCTAAACATCTACAGTGTGAGATCAGTGAAGGGGTCCCAATAGGAACTCAT
GTGACCTTTGTGAGTGCCTTTGACTCAGACTCCATCCCAGCTGGAGCAGGTTTTCTTAC
TTCATCGGATCAGGGAATGAAAATGGTGCCTTTTCTATTAATCCGCAGACAGGACAGATC
ACCGTTACTGCAGAATTAGATCGAGAAACCTTCCCCTCTATAATCTCTCAGTTTTGGCT
GTTGATTACAGGACCCCTCAGCTACAGGTAGTGCCTCTTTATTAGTCACCCCTGGAAGAT
ATAAATGATAAACGGGCCCATGCTGACTGTGAGTGAAGGAGAAGTCATGGAAAAACAAACGG
CCAGGCACCTTTGGTGATGACCTTTCAGTCCACTGACCTGATCTCCCTCCAAATCAAGGT
CCCTTTACTTATTACTTGTGAGCACAGGTCTGCCACCAGTTATTTAGTCTGAGCACT
GCTGGAGTTCTGAGCACAACCAGAGAGATTGACAGAGAGCAGATTGCAGACTTCTATCTG
TCTGTGGTTACCAAGGATTCTGGTGTTCTCAAATGTCTTCCACAGGAAGTGTGCATATC
ACAGTTATAGACCAAAATGACAATCCTTCACAGTCTCGGACGGTGGAGATATTTGTTAAT
TATTATGGTAACTTTGTTCCCGTGGGATTTTAGGCTCTGTGAAGCCACAGGATCCAGAT
GTGTTAGACAGCTTCCACTGCTCCCTTACTTCAGGAGTTACCAGCCTCTTCAGTATTTCA
GGGGTACTTGTGATCTGAATTTCCAGCCAAGGTCCACAGATGGCACGTTTGATCTGACT
GTCCTTAGCAATGATGGAGTTACAGCACAGTCACGAGCAACATCCGAGTTTTCTTTGCT
GGATTTTCCAATGCCACAGTGGATAACAGCATCTTACTTCGTCTCGGCGTACCAACAGTA
AAGGACTTCTTGACCAACCAATCTTCAATTTTTACGCATTGCCAGCTCACAGCTGACA
GGCTTAGGACTGCTGTGCAACTGTACAGTGCATATGAAGAGAACAATAGAACGTTTCTT
TTGGCAGCTGTGAAGCGAAATCATAATCAGTATGTGAATCCAGTGGCGTAGCCACCTTC
TTTGAAGCATCAAAGAGATCCTTCTCCGGCAGAGTGGAGTAAAGGTGGAATCTGTGGAT
CATGACTCCTGTGTGCATGGCCCATGTGAGAATGGAGGGAGCTGTCTACGAAGATTGGCT
GTGAGCTCCGTATTAAAAAGCCGTGAGAGCTTCCAGTCATCATCGTGGCAAATGAACCT
CTGCAGCTTTCTTATGCAAGTGTCTGCCAGGATATGCGGTAGCTGGTGTGAAATAGAT
ATAGATGAATGTCTTCCATCACCTTGCCACAGTGGTGGAACTGTCACAATTTAGTGGGA
GGATTTTTCATGCAGCTGCCAGATGGCTTCACTGGTAGGGCGTGTGAGAGAGATATCAAT
GAGTGCCCTGCAGAGTCTTGCAAGAATGGTGCCATCTGCCAGAATTTTCCAGGAAGCTTC
AACTGTGTTTGCAAACTGGATACACAGGTGTCTTTGGAAAACACTGCGAGTTGAACAGT
TATGGATTGAGGAGTTATCATACATGGAATTTCCAAGCTTGGACCCCAATAACAACATAT
ATTTATGTCAAATTTGCCACGATTAAAAGTCATGCCTTATTGCTTTACAACATATGACAAC
CAGACAGGCGACCGGGCTGAGTTTTTGGCCCTTGAAATTGCCGAAGAAAGACTAAGATTC
TCTTATAATTTAGGCAGTGGTACATATAAGCTCACCACCATGAAGAAGGTGTGAGATGGA
CATTTTACACTGTGATTGCCAGGAGAGCAGGAATGGCAGCCTCCTTAACGTGGGACTCC
TGTTCTGAGAACCAAGAGCCAGGATATTGTACTGTGAGTAATGTGGCAGTTTCAGATGAC
TGGACTCTTGATGTTTCAGCCAAATAGAGTTACAGTTGGAGGTATCAGATCTCTAGAACCA
ATCCTTCAGAGAAGAGGACACGTGGAAAGCCATGATTTTTGTTGGGTGTATAATGGAGTTT
GCAGTCAATGGAAGGCCTCTGGAACCCAGCCAAGCTTTGGCAGCACAAGGCATCCTAGAT
CAGTATGGCGATTTTATTTCTTACTGTTTTAAAGAAAAAAATGCAAAAAGTATGCTTC
ACTGTTACTCCTGACACTGCCTTATCATTAGAAGGCAAAGGGCGCTTGGACTACCACATG

AGTCAGAATGAGAAGCGGGAATATTTGTTAAGGCAAAGCTTACGAGGTGCCATGTTGGAG
 CCTTTTGGTGTGAACAGTCTGGAAGTAAAATTTAGGACCAGAAGCGAGAATGGCGTTTTA
 ATCCATATCCAAGAAAGCAGCAATTACACTACTGTGAAGATTAAGAATGGCAAAGTATAT
 TTTACATCCGATGCAGGAATTGCTGGGAAAGTGGAGAGAAATATTCTGAAGTATATGTT
 GCAGACGGCCACTGGCACACTTTTCTAATTGGGAAAAATGGAACAGCAACAGTATTGTCT
 GTTGACAGAATATATAACAGAGATATTATCCACCCTACTCAGGACTTCGGTGGCCTTGAT
 GTGCTTACTATATCACTTGGAGGAATCCACCCAATCAAGCACATCGAGATGCCCCAAACA
 GCAGGTTTTGATGGCTGCATTGCTTCTATGTGGTATGGTGGAGAAAGTCTTCCTTTCAGC
 GGGAAGCATAGCTTGGCCTCCATCTCAAAAACAGATCCCTCAGTGAAGATTGGCTGCCGT
 GGCCCCAACATTTGTGCCAGCAACCCCTGCTGGGGTGATTTGCTGTGCATTAATCAGTGG
 TATGCCTACAGGTGTGTCCCTCCTGGGGACTGTGCCTCCCACCCGTGCCAGAATGGTGGC
 AGCTGTGAGCCAGGCCTGCACTCCGGCTTACCTGTAGCTGCCAGACTCGCACACGGGA
 AGGACCTGTGAGATGGTGGTGGCCTGTCTTGGCGTCTCTGTCTCAGGGGAAGGTGTGC
 AAAGCTGGAAGTCTGCGGGGCATGTCTGTGTTCTGAGTCAGGGCCCTGAAGAGATCTCT
 CTGCCTTTGTGGGCTGTGCCTGCCATCGTGGGCAGCTGCGCAACCGTCTTGGCCCTCCTG
 GTCTTAGCCTGATCCTGTGTAACCAAGTGCAGGGGGAAGAAGGCCAAAAATCCCCAAGAG
 GAGAAGAAACCGAAGGAGAAGAAGAAAAAGGGAAGTGAGAACGTTGCTTTTGATGACCTT
 GACAATATCCCTCCCTATGGGGATGACATGACTGTGAGGAAGCAGCCTGAAGGGAAACCCA
 AAACCAGATATCATTGAAAGGGAAAAACCCCTACCTTATCTATGATGAAACTGATATTCCT
 CACAACCTCAGAAACCATCCCCAGCGCCCTTTGGCATCTCCAGAGCAGGAGATAGAGCAC
 TATGACATTGACAACGCCAGCAGCATCGCCCCCTTCGGATGCAGACATCATTCAACACTAC
 AAGCAGTTCGCGAGCCACACACCAAAATTTTCAATCCAGAGGCACAGTCCCCTAGGCTTT
 GCAAGGCAATCCCCCATGCCCTTAGGAGCAAGCAGTTTGACTTACCAGCCTTCATATGGT
 CAAGGTTTGAGAACCAGCTCCCTAAGCCACTCAGCATGCCAACTCCCAACCCCTCTGTCT
 CGACACAGTCCAGCCCCCTTCTCCAATCTTCTACGTTCTATAGAAACAGCCCAGCAAGG
 GAATTGCATCTTCTATAAGGGATGGTAATACTTTGGAAATGCATGGTGACACCTGCCAA
 CCTGGCATTTCCTAATATGCCACAAGGCTGGGAAGGAGAAGCAAGAGTCTCAGGCCATG
 GCATCACATGGTTCTAGACCAGGGAGTCGCTAAAGCAGCCGATTGGGCAGATTCCACTG
 GAATCTTCTCCTCCAGTCGGACTTTCTATTGAAGAAGTGGAGAGGCTCAACACACCTCGC
 CCTAGAAACCAAGTATCTGCAGTGCAGACCATGGGAGGCTTCTTTCAGAGGAGGACTGC
 AGAAGGCCACTGTCTAGAACAAAGGAATCCAGCGGATGGCATTCCAGCTCCAGAATCCTCT
 TCTGATAGTGACTCCCATGAATCTTTCCTTGTCTCAGAAATGGAATATGACAGGGAGAAG
 CCAATGGTATATACTTCCAGAATGCCCAAATTATCTCAAGTCAATGAATCTGATGCAGAT
 GATGAAGATAATTATGGAGCCAGACTGAAGCCTCGAAGGTACCACGGTCGACAGGGCCGAG
 GGAGGACCTGTGGGCACCCAGGCAGCAGCACCAGGCACTGCTGACAACACACTGCCCCATG
 AAGCTAGGGCAGCAAGCAGGGACTTTCAACTGGGACAACCTTTTGAAGTGGGGCCCTGGC
 TTTGGCCATTATGTAGATGTTTTTAAAGATTTGGCATCTCTTCCAGAAAAAGCAGCAGCA
 AATGAAGAAGGCAAGCTGGGACAACCTAAACCAGTCCCCAAGATGGGGAAGCAGAACAG
 TATGTGTGA

Figure 5C (SEQ ID NO:7)

>ENSG00000196159|ENST00000509444|FAT4

GTGATGTTACAGAAAAATTTGAAATATTTATTAGCTAGACTAGTTGTATTCTTTCCAACA
 TTGTTGTATGATCTTTCTTGTAACGTTTTCTTGCAATTTCTACCTCAGTTTTTTAATTATA
 GTAAATAGAAGTTACGATATTAATACTATATGACATATCCCTATTTCTGCTTTCTGCTTT
 AGTTATAGGATCATCGGTGGAACCTCTCAGTTCACGATCAACCCATCGACAGGACAAATC
 ATCACCAGCGCATTGTTAGATAGGGAACAAAGATAATTATACTTTGGTAGTGGTCTGC
 AGTGATGCGGGATCCCCAGAGCCTCTTCCAGTTCACCAAGTGTGCTTGTCACTGTGACT
 GATGTCAATGACAATCCACCAAGATTTAGCATCACCCATATGTCACTCACATCCCATCT
 CCTACTCTTCCAGGTTCTTTGTCTTTCGGGTTACAGTCACAGATGCTGATATTGGACCA
 AATTCTGAAGTGCATTATTCTCTTTCGGGTAGAAATCTGAAAAATTTACATTGACCCA
 CTGAGGGGAGC

Figure 6A (SEQ ID NO: 8)

>ENSG00000196159|ENSP00000377862|ENST00000394329|FAT4

MDLAPDRATGRPWLPHTLSVSQLLRVFWLLSLLPGQAWVHGAEPQVFQVLEEPPGTL
 VGTIQTRPGFTYRLSESHALFAINSSTGALYTTSTIDRESLPSDVINLVVLSAPTYPTE
 VRVLVRDLNDNAPVFPDPSIVVTFKEDSSSGRQVILDTATSDIGSNGVDHRSYRIIRGN
 EAGRFRDLITLNPSSGEGAFHLVSKGGLDREVTPQYQLLVEVEDKGEPKRRGYLQVNVTV
 QDINDNPPVFGSSHYQAGVPEDAVVGSSVLQVAAADADEGTNADIRYRLQDEGTPFQMDP
 ETGLITVREPLDFEARQYSLTVQAMDRGVPSLTGRAEALIQLLDVNDNDPVVKFRYFPA
 TSTRYASVDENAQVGTVVALLTVTDADSPAANGNISVQILGGNEQRHFEVQSSKVPNLSLI
 KVASALDRERIPSYNLTVSVSDNYGAPPGAQVARSVASLVIFVNDINDHPPVFSQQVY
 RVNLSEEAPPGSYVSGISATDGDGSLNANLRYISIVSGNGLGWFHISEHSGLVTTGSSGGL
 DRELASQIVLNISARDQGVHPKVSYAQLVVTLLDVNDEKPVFSQPEGYDVSVVENAPTGT
 ELLMLRATDGDLDNGTVRFSLQEAETDRRSFRLDPVSGRLSTISSLDREEQAFYSLVL
 ATDLGSPQSSMARINVSLLDINDNSPVFYPVQYFAHIKENEPGGSYITTVSATDPDLGT
 NGTVKYSISAGDRSRFQVNAQSGVISTRMALDREEKTAYQLQIVATDGGNLQSPNQAIVT
 ITVLDTQDNPPVFSQVAYSFVVFENVALGYHVGVSASTMDLNSNISYLITTDQKGMFA
 INQVTGQLTTANVIDREEQSFYQLKVVASGGTVTGMTVNITVKDLNDNSPHFLQAIESV
 NVVENWQAGHSIFQAKAVDPDEGVNGMVLYSLKQNPKNLFAINEKNGTISLLGPLDVHAG
 SYQIEILASDMGVPQLSSSVILTVYVHDVNDNSPVFDQLSYEVTLSESEPVNSRFFKVQA
 SDKDSGANGEIAYTIAEGNTGDAFGIFPDGQLYIKSELDRELQDRYVLMVVASDRAVEPL
 SATVNVTVILEDVNDNRPLFNSTNYTFYFEEQQRAGSFVGKVSADVDFGPNGEVRYSE
 MVQPDFELHAISGEITNTHQFDRESLMRRRGTAVFSTVIATDQGIPOPLKQATVHVYM
 KDINDNAPKFLKDFYQATISESAANLTQVLRVSASDVDEGNGLIHYSIIKNGNEERQFAI
 DSTSGQVTLIGKLDYEATPAYSLVIQAVDSGTIPLNSTCTLNIDILDENDNTSPFPKSTL
 FVDVLENMRIGELVSSVTATSDSDGDNADLYSITGTNNHGTFSISPNTGSIFLAKKLD
 ETQSLYKLNITAKDQGRPPRSSTMSVVIHVRDFNDNPPSFPPGDIKSIENIPIGTSVI
 SVTAHDPDADINGQLSYTIIQMPRGNHFTIDEVKGTIYTNAEIDREFANLFELTVKAND
 QAVPIETRRYALKNVITLVTDLNDNVPMFISQNALAADPSAVIGSVLTTIMAADPDGEGAN
 GEIEYEIINGDITDFIVDRYSGDLRVASALVPSQLIYNLIVSATDLGPERRKSTTELTII
 LQGLDGPVFTPKYITILKEGEPIGNVISIEAASPRGSEAPVEYYIVSVRCEEKTVGRL
 FTIGRHTGIIQTAAILDREQGACLYLDVYAIKSTAFPRTRQAEVEITLQDINDNPPVF
 PTDMLDLTVEENIGDGSKIMQLTAMDADEGANALVTYTIISGADDSFRIDPESGDLIATR
 RLDRERRSKYSLVRADDGLQSSDMRINITVSDVNDHTPKFSRPVYSFDIPEDTIPGSLV
 AAILATDDDSGVNGEITYIVNEDDEDGIFFLNPTITGVFNLTRLLDYEVQQYYILTVRAED
 GGGQFTTIRVYFNILDVNDNPPIFSLNSYSTSLMENLPVGSTVLVFNVTADDDGINSQLT
 YSIASGDSLQFTVDKNGVLKVLKALDRESQSFYNLVVQVHDLQIPASRFTSTAQVSI
 LLDVNDNPPTFLSPKLTYPENTPIDTVVFKAQATDPDPSGPNSEYIETLLNPLGNKFSIG
 TIDGEVRLTGELDREEVSNYTLTVVATDKGQPSLSSSTEVMVLDINDNNPIFAQALYK
 VEINENTLTGTDIQVFAADGDEGTNGQVRYGIVNGNTNQEFRIIDSVTGAITVAKPLDRE
 KTPTYHLTVQATDRGSTPRDTSTVSIVLLDINDFVPVFEVSPYSVNVNENLGTLPRTIL
 QVVARDDDRSGNSKLSYVLFGGNEDNAFTLSASGELGVTQSLDRETKERFVLMITATDSG
 SPALTGTTGTINVIVDDVNDNVPTFASKAYFTTIPEDAPTGTDLVNASDADASKNAVIR
 IIGGNSQFTINPSTGQIITSALLDRETKDNYTLVVVCS DAGSPEPLSSSTSVLVTVDVN
 DNPPRFQHHYPVTHIPSTPLPGSFVFAVTVDADIGPNSELHYSLSGRNSEKFHIDPLRG
 AIMAAGPLNGASEVTFSVHVKDGGSFPKTDSTTVTVRVFNKADFPKVRAKEQTFMFPENQ
 PVSSLVTTITGSSLRGEPMSYIISGNLGNFTQIDQLTGQVSIQPLDFEIKYVYVWIE
 ARDGGFPFSSYEKLDITVLDVNDNAPIFKEDPFISEILENLSPRKILTVSAMDKDSGPN
 GQLDYEIVNGNMENSFSINHATGEIRSVRPLDREKVSHYVLTIKSSDKGSPSQSTSVKVM
 INILDENDNAPRFSQIFSAHPENSPLGYTVTRVTSDEDIGINAISRYSIMDASLPFTI
 NPSTGDIVISRPLNREDTDYRIRVSAHDSGWTVDVTIFVTDINDNAPRFSRTSYLD
 CEPLTEIGSKVTQVFATDPDEGSNGQVYFIKSQSEYFRINATTGEIFNKQILKYQNVGT
 FSNVNINRHSFIVTSSDRGKPSLSETTVTINIVDSNDNAPQLKSKYFTPVTKNVKVG
 KLIRVTAIDDKDFGLNDEVEYFISDNHGLGKFKLDNDTGWISVASSLISDLNQNFITVT
 AKDKGNPPLSSQATVHITVTEENYHTPEFSQSHMSATIPESHSIGSIVRTVSARDRDAAM
 NGLIKYSISSGNEEGIFAINSSTGILTAKALDYELCQKHMTISAIDGGWVARTGYCSV
 TVNVIDVNDNSPVFLSDDYFPTVLENAPS GTTVIHLNATDADSGTNAVIAITVQSSDSL
 FVIDPNTGVITTTQGLDFETKQSYHLTVKAFNPDEERCSFATVNIQLKGTNEYVPRFVS
 KLYYFEISEAAPKGTIVGEVFASDRDLGTDGEVHYLIFGNSRKKGFQINKKTGQIYVSGI
 LDREKEERVSLKVLAKNFGADIDEVTVNVTVLDANDPPIFTLNIYSVQISEGVPIG
 THVTFVSAFDSISPSWSRFSYFIGSGNENGAFSINPQTGQITVTAELDRETLPIYNLSV
 LAVDSGTPSATGSASLLVTLEDINDNGPMLTVSEGEVMENKRPGLVMTLQSTDPDLPPN

QGPFTYYLLSTGPATSYFSLSTAGVLSTTREIDREQIADFYL SVVTKDSGVPQMSSTGTV
 HITVIDQNDNPSQSRTVEIFVNYGNLFPGGILGSVKPQDPDVLDSFHCSLTSGVTSLFS
 IPGGTCDLNSQPRSTDGTFDLTVLSNDGVHSTVTSNIRVFFAGFSNATVDNSILLRLGVP
 TVKDFLTNHYLHFLRIASSQLTGLGTAVQLYSAYEENNRTFLLAAVKRNHNQYVNP SGVA
 TFFESIKEILLRQSGVKVESVDHDSVHGPCQNGGSCLRRLAVSSVLKSRESLPV IIVAN
 EPLQPFCKCLPGYAGSWCEIDIDECLPSPCHSGGTCHNLVGGFSCSCP DGFTGRACERD
 INECLQSPCKNGAICQNFPGSFNCVCKTGYTGKMCESSVNYCECNPCFNGGSCQSGVDSY
 YCHCPFGVFGKHCELSYGFEELSYMEFSPSLDPNNNYIYVKFATIKSHALLLYNDNQTG
 DRAEFLALEIAEERLRFSYNLGSGTYKLTMMKKVSDGHFHTVIARRAGMAASLTV DSCSE
 NQEPGYCTVSNVAVSDDWTLDVQPNRVTVGGIRSLLEPILQRRGHVESHD FVGCIMEFAVN
 GRPLEPSQALAAQGILDQCPRLEGACTRSPCQHGGTCMDYWSWQQCHCKEGLTG KYCEKS
 VTPDTALSLEGKGRLDYHMSQNEKREYLLRQSLRGAMLEPFGVNSLEV KFRTRSENGVLI
 HIQESSNYTTVIKNGKVYFTSDAGIAGKVERNIPEVYVADGHWHTFLIGKNGTATVLSV
 DRIYNRDIIHPTQDFGGLDVLITISLGGIPPNAHRDAQTAGFDGCIASMWYGGESLPFSG
 KHSLASISKTDPSVKIGCRGNICASNPCWGDLLCINQWYAYRCVPPGDCASHPCQNGGS
 CEPGLHSGFTCSCPDSHTGRTCEMVVACLGVLC PQGKVCKAGSPAGHVCVLSQGPEEISL
 PLWAVPAIVGSCATVLALLVLSLILCNQCRGKKAKNPKEKKPKKEKKKKGSENVAFDDPD
 NIPPYGGDDMTVRKQPEGNPKPDIERENPYLIYDETDIPHNS ETIPSAPLASPEQEIEHY
 DIDNASSIAPSDADIIQHYKQFRSHTPKFSIQRHSP LGFARQSPMPLGASSLTYP SYGQ
 GLRTSSLSHSACPTPNPLSRHSPAPFSKSTFYRNSPARELHLP I RDGNTLEMHGDTCP
 GIFNYATRLGRRSKSPQAMASHGSRPGSRLKQPIGQIPLESSPPVGLSIEEVERLNTPRP
 RNPSICSADHGRSSSEEDCRRPLSRTRNPADGIPAPESSSDSDS HESFTCSEMEYDREKP
 MVYTSRMPKLSQVNESDADDEDNYGARLKPRRYHGRRAEGGPVGTQAAAPGTADNTLPMK
 LGQQAGTFNWDNLLNWGPFGFHYVDVFKDLASLPEKAAANE EGKAGTTKPVPKDGEAEQY
 V*

Figure 6B (SEQ ID NO: 9)

>ENSG00000196159|ENSP00000335169|ENST00000335110|FAT4

MVTTVVAVGDTLAQPLAAAEVFIVEITLQDINDNPPVFPTDMLDLTVEENIGDGSKIMQL
 TAMDADEGANALVTYTIISGADDSFRIDPESGDLIATRRLDRERRSKYSLLVRADDGLQS
 SDMRINITVSDVNDHTPKFSRPVYSFDIPEDTIPGSLVAAILATDDDSGVNGEITYIVNE
 DDEDGIFFLNPITGVFNLTRLDDYEVQYYILTVRAEDGGGQFTTIRVYFNILDVNDNPP
 IFSLNSYSTSLMENLPVGSTVLVFNVTDADDGINSQLTYSIASGDSLQFTVDKNGVLKV
 LKALDRESQSFYNLVVQVHDLQIPASRFTSTAQVSIILLDVNDNPPTFLSPKLTYPEN
 TPIDTVVFAQATDPDPSGPN SYIEYTLNLPLGNKFSIGTIDGEVRLTGELDREEVSNYTL
 TVVATDKGQPSLSSSTEVVVMVLDINDNNPIFAQALYKVEINENTLTGTDIIQVFAADGD
 EGTNGQVRYGIVNGNTNQEFRIDSVTGAITVAKPLDREKTPTYHLTVQATDRGSTPRTDT
 STVSIVLLDINDFVPVFE LSPYSVNVPENLGTLPRTLQVVARDDDRGSNSKLSYVLF GG
 NEDNAFTLSASGELGVTQSLDRETKEFVLMITATDSGSPAL TGTGTINVIVDDVNDNVP
 TFASKAYFTTIPEDAPTGDVLLVNASDADASKNAVIRIIGGNSQFTINPSTGQIITSAL
 LDRETKDNYTLVVVCSDAGSPEPLSSSTSVLVTVDVNDNPPRFQHHYPVTHIPSTPLPG
 SFVFAVTVDADIGPNSSELHYSLSGRNSEKFHIDPLRGAIMAAGPLNGASEVTF SVHVKD
 GGSFPKTDSTTVTRFVNKADF PKVRAKEQTFMFPENQPVSSLVTTITGSSLRGEPMSYY
 IASGNLGNTFQIDQLTGQVVISQPLDFEIKYQVYVWIEARDGGFPFSSYEKLDITVLDV
 NDNAPIFKEDPFISEILENLSPRKILTVSAMDKDSGPNQGLDYEIVNGNMENSFSINHAT
 GEIRSVRPLDREKVS HYVLTIKSSDKGSPSQSTS VKVMINILDENDNAPRFSQIFSAHVP
 ENSPLGYTVTRVTTSD EDIGINAISRYSIMDASLPFTINPSTGDIVISRPLNREDTDRYR
 IRVSAHDSGWTVSTDVTIFVTTDINDNAPRFSRTSYLDCPEL TEIGSKVTQVFATDPDEG
 SNGQVYFIKISQSEYFRINATGEIFNKQILKYQNVTFGSNVNINRHSFIVTSSDRGKPS
 LISETTVTINIVDSNDNAPQFLKSKYFTPVTKNVKVGTKLIRVTAIDDKDFGLNSEVEYF
 ISNDNHLGKFKLDNDTGWISVASSLISDLNQFFITVTAKDKGNPPLSSQATVHITVTEE
 NYHTPEFSQS HMSATIPESH SIGSIVRTVSARDRAAMNGLIKYSSSGNEEGIFAINSS
 TGILTLAKALDYELCQKHEMTISAIDGGWVARTGYCSVTNVVIDVNDNSPVFLSDDYFPT
 VLENAPSGTTVIHLNATDADSGTNAVIA YTVQSSDSDFVIDPNTGVITTQGFDFETKQ
 SYHLTVKAFNVVPEERCSFATVNIQLKGTNEYVPRFVSKLYYFEISEAAPKGTIVGEVFA
 SDRDLGTDGEVHYLIFGNSRKKGFQINKKTGQIYVSGILDREKEERVSLKVLAKNFGSIR
 GADIDEVTNVTVLDANDPPIFTLNIYSVQISEGVPIGTHVTFVSAFSDSIPSWSRFSY
 FIGSGNENGAFSINPQTGQITVTAELDRETLPIYNLSVLAVDSGT PSATGSASLLVTLED
 INDNGPMLTVSEGEVMENKRP GTLVMTLQSTD PDLPPNQGPFTYYLLSTGPATSYFSLST
 AGVLSTTREIDREQIADFYL SVVTKDSGVPQMSSTGTVHITVIDQNDNPSQSRTVEIFVN
 YYGNLFPGGILGSVKPQDPDVLDSFHCSLTSGVTSLFSIPGGTCDLNSQPRSTDGTFDLT
 VLSNDGVHSTVTSNIRVFFAGFSNATVDNSILLRLGVP TVKDFLTNHYLHFLRIASSQLT
 GLGTAVQLYSAYEENNRTFLLAAVKRNHNQYVNP SGVATFFESIKEILLRQSGVKVESVD
 HDSCVHGPCQNGGSCLRRLAVSSVLKSRESLPV IIVANEPLQPFCKCLPGYAGSWCEID

IDECLPSPCHSGGTCHNLVGGFSCSCPDGFTGRACERDINECLQSPCKNGAICQNFPGSF
NCVCKTGyTGVFGKHCElNSYGFEELSYMEFPsLDPNNNYIYVKFATIKSHALLLYNDN
QTGDRAEFLALEIAEERLRFSYNLGSgTYKLTTMKKVSdGHFHTVIARRAGMAASLTVDs
CSENQEPGYCTVSNVAVSDDWTLDVQPNRVTVGGIRSLPILQRRGHVESHDfVGCIMEF
AVNGRPLEPSQALAAQGILDQYGDFISYCFKEKKCKKVCFTVTPDTALSLEGKGRLDYHM
SQNEKREYLLRQSLRGAMLEPFGVNSLEVKFRTRSENGVLIHIQESSNYTTVKIKNGKVY
FTSDAGIAGKVERNIPEVYVADGHWHTFLIGKNGTATVLSVDRIYNRDIIHPTQDFGGLD
VLTISLGGIPPnQAHRDAQTAGFDGCIASmWYGGESLPFSGKHSLASISKTDPSVKIGCR
GPNICASNPCWGDLLCINQWYAYRCVPPGDCASHPCQNGGSCEPGLHSGFTcSCPDSHTG
RTCEMVVACLGVLCpQGKVCKAGSPAGHVCVLSQGPEEISLPLWAVPAIVGSCATVLALL
VLSLILCNQCrgKKAKNPKEEKkPKEKKKKGSEnVAFDDPDNIppyGDDMTVRKQPEGnP
KPDIIERENPYLIYDETDIPHnSETIPsAPLASPEQEIEHYDIDNASSIAPSDADIIQH
KQFRSHTPKFSIQRHsPLGFARQSPMPLGASSLTyQPSYGQGLRTSSLShSACPTPNPLS
RHSPAPFSKSSTfYRNspARELHLPIRDGNTLEMHGDTcQPGIFNYATRLGRRSKSPQAM
ASHGSRPGSRlKQPIGQIPLESSPPVGLSIEEVERLNTPRPRNPsiCSADHGRSSSEEDC
RRPLSRTRNPADGIPAPeSSSDSDShESFTcSEMEYDREKPMVYTSRMPKLSQVNESDAD
DEDNYGARlKPRRYHGRRAEGGPVGTQAAAPGTADNTLPMKLgQQAGTFNWDNLLNWGPg
FGHYVDVFKDLASLPEKAAANEeGKAGTTKPVPKDGAEAEQYV*

Figure 7

Proxy SNPs (chromosome position/strand/rsidsequence)

chr4 126347460 + rs6842220

ATATTCCAGAAAGATCACATTTTGTCAATATTATTTGTGGGAATGTATGATAGAAAAGTTTGCCTTGTCTGTTAT
GATCAACATTTTTAATAATGAAAAT[C/T]GCTTGAAAACCTTTAAGGCCCAATAATTCTATAAATCAAATCATG
CTAGAGTTGCCTTCAATTACCAGACATGAAATGCATTTGACTTAATTTTATTTT (SEQ ID NO:10)

chr4 126359002 + rs7656978

ACATTAAGAGTAGAACCTTGGGAATTAAGTTGTGTGGAATTGAATCCTGACTCTACTATTACTATTGCATTAGT
ATGGGCAAATTAACATTTCTGGACCC[A/G]GTTTTCACTGGATTAAGCAGAGTAATAATGAACTAACTTTAAA
GAGAGTAAGTAAAATAATTTAAGTGAGCTGGTTAGAATAGCACCAGGAACAAAAA (SEQ ID NO:11)

chr4 126352482 + rs13141820

GAATTACAGCACAATGTGTATATCAGAAATATTCAGATCTTCTTGAAATCTCACTGTAAGTCTTAAATACCA
CATTTAAAAATGTCCAATTTACTATG[C/T]CTCCATAAAGCTGTGAATTTTTAGAGAGCTAAATGTCTCATGTA
TTTTTACCACAAGTGAATCATTGAGATGAATTATTATTCAAAATATTTTCTGAA (SEQ ID NO:12)

chr4 126353466 + rs10021618

GCAGTACCTTCCAGCTTCTTGTCACTGGTAAAGACTCCAGGGCTGCTTTACATGGGTCACATCTCAGTGACATT
CCTCACTAGGTCTGTGGCCTTGAAAA[A/G]GCTACTTAACTTTCTAACTTGAGCTTACTCATATACCAAATG
GAGATGACAGCAGTGCTGATTTATGGGGATTAGATAAGACAGTTTATGTAACTTC (SEQ ID NO:13)

chr4 126343279 + rs11931967

ATAAATGAAACATTCAACTGCTATTTTTCTTTCCCAAATAAATAAATGTTTGAAAACATTTTTAAATGAAGCCA
AATTAAGTGGAATCAGTAATTTCAA[A/T]ATTGGTATTTTGAAAATAAGCTTAAATTTAGACATTGTTTAAATTT
AATTGTTAAATAAAGAAGATATAAAGAATTTGTTAGGCTTTATGCCTAGAAGAT (SEQ ID NO:14)

chr4 126349342 + rs28694074

CAGGAGTTCGAGACTAGCCTGACCGACAAGGTGAAACCCCGTCTCTACTAAAAACACAAAAATTAGCCAAGTA
TGGTGACACATGCCTGTAATCCCAGCT[A/G]CTTGGAAGGTTGAGCCAGGAGAATCGCTTGAACCCGGGAGG
CGGAGGTTGCAGTGAGCCGAGATCACACCGCTGCTCTTCAGCCTGGGCAACAAGAGCGA (SEQ ID NO:15)

chr4 126357469 + rs35589914

GGACGTGAGATCAAATGAAAGAGAGAAATCAGAATCATCTAAGTTTTCCACTCAAACACCTAGGCAGATCATG
ATATGATATCATTTACTGAAATGGGT[A/G]CATTGAAGGAGGAACAGTTTTGTGAGAAGTCAGAAGTATTCT
ATTTGAATACAGTTTCAAATGACTGTTACTCATTCATTTAGAGATACCAGTTAGGAAG (SEQ ID NO:16)

chr4 126359365 + rs17803313

GCAGATGCTGTTTCTTAGACAGTATATAGAATATTACCAATCAGATATAGGGAAATTCTCTTGATGAGATGTA
TAAATTCCTGAATATGAAGTTGAATG[C/T]TTACAACTTGATCCTGTCTTCCATTGAGTCATTCATTTATTCTA
TAATAAAGTAAATGCTGTGATGACCTGCTGTTTTTTCTAGTGCATGTAAAGA (SEQ ID NO:17)

chr4 126353280 + rs7677254

AGAAATTTAAATCTATGCCAAGATTATTGTGCTCAAATGTCCACAACTTAAGCTGGCCAGTAGTGAAGGT
CCCTCCCTGTTGGGCTCTTCACCTCC[C/T]GCCTGGTGCTCTTCTAGGCTCAGCGACAGAGCTGCTGTCCAG
ACCCCCAAAGCAGCGCAGGAAGCAGCACTGTTCCCCCTACTGGCAGTACCTTCCAGC (SEQ ID NO:18)

chr4 126345585 + rs28453293

ATGGTTCTATAAGGGCTTCACCCACTTCACTCTGCACATCTCATTTTTCTCTCTCCTGCTGCCTTGTGAATAAG
GACATGTTTGCTTCTGATTCTGCCA[C/T]GATTATAAGTTTCTGAGGCTCCCCAGCTCTGGGTTAATTGTGAG
TCAATTAAACCTCTTTCCTTTATAAATTGCCAGTCCCAGGTATGGCCTTATAG (SEQ ID NO:19)

chr4 126359456 + rs1395241

AGTTGAATGTTTACAACTTGATCCTGTCTTCCATTGAGTCATTCATTTATTCTATAATAAAGTAAATGCTGTG
ATGACCTGCTGTTTTTTCTAGTGC[A/G]TGTTAAAGATTCAATGCAAAATGCTATCCTATGCTTGTGAATTATG
CTTGTAATTTGGTCTAGAAAAATTGTATTCATACTCTCAAAGTGTGTTTACAAA (SEQ ID NO:20)

chr4 126361331 + rs9307564

TATTCTTCTCATATCATCTTTTTACTCCTAATATATTCTTTCTTTACAATATCTGGTACATAACAGTGGTTGTCA
CTTAAATAAATGCATTGAATGAA[C/T]GATTTTAATATTCTCTGGAATGGCTGCTTTTACTCATTCTATTTTTACT
ACAACATTCTTGAAAGCTTCACAACCTGTTTTCTCTGACCATTATTCTG (SEQ ID NO:21)

chr4 126361095 + rs9307563

TTTATTTGCCTCCCATGGCCTAGGAAAGTCATTTTAGTGCCTCAAAGGCTTAGTTTCTGCATCAATAAAAATGA
ACATAAAAATTTATACTTTACAGTTT[A/G]TGAGACAAACATTTACTAACCACCTACTATGTATCAACAGTATG
TATGGAATCAGTTAATATCCATAAATGTCTCTGGCATAATTATTAGGACATAGAA (SEQ ID NO:22)

chr4 126319493 + rs7697927

GATACGAGTGGAATAGAAAGAAAAGATGTATTTTTCTCCATTAAAGGTTGAGCGTGGACTTTAAAGGGG
GAAATTCTGAGTGATTCTTAAACAACA[G/T]GTGAACTTTTTATTTCCCCAGACATTAGTTGCCAATATGTA
AACATTTCAAGCAAGAAATTTATACCACCTCCTCTGTTTGTGAGGCAGCATTTAATG (SEQ ID NO:23)

chr4 126333397 + rs4623022

TGAGCTTAGTATTTTTAGTATACTTCAAATATTCCGGGAGAAATTTGAGTTTTGCTATGTCTGCATGTATTTTT
TAGATGTAGTGTATGTGGCCAAAGT[C/T]ACTTTTTAGACTGTGAGAAATGAAAAGTTATTTCTTTACAGTA
AAGTAAATGCAGATGGATTCCATGACCTGTAATTGCAGCAATTAATTTTCAGTTC (SEQ ID NO:24)

chr4 126343978 + rs2136345

AGTAGGGCACTGCTGTAAAAATACCAAAGTGACTTTGGAAGTGGGTAAGTGGCAGAGACTGGAACAGTTTGG
AGGGTTCAGAATAAGAGAGAAAAATGTT[C/G]GAAAGTTTGGAACTTCCTACAGACTTTTTGAATGGCTTTGA
CCAAATGCTGAGGTGTTATGGAAAATGAAGTCCAGGCTGAGGTGGTCACAGATGGAGA (SEQ ID NO:25)

chr4 126348639 + rs11098812

ATATAGTGTTTTTGATAGATTCCTATGCAAAAATAATGAAAAAATATTAAGTGTGTATATATCTAATTTATATA
AGCATATATGTAGAACTAATTAGCA[A/G]CAATACATTATTTTATAAACAGAATTTTAAATACAGAAGTGT
TGTTAATATTTAAATTGTTACATACCTTTGTTTTATGTATTTTTGTATTCAA (SEQ ID NO:26)

chr4 126354307 + rs1395233

ACTAGGCCACGAGTAATTACAATCTAAGAACATAGAAGAATGATTGAATAGTGGTAAAGGAAATACCAGCAA
ATCACTTGACTATTAGAAAATAATATGG[G/T]AAGGTTGTGAATCTCAATACCATTCTGTGATAATGAGGGCAC
TCCATAAACATTTTACAAATAAATGAATGAGTGGCTTTATTACAGAATATTGAATGG (SEQ ID NO:27)

chr4 126362855 + rs17803397

AGCAAAGCTGGAGTCAGTGAATTAAAGGGCAATGGCAGAAGTATGCATCAACATGAGCATCTCTTGGCTCTG
CTTTAACAATTATACTTCCTCCTCAAA[A/G]TCTTTCAATTCCAGTTTGCCTATGGTATAACCCCCAGTCTTCAA
ATTCTAGTCACCCATAAATGGCCCCAGCTAATTCTGCAAACTCTGCAACATATG (SEQ ID NO:28)

chr4 126368878 + rs13108706

AAAGATATTTTACTTTTGTTACCGTTTCTTCTGTAGGGGTGAGAGTGCAGGTTTGGGAATGGTTTCTGAATGAG
TAGATTGAAAATATGTCCTTATGGCA[A/G]CTTTTCTGCATATTTTACGACAATCTGTTTCATTGGCACTCAGT
CTAAGCACTAACTTTTGGAGTCCAAGTTGAGTCCATTATCCCTCAATTCTTATTT (SEQ ID NO:29)

chr4 126307341 + rs13146586

GTTACCTCCTTCTTAATTTGCGTGTGTGTGTAACAATAAAATGTACTAGTGCAATGAACAACTGGTTTTTACA
TCATTGAATAAATGTACATTAAATG[C/T]CTTCTGTACCCTAGGCGTTATATTGAACTGATCTAAATGTTTAC
TGTTTGAACTTAGAAAAAGAAGCAGGCTTTCTGAGTTTTGTTTGTGTTTGTGTTT (SEQ ID NO:30)

chr4 126302984 + rs7669346

TGACTGTCATGAAAGATTTCTCTGTAGCATTCAATACTGTTTGAGAGCATTTTACACATAGTAGAATGTCATTC
AAAAGTGGAGTCAATCCTCTCAAACC[C/T]TGCCACTCTTTATCAGCTAAGTTGATTTATTATTCTAAATATTTT
GTTGTCATTTCAACGGTATTTACAGCATCTTACCAGGAATAGGTTCCATCTCA (SEQ ID NO:31)

chr4 126325798 + rs62322574

ATTTGATACGCTTTTATTTTATTTTATTGTGATAAGAACATTAATGTGAGATCTGCCCTTTTAAAAGATTTCTAA
ATGTACAATACAGTATTGTTAACT[A/C]TAGGCACGATGTTGTACAGTAGATCTAGAAATTATTCCTCTTGCAT
AAGTGAAGATGTATACCCATGGCTTATAAGCTCCTGATTTCTCCCTACTGTCTG (SEQ ID NO:32)

chr4 126316472 + rs1986721

TATCTAAGGAACTGTGGAGTAGAGAAAAGGGAATGGGCAATTAAGGAAAAATATCTAGATTTTCAAGAAATG
GAATATGAAGTTATTCACTTTTCTTTT[A/C/T]ATTCTTTTTTGAGACAGAGTCTCACTCTGTCGCTGAGGCTGG
AGTGCAGTGATGCCATCTTGGCTCACTGCAACCTCTGCATCCTGGGTTCAAGCGATTC (SEQ ID NO:33)

chr4 126310531 + rs4349616

TTAAAAACAGAATTATTCCAATTCCTATTTGTATGTTACTTCATCAAATATTACCATTATATCATGTTTCTTGTA
CTAAAGTGTTTCTGTGAAATAAC[A/G]TAATAAAATGGCCTTTAGTATGCATGATAATTTTAAATACGCATT
TTCTAGTAAAATATAATGCTTATTCATTTTTTCTTCTAGTTCTAAAGAAAAAA (SEQ ID NO:34)

chr4 126308245 + rs885272

AACCTAGATCCTTCGCATGCACCATTCACAATAGGGTCCACCCTTCTTTGAGAATCTAATGCCGCAGCTGATCT
GACAGGAGGCAGAGCTCAGGCAGTAA[C/T]GCTCACTTGCCCGCCCCTCACCTGCTGCTATGGGCCGGGTCC
TAACAGGCCACAAACCAGTACCGGTCTGTGCCAGGGGTGGAGACCCCTGTTATAG (SEQ ID NO:35)

chr4 126312920 + rs1509292

AAAGAAAAAATAGTAAGTCATTATTATGAGTAGTTACTGAATTATCATAAAATATCATTTCATACATAAAAA
TTATATATGATAGCATGTTCCACAC[A/C]AAAACTAGGAAATCAATAGGTTTGAATTGCTTTAAATATCATT
GTAATAGTGGATAACTTTGATTAATACATCTTTATATGCCAGTAGAATGCCTATGT (SEQ ID NO:36)

chr4 126313149 + rs1912044

TTAATAAAAATGTAAAAATGACCTGGATTTGCTTAAAAACAGAAATATTTCTAGAGGAGAATTTACATGCTAG
ACATGGATAAGTTGTCAGAATGAGCAG[A/G]ACACATTATTGCTCTTGAATCTCAGAATATAGAAGTCTCTA
ATTTAAGTAATATAAATGATCTTCAGTATCCTGAAGATATTTGCAATTACCTATGTTG (SEQ ID NO:37)

chr4 126300866 + rs6855908

CACCATGTCCAGCTAATTTTTGTATTTTAGTGGAGACATGGTTTCACCATGTTGGCCAGGCTGGTATTGAACT
CGTGACCTCAGGTAATCCACCCACCT[C/T]GGCCTCCCAAAGTGCTTGGATTACAGGTATGAGCCACCGCGCTT
GGCCAGACATTGATATTTAACTCTTTCTTAATCAAATTTGAACTTATTCATACC (SEQ ID NO:38)

chr4 126297735 + rs34874968

AGGAGAAATACCTAATGTAAATGACGAGTTAATGGGTGCAGTAAACCAACATGGCATATGTATACATATGTAA
CAAACCTGCACGTTGTGCACGTGAACC[C/G]TAGATCTTAAGTATAATTAATAAATAAATAAATAAATAGGCCT
GGCGCGGTGGCTCATGCCTGTAATCCCAGTACTTTGGGAGGCTGAGATAGGCGGATCA (SEQ ID NO:39)

chr4 126295062 + rs1396694

TCAATAGGGCTACGGCATTTCATGCCTTCCTTTAAAAATTAATTGAGGGCAAGAAACCATTGTTTAATATGTAAT
TTCAAACATCTAGATGAAGAAAATAT[A/C]TGATTAGAAAATAATAAGGACTATGTATATATGATTTCAGACG
ATTCCTATTTAAATAAATTAGGATAAATGACATATTTGTTATAGGGTGAAATGTT (SEQ ID NO:40)

chr4 126270636 + rs7697665

AGAGTTTCAAATGAGTTTGTGAATGGATATCATACCTTCCACAAATGACAGAGATGGACTATTAAATCAGAG
TTGGTAGTTTTTGTCTTTGTTTACTGT[A/G]TTTCTCATTACCCCTAAATGGTCCTATCTATAACAAGCTTTGGAA
AAGCACCATGCACCTGAAATTCTTGCACTTCTGATGTTTCATACCTAGAGAGATTTA (SEQ ID NO:41)

chr4 126272004 + rs9307560

GCTGATTTCTTGAAAGTACTCCCTCCTCATTCTCTACAGTAAGCCATTGAATGTTACTAGGGATGGACACTAA
GCAGAAAGATTTCTGAGTATCTATT[C/A/G]TCTTCCCCAATCAGACAGTCCTTTAAATTTAAAGAAGAATGCCT
GACCCTTAAGACAGGGAGGTTTCATCATATTTCCATTCTGACAGTTTGAATGAAA (SEQ ID NO:42)

chr4 126270451 + rs10032352

CATTTGTTTTGAATTTTCCAGTATATTAACAATGGCTAACAATTATAGTTGAGAGAAATATATTTAGGAAAA
GTAATGCATTATTCAGCATTCTATTA[A/T]CTATACTATATTAACACATGTGTTATGGGCTGAAATTACACCACT
ATCACATGAGGGTAAATGGGTTGAAAGTGTAAGTTTAAAGAGTTTCAAATGAGT (SEQ ID NO:43)

chr4 126338088 + rs6534478

CTACTCAGAAGGCTGAGGCAGGAGAATCGCTTGAAACCAGGAGGCGGAGGTTGCAGTGAGCCGAGATCACA
CCACTGTTCTCCAGCCTGGGCAACAAGAA[C/T]GAAACTCGTCTCAAAATAAACAATAAATTAAATAATAATA
ATTTCTTCATAATATGAGTATGAAGTATTTTCTGTTTGCCATTAAATGAAATATTTGTT (SEQ ID NO:44)

chr4 126282761 + rs1396685

AGAGGTGATCTGACAAGTGTTCAATCAAACCTTGATTGAGACTGTGCTAGATGATATAAAAATAC
ATATGCCCTAACAGGGAGGATAGGCAA[A/C]CAAACAATTAATTTTAAATTTGTGAATTTACAACTGTGGGT
TATTATATGCTACAGAAGCCACACAGAGAAAGAGTTATTTGCTCTGTTTCAGAAAATA (SEQ ID NO:45)

chr4 126281130 + rs17193280

TCCAGCCTGGATCTCTGGGAGGGAGAGTAGTTCCAAAGATTACAGTGCTTAATCTTAACCTCTGAAAACACTA
CTTATTGACTCTCCACTGGATTCCACT[C/T]GCCCAAATCCCTAGATGGATTTCCCTCAGGATGAAACAACCT
AAATTCAAGTGTCTAACTGTCTTCTCCTCTCCCTCCTGCCATTGCCTTTCCTTGTT (SEQ ID NO:46)

chr4 126281923 + rs2663251

TACTGAACAATAATACATATGCACTTAATTGTAGTCATCCCCCTGACTATACTCACAAAACCTTAACATG
TCTTTAGGGGAGGAGGATGGATTGCAGATAT[A/G]CTATTAGAGGCATAGCCATCTTACTTCATTAAGTTT
AGTTTACTAAAATTTGCAAAATGTTTAAATATGGTCTTGCTTAATTTACAAATTCTGGGA (SEQ ID NO:47)

chr4 126280485 + rs62321342

TAGTCAGGTGGAGATAATTCACCCACGTCTTAAGGCCAAATGGAAAAATCTTCTTACTCTGGAATTAGGTG
GTTAAGTATCTTGATTTTAATGGATGT[C/T]GTTGTTTTCTTAATAATTGAGTTATTTGTATTAAAATGCTAACT
GGCAATATATGCCGATGGCCAATTTACCTCAAATATATTGAGTTCATACATATT (SEQ ID NO:48)

chr4 126278969 + rs62321341

AACTGCTGGCATGTGCTTTGTGAATATGTTTGAATCAAGGGCCTTTACAAAGGGCTCAGACCTTCCTCTAGG
GGGTTGTCATTTACCGTGGATGCTCT[C/T]GTTTGTGTGGTAAACAGCCTCAGAAAACGTCTTGACATTGTCA
ATTCCAACAGATTAATGAAGTAACTGGGCCATACATCCCTTCCCCTTACATATGA (SEQ ID NO:49)

chr4 126279303 + rs2663295

GGGCGGGGGAAGTCCAGTGTGATTATAAGTGAGTATATAGGAAAAAAGAAATGAAATTAACCTTTTTTCTT
TAGAAATCTTGTGTTTAATTTTATGTT[C/T]CAGTGTTTTAAATAACTGAAACCTTATTATGGACAAATTTACCTG
TTATGTTAGGAGAAATGAGTTTCATTTACCATCTTCATCAGCGATCCCCAACCTT (SEQ ID NO:50)

chr4 126280623 + rs2710556

GCTAAACTGGCAATATATGCCGATGGCCAATTTACCTCAAATATATTGAGTTCATACATATTCATTAAGTGGG
ATATTTTGGAGAATATACTGCTTATA[C/T]GTTCAAATGCAAATAATTTAATTCGCTGTGATTTATAATACTGTT
ACTCAGTAAATGGACTAAAGGCAGGGTAAGATTTATCAGTCTTAAAAATGTAAGT (SEQ ID NO:51)

chr4 126280021 + rs2710559

TGGGGACCCCTTATCTACATCCACGTTTTCTATGTTTGTGAAGATTTGATGTGGGGTTATGGGTTTGAGGAGCT
AAAAATTATAGTTAGTAGAAGGAAAG[A/G]CAGCTAGAAGTGGAAGTAAAATCACTTACATTGTACTTTTAC
TAGGACCTATATTGTAGGTATTATAAATCATACAAACAAGTTTGTTATACAAAACAT (SEQ ID NO:52)

chr4 126280006 + rs2710560

CTGTGGCCCAGGGGTTGGGGACCCCTTATCTACATCCACGTTTTCTATGTTTGTGAAGATTTGATGTGGGGTTA
TGGGTTTGAGGAGCTAAAAATTATAG[C/T]TAGTAGAAGGAAAGACAGCTAGAAGTGGAAGTAAAATCACT
TACATTGTACTTTTACTAGGACCTATATTGTAGGTATTATAAATCATACAAACAAGTT (SEQ ID NO:53)

chr4 126277240 + rs2940782

GTTCCTGTCGGCAGTGTATCACAAGTATTTCTCAGTGGCCTAACAGACCCTGAGTGGAAGGCTGGT
AAAAGCAACCTCGTCTGCATGCATCA[C/T]TTTGAATGATTTCAAAGAGGAAAGAAGCAGCTGTGACAATGTT
CACATGAACCACTCAGAGTGGCCTTATCTTTGTAGTCTAACATAATAGTACACCCT (SEQ ID NO:54)

chr4 126275098 + rs2036725

GTGAAGTTTGAGAATTTGCAAAGCCATAATGATAGAATCAACCCAAAGGTCCCAGAAATTTCAATAATCTAT
CATCCTTATTTAAAATTATTATACAAT[A/T]AAAAATTGTGTTTTAATCGCATGAGTAGACAGATGTTTATGCTG
TTATTCAGCGAATCTTGCAAAAGTGAGTGTAAATTCATAGAATAAAACAATGTTGGA (SEQ ID NO:55)

chr4 126408586 + rs17009825

AATATGTTTTACAGATTAAGAATGGCAAAGTATATTTTACATCCGATGCAGGAATTGCTGGGAAAGTGGAGAG
AAATATTCCTGAAGTATATGTTGCAGA[C/T]GGCCACTGGCACACTTTTCTAATTGGGAAAAATGGAACAGCA
ACAGTATTGTCTGTTGACAGAATATATAACAGAGATATTATCCACCCTACTCAGGACT (SEQ ID NO:56)

chr4 126280338 + rs2710558

ATAGAAGCAGCAGCATAAATATCTATATAGAATTAGCCAGGTTCTAGTCTGGCACATCATCACATAGTAGCAC
ATTTAATGCCCCAATTATTCTATGAT[A/G]TAGATACTACTAGTTTCCCATTTTCTAATGAGAAAAGTGAGT
CATAGTCAGGTGGAGATAATTCACCCACGTCTTAAGGCCAAATGGAAAAAATCTT (SEQ ID NO:57)

chr4 126297549 + rs10011289

ATTTAAATTTAAATCAAACAGTTCTCACTGAAATAATTAGGGGTAAAATGGACCTCTGTTGATGCTATTTGAAA
AAACTATTTGAACAATGAGAACACTT[A/G]GACACAGGGTGGGAAACATCACACACCGGGGCCTGTCGTGAC
CGGGGCCTGTCGTGGGGTGAGGGGAGGGGAGAGGAATAGCATTAGGAGAAATACCTAA (SEQ ID NO:58)

chr4 126423687 + rs1395227

ATTTCAAAGCTTATTATTTTCCATTACTACCTAACACTTGTGTATCTTCTTCAGCTTCAAAGAGTTTTCAGG
TGAGTTATCTAATTTGAACATTAC[A/G]TTACATCTGTGAGGTTGATTACAGAAAAGTAATTAACACATTTAG
AGAAAGGAAAACATAAATGAAAAGAGACTTACTCAAAGTCACAAAGTAACGGTG (SEQ ID NO:59)

chr4 126422859 + rs9995724

AAATAACTCATACAATTCACTTTAAGCTGTTTCTTTGATATGCAATTCTTAGCCATTACTCTTTGAGCCTGTCGTA
CTACTGTCATTATTATCATTATTT[G/T]TGACCCTGCCTTTGCAATCCGCATCATTACACATTCTTTAGTTCAAA
GTGGAGAACTAATGTCTTCTGCTTCAAGCGAGGCTGTCTTGTCAGCTCTTT (SEQ ID NO:60)

chr4 126314379 + rs13146027

AACAAAAGATTGTTTTCTTCTTTATTTGAGAACCATTTTATGTAGATTGCAGGAAGGTTGTGAATTAAATAT
GTTTAGATTTTTTCATTCCGTTTCATT[A/G]AGAAACATTTGATTTAAGCTGCAGAGAGGATATGCATTTAAGAA
TATGTTTAGAATTGTGGTTGAGGTGGCAACCACCATGCAATTATCAGTTTATTAAC (SEQ ID NO:61)

chr4 126318288 + rs13136889

TGCCAGTTGAACCTGTATGTGGGACTGGAATTCTGATTTTTAAAAATACCTTTTCTCAAAGCCTTTCTCTGGCTC
TAAGAAGCTTCCAGATCTGTCCTAA[C/T]AGCTTGAAAACCAAGATCTTGACTTTTTATAGAATACTTCACTCTG
TGCCAGAAACTGTGTTAAGCATTTTCTTTACCTATATCATCAGGATTTAGTCTT (SEQ ID NO:62)

chr4 126292769 + rs2663256

TC TGCTATAAGTGCTATAAGTAATAATATAGAAATAGTTGACCTCACAGTTAATTTATTAAGCAAATAGTGGAG
AAGATGCTAGTAATTTCTAGACCTTG[C/T]CTCAGGGGCTGTGAATATAGGAGGGGATAAGATAAAAAAGTGG
CTCTTTCATTGGAGTATCAATTGTGGGGAGAGATTGAATATCCTCAATAATATCTTAA (SEQ ID NO:63)

chr4 126270773 + rs7676058

GCTTTGAAAAAGCACCATGCACCTGAAATTCTTGCACTCTGATGTTTCATACCTAGAGAGATTTATGGTGACATA
AGCAGCCAAATAGCACAAGTGAAATT[G/T]TATATGAAGTATATGACATGCATGATTCAATATATATGCCCACT
TTAAATATACCAATAGTATATTTGGACTATAATAATGAATTCATTTCAAATATTG (SEQ ID NO:64)

chr4 126286443 + rs2663252

AATAAATTAGTTCAGGACCTTGTTAAATGTGAGGTCACTCTGAGATACCAAGTGGAATATCCAGCAGGCAGAT
GGATATGTGAACTGGAGCACAAACAGAG[A/T]AGTCTAGATTAATTTGCATTTGGAGTGTAGTATCCATGAA
AGTAGCCACGAGCTTGATATGTTGTCCAAAAGAATGTGGACTCTCTTCATCATTC (SEQ ID NO:65)

chr4 126286314 + rs9307561

TTGATGACGAATTGAATGTAGATGTGGAAGATGATGGAAGAACCAAGGAAGATGGCTTAGTTTCTGCCTTGA
GCAACTAAGTGGATGATGAGTTAGGGAA[C/T]ACCGGATGAGGAGTCATAACAAGAAGACAATAAATTAGTT
CAGGACCTTGTTAAATGTGAGGTCACTCTGAGATACCAAGTGGAATATCCAGCAGGCAGA (SEQ ID NO:66)

chr4 126287648 + rs2952841

CTCCAGCTCCATCCATGTTCTGCAAAGGACATGATCTTGTTCTTTAATGGCTGCGTAGTATTCCATGGTGTGT
ATGTACTATATATATATTTTTAATC[C/T]GGTCTACCATTGATGGGTATTTGGGTTGATTCCACGTCTTTGCCATT
GTGAATAGTGTTGCAATGAACATAACATGTGCATCTTTACAATAGAATGATGC (SEQ ID NO:67)

chr4 126296175 + rs2710582

ACACATAGAAAAAATGTAGGCTTGTTAGCATCAAGTAAGTTGCCAAATATGATATTGCCCTTATATAACTTG
AATAACTTTAGGTGTTACTTAAATTC[A/G]TAGGCACATATTGGCATCTTCAGAGCAAGATGAATTAACACTCT
GGAGTTTTTATTTTATTTATTTAAAAATAGATTATCACTTGAGAAAAGACAGCATC (SEQ ID NO:68)

chr4 126369279 + rs6846428

ATTGGAAGATATTTAAGACACACTAGAGCAACGGTATCATTGCATTGGGTAGAGGCATAGCACTTTGCAGAG
CTCGCATATTATGTTTCTTGAATGTT[G/T]TTTTATGTGCAGATTTTTCTCCTAGAACTATGATTTTTGAACGA
TTAGCAAGTTCTTTCCCTAGGCTTCTCTCAAAGGCATACTGAAAAGTATTAAAT (SEQ ID NO:69)

chr4 126351995 + rs17009641

GGAGAAAGTTCTTGGCTTGAAAACAGACTCATATAGATGTAGAATCACCTATGGGGCTGATCGTGGCTTAAG
GATCATCTGCCAGTCTTGAGAATCATTT[A/G]CTAATCTCAAGGATCAACAAATGATCCTCAAGCCAGAATTGT
CTGTTGTCACCTGAGTGCTTTGAAAATCATCTGGAAAATAAGTTGATATTCTTTGGT (SEQ ID NO:70)

chr4 126368263 + rs13129279

GTTTTCAAAAAGTTTAATAAATGGATAATTCTTGTTAATATTTATTTTATTCCAGGTTTTACAAATGAAAAGTGT
TCTGTTAGCAAGTTTATGGATCCAT[A/T]TATGAATCATTTTCATATTGACAATATGCATTTATCCTTCTGTATCT
CTTTAAATTTAGTTTGACATTTGCTAAGAAAGGCATACTCTAAGAACTGCACA (SEQ ID NO:71)

chr4 126294586 + rs62321346

TTTTTATGTTGTTTTATCTTAATTACTCTAACAGAGACAAATTCATCTAAAGAGGTGATATCTAAAGGAAATG
TAGAGATCAGAATATAGGACAGATT[G/T]TTTTAAAAAGTTTGATATTTATTATTAGGTGCCTAATAAATGCTC
CTTCTAGTTTATGAAGCTTTATTTCTAAACTATAATCTATGTTTATGTGTGTTT (SEQ ID NO:72)

chr4 126291032 + rs6854625

TCCTCCAATCGGCAAGCTCCAGGCCACCACTGTTCTGCTTTCTGTTCCCATGAAGTTGACTACTTTTGCTAACTG
ATATAAATGGAATCATACATATTTG[C/T]TTTTCTGTGTCTGGCTTATTTTACTTAGCATAATGTCCTCCAGGTA
GATCCAAGTTGTAGTAAATGTCAGAATTCCTTTTTTTTTAAAGACCGAATAGT (SEQ ID NO:73)

chr4 126293819 + rs62321345

GAACATATTACTGGTGAATGGGGAAGCTGGCTTAAAAAAGGGAGGGTCTTCTCAGACAGTTCTCTTTTAC
ATACGTGGCACAATGATTCATGATTTG[C/T]TATATTGTGAATGTTGAATGTGGAATATTTATAGGAATGCAAA
TCACATTTCTTTACACAATAGTATTAACTGATTTCAAAGTGTTTTGATATATGCT (SEQ ID NO:74)

chr4 126284351 + rs6817722

AATTATCAAATCATTTTTACAACAATAAAATTGTATACAAGGCAAACATGTACATATATGTGGGTGTCCTT
AGGAATAAATGCATAATTTCAAAGAC[A/G]TGGAAATTTGTAAGTGTTAGTCATGTTCTCACCTGTAATAAAGCA
ATGTGTTAATGAAATTGGGTGCTTATATATATTTATATATAATTTCTTAGTTTGAG (SEQ ID NO:75)

chr4 126275717 + rs79129861

TCTTTGCTGATGGAATATTGAACACGCTCTCACTCTGATGTACAGTTATAGTGTATACTAGGTAAGAAAAGAG
AGTCCCAGGCCAATTTAAACAATGATA[A/G]GGTTTGCTTTTCTGAATTCTGAGAAGCTAGTTCAGGGGAAGA
AATGAAACCACAGTGTAGAGGGTCAATGGTGAAGGTGAAAAATTAGTATCAAGCCTC (SEQ ID NO:76)

chr4 126277903 + rs79626418

GTGACAAGACTAATATAAGTAGAATATAGTTGAGTTACAGAATATGTTGTAATAGTCTTTACAATGCACATCCA
ATGAACATCATATAGACAGATATTAA[C/T]ATCAATATATCTACACATAATTGATATATAGTATATATTATAATA
AATATAAGATATGATAATATAACAGATAATATAATAGAAATCATAGATATCTGTA (SEQ ID NO:77)

chr4 126278572 + rs78188548

CAGTCTCTCGATTGATAATAAAATTTGTCATTTTCTCAGTTAAATTGATACAGATTCTTGTAGAGCAAAAAGAC
CTAAAGATAAGATTTGGGATAGATTT[A/T]TACCTTAACCCAGGTAATAAATAGATTATTCGGGTACTTTAATA
GTAACAAAGGAATCAAATGGAATTTAATTGAAATGATTTTACTAATATGGTCATT (SEQ ID NO:78)

chr4 126280842 + rs74646069

TATTATCTTCTAATTATCCTTTTAAATCAAAAACATACTTTCATGTTGGTATGAGTATCATAACCAAAAGAGAAG
AGAAACTTCAAAGAGAAAACGAAT[C/T]AGTGGAGAGTAACTTAATTCAGAAGAAAATCGTACTTTCATAT
AAATTCATAGTGAAAGGTAACATGTGATACCAGCATTGAGGGAACAAATGCCCTT (SEQ ID NO:79)

chr4 126302971 + rs79145530

CTTTGATTGAGTCTGACTGTCATGAAAGATTCTCTGTAGCATTCAATACTGTTTGAGAGCATTTTACACATAGT
AGAATGTCATTCAAAACTGGAGTCA[A/G]TCCTCTCAAACCCTGCCACTCTTTTATCAGCTAAGTTGATTATTATTA
TTCTAAATATTTTGTGTCATTTCAACGGTATTTACAGCATCTTCACCAGGAAT (SEQ ID NO:80)

chr4 126308282 + rs78474635

CCACCCCTTCTTTGAGAATCTAATGCCGAGCTGATCTGACAGGAGGCAGAGCTCAGGCAGTAACGCTCACTTG
CCCGCCCCCTCACCTGCTGCTATGGGCC[A/G]GGTTCCTAACAGGCCACAAACCAGTACCGGTCTGTGCCCAGG
GGTTGGAGACCCCTGTTATAGACTAATAACCAACTGAAATAGAATAGCATAGCTATGA (SEQ ID NO:81)

chr4 126310980 + rs79031396

CATCAAGATGAGACAGTAAACTATTATTAGAGTTACCACAAGTTTGAACAAAGTTGATTATACATCGCAAACA
AATAAATACTTAAACCTTGTTTCATAG[A/G]GATCAGGCCTTGCTACCTACATAGTCCAAACATTACATTCCTG
ACATTTAGAACATTTAAATGCAAACTGTTCTTTGTTAGGGCTTCTCATAACTGAA (SEQ ID NO:82)

chr4 126322550 + rs74733937

GTTGTTGTTTTAGTTGCTTATAATAAATATTAATGCTTTAGATAAACCTTTGTTTTATTTCTACTTTATTCTCA
GCTCCTTACCTCTTAGCCAAATT[A/T]TGGGGAAAATATTTAAAAATTTCTCTCTTTCAAATCCTGGCTCTGT
TTTCTTCTTCATCTAGTTTGAGTAAGACTCGAGATTATGTAGGTCATCAG (SEQ ID NO:83)

chr4 126337327 + rs74829391

TTTTGAATTTTGTTCACAAGGATAATATCTGCACATAGTAAAAAACTAAAATGATGGAAATGTTTGAAACTT
CGTTATAAATATTGTTCTACTCTTTT[C/G]CTTCATATATTTAACTACCTAGGTGAAACTGCTCTAAAAATTTTT
ATGAAGCCTTCCAAAAATGCTGTGCATTAGCTTTACACATATTTTACACAAAT (SEQ ID NO:84)

chr4 126340181 + rs74340824

CAAGTAGCAGGAAATTATCAGGGAACTAGAAGAGTATACTTTAAAAAATGAATTCAGATAATTAATTTAGAA
ATGGAAGTATATCATGTAGTTAAATAC[A/G]TAGACTTTATAGTTAAACCCAGTTCACATCCTACCTCTGACAT
TCCCAGCTATATGACCTTCAACAACTTTACTATTCCCTCATGTTTGTATCTATGAT (SEQ ID NO:85)

chr4 126343877 + rs74856924

TGGGTCAATTAAACCTCTTTCCTTTATAAATTACCCAGTCTTGGGTATGTCTTTATTAGCTGCATGACAGCAGAC
TAATACAGGTTACTGATATCAGAGA[A/G]AGTAGGGCACTGCTGTAAAAATACCAAAGTGACTTTGGAACGGG
GTAAGTGGCAGAGACTGGAACAGTTTGGAGGGTTCAGAATAAGAGAGAAAAATGTT (SEQ ID NO:86)

chr4 126357601 + rs77217742

AGAA GTATTCTATTTGAATACAGTTTCAAATGACTGTTACTCATTCATTTAGAGATACCAGTTAGGAAGCTGGA
GATATGAGTGTGGAGCTTAGGGTTGG[A/G]GTTAGGGCTGGATATACACATTTGAGAGTCATCAGTGTTTAG
AGGACATTTAAAACCAATAAACTGAATGAGAACACGTTTGC GGAGTGTATTAGTCTGT (SEQ ID NO:87)

chr4 126359840 + rs74501747

TTAAATGAAAATTGAAGCTATTTTTGTCTTGTGAATAAAAAACATTCAATTCATTGCAAATTAACAGGGCAA
ACAATTATTGCAGCTTAAATAGAAAA[C/T]ATTTTCACAGACAAAGTAAATAGTTATTATAACCTCAACTTTATT
TACTCTGGTTTGATAAAATCTTAATGGAATATAATGTATTTTATGGTTGGTGTTA (SEQ ID NO:88)

chr4 126364496 + rs79033360

GTTTATGCAAATAATTTGAAATAGTAATGTATTCTCAAATTAGAAAATAATTTAACGTGTTTATTGATTTTCATT
GAACTAAATGTGAACAAATTCTATA[C/T]TGACACAACCTGAGCAAGAGTCCATGTTGGCCTTCGCAATTGGTA
CATTTTCCGTCTTCACTACATTCCTCAGTTGAGTTTACCTTCCTTCTACTGTG (SEQ ID NO:89)

chr4 126369230 + rs76891791

ATAAATGGTAATGAACATGATTTTTGTTGACAAGATTACATATAAAGTGATTGGAAGATATTTTAAGACACACT
AGAGCAACGGTATCATTGCATTGGGT[A/G]GAGGCATAGCACTTTGCAGAGCTCGCATATTATGTTTCTTGGA
ATGTTGTTTATGTGCAGATTTTCTCCTAGAACTATGATTTTGAACGATTAGCA (SEQ ID NO:90)

chr4 126369554 + rs115240175

TGTGAACCTCGGAGAAAATATAGGAGATACTGTTCTCCCTAGTAATCATGAGAAAATAAGGTCACATCAAGCA
GCAATAGAGTGTCTTATATGCACTTAT[C/T]TGCTACCAAATATTTTATTTAAATTCCACGTGAGTATAACTGCA
CACTTTCTCTTTATAGGTTCCCTTGTCTTTCGGTTACAGTCACAGATGCTGATA (SEQ ID NO:91)

chr4 126381199 + rs115962084

TAAAAAAGCATAACTTTCCAAACCTGAGAAATATGCATTTAGAAGCTTTCTTTTGATTCTAAGTAAAATTATG
GAATCCTTTTCTCACACAAAAGACAC[A/C]GGTGTTTTAAATAATAATTTAAATTTAAATCTGTTTTCTACTAT
GTCTTTGAATTCAAGTATCTGCTATGGCAACCTCTGAGTTCATGAATTGTA AAAA (SEQ ID NO:92)

chr4 126381679 + rs141880214

CTCCCTCCTCCCACCCTCCACCCTCCAGTAGACCCCAGTGTCTGTTGTTTCCTTCTCTGTGTCCATGTGTTCTCAT
CATTTAGCTCCCACCTTATAAGTGA[A/G]AACAGGTGGTATTTGGTTTTCTGTTCCCTATGTTAGTTTGCTGAGGAT
AATAGCCTCCAGCTCCATCCATGTTCCCACAAAAGACATAATCTTGTCTTTT (SEQ ID NO:93)

chr4 126399393 + rs114235331

GAGATTACCAGAAATAAACTATTAAGGCAAAGCTAGGAATACTTTCTAATGTTTGTAACCTAAGTATTTTAA
TAACATTTTCTATTTGCCTTTCTTTT[C/T]CTACATGTTGTTACTGTTTTGTTACAAAGTCACACTAGTTCGTTATT
ATTATTAATCAAACAGTACAGAAAAACAAAGGATTGGGATTGCCACCATTGTT (SEQ ID NO:94)

chr4 126402260 + rs114783000

ATACTGATTATACATGATGATAAATTATATGTGATGATTACTGAAAATAAAGTTAGTTACCGATGTAAATACTT
GATTGAACACTTCTTTGTCCTAATTT[A/G]TAGCATACTAGAGACTAAAGATTACAAATCATTTTAACCATGCAA
ACGTATATTTTGAAACACAGTGAAAATGATTACAAACAAATTTTCAAGTACAT (SEQ ID NO:95)

chr4 126410669 + rs115415133

TGCTCCCCAAGAACCTATGTTCCACACCTTTGGTGTATTATCACCTTCAATGGGAATGCATGATTTAGTAGTTG
AAGCCATTGGCCTATTTTCATGTTCTT[C/T]ACAAATTTAAAAAATATATATTTTATTTGTATGTATGCAATTTTGT
GTATATGGGATGTAAAAAGGAAGGAAATTGATAAATAAATGAGTAAGAAAAAGA (SEQ ID NO:96)

chr4 126415682 + rs115572680

ATTATGACCTGAGAATTTTAATCCATCCCCTGTCAAGTTTTATTGGATTTCTGGAATACAGTTACTCTACTCTG
TAGAGGGCAGAGCAACTCCATCTTG[G/T]ATGCTCATCTTCCATGTCTACTTCTGATTAACCCAGTTCTGGGA
ATGCCTCTAATATTTCCAGTATATCTATAGTTCCTTATGTAAGAGCTTGACTAA (SEQ ID NO:97)

chr4 126419863 + rs78127669

TAAGTTAGCCTGTAAGTCTTGCTATTGCATCCACTTTTTAAATTTGTTCAACACCAGAGCTACTGTGTGCCAAGC
ACCATATTTAGATAAGTGAGAGATG[A/G]CTCTTGCTTCAAGAGGTTTGCAGTTTTTGGTGACTAGACTTTCC
CTTTCCAAAGTAGTTTAAGATTTGCATAGCTCTGTTTGCAGAGAATTATTTAAA (SEQ ID NO:98)

chr4 126420770 + rs148385122

CTCTATAATATTAATTTTCATATTACATCTTAAGACTTTCATTTAAGCAAATTACATAACTCCTAAAAGGTGCTGC
ATTGAGGCCAGGCACGGTGGCTCAT[A/G]CCTGTAATCCCAGCACTTTGGGAGGCCGAGACAGGTGGATCAC
CTGAGGTCAGGAGTTTCAGACCAGCCTGGCTAACATGGTGAAACCCCATTTGTACTA (SEQ ID NO:99)

chr4 126423297 + rs79771845

CAATAAATTTGTTACCTTTATATTCAGAAACCTAATTGAATCGGAGTAGACGAGGACTAAAAGCATAAGGAAT
AATAATCACTAATCTTCACTATTTTC[C/T]TTGTTTGTGTTGCAAATATTGTGTGTTGGCTGGTGTAGGCATG
GTGAAATATATGAAAATGATATTAATATAAAACAATGTCCAAGTCCTAGAGGCAAC (SEQ ID NO:100)

chr4 126343915 + rs115504303

TCTTGGGTATGTCTTTATTAGCTGCATGACAGCAGACTAATACAGGTTACTGATATCAGAGAGAGTAGGGCAC
TGCTGTAAAAATACCAAAGTGACTTTG[A/G]AACTGGGTAAGTGGCAGAGACTGGAACAGTTTGGAGGGTTC
AGAATAAGAGAGAAAAATGTTGGAAAGTTTGGAACCTCCTACAGACTTTTTGAATGGCT (SEQ ID NO:101)

eolf-seq1
SEQUENCE LISTING

```

<110>  Nestec S.A.
<120>  Biomarkers for predicting weight loss and weight maintenance
<130>  13771
<160>  101
<170>  PatentIn version 3.5

<210>  1
<211>  201
<212>  DNA
<213>  Homo sapiens

<400>  1
actcttcagt aacttgcaag agcagaccaa caaatgggca gttggatctg acagcccaga      60
ggcagcagaa agctttggac ggaagataaa gtaatagtaa rcattatgca gcacttcaaa      120
taggatgtat ccactacacg gtgggaaaca gtaatactcc ggagaacctc tccacacagt      180
taaaaggaag ggttacatca c                                          201

<210>  2
<211>  201
<212>  DNA
<213>  Homo sapiens

<400>  2
atacctttat ttgaaaacta aaatcaaagt atcccttgat gtcataggat actttgaaat      60
tatagataat catagttata tagtcataaa ttgaggaaga rtgagagagt agtagaaaaa      120
aatcatcaaa ccgtattatt tcatggagat ggtagttgt agtcagtatt tataattgat      180
ggctttttcc attactctgg a                                          201

<210>  3
<211>  201
<212>  DNA
<213>  Homo sapiens

<400>  3
cctctaactt ttggattgtt ggagggggag gaagaacttg atatgtatta ttttgagttg      60
cccctgacag atagcagtat ggcatggtaa gtgagaatgt rtagctatat agggtaggaa      120
aaggtattaa tagattcaga gaaataaaac tcccagtaca agccatacaa cagatcaata      180
tacattagct ttttactctt c                                          201

<210>  4
<211>  176534
<212>  DNA
<213>  Homo sapiens

<400>  4
gggagccagg accatggact tagcaccaga cagggctact ggccgcccgt ggctcccgtt      60
gcacactcta tcagtatctc agtccttcg agtgttttgg ctactgtcat tgcttccggg      120
gcaggcctgg gtccacgggg ccgagccgcg ccagggtgttc caagtgtctg aagagcaacc      180

```

eolf-seql

tccaggcact	ctggtaggca	ccatccagac	gcgccccggc	ttcacctaca	ggctcagcga	240
aagccacgcc	ctgtttgcc	taaacagtag	caccggagcc	ctgtacacca	cctccaccat	300
cgaccgcgag	agcctgcccc	gcgacgtgat	caacctggtg	gtcctttcca	gcgcgcccac	360
ctaccccacc	gaagtgcgag	tgctggtgcg	ggacctcaat	gacaacgccc	ccgttttccc	420
ggacccctct	atcgtggtca	ctttcaagga	agacagtagc	agcggacgcc	aagtcattct	480
agacaccgcc	accgactcgg	acatcggtc	aaacggtgtg	gaccaccgct	cctaccgcat	540
catccgcggc	aatgaggcgg	ggcgcttccg	tctggacatc	accctgaacc	cgagcggcga	600
gggagcgttc	ctgcatctgg	tgtccaaggg	cggactggac	cgtgaggtca	ctccgcagta	660
ccagctcctg	gttgaggtgg	aggacaaggg	tgagcctaag	cggcggggct	accttcaggt	720
aaacgtgact	gtgcaagaca	ttaatgacaa	cccccggtt	tttggcagtt	ctcactacca	780
ggcgggggtg	cctgaggacg	cggttgtggg	ttccagcgtc	ctccaggtgg	cggcggcgga	840
cgcgagcgag	ggcaccaacg	cggacatccg	ctatcgcttg	caggacgagg	ggaccccctt	900
ccaaatggac	cctgagacgg	gacttatcac	ggtgcgggag	cccctggact	tcgaagctcg	960
gcgccaatac	tcgcttacgg	tgcaggcgat	ggacagaggc	gtgccttccc	tcactgggcg	1020
cgccgaggcg	ctgattcagc	tgctggacgt	gaatgacaat	gacccggtag	tgaagttccg	1080
ctacttcccg	gccacctcgc	gctacgcctc	ggtagatgag	aatgctcaag	tgggcaccgt	1140
ggtggctctg	ctcaccgtga	cggacgcaga	ttctcccgcg	gccaacggga	acatctccgt	1200
gcaaattctc	gggggcaatg	agcagcgcca	ctttgaagtg	caaagcagca	aagtgccgaa	1260
cctgagccta	atcaaggtgg	ccagcgcctt	ggaccgcgag	cgcattccctt	cctacaacct	1320
cacagtttcc	gtctctgata	actacggggc	gccccctggc	gcagcagtc	aggcgcgctc	1380
ttctgtggca	agcctggtga	tttttgtaa	tgacatcaat	gaccatcctc	ctgtcttttc	1440
acagcaagtg	tacagagtga	acctgagcga	ggaggcgcct	ccgggaagct	atgtgagtgg	1500
gatatctgcc	actgatggcg	actctggtct	caatgcta	ctgcgttaca	gcattgtctc	1560
tggcaatgga	ctgggatggt	tccatatcag	tgaacatagc	ggcctcgtga	ccactgggtc	1620
ctctgggggc	ctggaccgtg	aacttgcttc	ccagattggt	ctgaatataa	gtgcccggga	1680
ccagggagtt	cacccaagg	tgtcctatgc	ccagcttgta	gtaactctcc	tagatgtgaa	1740
tgatgaaaag	ccagtattta	gccagccaga	agggtatgat	gtgtctgtgg	ttgagaatgc	1800
cccaacaggg	acagaactgt	tgatgctcag	ggcaactgac	ggggacctgg	gtgacaacgg	1860
aacagtgcgc	ttctccttac	aagaggcaga	gactgaccgg	aggtccttcc	gtctggatcc	1920
tgtgtctggg	aggttgagta	ctatttcctc	cttggacaga	gaagagcaag	ccttctactc	1980
cctgttggtt	ctggccacag	atctgggctc	ccctccccag	tcattcaatg	ctcgcataaa	2040
tgtgagtctt	ctggatataa	atgataacag	ccctgtcttc	taccgggtcc	aatactttgc	2100
tcacattaag	gagaatgagc	ctggaggtag	ctacatcacc	actgtgtctg	ccactgaccc	2160
agacttgggt	accaatggta	ctgtcaaata	tagcatatct	gctggggaca	ggtctcggtt	2220

eolf-seql

tcagggtcaat	gctcagagtg	gggtttatttc	tacaagaatg	gccctagaca	gagaagaaaa	2280
aacagcttat	cagttgcaaa	tagtagctac	tgatgggtggc	aattttacaat	ctcccaacca	2340
ggcaatagta	accatcactg	tattggacac	tcaagacaac	ccacctgtat	tcagtcaggt	2400
tgcttacagc	tttgtggttt	ttgagaacgt	ggcgctggga	tatcatgttg	gtagtgtgtc	2460
tgcatccacc	atggatctca	attccaacat	cagttatctc	attactactg	gggatcagaa	2520
aggatatgtt	gctatcaacc	aggtcactgg	gcagcttacc	acagcaaattg	tgattgatag	2580
agaagagcaa	tccttttatc	agctgaaggt	agtggccagt	gggggcacag	tgactggaga	2640
cactatgggt	aacataacag	ttaaggattt	gaatgacaac	tctccccatt	tccttcaggc	2700
aatagagagt	gtaaattgtg	tggagaattg	gcaggcaggt	cacagcattt	tccaggccaa	2760
agctgtggac	cctgatgaag	gtgtcaatgg	catggtactc	tatagtctga	agcaaaaacc	2820
caagaacctg	tttgctatca	atgaaaagaa	tggcactatt	agtctgcttg	ggccccctgga	2880
tgttcatgct	ggctcctacc	aaatagagat	cttggcatct	gacatgggtg	tcccacagct	2940
ctcctctagt	gtcatcttaa	cagtttatgt	ccatgatgta	aatgacaatt	caccagtgtt	3000
tgaccaactc	tcttatgaag	tcaccctttc	tgagtcagaa	cctgtgaatt	ctcgattctt	3060
taaagtacaa	gcttctgata	aggattcagg	agcaaattgg	gaaattgcat	acaccattgc	3120
tgaaggaaat	acaggggatg	cttttggcat	attcccagat	gggtcaattgt	atataaaaag	3180
tgaactggac	cgtgaacttc	aagacagata	tgttttaatg	gttggttgctt	ctgacagagc	3240
agtggaacct	cttagtgcta	ctgtgaatgt	tactgtaatt	ttagaagatg	taaatgataa	3300
cagacctctt	tttaacagta	ccaattacac	attttacttc	gaagaagagc	agagggtctg	3360
gtcgtttggt	ggcaaagtaa	gtgctgtaga	taaagacttt	gggccaattg	gagaagtaag	3420
gtattctttt	gaaatggtgc	agccagattt	tgagttgcat	gccatcagtg	gggaaattac	3480
aaatactcat	cagtttgaca	gggagtctct	tatgaggcgg	agagggactg	ctgtgttttag	3540
ctttacagtc	atagcaacag	atcaggggat	ccctcagcct	ctcaaggatc	aggccactgt	3600
acatgtttac	atgaaggata	taaatgataa	tgctcccaaa	ttttttaaag	actttttacca	3660
agctacaata	tcagaatcag	cagccaatct	gacacaagtg	ttaagagtat	ctgcctcaga	3720
tgttgatgaa	ggtaataatg	gacttattca	ctattctata	ataaaaggaa	atgaagaaag	3780
acagtttgct	atagacagta	cctctgggtc	ggtaacacta	attggcaaatt	tagactatga	3840
agcaacacct	gcctattccc	ttgtaattca	agcagtggat	tcaggggacaa	tccccctcaa	3900
ttcaacgtgt	actttaaata	ttgatatttt	agatgaaaat	gacaataccc	cttctttccc	3960
taaatcaaca	ctctttgttg	atgttttgga	aaacatgaga	attggtgaac	tcgtgtcctc	4020
tgttactgca	actgattccg	attcaggtga	caatgctgat	ttatattaca	gtattactgg	4080
gactaacaac	cacggaactt	ttagcattag	cccaaacact	gggagtattt	ttcttgccaa	4140
aaaactggac	tttgaaacac	agtctttgta	taaattaaat	ataacagcaa	aagaccaagg	4200
aagacctcct	cgttcatcta	caatgtcagt	ggttatttcac	gtgaggggact	ttaatgacaa	4260

eolf-seq1

tcctcctagc	tttcctcctg	gagatatttt	caagtctatt	gttgagaaca	ttcccatcgg	4320
tacatctgtc	atttcagtga	ctgcacatga	ccctgatgca	gacattaatg	gtcaactatc	4380
ctacacaatc	attcaacaga	tgccaagagg	caaccacttt	accatagatg	aagtcaaagg	4440
gactatatat	actaatgctg	aaatagatcg	ggaatttgct	aatctctttg	agttgactgt	4500
aaaagccaat	gatcaagctg	tgccaataga	aactagacgg	tatgctttga	agaacgtgac	4560
cattttgggt	acagacctca	atgacaatgt	cccaatgttt	atatcacaaa	acgcccttgc	4620
tgagaccca	tcagctgtga	ttggttccgt	tctgacaaca	attatggctg	ctgaccacga	4680
tgaaggtgct	aatggagaaa	tagagtatga	gatcatcaat	ggggacacag	acaccttcac	4740
tgttgatcgt	tatagtggag	acctgagagt	ggcttcagcg	ttgggtgcctt	cacagttgat	4800
ctacaatctc	atagtttcag	caacagacct	tgggcctgaa	aggaggaaat	cgaccactga	4860
attgaccatc	attcttcagg	gccttgatgg	acctgttttt	actcaacca	aatatataac	4920
tattttgaag	gaaggagAAC	ccattggcac	aaacgtgata	tcaatagaag	cagctagccc	4980
cagaggatct	gaggccccag	tggagtatta	tattgtttca	gttcgtttgt	aagaaaaaac	5040
tgttggacgc	ctctttacta	ttggacgaca	tactggtata	attcagaccg	cagccattct	5100
ggaccgggag	caaggagcat	gtctttacct	ggtggatggt	tatgccatag	aaaaatcaac	5160
tgcttttccc	agaacacaga	gagcagaggt	aatgatattg	tagtcattta	ttatttgttg	5220
atttgctttt	tagaaaaatc	attctcttta	tatttactct	ctataattgt	ttaccttcac	5280
tgtttattgt	taaatttggt	aacaggaaca	cctaaaaatg	ttctgtcaaa	ggctaacaga	5340
gagttacata	aactttagtt	ttaatcttgg	ttgcaactaa	acaacaaact	ttcttttcac	5400
tttatatttt	actttatagc	aatcacatat	ataaggttaa	ggagaaatct	ttagccattt	5460
cagaggggaa	aaaatccata	tatctaagct	aaattgctga	ggtaatctaa	ataccactca	5520
ataaggaagg	ctaccagaag	atgggcactt	tcagaattaa	gaagacctat	tccaaaatga	5580
agagcttttg	taggaatcag	cattgtacca	tagctcttca	ggaagagtgg	ccatggagga	5640
tgggctgaca	gtgtacacca	ggacagtatt	aactttcaca	tcctcagcag	tcttggcagt	5700
ttctttatag	acagtgacta	attttaatgt	gctgagccaa	gttttggaag	attcctgatt	5760
tcactctgct	taacatttta	gacactgtct	tctgacttag	gataatcctt	ccttttcctt	5820
cttaaattaa	ggcatgcaat	gggctgtgaa	taatcagaga	ctagggattg	tttcttgaca	5880
atactgagtt	caatgccatg	ggatagatac	actctgttct	gtttgttggt	gagtaagaaa	5940
ttagtgtttc	atagcataag	ccaaaagaat	tccaagctca	gccttccttg	gagtgtattt	6000
taggctactg	cctccttgta	tcgttgattt	gctttttaat	tgaactactt	tcaatgttat	6060
tttgataatc	aactagaaat	gatatagcta	tactccagaa	aactcttggt	tgctgtttct	6120
cagttcattc	tttccctccc	caggccccctc	aaagacattc	tagtgtcagt	cagccaaaaa	6180
cacaaacatc	aaatgtgggt	tgtgatactt	ggcagtgacc	cagacacaac	atgcaagtga	6240
aattgaggct	catgtgcttg	ttttcttgct	tcttttcttt	tttgggggga	ggaggtgggg	6300

eolf-seql

attttcttta	ttttaaatga	taatttatta	ttattattat	atatttttgt	atcctctgtg	6360
attttttttc	atagtagttg	gttatgtcta	tctatggatg	gggaagaata	tttatggcctt	6420
aaaggaccat	attaattaga	gatataattc	taaggggaat	tcaattttat	ctttacctac	6480
atagcactga	aaggatttct	aagccaaata	acctctttta	cctaattatt	taaaaaatat	6540
tttaatatag	ggcttatatg	ttgagctatt	tgggtgtagct	caggccatga	tttatatgta	6600
attgaatttt	gatttgaagt	tatccatctt	ctaaaccac	aatcctctct	ctaactttct	6660
tctctggaat	gaatacttac	atgaaaatat	ttgattagtt	tgaaaaccaa	aatattgatt	6720
gaaggcagga	aattaagtca	ttccagactt	tagatgaatt	tgttaaactg	taaaacagat	6780
tatgttatta	gatgctgttg	tttggttcag	tgtagtacat	tttattagaa	tactatggag	6840
aatgagaata	aatgctcagt	tttatcatta	gatttattgt	gtctttttta	tttaccatt	6900
agctatgcaa	agattggcct	agcatgaaag	tattaaatag	tgctgcctct	gcaataggca	6960
agaagattaa	aaatgtttat	aagtaatttt	gttattaata	ggggatgatt	tgttttattac	7020
tttttataag	tcaagtaaca	ccaatatgaa	aagttatcat	atatactatg	ttctattcat	7080
ttaaaaaatct	ggggagaatt	caatgtgatg	atttttttta	ttaaaaaaaaa	gtcagcatat	7140
cttctgtgaa	cttaagtgtc	gaaattgtaa	acccaatttg	agttctcaag	atccaaccac	7200
tttgaaaatg	aaaagcaaat	gtgtttctcc	aaagaatatt	gaaagcagtg	gttgtgagct	7260
agaatttcat	attattattg	gttggttttt	tcaagtgtat	acaataaagt	gctgttttcc	7320
ttctgtcaa	acaattaatt	tactgtgatt	ctgcaaaaat	aagttataca	tttcctcttg	7380
ttatcaaagg	cgatttttaa	attgtttgtt	taattggact	ttgtccagcg	catttttaaaa	7440
aattattcat	gtacactgat	aagagtctgg	gttgcttact	caggtttctg	gcagagtcac	7500
gctgatcaca	ttccatgggc	aggcagagag	tcagcgggta	aaagagaaac	aatttcatct	7560
gcattctttt	cctagctctg	acatttgggg	taagaggcta	atgactatga	ctctgatatt	7620
gttcattcca	aagatgtgtc	cagttataca	cctttactta	cgctacttgt	tatatccaaa	7680
gatttggcat	tggtagtaat	gtcattgaaa	gatttgtgtt	gggtttcaga	cacaagatta	7740
attacctttt	tattttgtct	ctttatgttc	tcagaagagc	ttagatagtc	ttgattatgt	7800
tagaataggc	catgtaaagt	ttgtggcatt	tttctaggtt	caccaaaaaa	tagatatatg	7860
tacttcagta	agcatttatc	ctttaatgtg	tattacatag	gaacatgcaa	cttaggaacg	7920
tggttagacc	tcatgatggg	caggggcctg	ttttattggg	ctttgttatt	tcagaccgtg	7980
gcatattacc	tgatgtatag	taggtgctcc	atacatgttt	gctgaataag	atggtagaag	8040
acctaagatc	agaacatatg	tctttataac	ttgggaataa	atcaccagag	aaaagctgag	8100
gaaatgaagg	aagttaataa	atctgatgct	gctcattaat	tgaactcagg	tcagagcata	8160
ataattatct	ctgctctaca	aatgaattga	taactgtcag	gaaactcaac	aaggaagagg	8220
aatttacgtg	ggtgttctga	tatggagctt	agtgtttaaa	tggaaggaag	caatcttata	8280
cattcaggta	gtcaccaggc	catagttccc	aaacttgcta	cattcaggac	ccctttatgc	8340

eolf-seq1

tcttaagaat	tgtcaaggac	acccttgag	actttgtgta	agcatgtctt	gtctattgat	8400
atttaccact	tttaacagta	caactgagga	aattaaaaat	atttgttaat	tcatttttaa	8460
actacattat	attttaaata	tataacatgt	ttattttgtt	ttaaaaaagt	ttattttttc	8520
taactaaaaa	ttaaagagtg	gcattatctt	acatctttac	aaatctcttt	aatatctagc	8580
tcaatagaat	acagctggat	tctcaaactt	tcttgggcaa	tatattgcaa	tatgttgtgt	8640
ttttggctaa	aatatacaag	cagaatccat	ccttacacag	atattttgag	tgggataata	8700
gagaaatagt	ttgcctactg	catcagaagt	ccacagtggc	agtttcttaa	gacttacttg	8760
cagtgtggaa	tatgaaaccc	tgtcagcaaa	cttttcatag	tctgtttacat	aaaaatacat	8820
ttatctcgca	ttcgtaatga	ttttttttta	cctattcctg	atttagaaat	atcaggcatt	8880
gatcatttca	aaattattgg	tgtaactgat	aaggaattta	tcataaaagt	ctttaatata	8940
tgactctcaa	cctgtttggt	atggttagaa	gttttccaaa	tttgaatttt	tactcgaaag	9000
ctcaaatttc	actattagta	acatatattg	ttgttttcct	ggaagtgtca	ggcttccttt	9060
gttcatgata	aaaagaaaag	attatgcata	ctcaaataat	taaaaagaaa	cagttgctct	9120
ttcgagtaaa	aatcgtattc	cacaaatcaa	gtggctagtt	cagcttacia	ttcaattaca	9180
catatgcatt	tctttgagaa	aaccacaata	cctaggtaca	gagtaatggg	tctttgtgca	9240
catattgctt	tgtgtcacac	aggatattga	aaagacatca	aagttgagtc	tagatttgat	9300
aaaattaata	cgttttttgt	tttctcaaga	aaacttattt	acctttttta	atgaaatagt	9360
tttgtttgtt	tgttttgttt	actgtgagta	tgtgggtggg	aagaacacaa	ttactgctaa	9420
agtactttgg	atctactgct	ttgatttgtg	ctaaagtacc	accagtttta	cccaccattg	9480
cttttgcacc	tctagcataa	atgccaacac	agtgaacaaa	ggcagaggat	ggtttgcatt	9540
atcatgtaaa	cagtgttgat	ttcccaggac	tccttaaaca	ggtctctggt	ttgcatggag	9600
gtccatgcat	actccacagt	gagagaacca	ttggtgtggg	tagtgagatt	ttggcagttc	9660
agttaacaac	caggaaaaaa	agagccactc	gaaataatat	attaaaagta	tgtttggaat	9720
attaggtaaa	tggactatga	ttcattaatg	attacaaatg	agtttttagca	atctgataat	9780
aaattaattt	attttcacia	gaaactatta	agattttcaa	gagaaatgat	ggagacattt	9840
gtgaggtcag	ttttggatac	aaacgttaga	aatgattttc	tttcacaggg	ttttgaatca	9900
cagtagtgca	ccttagatta	aatgtctgta	tatcttgtgt	attgaacctc	acaagcagaa	9960
tacaggcaag	agagctggat	atataataac	tgttattatt	ataaaattta	ttgaatattg	10020
ctatgtttag	acataatgat	aagtgcatag	tgataagtgc	atttttaggg	attttattta	10080
accatacaa	tactaatatc	atttgcattt	tgtagctatg	gaaactgagt	ctcagataag	10140
ttaataagtc	gcttaagttc	atatagatag	aaagaaaacc	atatccagac	ttgagtaact	10200
tcacaatgca	tcctcataac	tactcttcta	tcaagctgga	tcagtctgtg	gttttggtta	10260
agagaaaagc	tctttgccct	atagctatga	tgatatatgt	atgcttttta	ataactttgt	10320
tttcactctc	tgatttgttg	cttaaaaagc	atttaaggcc	aggcaaagtg	gctcacacct	10380

eolf-seql

taaatgggag	gccaaggcag	acaattcctt	gaggccagga	ttttgagacc	agcctgggca	10440
acatggtaaa	accccatctc	tactaaaaat	acaaaaattt	gccgggcatg	gtggtgcacg	10500
cctgtagtcc	cagctacttg	ggaggctgag	ataggagaac	cactcaaacc	ctgggagcag	10560
aggctgcagt	gagctgagat	catgccattg	cactccaggc	tgggtgacag	aattagactt	10620
tatctcaaaa	aaaaattcat	aagtatTTTT	atgtattgtg	taaaataaag	ggaaacaatt	10680
tttgcctacc	acagctaagg	ccctcagcag	atcggttaca	tccctaggca	tcattagtgg	10740
tggtagcaag	gagcctaaat	tgaattagga	agacttccaa	gggtttctag	agcaggggaag	10800
aagatgagaa	tttgagagaa	gggagctgaa	ggcaaatgga	gagcaaaggt	agatgagggg	10860
cctcttctaa	cctacagcac	tattcacttt	ggaagcagtc	actggagttt	aagaaggtgg	10920
agaattatTT	ttgaattttt	aggtgataaa	tcatcttctt	tggaataatg	atggggttgg	10980
agtggatgga	gtgtgaagat	tattttaaat	aggaaaacat	tttactgctt	cctatgtgtt	11040
tgaagtcaag	agtgtttctt	taaaaaacag	cctgggataa	atTTTTtgat	tttgtttctt	11100
ccctattggg	atgtttttaa	atgtattgaa	caaaatgctg	tgaattaaag	ggctttataa	11160
atTTttaaga	tgggtacaaa	tgtgtatgac	aaacaggatt	attgatggct	aattatgttc	11220
atgctgcata	ttttatatat	atcttcagga	tgcttgattt	actcctgctg	ctagatttct	11280
atagacataa	ctcatcttcc	aatgaattta	caatttatta	cttttttata	tttattaaaa	11340
ccctaataat	tttaattctt	ttttgtttta	ttcaattttg	aggaatctgc	tctaggaata	11400
gttttgaaaa	atagttatTT	acttagaatt	ttgtggaatc	aatTTTTcat	tgcattgtct	11460
gcagcttgca	ctttgtcatc	attagagtga	aaaactgcct	aagaacctca	ttagttgtga	11520
gggactgttg	cattagtgcg	tgtagcaaac	tgcataggcc	ctgaggtggg	ttctgtatTT	11580
caagaattaa	taaatctagg	cccagcgctt	tataaaaccc	ataaaagtag	gtggtattcc	11640
gaattaggca	ctcgtgagtg	gaaataggaa	aagaataact	ggcaggtaat	gtgggtcaag	11700
atgaatataa	agtgtccaat	atagaatatg	gtaaatatTT	tctaataatt	tcaagcttta	11760
tgtagtctgt	gacaaaagta	gccattttta	tagtatgttg	actgagaagg	agagtatagg	11820
gaatgcagac	aggtgaaaat	attctattaa	acaaacattc	tgtataaaat	acacacatgt	11880
aattatatat	taacacgtat	gccccatttg	tacaaagact	gttggctttt	ctttgctctt	11940
aatatcctga	gacaaaattg	gacaattaag	tcatgaagag	gaaacaatct	aattggcaga	12000
taatttatat	gtggtaatta	aacagtgatt	ataggaccac	aatcttcttc	agtttccaga	12060
cgtgtatgca	tttttaagaa	acgatcagtg	agtaaaaacc	aaagaatTTT	aaggctttga	12120
agaaatgttg	aaagacattt	agaaacatgc	tttgctactg	gcaggtggga	gcaagtggca	12180
tttttgatga	ttgttacaga	ttatttgaca	tttctctaag	gctttttatc	attcacagat	12240
tctaacatat	ataaatcggt	tatgttattg	ttagacactg	gtaaacagtc	ttgccaggtg	12300
ctgtcttgcc	tttgcaatgg	ttctggaggt	agatacaaca	tatcatcatt	tgacaaatga	12360
gaatactgag	gctcatggag	gttgcttatg	gagttggttt	atgggtggaag	caggatttta	12420

eolf-seql

accagcagt	ctgcctctga	agtctgtgca	tttagttcca	acacagcact	aactaatgct	12480
acttgaaga	atgattat	ctatacat	gtagacataa	ttctcaccat	gtaaaaagtt	12540
gtttcata	ttctatactt	gttcatgtta	atgatgaaaa	aatataagat	aaaatgaaat	12600
tttggatg	aaccagtagt	aggattactt	taggtcccta	tcaatctttg	tttaggtccc	12660
tattaacctt	tataatcttt	attaacctat	aatctgttat	ttcttcattt	tgctttctaa	12720
atcccaaggc	aggaatat	ttccattctt	tcagttgctc	atattttttc	ttccctttgc	12780
agcaaaactt	tttgaaagag	ttgcctgtac	ctgcattttt	tcttctcatg	atctcttaaa	12840
tctactccca	tcagacttgg	cccctgccac	tccagtga	ttgctcttac	tgaggccact	12900
atgatggaca	cattgctaga	tccaatggcc	tttctcaatg	ctcattgtag	ctaactctaaa	12960
gaatatttga	cctagtggat	tttacttcca	ttaaagtctt	tattcggttg	gcttccgagt	13020
catcatattc	tgtgactttt	tacccttttt	tatttcttgg	accaatcact	tctcagcctc	13080
gttcgcaagc	atctcaccat	gtcctcaa	tctaagtgtt	ggaacatccc	taaagccagt	13140
tcttgagtc	tttctctttt	tactctatac	tcattccctt	gaggatctca	atctcatagc	13200
attaaatgac	atatatacac	tgatgactcc	aaaattttgc	ctccagccca	tatgtctttt	13260
ctgaacccta	cattcgtata	accaatcact	tattcattga	ttagcttcct	aactgatatt	13320
ttaaattaac	atttttaaat	ctgagctgct	gatattctcc	ccaataaaaa	catattccat	13380
cttcacccat	cttcttttca	gttgatggca	attccaacct	tctgattgat	caggtcaaaa	13440
atcttagcgt	tatctttgac	tcctaacttt	ctttctcacc	ctacttacia	cctttcagtt	13500
gatcttggtg	gctctgtctt	caaaatattt	catttcaata	tgatcatttc	atgataattt	13560
ctcatcatgc	tcactgtag	taacttggtc	taagacacca	tcattcttcc	cttggattat	13620
tgaagacatc	ttcttggtga	tttctgacag	tgttcctatt	gttctcttct	cttacttggc	13680
tttacctaca	ctggcttctt	tctattctcg	gaacttgcta	ggcacacatt	agccttcggg	13740
cttttgccct	ggctcttcct	tctgcataga	acaccctttc	tccagacatc	agccttgaca	13800
acaacctccc	atacttcaag	tatttttttt	tatctcacat	tgcaaattag	gctaaatctt	13860
cctttaataa	cttattattg	taactatccc	ctcatgctgc	ctgattttcca	ttgccttgcg	13920
gcatttcttc	atcttcctct	cccataaggc	ttaccagcct	ccttcaccaa	tttctactta	13980
tctcctcaca	tgtaaagtgt	tggaatgccc	ctggaactag	ttgttgaatt	ttttctcttt	14040
ttaatcaatt	tcactgagga	gctcaaccaa	tctcattcct	ttatataaaa	tatgaacact	14100
atatatgtat	aggggtgggt	gtgagtgata	taatttattg	atttataatg	ttgattattg	14160
tttgatctgt	cttcttccca	ctggaattaa	tttctacgag	ggcagatata	ttgatctgct	14220
atgttcctta	acatatctta	agagtctaga	acattacttg	gaacaaacat	agtagacaca	14280
atataagttt	ctgttgaatg	actaagtga	tgaatgaatg	aactggcatc	tcagcctttg	14340
tccttgctcc	cttcagttta	gtctagcaac	cagagtgaga	gtgatctttt	agatcatttc	14400
atttgcccaa	aaacttccta	tttcacttat	agtaaaagtc	aaattcttac	aatgaccctg	14460

eolf-seq1

aagaccctag	ttgactgctc	ttattagtta	ctgttttgac	ctcttttttc	ctgattcccc	14520
ttgcctgaac	ttgttcagca	accatcagag	ctccaggccc	cagcctcagg	cgccccctct	14580
tagggctctt	gtggcagctc	tggcctggac	tgctcccttc	ctcactttcc	ccacatcatt	14640
tctgagagtc	accttgcaaa	gtccttcttc	cctccagttt	tcgtttttct	ctttccttcc	14700
ttttgtttct	gcttttttct	tatcatcacc	cgacataaca	catatgttac	ttgtttattc	14760
tgtttatggt	gtgccttccc	tttagaatat	atgtttcatg	aggggaaagc	ttttcatctg	14820
tttctgctat	atgcacagca	cctacagtgt	ggctggctct	aggcagatgc	tcagtaaadc	14880
attgataagc	taaggattta	ctgttgataa	tgctgcaaat	atgctgctta	agcttcagga	14940
gctcaaccag	tgatgcatgc	tgaagtaggg	gagtcatttt	tcattctctta	agccaagact	15000
ttagagcctc	ttctgaaatt	agggaaagta	actgattgga	aaagactggg	tttccttcat	15060
aaaaagatag	tggctacatg	acttgattgg	ctaagaacgt	gtaacccaaa	cttcagaaac	15120
atttatggtg	tctgtgaagg	aaagtgggac	cactaatgct	atagatgttt	tggtaaagta	15180
gaacatttta	gaaaatatat	atcacagtgt	atgctacacc	atctcatgtc	ttctcatctc	15240
cttcaacctt	atctaatttt	gctttagaga	gcagatctta	agttattggt	atcgtaaacc	15300
atgttggtca	tcagaaaaca	ggtgaataca	tagaaacttt	gaaaacatta	ctacttttaa	15360
tattgataac	tttaattact	gtcattcctt	ttttctaatt	taccatcctt	gttcaacatt	15420
tcacatcaat	aatatcagta	aacttgattt	taacacgcag	caaagaaaat	actgctggac	15480
aatccctctt	gccttaagtt	tagttgaaag	aatgcaggct	tttgatttaa	gagaagcttg	15540
attcagatgt	tgacacagct	actctcagaa	tcttattttc	ctcatttgta	aaatggtaag	15600
gatagcctac	ttcatagctt	cttgtagaaa	aaacaatggc	actctataaa	gtttattagt	15660
gctcttcccc	tttttctca	aatatagat	ctgcacagga	ctattaacat	ttaagaaaat	15720
gtctttctat	ttttaagta	tttagagtt	ccgttccatt	cttttttttt	ttttttttcc	15780
tttctcaatt	tcctcaacaa	gcctgtaagg	aagtcaagca	tttttatggt	cattttaagg	15840
aaaagacaca	aggaatttca	ttatttctgt	gtggtcacaa	atctagacta	gcaccaggt	15900
ttatatgact	ttgggtcaaca	tgctgacat	taaacaatac	tgcccagtct	gggtgtaaatg	15960
ctatttttca	tccactattg	tattgttggt	gacataattt	agtaatagtt	ataaccctt	16020
aagtgaagtt	atttatgaat	tgtgaaactt	ttttaagggt	ttagttgctc	aggaaacaaa	16080
caagttagaa	tatttgaaata	ttcagtgttt	gtttcatttt	catttgattt	aatttgattt	16140
gatttcattc	agtgttttgt	ttcattcaga	gagaagcctt	atctctgatt	tagatgaggg	16200
atattcatct	ctcaattttt	agtgatggta	gtaaaatatt	gactattatg	gaattgtgtg	16260
tgtttgtttg	tgagcctatt	tagaaatcgt	tttttgtcca	tgacttaatg	cagttttctt	16320
aattgaggtc	gacttggctt	ctccagtcca	aaaaagggaa	aactatctat	ctttcgaaac	16380
tactctttaa	caaaacatat	aaattctggt	aactttttta	gtgaagattt	tctaactaat	16440
gattaaaacg	ttttcctgga	cagaaaagta	ttttcttact	tcataaaaata	ttcaaaataa	16500

eolf-seq1

gcaaatacac	aaagaagatg	ggctttcttc	tgctcggggg	agtgttttat	ggtatataca	16560
tttttgttct	ttggttaaaa	tacttactct	tattttttatt	tatacattgg	cttcatttcta	16620
caatagattt	gaagcagttt	acaaaagtat	atatacaaca	aagagataca	atattttaaat	16680
gaatctctaa	gtagtaaaaa	taagtgttac	taaaaataat	cctgaaatat	ataagattag	16740
catacagata	tatgtaattt	aggtaactca	ttgagtttat	gttttagcttt	ctaaaggcca	16800
agtcaagcag	agaagcaaga	tcagatatgt	aagtcatggg	gctctttatac	taaacaaaca	16860
cagggtaaac	aaaggaaata	cagatttttct	aaaccaagg	aacttaatag	aattcgtccc	16920
acagatgctc	aaaacagacc	tatttttaaag	tgatgatttt	cttaatggca	tcttcactag	16980
ttcaatgaca	gattttttaac	atcatttttaa	tgtgacgtct	tttcgtgtgg	atttgtggca	17040
aattgtaaaa	gtgcagttct	ggcaaattat	ttattttatgg	atcaaaagag	attccccatt	17100
gataagtgct	tttgtttagc	tttattttcat	gaagtggatt	aatatttttat	aaccaaagca	17160
agaatatccc	tactgggttt	tttcacatta	gcatatctgt	agcacatcac	aggaaaaatc	17220
taactagaga	ggttttctgt	aaaactgtag	cttaatcctt	aaggagactt	tattttaagc	17280
tatgctgcag	tgattaaaa	gcttagcacc	aattttctagt	aatctgtgtc	ttagattggt	17340
tccatttttc	aagaaataga	aacaatcatc	ctgtgagata	acaaaatttg	ctattgaaaa	17400
catcggtgct	gtttaaaaat	gtcatatatt	ttcaaataat	aaaaatataa	aagaataact	17460
atcacataca	ctctaacttt	tcctctggtg	gagtcactaa	tatcctaagg	ctaggaaggt	17520
gaggaatcaa	taccaagtaa	aggtcagagc	tctaggatgg	gaatgggagt	ctcaggtttt	17580
taattctagg	acagtcattt	gacacctcat	tttcaaataa	taaactgaaa	caatagggtt	17640
tatgtggccc	actcatataa	cacacttagt	tggcagagga	gtcccagatt	agaatttctt	17700
acttactgag	tatagtcaac	ctataactag	tgttgactcc	agtccttaaa	ctcggagtga	17760
gaaaaggagg	ctacagcttc	ctcatgatct	tcacatctcc	atcagcatcc	tcccaaagac	17820
atctcccaa	aacatggaat	ttaaagtaaa	agaaagattt	tttgttatgc	aaatgcggct	17880
tcaagatgaa	gcctttggac	cccgattctt	gctctttccc	acatgcccc	tcacctcttc	17940
ccatgcacct	gtccccatcc	catccatatt	gttgtcccta	aatcccattt	gcaaagatcc	18000
tggatccacc	aacagctata	acctttcttt	tttcatgaca	ctgcttctaa	atcctttgca	18060
caattctgag	aaattgcttc	ctatcaggtg	ctaattggcat	ttaacctttt	agggatctcc	18120
tgtcttcaaa	ttaaaaaata	ataaaatgta	ttcaattcta	ttgtcatgtt	aatttcaaat	18180
tttttaacaa	ttttgagatg	tttgacagtt	tcaggagatt	tgcttaaaac	aagacatgta	18240
tttcatatat	tactttaata	ccaaaaccaa	ttgtgattat	gtctatctaa	tggcaaattt	18300
gaaacataat	tcagagttat	taaatgttac	ttgaattgat	tatattatat	ggcatagaaa	18360
ttttcctcac	cagtagctgt	atggcaatcc	tttaattgca	caaaagttaa	cccatagtct	18420
ctttttttta	agatagtact	ttaaaatttc	cactaaaaac	attaaaatac	caattcatgt	18480
atagtatagc	tatgtggaac	agaacagcct	gtgttgcaac	gccagcttaa	tattttatta	18540

eolf-seql

cttcacataa	taaaataggg	aacgtatttta	tccactgagg	ttgtaattag	ttacaagtaa	18600
tgaatcttta	gtgttcta	tccagagcct	ggcagatttta	gaacaccagt	tgaccctgtc	18660
ttgctggaaa	atgaaggaag	tgggagtaga	atcttctctg	taggacaaga	cagctttgga	18720
tgggagggac	aatagaagct	tgccaaaaac	atgggtcaaa	ctgaacacag	atggctgtag	18780
ctgatagagg	tgtctattat	tgtgttttct	tctcagcagt	tttctctttg	tttgtcagta	18840
tttttatact	tacatgaaga	aattttgttg	ctcagcaacc	aagagaaaat	atactaatag	18900
aatccatttt	tgttgaaaa	aaaatgttgg	tggtagatgt	tgatgatggg	gttgaggtag	18960
tgttgtgatt	gagcagtatt	aacgtaggag	tagaggtgat	tttctcggag	tgctgtttat	19020
tataagtgtc	taaaattaaa	tatatcacat	tatccatttta	ctgcttagct	tgccctctgtc	19080
ttacacctcc	aatactattt	gggaaaaaaaa	tgccctaagt	aaatgtattc	cattagttaa	19140
taataataatt	tataatacac	ggaggaaaca	tttgaagaaa	taaaactata	atttacatat	19200
tttttataac	ttcagtgttt	cctaaagtca	atctttttaag	cttcattaaa	ggatttcatg	19260
tgtatttcat	tttttttttc	tggaggagtt	ctatttatta	ttcttgagta	catctgtttt	19320
ctgcatgggtg	aaatattaaa	ataaatatat	atctgaaagt	cagaatagtt	ttgttcaaat	19380
actggcttaa	cttttcatgc	tgtgtgactt	taaggagaga	gccaaacttc	tctgaaccac	19440
agtaccttta	tctgttaaaa	aaagagaatt	ccaatccctt	aataagtgtt	gtgaggaaaa	19500
tgtgcagtac	acatagcact	gcatattttc	ctaaaagact	gttttgattta	cttttgttga	19560
tgctacattc	agttattttac	ttcttgtgtg	gtccagaagg	caatgataaa	aaaatgtaaa	19620
caactcctgg	tcatgtaaat	agctactgtt	catacaaaaa	ttgtgatgac	atcttttaatg	19680
ataccacata	aagggaatc	aagaccaatc	ttacaaattc	tgtttcttgg	ttttaaggaa	19740
attattaagg	aactgcatta	aaaataactc	tgtggtaatt	ttcttcattg	tactgtatca	19800
ggtagaaaaa	taatttttaa	atgagtgact	agtgaagcgc	aagacataac	caagaacaga	19860
agggttatta	gctaacaaag	ggaagcagat	gtaattttta	aacattgatt	ttgcattttat	19920
ttatttttaag	taaactacag	aattttttaa	ttttaatata	atgcaaaggt	agagtagcat	19980
tttccaattt	atacactatg	ttttgataag	tgtcagatac	tgaagttata	ttctaaatat	20040
aatccacccg	cctagggaaa	cgaataaaaa	tataaccttt	gttaaaaagat	agggttaagt	20100
aattgttaat	gactattcca	gaagtgaagc	ttcagaacat	agtttggctc	taaaagacct	20160
ttctttcatt	ttaatattat	atctgaaaca	cttagtaag	ataaattttt	aaatgttcaa	20220
tgtctgatca	ttgtaagcaa	tgtcattttg	tgagctctat	ttctggaact	agaaaaatta	20280
ctttgaaaac	tgtccattct	ggttgtgctt	ttttgagtaa	gtggctcttag	ttgtatttta	20340
atagaggaaa	tgaacaagg	taccactctt	ttaatgtatt	tattctgatg	ttgaggcgat	20400
atgttagaac	aaatttaatt	atactatgac	tatgaaaaca	aaattaggca	gaactagagt	20460
gataggcggg	aactcattgt	tgattttcaa	cttaaatatc	atatacttat	taatatatgc	20520
attacaaata	tatcatttaa	ttatctcaac	aactctagaa	ggtaagtaat	ggatatttcca	20580

eolf-seql

ttttgtagat	ggagtatcaa	ggatcatgaa	attgtcagta	tattgttttg	tggtagagcg	20640
ccatttgagt	tcatttggtt	ccaaggcttt	agttctttcc	agtacacttc	actggtcttc	20700
aattgttata	aatcacagcc	tgctaatttc	acagaaagga	gattaaaagc	aaaagccata	20760
aatataaata	cgaagtat	gaatgctgat	ctatatcata	actagatctt	tcttttttgt	20820
ttggattata	gtgaattttt	aaactagaaa	atataagcaa	acagtat	tgaaggatgt	20880
aataaccaca	ctccaaagta	catcaatgaa	tcatattaaa	ttaaccatta	attaatcaca	20940
ttaaaaggaa	aagcatactt	aggaaacaca	gaaaatttat	tttttaaggg	ttgaacttat	21000
aattaactga	attaaatgag	atgttaaatt	aactttgaaa	ggcacatttc	gatcactgat	21060
atacctaaac	ttgcctccta	attaaatact	taaaaataaa	tgaatcaaca	tttgctttta	21120
ataatgaccc	tgagagaagg	aaaatataga	atatttaact	acaagttaat	aactaataat	21180
tagttagat	ttagtagtag	aagaaaaggt	aagatggagc	caatactgta	actacattat	21240
atgttaaaac	acttatgtaa	acacagccag	atataattat	atggagggtt	ctttaaggat	21300
tactgttatt	acataaaaa	ttttccttac	aagagtaggt	gaacataaaa	agactattga	21360
attcaaactc	agggaaactg	ggaagaaaaa	taaaactctt	ttagagagtc	tatgtaatac	21420
atgggaagag	taaggacttt	tgattcaaac	acacttgggt	acaatcatga	cttggggaag	21480
ctgtcttccc	caagagtatc	acagtatcag	ttgcctcttt	tgtgaaatct	atttcacaga	21540
gcagctttga	gaaacaaaac	ttaaaaatgc	acccatgata	ctcacccaaa	ataagtatcc	21600
attcacttct	ctctcat	cttcatttgc	atagatgctg	gttttgtcat	tcatcagaca	21660
agattgccag	gatataacat	tgagaactat	gtaaatgaca	ctacatcttt	tcatccctgt	21720
tcttagatga	agataagttt	gagaattttc	ttgggggtgtt	tcagtagaga	attaaacctc	21780
cttaggattt	ctggttttgt	tctgaaatgc	aagatggaca	tggaagcaga	agggacatta	21840
acctgtttct	ctgccatttg	cctggatgta	tatat	ttgctaagat	cttggttctg	21900
cacactgtca	tttagacaat	aactaaggat	ttccgaatta	gaagggataa	gtgttaacta	21960
ggaccttggt	cttatgtttt	attgtggata	atgtgttggc	ctttgtacta	ccttcccatc	22020
ctcaactatc	attccagtat	tcaatatgcg	agctacagt	tttcttactg	gggatttaaa	22080
tatgcatagt	tcaggtcaga	tacacatatt	tcaaatatgc	atggttcaaa	ggtaagcagt	22140
tacctttaac	aggatagctt	ctatttatag	cttttatcca	tgccctcaag	agactagcaa	22200
tctaatagga	agacaaacat	cacataaact	attatcagaa	aatctaaaag	attgctgtga	22260
tgaaaaagtt	tcaccagctg	attacggtaa	ctggtttctg	taatctcaac	acaattgaga	22320
ttatttatcc	tgtctgagct	tttggttttt	gcatttcata	aggctttgtc	tgcata	22380
aaactattgg	aatgaat	tttttaatct	atgtgcagaa	aaaatatcag	gcaaattata	22440
cccaccttta	ttcttctgtt	tttaaaatac	tgaatatgaa	atattacatt	cctatgtaat	22500
taaatagcgt	ttgatttaaa	gcatgtggac	cttgggcctc	atccaaggga	tactctagt	22560
taccttggtc	tgaggctgct	tatcagtcct	gatgtgcttt	ccctttcctt	cctgtttgaa	22620

eolf-seq1

tacaggtcca	ttctgtgctg	ttaccatctc	tgtccttaag	agcttccttt	gccctaagat	22680
gccccgatgt	atgtttgtat	ttgatgacat	atTTTTacat	cctgggtcagg	aaatataatt	22740
attcatctct	ctacaacatt	atcaacatta	tctccttttt	tttgagacgg	agtcttgccc	22800
tgtcgcccag	gctggagtac	agtggcacga	tcttggtca	ttacaacctc	tgctcccg	22860
gttcaagcga	ttctcctgcc	tcagcctccc	gggttcaagc	gattctcctg	cctcagcctc	22920
ccgagtagct	gggattacag	gctcatgcc	ccacgcctgg	ctaatttttt	tgtattttta	22980
gtagagacgg	ggtttcaccg	tgtagccag	gatggtctcg	atcttctgac	ctcgtgatcc	23040
gcctgcctcg	gcctcccaa	gtgctgggat	tataggagt	aaccaccgca	cccagcctcc	23100
aacattat	ctatggta	agttattaaa	caataatagc	atcattatta	ataattatgg	23160
aacattaaca	gcaactacct	ctaaaacaac	taaaactaac	atttatttaa	aacaaatggc	23220
tatttatgct	attttattca	aacctcaaaa	taatgctatg	aaatagttaa	cgttgttatt	23280
accatttcac	tgatgagaaa	actgaggctc	agggaagatt	agttaactcc	ctttggatca	23340
tacaattagg	aagacctaga	gccaagattt	cagcctaagc	aaaattcatc	cttagcaata	23400
gcacatcctg	acctggatc	atataagaat	ttaatagtag	tttctgataa	agatatcggt	23460
ttggaaaatt	taaaaaata	atattttatt	gtacatctat	aatataattg	tatagttaat	23520
tgtataattg	tataattgta	tatgtgtata	tgagatagac	agtttaaaaa	atattacttt	23580
aagtcctttt	tgaaatgaat	cgtgaataaa	aatagtttga	atatagaagc	aggattttta	23640
tcaaatgaat	atagaaaata	ttcttttaaa	tcactgacag	aaaatacaag	aatttcagaa	23700
aatgaacgtt	caacatattt	tttcaagggc	tcttattctt	ttctattttg	tggatattca	23760
atataagcaa	aattttta	tcaaaaaata	tttaatttta	tatgttgata	tatttttagtt	23820
tgattaattc	tcaaaactta	atgtacatga	gactctctta	ggtggatatt	tattttaaat	23880
gcataattact	tttcagaaga	tttcatgaaa	gttcttgaaa	catattttta	caagtccttc	23940
aagggattct	gatgcaa	tctcgtagag	cacattgtaa	gaaacaactc	tttttttttt	24000
tttgagacgg	agcctcgctc	tgtcgcccag	gctggagtgc	agtggcgtga	tctcggctag	24060
ctgcaagctc	cgctcccg	gttcacgcca	ttctcctcct	gcctcagtct	ctggagaagc	24120
tgggactaca	ggcgcccgc	accacgccc	gctaattttt	tgtgttttta	gtagagacgg	24180
ggtttcaccg	tgtagccag	gatggtctcg	atctcttttt	aatagggttag	gtcatatata	24240
agaattta	tacacatttg	caaatttaga	agctcttctc	taaagttttc	cagtttcact	24300
agttctttga	agtagtagtt	gtgtagcagt	tgcggtggca	atagtagtag	cagcagcagt	24360
agtagtatta	gcagtaatag	taacagcata	gtaacagtag	tagtagtagg	ataatcaaca	24420
catggaacac	taagggatag	ttatcttttc	taatgtgggt	gtactcaaaa	cacattacaa	24480
gattttggca	ttagttgaca	agctattgca	agcaatcatt	gagataataa	actataactt	24540
aagtaaaaa	gtacactgtc	ctgtttatta	agtttgtgta	aatgtgttat	gtgttggttat	24600
gtagcttttag	aataccttca	ctgacttttc	agcaattacc	tttaacagaa	tagtttttat	24660

eolf-seql

ttatttttac	atttattata	catttagaaa	gaagatgaga	gcaatagttt	tttattagta	24720
taaggcaaac	ttaactgatt	aaaccttctt	aggaaaagca	atagttctga	aagatatgca	24780
agaaaaaaaa	tgacaaaagt	gaaagaactc	tagtgtttca	agaacaagga	atggctctat	24840
gagctatccc	taggaaagca	tatttaaaat	gaactaaaat	aaggatcttt	tgcttagcac	24900
agaatgtatg	aggtgttttt	aaaagagggtg	gcctgaggca	gtgggttatat	gggaattcat	24960
acaaatgtta	gagatttggt	agtttttaca	ttatacttct	attaactgta	gaattactat	25020
tagtatagag	acctcaagt	tttcttattt	ctgaagtctt	cttagtagtg	aaatgatgag	25080
gggtatagta	atgtccattt	gtaataaaaa	tgattaatga	aaaatagaat	tttttatttt	25140
ttaactttta	ggattcatca	tatgctgaac	atctttttta	agttctgact	gtattgtgca	25200
atgtctttta	attcatgtgt	gttcttcctt	atctaaaaat	catttacatt	tacaaataag	25260
aatattttta	cctgcaccaa	tcaagataca	attagtagct	ataaatgtaa	cattctatat	25320
gtaacagaat	aagaaaacaa	gagaaaaaaa	ttgtaactta	gcataattga	aacatgtgcc	25380
tagccatctg	gagcacttct	gcataatata	aagacatttg	acatttttaa	taaaggattt	25440
tgaaataaac	aagaattctt	ttgtgtcttc	caaagacatt	gattttattga	gactatgtgt	25500
ggcttttcat	catatacaaa	agattaatga	tttcctaaaa	gtccttgcat	ttcttcattt	25560
tataaaatgt	atacacacag	ttaagaaaaa	tgaatccttg	aagtcctgtg	aagaaagggtg	25620
acaggaaata	gttcaaagta	tttcatttta	aataacatca	aatattataa	aatataaatt	25680
ttctcaaagt	aaaaaaatga	gcttggcatt	attgaatggt	ggttgaatga	taaatgcata	25740
agtttatgat	tatcccaata	ctatatatgt	gatttttatc	aaacatatta	aagagtacta	25800
taaaataatt	ttaacttttg	atctataaat	ttctaaaatt	tcagcacggt	gattgggtgtt	25860
gataaattta	aagcatcaaa	cagatcttgt	cttatcaata	agaagtagtt	taaataaaca	25920
tttttgaaag	taaaattttt	atcaagctca	aataatttca	aagcatagtt	caagagatta	25980
gaaagctttt	atgggtataaa	atatgaaatt	gatactgggt	ttgttcagaa	tcccttcatt	26040
gacttttcag	cacttacctt	taacaggatt	gttttattta	catattttta	cattttattat	26100
acatttagaa	agaagatgag	agcaatagct	ttttattagt	atatggcaaa	cttaaactga	26160
ttaaagcttc	agttaaattt	tgccattatac	actcatattt	cctgttaaaa	atacaattta	26220
aatttagata	tgtttacatt	aaaacactca	gcacattata	aacttaacta	ttgacttaaa	26280
aattttgtag	acgtcatcat	atatgtttga	attttatttt	tttattacaa	taacaatatg	26340
gtcaagaatg	aaacacaatt	ttatattact	ttatagctaa	gaatgttaaa	atgagataaa	26400
aattcagggtg	taaaattttg	gttcattctt	tttcactact	acttttattt	cttagttatt	26460
gcattaaatc	aggattttag	agaaatatcc	catccaatgt	acagttcttt	tgagtaaata	26520
ttccaatgca	aataaatcaa	tgcaatatca	ttttgaaatt	ataaattggg	ttataattaa	26580
ctatatggc	taatattagt	tttataagtg	ttttaataac	tacatagcaa	aagttctgcc	26640
caattttaat	gtaatttaga	agctgtgtaa	attttaagta	atcatttacg	cttttaaaat	26700

eolf-seql

catattcata	ttcatatatt	ttggttttcca	aaatagtgggt	ttttataagg	cctcaatttt	26760
tttcccatgt	aaattgaggt	atgctattga	gttctctgaa	tctgctcttg	tccataaaga	26820
tagcttattc	tccttcagac	agggcggatg	atattttccag	aagcaagtca	gtgtattaac	26880
ctagttacgt	taaaccatat	ctctgctatt	ttagaaacaa	tgatgaatta	agcagcttca	26940
gttcttgggg	cagcatccag	ggctagaacc	catagcacca	agtccatggg	ctcctccac	27000
ttcacctcct	gtgcatgtta	ccagccattt	aatctgtttt	ggcccctaaa	tcagtcagga	27060
atttccatat	gatttacaac	tccatttgct	aagaagaaaa	aaaaaatgaa	gaaacttaaa	27120
tttcatctct	taatatagtt	ttaatagcac	ttaataattt	tatcttagaa	ttttgaacac	27180
atttttaaaa	ctctgagttc	gagtattgac	tacctactat	gtgaagaact	ttactgctca	27240
agaatatacg	ttaaaaatac	atattgaccc	agctctgaga	gaaaatttga	gaatccacac	27300
tacagaataa	aagaaataca	gtagaaattg	tggaagagga	tacaaagtaa	attagttaag	27360
catattatta	ggcagggttg	ttcgaaaggg	ctttctgaaa	aaaagtttga	tcttagattt	27420
acatgaattg	ttaaatataa	ataaaaagag	ataaagcatg	agatatttcc	aaaagcatat	27480
ttaatccagg	cctgtgcaaa	aggaggggtg	agaacagtaa	tgaattgggtc	tctggatcat	27540
gttgtgttct	aatagatgat	ttgataaaga	cttgggtatg	gatgtgagtt	agaggaattg	27600
agcaggagga	gtgtattagg	agagagagcc	tttattgcta	ggttaagtaa	tttacatttt	27660
tgaagtgtg	ggaacatctt	ataactcaat	tactagaatg	caaaaagttg	ctgatgaatg	27720
ttgagcaatg	ctgtaagttt	tccaaagcat	atccaagaga	gattgcattt	ggatttcgaa	27780
taagattatc	tcctttatac	atctattctt	ttaatgtatt	ctactatatt	ctactcttga	27840
ttcccctttt	ctgtgggtga	tggattttccc	aactaccttg	aagaattgag	aagcaaat	27900
attaggtgaa	ttattccaat	ttcctagtaa	ttaaacagca	tgaacatagt	tagtctagga	27960
ggcctgggtg	tattttaatt	cacttttcct	tgtgagttta	ctgaagtgga	gattatccat	28020
tacagccaga	ggctttaacg	accagaaaat	tcttcagcat	accttaaaca	ccaattcccc	28080
atgttgaaat	acttaatcac	cactcttgct	tctttgggtg	ctgaaaagaa	gtttgatctt	28140
agattacctg	aattgctaaa	tataaataaa	aagagagaaa	acgagatatt	ttcataacca	28200
aatagtatct	gtgatgcaa	tgggcgttat	tctgctttcc	tatgtggaag	attccttctc	28260
atcattcact	gttttgggtca	agaacaccct	gatgaaaaaa	atctttgggt	gccttccagg	28320
tagagttagt	ctcttctaag	ttccaccatt	tttattcaca	ccataattgt	aatgcttacc	28380
ccattgataa	attacttgca	tttctaactg	tccccctgc	ccccaccac	catgactatg	28440
atctctttgt	gcctgggtga	tttctcactc	atccctgggt	cctccatgtc	ttacagtgggt	28500
gcctggcaca	tggcaataat	caataaatgc	caagagaatg	aatacattga	aatgaatttg	28560
tgaatggatg	agttttgctt	tctttgggtac	tgtagtgatt	gttatttgca	gattatttct	28620
gtcttttacc	taatttagaa	ggtccatgtg	taatttggtc	atggtttgaa	ctgctagtaa	28680
aaacaaaggt	catcctttat	ttaaattccc	acagtagctg	ctgcttccat	ttacacattg	28740

eolf-seql

tagatggtca	acgattgttt	aaaattggtg	agcagatgaa	tatccaggtg	cttcctggag	28800
gaaaagtga	tgagcagat	catcctccaa	cttaatcact	gcaatgtaat	ttttcatatg	28860
ggaatagaac	agcgaaaata	ttctctgcaa	acgaaaaata	ttggacaatt	aaggtgctaa	28920
gattgccttt	tttgtgtttt	tggtttgggg	tctctgtttg	aaatgacact	agtgagcttc	28980
aggtttcttt	ccttgttaac	ttttgctgaa	ggccaaagag	gaatgattaa	ggacttctaa	29040
agaagtattg	aaaaaaaaaa	cacacaaaaa	gtggtgacaa	aaatacttat	tattttcctt	29100
taattttttt	ctgcaatttt	gttgatgttg	ttattactac	catttaaata	tagttaatat	29160
taatgattac	ttttagtagc	atttaaggat	tttcatcttt	caaattacta	ctctggcatg	29220
tattatttat	gcactttgaa	ttgctttgca	tgttgaaatt	ttcttttggc	ctctaattca	29280
attagaatgc	ccttagagtt	ttgaagggtg	cagtttatat	aacttacctt	attagctata	29340
aatggaatac	agatttacc	ttaaaatgat	ctagttgtct	atattttaat	cacatatata	29400
catgtagtgc	tataaatgtt	aaccaggtag	atttttccca	gctgcctagc	caaagagAAC	29460
ggtattagt	tcacagttca	gttgagctgt	tgttatctgt	atgagatcaa	tcttttggag	29520
aaggcagtga	aggttttctt	atttaatttg	ctttcagcaa	gtcctcccc	tctttttttt	29580
tatatataat	tttaagtact	gctcttagtg	ggtcattaga	ctttgagaat	tattcacttt	29640
gtagcccaa	acactaaaac	cttgtgtctt	ttaactctga	ttagtgacac	tttaataaag	29700
tcatttgaag	ttcagtggac	tgaattttcc	aacttttctg	atgtttctat	ggtcacggta	29760
gagcaacctg	tattgaagct	tgtacacaaa	cttttaaattg	caaattcttg	aaagctgtgt	29820
gtaattttgt	atatctgact	tcaacaggga	ctgcaaaatg	tgagggatta	aaaataaaag	29880
cggtagcagt	gttttccttc	tttttgtttt	tcaagttggg	gtacagtaag	ctttgggaaa	29940
tagagaagtt	gtcacttgac	taaacttgat	tctctgagaa	aaaaaaactt	gcagattaaa	30000
acttttatgg	ctatactttt	tttttgacaa	accaatgagc	acaaaacctc	attttcttcc	30060
acatgattag	acaataagg	taatgcaaac	tattgaatca	taaatttctt	agagatagag	30120
ccttgaattt	ttttttgaaa	aagtaaagaa	aaagtatatt	caatggctat	aattaaatca	30180
tgcacggtga	accactttg	gaggaattac	ttcattttgt	attgcattgc	gacttgagt	30240
aacatttaca	acacgtgaga	atggaaagga	tgaaaaatta	tggttgtctt	tcggttcaca	30300
agaattcaag	gaggcaggtc	attgagttaa	ttttcatggg	aagactaact	ctggcctgct	30360
cgcattattca	gaggccaaac	aacctggtat	tgacagcctc	aatttgggag	gggaacatgc	30420
agcagcattg	tgccatggtt	tggtgaggaa	aaacaaggga	agatttaaaa	caaagctgtg	30480
aataggaaca	gtagcccttg	tgtcttgaag	ctgattgact	tttccttttt	agacctttgt	30540
gaaagtgtta	ccctctcctt	taaataagg	ctatactgtg	gtaagagaaa	tatttaagat	30600
ataattcagt	gactctagga	atgggagcat	ttacacttct	tgaaagaaat	caggtgagag	30660
ctattaattg	caaatgcat	atgaaagcat	cagcctgagc	ggtaggctca	gtgctaggca	30720
aggcatatat	aagaatacta	atactaata	gcattttttt	caaaccatag	atatatatta	30780

eolf-seql

ccaatcatat	gttataaatt	atatattatc	ataatatata	atatatggca	tatattatgt	30840
ctatgtat	caatcatata	acctat	atattttata	tacagaaaca	tacacatgta	30900
gataaaaaga	ccaatcaatt	aatggtacta	acaaaagaaa	gaagataaga	aaaatctgta	30960
tagtcatatt	tacagatatt	tttagaagta	aaaataaatg	tcaacagtac	atccagtgga	31020
aaaatagttt	tctagaactg	cccttctttt	tccagtacct	cttcagttta	ttgacctttg	31080
aagagatggc	tgctaacact	taactaccaa	catttgttta	aaaaagaaaa	attagtttgt	31140
acttttgaat	atatatttga	tatataat	gaatattgta	tttaaaatat	aaagcataaa	31200
tataaatcat	aaataaaaa	tactaataaa	ttacaatttg	taagtgtgct	cactgtgtta	31260
tatttccatt	tggtttgaa	tccacttatt	agactacaat	agaaattaca	tttattttta	31320
aaaattaata	cagattacat	aaaatactaa	gatgatttca	gtacatactt	actaaaat	31380
taagaagacc	caagacttta	tagtaggacc	tctgagttat	atgtctgaaa	attaattgac	31440
ttttggattt	gaatatatta	ctaattcact	tagccagttt	aattggattt	atcagttgtt	31500
aagagttagc	agtttatcat	aataatcata	ttgatgctta	ataccctctg	catctattat	31560
ttgggatgtc	tggtttgaa	aaactccaga	cacaatttaa	atgaactaga	aaaaatcata	31620
aggttttagga	tcagaaggcc	cagagttcaa	atttcacatc	actcagtccc	tgaactagct	31680
catgatgctg	taaaagttgc	acaatat	tgaacctcga	tttctttatc	cataaaacaa	31740
tgatgttaat	atttacattg	tttagttatt	gtgtgtccta	attagttaat	gtacccaaac	31800
acctaacatt	gtagtttcta	tacgaagcat	atttaaggaa	ataatgttta	tcacataaat	31860
tggaacgtat	tcttttatat	ataaaatgcc	caattaatat	acaactttag	agttcagaga	31920
acacaacaaa	atagtagggt	gccacatct	gcaatatgaa	gaacaatgaa	gttttttatg	31980
taggggtgtaa	acttcagaaa	gttgaaggat	cctttctgat	ctcatgtgtc	ctgctcatca	32040
gtgtatcccc	agcgctgatc	ctgatgcctg	atacctagag	agcaatcaat	aattaatgct	32100
atattgagga	agtgaaccaa	caccaggat	tagagtggag	aaaactaatt	tttctccact	32160
ctaggtatga	ccactcaagg	tagtacacta	gagtagttct	tcttttttta	atatgaatac	32220
acaaattaat	aatcctggaa	aatatgttca	gattaagtaa	atagtcaaac	ttggagcaat	32280
tatccaagac	agccatataa	ggctgtctgc	atggataata	gccataataa	tgttgataat	32340
tctatgttta	attgtgatcg	aagccgacat	ctttttccta	aaaggggtgtg	ctgagtttat	32400
tatgaaatta	aatttaggat	aatttatatt	ttagtgatca	catcttagag	aaaactgcag	32460
gcatatttta	tgatgctaag	gttgagaaaa	tctaagagtt	ctctatagtt	aatttcctga	32520
aaatagaagt	tagttttcaa	aagtccaaac	aaatcaggaa	gattagaaac	taaaataaat	32580
tgtcatataa	gaaataatga	atctatgcat	tggggatgtt	gcatttagtt	ttcgttacca	32640
cgattaggaa	agattctgaa	aaaggattaa	attatccaga	ggggtttaga	agagtatact	32700
aaaaatatga	aaattaggac	tcttaagtct	atggaagaaa	atataaaagg	catttttgtt	32760
gaagtttatt	aatgatgta	aattattact	gaaactgcat	ttgttttgaa	ttttccagta	32820

eolf-seq1

tattaaaca	atggctaaca	attatagttg	agagaaatat	athtagga	agtaatgcat	32880
tattcagcat	tctattatct	atactatatt	aacacatgtg	ttatgggctg	aaattacacc	32940
agtatcacat	gagggtaaat	gggttgaaag	tgtaagttta	aaagagtttc	aatgagttt	33000
gtgaatggat	atcataccct	tccacaaatg	acagagatgg	actattaaat	cagagttggt	33060
agtttttgct	tttgtttact	gtgttttctca	ttcaccttaa	atggtcctat	ctataacaag	33120
ctttggaaaa	gcaccatgca	cctgaaattc	ttgcattctg	atgttcatac	ctagagagat	33180
ttatggtgac	ataagcagcc	aaatagcaca	agtgaatttt	tatatgaagt	atatgacatg	33240
catgattcaa	tatatatgcc	cactttttaa	tataccaata	gtatatattg	actataataa	33300
tgaattcatt	tcaaatattg	tcattttgct	tgacattcgt	atcatcacat	aagctagatt	33360
cccgttatat	aaagatgcac	aaaggctcat	ttcagaaata	aaaacaaata	actgttatta	33420
ttttttacaa	aggtgaagga	caataaaaaat	tgactaaaaat	cctgaaaaaa	caattcagag	33480
tgcttcagtt	gggccctaaa	ctcaatgctc	aatcttgaca	catatatatt	gttataatta	33540
tttactacat	tatatattat	ttgtaactgt	cgtcagtttt	ttatgtatgg	atctattaat	33600
ttcaatgaaa	tttggtatcca	gtaaattttct	atacaatgga	gtttggttat	ttggcacttc	33660
ataaaaaatgt	acctttcaca	taatgaatga	ataattttata	ttatgatttc	tcttgtgtag	33720
gacagttctt	gcaggaatac	aaagtaatgg	taaattttga	tttaaagtgc	agcaattcat	33780
gcactttaga	gccagttgga	tgccaaagta	acttggttgg	tgttttatttc	tagttacagt	33840
cagtgttttc	tttctttcta	ccaatgagat	gagatatatt	aaggcttttt	ttcttcttag	33900
gccatatcaa	ttcaaagaaa	atgagaaacc	atagattttg	ggttggcctt	acaatgtgct	33960
gtcatttcat	ctttccaaat	ataaaaaatca	aaacttcac	ctacttcact	taatcttttc	34020
aaagctgtgt	tccttaatgc	tgattttttt	aatcaattt	caatgacttc	gtttcttgta	34080
tacagcagaa	agaatccagt	ttggtctttg	taaggagtga	aagactagga	aggaagtatg	34140
tgttgtatag	tcagtgtctc	agagttggta	gattttgctt	ttgtttactg	agtttctcat	34200
tcagtccgaa	tgttcctatc	tataacaagc	tttgagagaag	cacctttgtc	cccagagctg	34260
gcctccagga	aggcttggat	ccttacaagt	ttggaaaaat	ggttactggc	ggcatccat	34320
aggaaaacag	agcaagttta	caaagttcct	gctgattttc	ttgaaagtac	tccctcctca	34380
ttctctacag	taagccattg	aatgttacta	gggatggaca	ctaagcagaa	agatttctga	34440
gtatctattc	atcttcccca	atcagacagt	cctttaaatt	taaagaagaa	tgcttgaccc	34500
ttaagacagg	gaggttcac	atatttccca	ttctgacagt	ttggaatgaa	aggacacata	34560
aattattatt	attattattg	aattagaggt	atgggtatga	tgactgaggt	ttctcagcag	34620
aagatttctg	attccatgct	ttgcatcatt	agacagccaa	cagaagctgc	acttagtggc	34680
cgcgtgatgt	gattgattgg	ttagattgga	ataaaaacttt	tttgttgttt	tttaaattcca	34740
atattacttt	atttttattt	aattaactta	cattcaaagt	caattgatca	tatgattttc	34800
taatttttagg	attaaaatat	atatgaagat	aagtttggtg	ccaccaattt	gaaattaaat	34860

eolf-seql

gtacagataa	aacaatagaa	caattactga	tacaggccat	cactgataca	gtaactactt	34920
tagaatgcat	cataaatttc	attttcatat	ggatttggtta	aatgtgcttt	tagttacaga	34980
attgttagtc	ataaatcaac	tagcaaaaaca	gaattttcaaa	tttttgagaa	accatgaacc	35040
atgtgatgca	tgttattttg	ttatcctctg	ctgtctctta	agaaattatt	tttttctagt	35100
cacattatth	gtatcagcct	gtctgcaaaa	ctgagtctgt	gcattttctct	ctgtcttcac	35160
aataaattca	gttccattgt	atgtgcaaga	gttcttggtc	ataccataag	cttttttagct	35220
gtttcatgat	agcttagttt	tgtaaatata	tagaaccaaa	ctcccatatg	aagtgaggaa	35280
ataaatgtgt	aatgagtaag	aaggcagaat	tttgttttga	tttttcaaaa	cttgttactg	35340
aaagtcagaa	atgtttgtac	acatgttctc	ctgattatga	tcagtgatta	aacttttgta	35400
ttaagaactc	ttcctaccag	aaatactcat	cctaagaaag	atgaattctt	cagaattttc	35460
ccatttatta	ctaaatttcta	gacacttcca	actcagaaca	aacttggttt	tgaggaatac	35520
caagtaggca	caggatttaa	ggcagaaatt	cagctaattc	cagaacgggt	gatgctacct	35580
gttgaagcat	tttatagtgg	aatttcaata	aacagtagat	atattatgcc	ctttgattta	35640
ttgtagtata	acttttattt	tccccaacaa	atcctttttt	taaaaaggga	tttaggttgt	35700
ttcaagtata	tactaattta	attgtcatga	tttgtctagc	ttatagaata	ctacttatga	35760
agactattat	acattgaagt	tctgtgctta	aatagaatat	agctctaagt	aattacgtta	35820
gtggtaatta	aaatattctg	gaaacatttt	ttggtcacct	ggtgctgtga	ttttcaaact	35880
agagctgaaa	aaaacctcaa	gggccaggga	aaactttgtc	actagtactt	ctcaccctct	35940
tcaccatttc	aatcagtata	gctccaagtg	taacagcttt	aaatgatttc	ttccatgtaa	36000
cattagttat	ttttaatata	ataattttatt	gttctcaaaa	aaatgtttac	acagaatagg	36060
taatcactaa	atgttttgct	tgaaaatgca	ctagcatgca	ggccaccaac	atatttgggga	36120
aatacatctc	ctgtgcttga	ctgttcctct	tttaagtaaa	aacttctttt	tccattgtta	36180
ctttttaagc	ctattgatca	gtgttttctg	cacttcattt	gtgtacatca	caatgaggac	36240
atttaaaaaa	tgggcttccc	taatttcaga	gacaagttct	tcagattgct	tcccatatg	36300
tgcaataactt	tcctctctga	gagctgccag	tcttctttgt	agggctagca	cgcatacatt	36360
gcccttttct	gaaatgaaac	tagggctttc	ttctgcttct	tcagcatatt	gcagccttgg	36420
ctttaaaaga	aaaaatgcca	gagtcaactg	tataagccat	aagactacac	tgaattctac	36480
tggatgcagt	gatgtattaa	aaaaatgatt	tattttccata	ttgctgtttc	ctcagcagaa	36540
tgccttggac	ataataggac	cttgatgaat	gtgtttttta	ttcctgggtta	gccctcttct	36600
gtatggaaat	cttaaaaata	ttatttcact	ctaatttgaa	gatattgtca	aatctttgtg	36660
aaatttttagc	agattgtaaa	ttttagaaaag	atccaaagga	aacattgtta	atactaataa	36720
agatttttatg	tgaccaaaat	cggatcttat	ttttcaagaa	atactcagtt	ctatagaaag	36780
tttggccttc	agtcagaatg	acttcttcat	tcaatcagtt	ttataataat	ttgaaaatga	36840
aaaccagcca	gcatttactg	atgatagttt	acagaagttt	caccaaaaaca	ttacttcatc	36900

eolf-seql

acaaacaaag	aaactattca	ttgcctgtta	ggcatcatct	caacatctgt	ccactattgg	36960
cttgtccatt	tttatattgt	tttagaatat	gatataaata	atTTTTtatt	atTTTctctt	37020
tagtttaaaa	ttgtactgtg	ccccaaattg	gtattggctc	agaaatgaga	tgaatatgtt	37080
ttaaagtaag	tccttttcat	aatatgttta	gtattctttg	tcaatctttt	agttggctta	37140
gagcttgata	ttatctttta	aaacagaaat	taatacttgt	cattagagta	aaacagtgc	37200
gtagcagagc	tcacggttac	attgataaac	tatacataca	tatatgtatt	atatatttat	37260
cttaagtaga	aactatcagt	gctgggtattg	ttgtaaggga	gatctgtggt	ttctataata	37320
tgacttatat	gcatacatc	tttattaaaa	gtgaacattt	gttacatttt	aatcgttaga	37380
gtaaaatatt	tagtgactga	aaaattccaa	atgaagacta	agtaaaatat	gttttggttg	37440
aattgtgaag	tttgagaatt	tgcaaagcca	taatgataga	atcaacccaa	aggtcccaga	37500
aattttcaat	aatctatcat	ccttatttta	aattattata	caataaaaaa	ttgtgtttta	37560
atcgcatgag	tagacagatg	tttatgctgt	tattcagcga	atcttgcaaa	agtgagtgt	37620
attcatagaa	taaaacaatg	ttggaaatat	gctttcttaa	aggcaataaa	agttgaagtc	37680
tatgtatcaa	agacaaaggt	gggaaattgt	attgcatttt	ataatatatt	ggaaaaattc	37740
tgtaaaactgc	tattactaag	attattttat	aagattttac	cccagatttt	cataggtaat	37800
aaatgggcaa	ataacttatt	gttttcccta	gtcagatcgc	tgggtgttaa	ttaatataaa	37860
gttttaatat	aagggatttt	tattaataaa	gtattttggt	aacactcaac	atgtacttta	37920
tttgcttttg	gatattgttt	tgattcaa	atagaaaaga	ataactaaga	tactttggtg	37980
ttatatatgg	atatagtcaa	cttagaaaat	tatacacatt	gaatcttttt	attgtgctta	38040
ctcaaaaatg	aattggtttc	atttctttgc	tgatggaata	ttgaacacgc	tctcactctg	38100
atgtacagtt	atagtgtata	ctaggtaaga	aaagagagtc	ccaggccaat	ttaaacaatg	38160
atagggtttg	cttttctgaa	ttctgagaag	ctagttcagg	ggaagaaatg	aaaccacagt	38220
gtagaggggc	gaatgggtgaa	ggtgaaaaat	tagtatcaag	cctcagttca	acaggaaaat	38280
gtgtgtggaa	atggaagaat	gaaggtaata	ttggtagatg	ggagaatagt	aaacaagcct	38340
ttcagagttt	aatgaaaaaa	aaaaaaaaaa	ctgggttagaa	cagttgggta	agaaggaaaa	38400
taaatctaaa	gttttagttt	taacttgatc	agagtcctgg	atcaaacagt	ggacctcaaa	38460
ggaactgttc	aaagcagtag	tcctagtatg	gtttctgaga	ctttctgaat	tttaagattc	38520
agaaacgtgg	gaggaagtca	tactagctta	gcttcaactg	cacatttata	ttatgacagt	38580
ttttcctgtt	atccacatat	tttttaaat	tagacatgaa	tatagagaaa	tttagtatag	38640
cctctactta	ttaaaatgtt	agtactttac	ttttaccaa	taattccctg	catatcatca	38700
aaaattttata	tttttagcca	atttaatttt	agagaacctt	catatgaggt	attgacaccg	38760
gatagaaaat	taaaggaatt	ttaaaatata	tatttctttc	caagaaaatg	atttatacat	38820
tcatgtaata	atttgtatta	ccctaaaaca	tatttacatc	tctaaagtaa	aattagtttc	38880
taagggtggat	atgagagtgt	gctagttata	acagaaaatt	tggatatcct	ccacatattt	38940

eolf-seql

taatgtaaca	aaaaaaca	ttcttttgat	ccatctcatt	acagaatgtg	ttccagatat	39000
aattccaaat	gcatgtaggt	aatggaaag	aaaaattgga	tcctggagtt	gtactgatct	39060
gatggaaata	atattacgaa	cttggtttga	gtgtcagctc	tttttactag	ctttgtgccc	39120
ttggtcaagt	tacttgattt	ttgttaactt	acgctttctt	atctgtgaat	gaggaaacac	39180
ctatgtttgg	ggttttgtaa	agattagaga	atgtaattta	tgcattggtac	acatgccttt	39240
tatgatacag	gtaaaatatt	tcacatcttc	atctcatttg	tttctggtga	tgtagaggtg	39300
gtaggtcaat	ctttttttct	tttttttcct	ccaataatca	gtggactcaa	ttgaattgga	39360
gaaggggttg	cttgggtgaa	gagaaaaaac	atatggcact	gatgatgatg	atgatgacaa	39420
agttgatttg	caatttttta	acagattatc	tttctatagg	gccagaagcc	atattgtctc	39480
ttccttcccc	agatattctt	acattagagg	attttttcta	tcacagttgc	acccttgat	39540
tgacatagca	atattcctata	agtagcagcc	ctgctgtttg	gatcatgttt	tttttctgtc	39600
ggcagtgtat	cacaagtatt	ttcctcagtg	gcctaaacag	accctgagtg	gaaggctggt	39660
aaaagcaacc	tcgtctgcat	gcatcacttt	gaatgatttc	aaagaggaaa	gaagcagctg	39720
tgacaatgtt	cacatgaacc	actcagagtg	gccttatctt	tgtagtctaa	caataatagt	39780
acaccctggc	tgcattcctc	tgcttgagaa	gagcaaagtt	gcctaagagc	catccataca	39840
tttgatttcc	ttgacatgtc	ttaaagttgg	atgtatgata	aagctaataa	catctttaca	39900
tccttgagta	atttgtcttg	aaagtaaagt	tagagaaagt	ctcttttatg	atttattgca	39960
tgtgtggtca	atatttattt	tatgcagata	tatgaactaa	tatgtaacag	attgttattt	40020
acaaaagaaa	tttgaagttt	tatttatattg	actagctaaa	gaaatataaa	aagaagtttt	40080
ctacatatgc	agatcattat	agaaataata	ttcttctcta	aatttgtaga	tatagggtgt	40140
tttgtttttt	gttttttttt	tttttttgcc	atttataggt	tacaagctat	gttttaggtat	40200
ttcagagtgc	cccatatatg	agttatttta	aaaagtgaca	atattacagg	tgacaagact	40260
aatataagta	gaatatagtt	gagttacaga	atatgttgta	atagtcttta	caatgcacat	40320
ccaatgaaca	tcatatagac	agatattaat	atcaatatat	ctacacataa	ttgatataata	40380
gtatatatta	taataaatat	aagatatgat	aatataacag	ataatataat	agaaatcata	40440
gatatctgta	tatcaataga	tacagactat	aagtcaatgg	cgggatactg	cacattgcat	40500
taaatctcca	ctagttcttt	gttgaacatt	catgaatcta	aaaatgtaaa	aattaagtcc	40560
cctgagggag	taactatgtc	tttgcattgc	ttctatttta	atatctcagt	atagctcccc	40620
caacacttcc	cattatgtgc	ttttatacaa	agcaaccagt	aataatgctg	aatgaataaa	40680
agtgaacata	gcatataatg	tattccatat	gtataaaaca	atattcacat	gaatgaaatt	40740
gatccatcag	tgtgttcaac	tatgagtctg	tgtttctgag	tacctgtaaa	caaaaagaag	40800
cgttgaaacc	ttttaggagg	ttatgagaaa	taataagagta	aaatgataaa	tacattttta	40860
ctgaataaat	atacctgaat	gagttattcc	agttttttca	tgaatttagg	caaattgtaca	40920
gtctctcgat	tgataataaa	atttgtcatt	ttctcagtta	aattgataca	gattcttgta	40980

eolf-seql

gagcaaaaag	acctaaagat	aagatttggg	atagatttat	accttaaccc	aggtaataaa	41040
tagattattc	gggtacttta	atagtaacaa	aggaatcaaa	tggaatttta	attgaaatga	41100
ttttactaat	atgggtcatta	gcattaagta	aatgagatac	atttgccatt	tcagctgtat	41160
ttgttaacat	tagattttca	tacaaataca	agagatgtta	ttttaactgc	tcattcttat	41220
ggattttact	gctttcacta	aagagaaaca	aaatatatta	tctcctcatt	gcaatttagg	41280
cttagggagt	aacaactaag	catatacatt	gttgaacact	gctggcatgt	gctttgtgaa	41340
tatgtttgaa	tcaagggcct	ttacaaaggg	ctcagacctt	cctcctaggg	ggttgtcatt	41400
taccgtggat	gctctcgttt	gttgtggtta	acagcctcag	aaaacgtctt	gacattgtca	41460
attccaacag	attaatgaag	taactgggcc	atacatccct	tcccctttac	atatgaaagg	41520
aaaagctaac	tacttcatag	agctgtaaga	ttgtttcctt	ttacccttg	gtattagttt	41580
cctttgtagt	cagttaagta	tggttctttt	aagtaagcca	gaccagaatt	cttttaagta	41640
agccagcttg	ggcgggggaa	ctccagtgtg	attataagtg	agtatatagg	aaaaaaagaa	41700
atgaaattaa	cctttttttc	tttagaaatc	ttgtgtttta	ttttatgttc	cagtgtttta	41760
aataactgaa	accttattat	ggacaaatth	acctgttatg	ttaggagaaa	tgagtttcat	41820
ttaccatctt	catcagcgat	ccccaacctt	tttggcacca	gggaccgggt	tcattggaaga	41880
caatttttcc	atggaccag	gtggagggat	agtttcagga	tgattcaagt	gcattacatt	41940
tatcgtgcac	tttatttcta	ttattattat	attgtaatat	ctaatagaat	agttatacaa	42000
ctcatcataa	tgcagaatta	gtgggagtcc	tgaactcgth	ttcctgcaac	tagatgttcc	42060
catctgggta	taaagggata	cagtgcagaa	tcatacccat	tggattctca	taaggagcgt	42120
gcaacttaga	tccctcatat	gcgcacttca	caatagggtt	tgtgctccta	tgagaatcta	42180
atgctgtggc	tgatctgaca	ggaggcagag	ctcaggtgat	aaagtgagtg	atgggaagat	42240
gggaagcggc	tataaataga	gatgaagctt	cactcccttg	ctactgctc	accgctcacc	42300
tcctgctgtg	tggcccagtt	catatcaggc	cggtttccta	tcaggtaatg	gtctgtggcc	42360
caggggttgg	ggaccctta	tctacatcca	cgttttctat	gtttgtgaag	atttgatgtg	42420
gggttatggg	tttgaggagc	taaaaattat	agttagtaga	aggaaagaca	gctagaagtg	42480
gaaagtaaaa	tcacttacat	tgtactttta	ctaggaccta	tattgtaggt	attataaatc	42540
atacaaacia	gtttgttata	caaaacatga	ttaccttatc	attgttttat	taagtattta	42600
attgtgcatg	agtaatcatt	gccattattg	atttgtccat	attaaactta	tgatcagact	42660
tagtggacia	attttcaaca	aataatagaa	gcagcagcat	aaatatctat	atagaattag	42720
ccaggttcta	gtctggcaca	tcatacacata	gtagcacatt	taatgcccc	aattattcta	42780
tgatatagat	actactagtt	tccccatttt	cctaatagaa	aaagtgagtc	atagtcagggt	42840
ggagataatt	caccccacgt	cttaaggcca	aatggaaaaa	atcttcttac	tctggaatta	42900
ggtggttaag	tatcttgatt	ttaatggatg	ttgttgtttt	cctaataatt	gagttatttg	42960
tattaaaatg	ctaaactggc	aatatatgcc	gatggccaat	ttacctcaa	atatattgag	43020

eolf-seq1

ttcatacata	ttcattaagt	gggatatfff	ggagaatata	ctgcttatat	gttcaaattgc	43080
aaataattta	attcgctgtg	atttataata	ctgttactca	gtaaatggac	taaaggcagg	43140
gtaagattta	tcagtcttaa	aaatgtaact	atgagatcat	tataatccta	ttatcttcta	43200
attatccttt	taaatcaaaa	acatactttc	atgttggtat	gagtatcata	accaaagag	43260
aagagaaact	tcaaagagaa	aactgaatta	gtggagagta	acttaatttc	agaagaaaat	43320
cgtactttca	tataaattca	tagtgaaagg	taactatgtg	ataccagcat	tcagggaaca	43380
aatgccctta	cgtttttgcc	tgtgtgtttg	tggggagggg	ggttgtttca	ttttgttttt	43440
atttcttgcc	tgtttaaatt	tcttttactc	acaggctcca	gcctggatct	ctgggagggg	43500
gaagtagttc	caaagattac	agtgcctaat	cttaactctg	aaaacactac	ttattgactc	43560
tccactggat	tccactcgcc	caaattccct	agatggattt	tccctcagga	tgaacaacc	43620
taaattcaag	tgtcctaaac	tgtcttcctc	tccctcctgc	cattgccttt	ccttgtttct	43680
ctagtcta	ccatcttatc	ttttgttctt	ttctgttaat	ctattaatca	ggctcttgac	43740
attctaaaag	ctctcatgcc	ccttcgcaat	atttcctcct	ttacgcattg	ctagcaccag	43800
cacttccact	actccaggaa	ttaacacctc	ttctctctct	tcctcaatgg	ctaagagatc	43860
tggagtcatc	atgtctgggt	tcatattcca	ctttcccaat	ttactgactt	cgtgacctta	43920
ccaagtcagt	taacttcatt	aaattttcat	ttcttcattt	tcaaaacatt	ttcatcacgt	43980
ttccacaca	ggcttgtaag	gaggacacaa	ttatgtcatg	aatataaagt	tcttagcggg	44040
gagtttggca	catagatcac	agattagccg	ttcttattat	tgctccctcg	gtagagtccc	44100
actgtgaagt	cattatttct	cacataactc	actaattcag	gaactcttta	atcaaaccta	44160
ttatgtctaa	ggacctgagt	aaacagttac	tgttctcaag	gaactcactg	tctagaagaa	44220
gaagaggctg	accagcaaag	ccataattac	aataaaccta	tgctatttgt	actgaacaat	44280
aatacatatg	cacttaattg	tagtcatccc	cctgactata	ctcacaaaac	ttaacatgtc	44340
tttaggggag	gaggatggat	tgcagatatg	ctattagagg	catagccatc	tttacttcat	44400
taaaagttta	gtttactaaa	atttgcaa	gtttaaaata	tggctcttgct	taatttcaca	44460
aattctggga	taaatattta	aggattta	atttattaaa	ttttttat	atttattatt	44520
tattttat	atttatttta	ttatttttat	ttatttttat	ttatattttt	attattattt	44580
attttattta	tttattattt	ataaatattt	attaaatatt	tattaaatga	gtgcactgat	44640
gtgtattgtt	tcaaatacat	tttattaa	ttagtgtcaa	attgctagct	actgtatggc	44700
taaatattac	atttttcccc	agtggggcaa	agttcaattc	aattagctgc	aatgaatatg	44760
tattagatct	caattctctc	ctgtgataag	tgttgagggg	aattcagaaa	taataaaaat	44820
atatctctgt	tctttgggat	ttcagtctat	tattaactaa	gcctctggag	cagttacacc	44880
tatgaaacag	tttggtatgg	catgacagtg	aaagcagtaa	caaggtaaaa	ggggaataaa	44940
aagaatgaga	tccatcaaat	tgtaaatccg	gaaggcacag	ggagtgagat	ggcatgtgac	45000
agtcaatggg	tagtgatggg	gtagaggccc	atatgctcat	gagagatttg	agaaatataa	45060

eolf-seq1

agtcattgtc	tttgtttaaa	aggatggtgt	gcagggtgga	aatactgaga	ggtgatctga	45120
caagtgttca	ttcaaactct	gcaaccttga	ttgagactgt	gctagatgat	ataaaaaatac	45180
atatgcccta	acagggagga	taggcaacca	aacaattaat	tttaaaattg	tgaattttaca	45240
aactgtgggt	tattatatgc	tacagaagcc	acacagagaa	agagttattd	gctctgtttc	45300
agaaaataga	atagaggaga	tgtgggaagg	caagatagtc	cttatagaaa	agtggtcgtt	45360
ttattacctg	caaccgttct	gacccgcttg	tcattctatg	tcttcctacg	tcagtcatga	45420
gctctatttg	ttctcatgtg	caaattcccag	cctcactagg	atgcactcca	gttatccatt	45480
aagcacggag	attcccatga	gcaatgggac	aaaatgacta	ttggacttct	atctcaactg	45540
cttgtgtaga	atgttgcctt	gtttatttta	agtcccagat	tctattattd	tcctactaa	45600
ccatgggtag	actctggatc	agacttctca	ttgaaagacc	tttgaaattd	gcttatactc	45660
aattgccatt	tcagtcacct	ctctcactag	atgttcttga	ctgctgtacc	actcttcaga	45720
ttcatgatgt	gctgataata	caatgtttcc	ttgcattgtt	attttgttat	atttaccctt	45780
atattatcat	ggtttttgat	taaaagcgta	tgtgtgtgtt	tacacataaa	catttttttt	45840
tcctttctca	acttttttagg	gatatgcaga	ctatatattd	cttttcaaga	gggcaagact	45900
gtaaaatagat	tgagggcaag	catcatgttc	tgtccagtgt	aagagaacat	tctgagaacc	45960
tagccggaca	tcaggtatac	attgaaagat	attagttgaa	attataggta	gagctgtcat	46020
gatgacatga	gtaggtaata	ttttgagaag	tttggtggtg	tgatattaga	agagaaatga	46080
ttcttctctt	ctgatgcagg	gaaaaagatt	cccaaatct	gcaagcgaag	aattgggtag	46140
aggaattatt	cagtttagga	tctggtctag	agatatacag	atttacattd	actgtttggc	46200
cttttttaca	tggttggaata	ccatatgaat	tttaaataat	agtaaaatat	ccaaaattac	46260
ttttgataga	ggaaaatgta	ttgcactata	tattcttctt	tgaatagaga	actttgtcaa	46320
gtaagagaat	aaaaaataca	ggatgattdc	tattaaacat	acagtattca	aaagctatgt	46380
gagggaaatcc	agctagtgtg	attatgtcaa	aagggaagat	agctggtctg	aaggtaatga	46440
gttatctcaa	ctgattggtc	atggccaatt	acagacagaa	ctccttattd	tacttcccca	46500
ccccccgact	actgcacttg	actagtcaaa	aaataaaaaca	aacaccaaaa	ccaaactaaa	46560
gggaagacag	tcttttccta	gcttggcatt	agttggatgg	tttatataaa	tgtgaaactt	46620
ttagaactca	tttgaaaaaa	aaaatttagt	aaagcaaaaa	gaagttdttc	aaatagttaa	46680
aaaattttaa	agactgaaat	tatcaaatca	tttttcacaa	caataaaaaat	tgtataacaag	46740
gcaaactatg	tacatatatg	tgggtgtcct	taggaataaa	tgcataattd	caaagacatg	46800
gaatttgtaa	gtgttagtca	tgttctcacc	tgtaataaag	caatgtgtta	atgaaattgg	46860
gtgcttatat	atattttatat	ataatttctt	agtttgagag	aagcaaataag	aagtgaatat	46920
atgtagccac	tttttaatat	ttgtattcag	ctataattcc	tcctgatttg	ctcctcgttt	46980
tagagtgatg	tactgggaat	ggaatcctaa	aattaaactt	attttagatt	aaatcatacc	47040
atgtagtttt	aatttttttt	attttttcaa	ttctatatca	atatagcttd	tttttaattt	47100

eolf-seql

atatatatat	ttttttgaga	aagaatcttg	ctgtattgcc	agcctggagt	gcagtgggat	47160
gatctcggct	cactaaaacc	tccgcctcct	gggttcaagc	gattccccctg	cctcagcctc	47220
ccaagtagct	gggacaacag	gcgcatgcc	ccactcctgg	ctaatttttt	gtatttttagt	47280
agagacgggg	tttactatg	ttggccagga	tgggctcgat	ctcctgacct	catgatccgt	47340
ccaccttggc	ctctcaaagt	actgggattg	caggtgtgag	ccaccgtgcc	tggcctgtag	47400
cttatttttt	aaaactagat	ttgatttttg	aattgcaacg	attatggatt	attatattca	47460
ctacttatta	tctcatcact	gtttagtttg	cagaaaggct	tacttaatat	ttcattttata	47520
tgttcccccta	ttgatagtgc	ctggaaaact	tttaatgctg	gccattaatt	taacatatat	47580
ttgcttagag	tctactgtgc	attacaatca	ttctagattt	caaggatgca	aaagtgagca	47640
gaaacagttg	tccgttgttg	atggactgat	ggaggttcct	gaaacttgct	tattttttgct	47700
ttacttttgt	ggatgttcct	attccttctc	tctctctctc	tctctttctc	tcttctctcc	47760
accccatgtg	tgccctcact	ctagcttccc	ctctttcatc	ctccctcttg	ctacaaatta	47820
aatgtagttt	ttttcaaata	ccttttcttg	gacttttttc	tctctatagt	gattcttgta	47880
gtaatcttat	agcatcatct	gtcacattta	tgttgatctc	tttttacttc	tgtctcttct	47940
tcagcatcac	aatctgttta	tgtgctggac	ctagaaattt	agccccccgt	gaatttcaac	48000
ttcacctgt	ctattaagaa	agccagttat	taataacgta	ttttaataaa	ttatgataag	48060
catatgataa	ggagaaagaa	taggggactt	tcagaatata	ttagaaggga	acccaaacta	48120
gactgtggat	caccagagga	gtcactaaag	gagtctcggg	ggaagtgata	tttaaactgc	48180
gatacgaagg	atcgcttgaa	ttaactaggc	catcttcagt	ggtcaggagt	cagttttctg	48240
agcagaaaga	gtagtatgca	taaatgccat	gagctggaaa	cgcatacaac	tctgtataac	48300
tgaaggaagt	gaggtttttt	cagctggtgc	atggagtgtc	gaaaggaaac	tgagaagaga	48360
ccctggaagg	tcagcttggg	tgtgagagtg	aagagcacc	aaagtaagac	taaaagtttg	48420
gtagttctca	taccaaata	agaagccatc	aagagttttt	atcaaattat	tgactttatc	48480
ttatttgtgt	ttcataaaaa	gctttctggc	tacatgaaaa	gaaaacagtt	agaggttggg	48540
ggcattgcgg	atttagaaat	tgagcatgga	gaacttgggg	ccctggacta	acagttgata	48600
gtagagttag	aggtacatgc	attgagtgga	gatgtgttga	agatgtgggc	ctggtatttc	48660
ttgatgacga	attgaatgta	gatgtggaag	atgatggaag	aaccaaggaa	gatggcttag	48720
tttctgcctt	gagcaactaa	gtggatgatg	agttagggaa	taccggatga	ggagtcataa	48780
caagaagaca	ataaattagt	tcaggacctt	gttaaagtgt	aggctactct	gagataccag	48840
tggaaatata	cagcaggcag	atggatatgt	gaactggagc	acaacagaga	agtctagatt	48900
aaaatttgca	tttggagtgt	agtatccatg	aaagtagcca	cgagcttggg	tatgttgtcc	48960
aaaagaatgt	ggactctctt	ctcatcattc	aagctgaaaa	cctcaacttt	attccttgac	49020
tcctctttct	ctttttttct	tgcttcctat	atgtaaataa	atggtgaagt	cttatcagtt	49080
ttgctctcta	ttgtctttcc	tattcatacc	accatttctg	tttccaatag	tctaattagg	49140

eolf-seql

ttcttggtat	ttctgacgag	agagctatta	tatacttgag	gatagcaaga	ctgggtgcca	49200
ggagattcat	agactattgc	agtaagctgg	agagttatga	ctgctgttta	aacaagatca	49260
ttagctgtag	gaaaagagga	aagtatat	aagaaataaa	gtatatgata	aagtaataga	49320
aaatgaatat	ttgactaaaa	ctagtatggg	aaacagaaac	gccttgaata	taactaaatt	49380
agaattatcc	tcctttatag	atttaacttt	tattttaagt	tcagagctaa	atgtacaggt	49440
tcgttatata	ggtcaggagt	tcccaacccc	ggggccactg	accagtacgg	gtctgtggtc	49500
tgtaggaac	cgggacgcac	agcaggaggt	gagcggcagg	ctaacgagca	ttaccacctg	49560
agctctgcct	tctgtcagat	cagcccctgc	tttggttctt	cgtgggagcg	tgaaccctat	49620
tgtgaagtga	gcatgtgaga	gatctagatt	gcgtgccctt	atgagacctg	ccccaccctg	49680
ctctgtggaa	caattgtctt	ccacaaaact	ggccctgggt	gccaaaaagg	ttggggactg	49740
ctgatatagg	taaacttctg	tcatgggggt	tggtgtacag	attatttcat	caccacaggt	49800
ttaattaagg	ctagtaccca	ttagttat	ttcctgatgc	tctccctcct	cccatcctct	49860
gccctcta	agacccag	atgtgtgt	cccttctatg	tgtttatatg	ttctcctcat	49920
ttagctccca	cttattagta	agaacatgga	atatttggtt	ttctgttccc	aggttagttg	49980
ggtaaggaaa	tgggtctccag	ctccatccat	gttcctgcaa	aggacatgat	cttgttcttt	50040
taatggctgc	gtagtattcc	atgggtgtga	tgtactatat	atataat	aatctggtct	50100
accattgatg	ggatatttggg	ttgattccac	gtctttgcca	ttgtgaatag	tggtgcaatg	50160
aacataacat	gtgcatcttt	acaatagaat	gatgcatatt	cctttgggta	tatacccagt	50220
aatgggattg	ctgggttgaa	tggtatttct	gttttaggtc	ttggaagaat	tgccacactg	50280
tctttcacia	tgggtgaact	aatttacagt	cccacctacg	gtgtacacat	gttatttttt	50340
ctctgaaagc	ttgccagcat	ctgttat	tttgactttt	tagtaatagc	cattctgctt	50400
gtatgagatg	gtatctcatt	gtggttttga	cttgcat	tctaatgatc	agtgatattg	50460
agctttttgt	catatgcttg	ttggccatat	gtatgtcttt	tttttgaaaa	gtgtctgttc	50520
atgtcctttg	cccacttttt	aatggat	gttattttta	tgtgtaaatg	tgtttaagtt	50580
cctttagat	gctggatatt	agacctttgt	cagatgcata	gtttgcaa	tttttttgca	50640
ttctgtagga	tgtttgttca	ctctgttgat	agtttctttt	gccatacaga	agcttttctt	50700
tagtttagtt	agaatataaa	taaaccagaa	gtttcccttt	taatttttagc	atcgcaaata	50760
tgcatcaa	gttatcaatt	tattttacca	cattgtctca	caaagtctca	tccaccaatt	50820
ataattcttc	caggtaaa	ttactggaag	caattattgg	tagagctgga	aatagcattt	50880
gccagacatt	tttctacaca	ctgtacatat	attaaatcat	ttaatat	ttaa	50940
atgaaacatc	acattttaca	ggtaggaaa	tgaagaacac	aaagggtata	gagggtat	51000
ttcaagggtca	tacaatttgt	aactgtcagc	aatagacttg	aaccaagta	ttctggttcc	51060
agaatctaca	cactaatcca	ggaaagtaaa	ggactgcgta	tgttttaagc	acctattaac	51120
gtgccaagaa	ctgtggaata	tatgaaaaat	acataggagt	caatatgtaa	atacacatag	51180

eolf-seql

tttaaatagc	aggttggggg	aaaaaataac	atactctgta	actagttttt	tcaaccgtat	51240
atcatagaaa	gttaagttat	tcagttgttc	aaagtcagtc	agtttccatg	agagatgggt	51300
aaaatgaaaa	accttcctta	taggtgaaat	ttaggggtgac	cattgccatt	tttaatcaga	51360
tatcccaaaa	attcaccttt	ccttgactag	catttaagaa	agtactgcaa	aatagtatat	51420
gcaaacattg	gctttggtaa	cttttgccaa	ctaacttacc	atagttttta	tcagggaaaa	51480
tggtgagttc	atgtgtggaa	gttctactct	gactcaggta	ggtagagatt	atgaacaaaa	51540
agggaaaagg	caatttccta	cctgatgggtg	tggaactctc	taaatctgcc	agtccagttt	51600
ttttccccct	tccgtttaag	gttttataag	acttttctaaa	taggcaattt	agtatttggt	51660
actagtttgg	aaattatttt	tctggagcca	tatgaagtac	taagtattta	tagacaaaaa	51720
tgttggcaaa	gaatatagag	gttcttgaaa	tggcctttca	ctgtggcaga	agaacttgaa	51780
tacattcaag	tgcaaatcca	gatttgtaga	gagtactgtg	ggtttatgga	aataaagcat	51840
ttgattgaaa	aagtcatttt	ttccagtatg	acttagtgat	tattaaataa	ccatgttttt	51900
aatctgactc	actggagggg	agctccatag	cattagtggg	aaacagttta	tgcagttaga	51960
atatgaaaaa	gacaaagaaa	agcaaactaa	aaagacattt	tagagtagag	tgggaattga	52020
gccaatgtgc	ctgactggta	aagtctttgg	agggaagcca	ggaagtctgt	gatattttctc	52080
tagttaggat	atatatatat	atgtatgtat	atattatata	tatgtatata	tatatatata	52140
taaaaatcat	attggataaa	aaatgttaac	cctttctatc	aaatttcaga	ctttcctgat	52200
tctgaaactc	aaaactgaat	gcaaattaag	atttttaaaa	agtatgatta	aaaaaaatac	52260
cgcatacaca	catgacatct	ggcaatgcct	tagatctctc	taaaatgtca	agatgggaaa	52320
atatccaaaa	cttttttttt	ttgagagaga	gagagagaaa	gagaaagttg	gcttctagcc	52380
ataagcctgc	cgaggaattc	ttacgagaat	ttctggaaac	tgtacttttt	aaggcaatca	52440
tgttctccat	gctttcgtgg	cctcagatgt	tacttgaagg	aattttaaagt	ttcatctatt	52500
tgtgctttgt	tgctgtacac	ccttttagact	tcagtggtca	agtttcactt	tggagaactg	52560
acaaaagaaa	aatatttgtgt	ttggcactac	acaatcttag	aatactttta	gaatgaatat	52620
gccaagggag	agtcataatta	tatagcttga	attgtatttt	tcatgcatga	tatgtacatc	52680
accttatgtc	acacaaatct	ctatcagcct	tttgcttttc	cattaaaata	aatacccatc	52740
agatacttga	tatagatatt	ctgtggttgg	agggccttaag	tgagatgcag	tttcaggtaa	52800
ataacataaa	atcagcagac	ctctaattctg	aattgaatgt	gttaaattctt	atcaacctag	52860
agttttaagg	aagagggaac	aactgtcttc	agtgaagta	ggcgcgtgca	ttaataccag	52920
ttactcagga	ggctgaggca	ggagaatcac	tttaaccag	gagatggagg	ttgcagtgag	52980
ctgagattgc	ctcattgcac	tccatcctgc	ctgggtgata	cagtgcagact	ccatctcaca	53040
aaacaagcaa	acaaataaat	aaaaaaacaa	aagaaatggc	caagaagaaa	aatgcctagc	53100
tttcctgcaa	caatttggga	gattaccatc	atctgtatta	attcattcat	tctgttgttt	53160
aatgaaaatg	gctaaagtct	ggccttgcca	ttgaggtttt	taaaaattct	ggtaaaatat	53220

eolf-seql

gcataacata	taatttgcca	ttttaatat	tttaagtgt	ttattctgag	tcattgaata	53280
atttcaaatt	gctctgcaac	tgtagccgtc	atctatctcc	agaatgtttt	tgtttcccaa	53340
actgaaactc	tctacccatt	aaacactaac	tttccatttc	ctccaatcgg	caagctccag	53400
gccaccactg	ttctgctttc	tgttcccatg	aagttgacta	cttttgctaa	ctgatataaa	53460
tggaatcata	catatttggt	tttctgtgtc	tggtttat	tacttagcat	aatgtcctcc	53520
aggtagatcc	aagttgtagt	aaatgtcaga	atttcctttt	tttttaaaga	ccgaatagta	53580
ttccattgta	tgtatatact	acattttgtt	tatcaaaaat	ggacacttgg	gttcctttct	53640
cctttttcca	ttgggcgtat	tgggttttaa	tattacacgt	ttgttataaa	ggcagatata	53700
gggtgataga	attcatacta	gatttgga	taatcaaact	aggctttgtt	ctgccacaac	53760
taggtaaaaa	tgttacttct	ttctgacttt	ttgtaaaatc	aggatggaaa	tatatttcat	53820
atcattgtta	tagctaatag	ctattaagca	cttgtatgtt	tcatactgtg	ttaagggctt	53880
ttatatat	ctcattgtat	tccgacagga	accctacaaa	gtagagacag	ttccaaat	53940
ccagaatgaa	tgtgagattg	tgatacatat	gacaaactgc	ttattaaact	gtacagcacc	54000
taacaacatg	agggattatg	cctaattccc	tacacagtgc	atggcataca	caaggactca	54060
tgagatgctg	ttgaagaata	aaagcagctc	tactttacag	ccataggaag	cacatacata	54120
ttcagccatt	tgaaaacagt	gtgtcttgat	gaaagaggat	tgagttgga	ttaatatgaa	54180
cagtcactaa	aaaataaatg	aaaaccaa	ctctaaatca	cgtatacaga	caatattcgc	54240
aatattgata	atattcaaat	tgtgtaaggt	aaacctgatt	actcagcaga	attaaagttt	54300
cactggtgat	atgggggtga	ggcagtgta	tctctctgac	aaaat	aaat	54360
aat	tttcaa	attga	caaaa	attt	caaaa	54420
tagaaatcat	cacagttctc	tttattaatc	agagtttaaa	tgtaggcca	gcctgggtgg	54480
ctcacgcctg	taatcccagc	actttgggag	gccaaggcag	gcgggtcacc	tgaggtcagg	54540
agttcgaaac	cagcctggcc	aacgtggtga	aacctcgtct	ctactaaaac	tacaaaaaaa	54600
ttagccaggc	ctggtggtgc	atgcctgtaa	tcccagctac	ttgggagact	gaggcaggca	54660
aatcgcttaa	atctgggagg	cagaggttgc	agttagctga	gatcgcgcca	ttgcacttca	54720
gcctgggcaa	tgagagctaa	actccatctc	aaaaaaaa	aaaaaaaga	agaagtttaa	54780
atgtctactg	ataggcatta	ttttataggg	ttattttata	gggacttaaa	aatttctaca	54840
tatcaaata	ctaacataaa	tattggatca	catggatata	tattaattct	gcaaataatt	54900
atacaaata	tattaaatat	acaaataatt	agttatacaa	ataatattat	actgtgtatg	54960
cctttttata	gaatttcttc	caaaaagcaa	cagtggataa	gttggagaga	gccatgaaat	55020
tccccaggag	agtggctgtg	aagggtggcc	agggattgag	acatagggtg	tcttcctaga	55080
gtctatccat	gagaaactga	catgatttca	tgccatctgc	tataagtgtc	ataagtaata	55140
atatagaaat	agttgacctc	acagttaatt	tattaagcaa	atagtggaga	agatgctagt	55200
aatttctaga	ccttgcctca	ggggctgtga	atataggagg	ggataagata	aaaagtggct	55260

eolf-seql

ctttcattgg	agtatcaatt	gtggggagag	attgaatatc	ctcaataata	tcttaattaa	55320
tatataaata	tatataagaa	atatataaat	tgaataatta	cagatagagt	tttttgtgaa	55380
taaaactgaa	caaagtgatg	taatggagaa	tgatagcagt	atatggggca	tattcttttag	55440
atgggggtcat	ttaggggaatg	tcttcctgtg	acgggggcat	cataaacaac	aattgttcaa	55500
ctgctctatt	ccatcagggg	gggaatcaca	tactcattgt	tggctagcgt	gtctgcagtg	55560
cctaggacag	aacctggcac	ttgataggca	tttactgaat	atTTTTTgaa	taaaagaaga	55620
acgaaatgga	tgacagtaaa	taagtctttt	aaaaacgttg	aatcaaggct	gggcatagtg	55680
gctcatacct	gtaatcccaa	cacttttgaa	ggcagagggtg	ggaggggttg	atgtgcttag	55740
gagttcaaaa	ccatcctgag	caatgtagtg	agacctcgtc	tccacaaaaa	aaaagaaaaa	55800
agaaaaaagg	aaaattatcc	agctgtgggtg	gtacacacct	gcagttccag	ctaatacagga	55860
ggctgaggtg	ggaggatcgc	ttgaaccag	aagattcaga	atgcaatgag	ttatgcttat	55920
gccactgccc	tccagcctgg	atggcataga	gtgagaccct	gtttcaaaaa	aaaaaaaaaa	55980
agatggatca	acaaaagtga	tatcaatagt	aatgacacta	ataacaaaaa	aaatagttaa	56040
atcatgactt	gcaagtataa	atcactttta	aagattattt	taataaaaaa	catgttaatc	56100
tttagaacta	cctgaggtag	tgtgatagga	actattaact	acatttgatg	aatttgaggt	56160
acttagaaca	tattactggg	gaatggggaa	gctggcttaa	aaaaaaggga	gggtcttctc	56220
agacagttct	ctttttacat	acgtggcaca	atgattcatg	atttgttata	ttgtgaatgt	56280
tgaatgtgga	atatttatag	gaatgcaa	cacatttcct	ttacacaata	gtattaaact	56340
gatttcaaag	tgttttgata	tatgcttcta	tccttacaat	gggtccagtga	gaaagaaaat	56400
atgatattca	tcattgtaga	catggaaata	aaagtttaaga	aaagttgtct	tgatcaatat	56460
catatgcaat	agcaagtgga	aaacccatgt	ttttaattta	gaatttaata	ctaacagtct	56520
atgctctcat	ggatgtttta	tgtagtttaa	tgtttttaaa	aaactctaag	cccgacaact	56580
tcgctgttta	aaatatttga	aataaaaaata	gctttgccat	tttttaata	aaacattacc	56640
ttttattata	acaaaattca	gaaaatacac	aaaataacaa	aacaggaatg	accaccagtt	56700
atcattttaat	gtgaatcatt	gaactccttt	ctttctataa	aattacaaaag	ttgaaatatg	56760
ttttaaaatt	tgtgtaaaag	ttagaggatg	atttgattta	aatctattat	ttaaatttat	56820
ttttagtcaa	gtaataataa	ttcagtgaat	tgttcaaata	agaattgcca	tgatgcaggt	56880
ttcacatata	tgaacaagt	taatatgagg	aatattcttt	cctatacttt	cctttttatg	56940
ttgtttttat	cttaattact	ctaacagaga	caaatttcat	ctaaagaggt	gatattctaaa	57000
ggaaatgtag	agatcagaat	ataggacaga	ttgttttaaa	aagtttgata	tttattatta	57060
gggtgccta	aatgtctcct	tctagtttat	gaagctttat	ttctaaaact	ataatctatg	57120
tttatgtgtg	tttattgaat	atttgtgttc	cgttggtaac	aaatgaaatt	taagtgtact	57180
attaagtaat	gctaatacta	atatcagttc	tattttgaca	aacactgtgc	tggccactat	57240
tccatgtgcc	tcacacactt	ttatctcatt	taaatttcat	aaaaacccta	tgactgaggt	57300

eolf-seql

acttttctta	tctagagatt	acttgattga	agaaacaggg	gcacagggag	gcaaaacaat	57360
tttccagggg	catacaggtg	aacatgaaaa	agccaaaagt	aacacccatc	aataggggcta	57420
cggcattcat	gccttccttt	aaaaattaat	tgagggcaag	aaaccattgt	ttaatatgta	57480
atttcaaaca	tctagatgaa	gaaaatatct	gtattagaaa	ataataagga	ctatgtatat	57540
atgatttcag	acgatttcct	atttaaataa	attaggataa	atgacatatt	tgttataggg	57600
tgaaatgtta	gggaaaatct	cagttttagt	cacagatctc	tactaacctt	gaaatcagat	57660
ataccaattt	aactctttgg	cttgggattt	ttttattcaa	aggcatcaga	tgaaatgagc	57720
tcaacagtct	gccggttcta	aagttctttg	tcaccttctg	tgttatcacg	tggtgggtctg	57780
tgaatcttac	agagattgat	ggcttcagtc	ttctccaaat	atttctccta	catccctcgt	57840
tgtaaaagga	aactgagtgt	aaggaaagaa	tgtaaatccg	taatcacatt	tgatattcct	57900
tgaagttgca	acactccaga	aatttggtga	caagcaaagt	cccctatfff	taaaatgatg	57960
aagcatcagt	gtattagtgt	aagttgataa	gcttggagat	attccataag	agattattat	58020
attcttttga	aaaaactcag	gaggagaggt	gctatcaata	agaagccatc	ttggcttcaa	58080
cagaaataaa	ttatttgaat	aggattcacg	tccttattct	acagacatta	attgcaaaac	58140
gacccttact	tatttttaaa	gaaatttgaa	aaatataatt	cacatgccac	aaagttttcc	58200
ctttaaaggg	tacaatgtag	ttgtcccacg	tatattcaca	gagctgttca	gattgtccct	58260
tattgaatca	ttttgcttat	tcaagagcat	ctaaccaggt	gaagtatgca	gtgatagtat	58320
tgcatcaata	tttgctgaat	tctccactca	atgaatacaa	ggtacagcaa	aagagaccag	58380
ataattctag	ctaaactcag	atgaaataat	tgtaaaatcc	agaataatta	agtattcaga	58440
tatattcaga	taaagattcc	agaaggatac	aagtaaataa	taaaaagagc	acattttatt	58500
ctaataattag	ctgtcatatt	aacacataga	aaaaaatgta	ggcttggttag	catcaagtaa	58560
gttgccaaat	atgatattgc	cccttatata	acttgaataa	ctttaggtgt	tacttaaatt	58620
cataggcaca	tattggcatc	ttcagagcaa	gatgaattaa	cactctggag	tttttatttt	58680
atttatftaa	aaatagatta	tcacttgaga	aaagacagca	tcataacatt	tagtgacaaa	58740
gtgtgaaatt	ttcctacagg	tcttagtgat	ttagcaacca	caaaaccaa	gaaaggagag	58800
tttaatcatt	attttaggtt	ccctcatggt	gactctaaat	tgtaagtaag	aatagcaaga	58860
acgttttcac	tggcaacctt	ctttatctta	aaatttaatt	tcataacacg	tttggttaaag	58920
cagctaaatt	atttctaatt	tatatgtttg	gctgaggcag	tttaatacaa	gtaaaaggca	58980
aaaagtcatt	aagcttttat	tttctatctt	gtttcacttg	tgcttccaat	gagcattggc	59040
ttggagtgt	tatcgtcatg	tcactgacat	tcttgcccag	gccttggtcaa	actacttgga	59100
taccctgggt	agagaggttt	ctgggacttt	ggcctggaaa	tatgcatttt	gaaaattata	59160
tccagtgtat	ctaatttgta	actagttaga	catcactgca	ctaagagtaa	actttcagct	59220
ctctggccta	gttcagtaat	tttctttatc	acaaacacgt	ctttcataac	ttggttccaa	59280
aggcattcat	gacttttgat	gtcatccgta	aatgcatttt	aaggaattaa	tttctgcttt	59340

eolf-seql

taaccaatta	caagatttta	ttaacaatct	gtttactggt	tgacaagtat	tagtcagctt	59400
ttattttatg	tcattactga	gatttgaagt	cacctgcact	acgttttaaac	aaaacctatt	59460
cttatgatta	caatatattt	acctgacatt	atgcaaaaact	gcattttttt	tgcatttggg	59520
aacaccattt	tatatatgaa	gttggtgagg	cttataaaag	gtcacaagta	actgactaat	59580
agcgtcaaga	ctagaaccca	tgtagtgttg	gcatctgttt	aggaacctgt	gtcagatccc	59640
acacttgtaa	tggagagctt	aatttcagag	aacattagcc	atatctagct	attgctgtga	59700
atttaaattg	ttttgagtgt	gcatttaatt	tgcaaatttg	tattggtttg	ttatttgtgt	59760
aagaattata	cacctacaaa	gattttacca	agtttatatt	tttacatttt	aaagtagtgt	59820
tttaaaacaa	ataaattaaa	ttgacacttg	gtgatgcaag	attttatttt	tcctttttaga	59880
aaaggtcttt	acaatattta	aattttaa	aaacagttct	cactgaaata	attaggggta	59940
aaatggacct	ctgttgatgc	tatttgaaaa	aactatttga	acaatgagaa	cacttggaca	60000
caggggtggga	aacatcacac	accggggcct	gtcgtgaccg	gggcctgtcg	tgggggtgagg	60060
ggagggggaga	ggaatagcat	taggagaaat	acctaagtga	aatgacgagt	taatgggtgc	60120
agtaaacc	catggcatat	gtatacatat	gtaacaaacc	tgcacgttgt	gcacgtgaac	60180
cctagatctt	aagtataatt	aaaaataaat	aaataaatag	gcctggcgcg	gtggctcatg	60240
cctgtaatcc	cagtactttg	ggaggctgag	ataggcggat	cacctgaggt	cgggagttcg	60300
aaaccagact	gaccaacata	gagaaacccg	gtctctacta	aaaatacaaa	attagtgggg	60360
cgtggtggcg	catgcctgca	atgggctgag	gcaggagaat	cacttgaacc	caggaggtgg	60420
aggttccggt	gagccgagat	catgccattg	cactccagcc	tgggcaacaa	gagtgaaact	60480
ctatctcaaa	aataaataaa	taaataacaa	taaaataaca	aaatagaaga	aattggtttg	60540
atgccacgat	taaatataga	tttgtttttg	catttgtagg	cagtcagagc	aaaatgggag	60600
catagtaa	tttctcttat	cataagggaa	gaaaaatctg	gtccttgagg	tggttgttat	60660
tttctttgtg	ttttcttctt	tctaaattct	aaaagaaagt	gtcatgtggg	gtttcatata	60720
aatgacacag	atgtcataga	ccttttttca	atatttttat	ggcaattaca	ggcacaaatt	60780
accaacgact	atttgttata	gaactttttg	atcaaaaact	tacttcattt	tttctctaga	60840
ggattttcaa	tgaggaaaag	aagcctttac	tattttacttt	tatatttcat	atgtagctac	60900
aaagttgctt	aaataaaaatg	agcattcttt	atcaaaaaaa	aacaaaaagc	tatttactga	60960
aactttgggg	atactcatct	tcatgtacag	tttccaactc	tgatttagacc	acagctcctc	61020
cctatattta	tgatttgctt	gctttataat	caatattatt	tctgaaacta	gaccccaa	61080
aagtcagttt	tggttttgct	aagatttgct	taaatgtaaa	cctttagaaa	atcttatgta	61140
tattatttta	tgactcttaa	ctgagtacat	acttgagtgg	ttattctgct	gttacatttg	61200
ttctgaagaa	tcatgcacat	tttaataggc	aagttattaa	tgcaaccaa	cctttaagtt	61260
ttggagtttt	ataggtaaaa	tatgtttttc	tagaggctctg	tttctaaagt	taaaagctgt	61320
tctaataaat	aataaacaga	ttcaaaaacc	ttggcaaact	ctcaciaaacc	aaaacaaaat	61380

eolf-seql

taggacattt	tgattgattt	taatattact	ttatctaata	aaaaataagt	tagatgctat	61440
aaaaatattt	ttaaatgtgg	aggtaattta	gttcagttat	cacacaaaca	ttctctccaa	61500
tatacacttg	agtgtaaatt	atatgttggt	atttacttta	ataacagttt	gctcaagcag	61560
aaaacctgaa	aaaactattg	cacgtatgcc	cagggttgta	ttgcatatta	acacctgcaa	61620
aataaggcac	aattaccttt	ctatttagac	aattaaaaac	ttcgataaca	taagcttagt	61680
tattgcctga	taaaaaatat	gccaatcctg	ctccagatta	acagatgtct	tattgattct	61740
atgtatgtac	caagttagac	atataaacca	atgggttttag	gaatggtttag	tcttctaaaa	61800
tctaaactgt	ttgtagcaaa	atgtcattgt	aaaagcccaa	tataaagaat	agctttaaga	61860
attcattaaa	atgtaaggta	catgaaagcg	gagtacgtgg	ttggttttgt	tcattgctat	61920
atatttatca	cctataacag	acacatagta	actcctatag	aaatatttat	tggataagtt	61980
aatgaagtat	aattatggag	gcatagttat	ttttcagaaa	agtaactata	catcacatat	62040
caaccattgt	ttatataaaa	atcagatgta	atttcatatg	atttggtgag	ctaagtatgg	62100
tcaagaagca	tgtgttctta	tcacagataa	tcataaaact	aatttgaaaa	ttatagaaaa	62160
tctcaaatta	tatcccaaaa	tggacaatta	ttacttgtac	tatattttct	cttagtaaga	62220
taatatttgt	tttgttatag	aatatttggt	gtcattccta	ctcatcaatg	ttagtacaat	62280
ttctcaaata	gatgtaagca	taacttctaa	atttaacaat	caaaatatgg	tctaataaac	62340
taagatgaat	tccatactca	atatttgtct	ttgtaaccta	gaatattttc	tcaattgcta	62400
ctatgaaaat	taagaataaa	aagaaaattt	taaatgtagg	aagtgcactg	aactgagaag	62460
attattttcc	taaagggaaa	ttccactggc	tatggagtaa	ctgggaactc	tgtcctttat	62520
tgtaaaacat	ttatgaaaat	tgcttgactt	gcaacttcac	tggttgacct	ggagagttca	62580
ttctataaaa	aaaggtgcat	cacgtgaaca	agaaatgtat	ctacacaatg	ctcaacagaa	62640
aacccttgat	taattgaagt	atagtaaagt	gttattgggtc	cattccaatt	tcctttaatt	62700
tgagttgct	tggaagcata	aagcttttta	atgtctttgt	tttgacaaag	aattcactta	62760
aaagtgagaa	caaatttaat	ttattaatat	aatttaaaaa	catgttaaag	caaattaaaa	62820
aattaacatg	cggaacaatc	ttttaaaaag	tttttttttt	tttaaagtag	gaagtacact	62880
gaactgagaa	gattattttc	ctaaagggaa	attccattgg	ctattgacta	actgggaact	62940
ctgtctttta	ttgtaacaca	tttatgaaaa	ttgcttgact	tgcaacttca	ttggttgacct	63000
tggagagttt	ataaaaaagt	tatttattaa	gttagaactt	taataaaaga	ctttttattt	63060
ttatttattt	attttttttg	agatggagtc	ttgctctgtc	accaggctg	gagtacagtt	63120
gtgcaatctc	ggctcactgt	aaccttggcc	tcctggcttc	aagcaattct	tttgacctcag	63180
actaccaggt	agctgggatt	acaggctcat	gccaccatgt	ccagctaatt	tttgtatttt	63240
tagtggagac	atggtttcac	catgttggtc	aggctgggtat	tgaactcgtg	acctcaggta	63300
atccaccac	ctcggcctcc	caaagtgtt	ggattacagg	tatgagccac	cgcgcttggtc	63360
cagacattga	tatttaactc	tttcttaatc	aaattttgaa	cttattttcat	accttggtata	63420

eolf-seq1

ttctaaaaaa	aaaaacacac	acatatatat	gtatacatat	ttctagctta	tatgcccacg	63480
tgtttatgga	gttcactctt	ttgttttgtt	ttgagatgga	gttttgctct	tgttgcccag	63540
gctggagtgc	agtggcgcgga	tctggggtca	ccgcaacctc	cacctccaga	gttcaagtga	63600
ttctcctgcc	tcagcctcct	gagtagctgg	gattacaggc	atatgccacc	acatccggct	63660
aattttgtat	ttttagtaga	gacaggggtt	ctccatgttg	gtcaggatgg	tctcgaactc	63720
ccaacatcag	gtgatccacc	tgccctcggcc	tcccaaagt	ctgggattac	aggcgtgagc	63780
caccgcgct	gggtgttact	cttagggaat	ttaggtgaat	gcagatagtt	acctactaaa	63840
aagatataaa	tcgaaagaga	taaacttttg	ctgttgggaa	aatgggttga	tcaatcaagc	63900
agcaatatta	acctgcgaag	ggtaagtcac	ttttgtcaaa	ataaaaaggc	tatgttgagg	63960
ttcttacaga	aaatactttt	aaaaataggg	acctacacaa	tgtaatgtag	aggtgttttg	64020
gcagttaag	ggaaatgtaa	tgtaaaaatt	tgcataatgc	ttttacatat	gtaatccata	64080
caatattaaa	aaccgtcaat	aaaaacatgt	tgaaagtcct	taatctctct	ttagtattag	64140
tttaacagtt	aacagagact	attaagattg	taatttattc	tcttattaaa	aattattatc	64200
tgatttactg	aaaaaacaat	cacaggtttt	gaatatctaa	aaacaaccac	tagaggaaag	64260
caattgattt	cctgtaacat	ttattaatgt	aagcagactg	cgagaattct	attaatctag	64320
acaggagaac	tgtaatgttt	ctgttgtctt	ctttattaaa	tttgacaaat	ttgaaatgct	64380
tgcaattctg	cactaacagg	atttcataaa	tactctttgc	tgacacattt	taatttttgt	64440
gcatttactg	gatattctta	aatgcaatc	atttattata	tttcagggca	ggaaaaccta	64500
attagtagta	aacgattata	tcaaacattt	gcttttttaa	taaacttggc	tttatattac	64560
cttattttaga	tatcatgaat	tcatattagt	acagacttct	gattacctat	tacagaaaca	64620
ttccaatttc	aataaaacta	acgttagtag	tcaagtagtt	tctctaagca	actgaaataa	64680
atttgcaagt	gatggactat	gcattcttag	tattaactgc	agtcataata	ggccatcagt	64740
aacatgggat	taagagaaaa	ccaataaatt	taccagttta	gtcagtcctc	tggtatgtga	64800
gtagaagaga	caaaaagaaa	aaactaataa	tacagttgtc	acataattatt	gaccattttc	64860
tgcccttcta	tactttttcta	agcccatagg	ctgtgggttat	attgctatga	tcagtttggg	64920
tagctacttg	aattttttag	ctttaaatgc	aggtatacct	ctgagacatt	tcagattttag	64980
ttctagacaa	ctgcaataaa	gtgaatatca	caataaagca	agtcatacag	tttttttggg	65040
gtttcattgc	atataaaaatt	atgtttattc	tatactgtag	tctgttaagt	gtgcaataac	65100
attacatttt	taaaaaacia	tgtatatacc	ttaatttaaa	aatactttat	gctaatacat	65160
gctaacagct	acctgagcct	tcagcaagtt	gtcctcttct	tgctgggtgga	ggatcctacc	65220
ttaatgttga	tggtctgtga	ctgatcaggg	tggttaattgc	tgaagggttg	gggtggctgtg	65280
gcaattttgt	gaaataagac	aacaatgaag	tttgcggtct	tgattgagtc	tgactgtcat	65340
gaaagatttc	tctgtagcat	tcaatactgt	ttgagagcat	tttacacata	gtagaatgtc	65400
attcaaaact	ggagtcaatc	ctctcaaacc	ctgccactct	tttatcagct	aagttgattt	65460

eolf-seql

attattctaa	atattttgtt	gtcatttcaa	cggtattttac	agcatcttca	ccaggaatag	65520	
gttccatctc	aagaaaccac	tttctttgct	aatccataag	aagcaaattct	tcatctgttc	65580	
tagttttatc	ttgtgactgt	ggaaattcag	tcacatcttt	tggctctact	tctaattcta	65640	
gttttcttgc	tatgtctacc	acatccgtgg	ttactttcag	tactgaagtt	ttgaaccctt	65700	
caaagtcatc	cttaaggggt	ggaaacaatt	tcttccaaac	tcctgttgac	gttggtattt	65760	
ttacctcctc	ccatgaatca	caaattgtctt	taatggcatc	tagaatggtg	aattctttcc	65820	
aagttttcaa	ttactttgcc	cagattcatc	agagaaatca	ctatctatgg	cagctatagc	65880	
cttacaagat	gtattttctc	gatcataaga	cttgaaagtt	tagattactc	cttgatccat	65940	
tggctgcaga	atggatgctg	tgttaccagg	aatgtaaaca	ttaatctctt	tgcacatctt	66000	
tttcagagct	cttgatgac	caggtagatt	gtcaatgatc	agtaatat	tgaaaataat	66060	
cttttttact	gagcagtaat	tgtcaacagc	gggcttaaga	tattcagcaa	atcatgctgt	66120	
aaacatttgc	tgtcatccag	ggtttgttgt	ttcattggta	gggagcaggt	agagtagaca	66180	
tagcatactt	ctgtggggct	tcaggat	ttt	cagaatggta	aaagatcagt	ggcttcagct	66240
taaagtcacc	aactgtacta	gtccctgaca	agaaactcaa	cctgtccttt	gaagcttcaa	66300	
agccaggcat	tgattttctc	tctatagcta	tgaatgtctc	atgtggcatc	taccagtaga	66360	
aggctgttca	tctacattga	aaatctgttt	tttaatgaag	ccacctttat	caattatctt	66420	
tgctagatct	tctggatctc	ttcttgcagc	ttgtacatca	gcatttgctg	cttcaccttg	66480	
tgcttttatg	ttatggagat	gccttcttcc	cttaaaccctt	atgaaccaag	ccctgctagc	66540	
ttccaacttt	tcttctgttg	cttcctcagc	tctctcagcc	ttcaaagaat	tgcagaatta	66600	
gggtcttgct	ctgtattagg	ctttgcttta	agggaaatgtt	gtgggttagtt	ttcttcgtgt	66660	
cagcaataag	gctgttttgt	tttcttatct	tttgtgtgtt	ctctggagca	gcacttttaa	66720	
tttccttcag	tatcatttcc	tttgcat	ttta	caacttggct	agctatttgg	cacaagagac	66780
ctagcttttg	atttaccttg	gctttcaact	tatctacttc	actaagctta	attatttata	66840	
gcttttgatt	taaaataaga	gatgtgcagc	tactcctttc	acatgaacac	ttagaggcca	66900	
ttggaggggt	atttcaatat	tgtgcttcag	gtcttggttc	catattgttg	ttctcaggaa	66960	
tagggaggcc	ctaggagaag	gtgagaaatg	gaagaatggc	tggacagtag	aggactctga	67020	
acacacacaa	tatttatcca	tccagttcac	tgtcttatat	gggtgcagct	tgtaattctc	67080	
ccaagaaaat	agtaacctca	gtaatcgctg	atcatagatc	accttaataa	tgaaaaagtt	67140	
tgatgtattg	taagaattac	caaatgtga	cacagacaca	aaggagcac	atgctactgg	67200	
aaaaataatg	ctgatagaaa	cttgctcaat	gcagggatgt	cacaaacttc	taatttgtaa	67260	
caatatgcaa	atatctgtga	agcatgataa	aggcaagtgc	aatgaaacat	ggttttccag	67320	
tacgtgatat	taaaccatat	catgaaattc	tagactctga	gatttacaag	ggactgacaa	67380	
ctcaatcagt	tcagcttctc	atttccactc	ttaagaggta	cctcttttaa	taaaaagcc	67440	
tattaagatc	attaaaataa	atccatggaa	atccttttta	ttaagcaaaa	tgtgacaaaa	67500	

eolf-seql

ttgttggaat	aaccagaatg	aaaaagtcta	tcattgtcac	tgccctatca	gactgacata	67560
cttcattgag	cataagaggg	atactataaa	ctgtactaat	atgactttat	ttctttttac	67620
tgctgaatat	gattccattg	tatgaatata	tcacattttg	tgtattcatg	catcagctga	67680
tggacatttg	ggttgttttc	accttttgaa	tattataaat	aatgctgctc	tgaacatttg	67740
tgtacaagtt	tttgtgcaaa	catgtttcat	ttctctatgg	tagaattcct	atgactggaa	67800
ttacaagtca	tgtgatagct	atatttaaca	tattgaggaa	ctgccaaagt	attttccaaa	67860
gtggttgcac	catcttatat	tctcaccaac	aacatatgag	tgttttgatt	tttgtatgta	67920
ctcaccaaca	cttgttatta	tctgttgttt	ttaatatagc	cattttttatg	tgtgacatat	67980
tgtattttta	attttcatat	ctcaaataac	taatgaattt	aacatctttt	tatgtgttgt	68040
ttactattc	ttacattttc	tttgaggat	tgtatattca	aattcttttc	ccattttaaa	68100
ttgggttatt	tatttttatt	attgaattgt	attagttctt	tatatatttt	ggatataagt	68160
ccctttcaga	tatatgactt	gcaaagtgtt	tctcccatc	tgtgagggtt	tctttcactt	68220
aataatgtcc	ttcaaagcaa	aaaagggtta	aattgtgatg	aagtctaaat	ttccagtctt	68280
ctatcacttg	tgcttttcct	ttagactctc	tgtaattttt	tacttagagc	aacatgtagt	68340
gtaattttgg	tttaggtgac	tgtgcttcta	ctagacagta	aatgtgaaca	cctgggtatt	68400
ttgtatccta	agcaacaagc	aaagggcctg	agctctagta	agatatcaat	gaatgtttgt	68460
tggattcatt	aatggatttt	ttgatactcc	ttttcaataa	gtaaatttaa	cactactcag	68520
taacaaaata	atttttacta	aggaatgaca	atatttgatc	tttgaataat	taattttaga	68580
aacacacaca	tatatatata	tacatatata	tatatatata	tatatatttt	tttttttttt	68640
gagatggagt	gttgctcttg	atgcccaggc	tggagtgcaa	tggcatgatc	tccactcact	68700
gcaacctctg	cttcccgggt	tcaagcaatt	cttctgcctc	agcctcctga	gtagctggaa	68760
ctacaggctc	ccgccaccac	acctggctaa	ttttttgtat	atttagtaga	gatggagtgt	68820
caccatgttg	gtcaggctgg	tctcaaattc	ctgacctcag	gtgatctacc	tgccctcgcc	68880
tcccaaagtg	ctgggattac	aggcatgagc	cactgcgccc	tgccaatttt	agaaacttct	68940
tggtcaccta	cacacaaaat	tcagatattg	attccttaaa	ttaaatttta	gtgtgcatat	69000
ttaaaagcat	gtttcaatga	taatattaag	tagttaattg	ccttatttta	tcttggaata	69060
agcagaatga	gtgatgaagt	gtcatctgtt	ttatttttcc	agtttttttc	catagaacat	69120
acctttattt	gaaaactaaa	atcaaagtat	cccttgatgt	cataggatac	tttgaaatta	69180
tagataatca	tagttatata	gtcataaatt	gaggaagagt	gagagagtag	tagaaaaaaa	69240
tcatcaaacc	gtattatttc	atggagatgg	ttagttgtag	tcagtattta	taattgatgg	69300
ctttttccat	tactctggag	tctaatttca	aatctttcat	aagtgtacag	atgtttttatc	69360
tgattttgca	cattattttc	tttctacatt	tccatagtag	ttcagacttc	ttaaaagtca	69420
atttttaaaa	aaaattcagc	ttttcgcca	gctttttgtc	atactcttat	tccactaaaa	69480
atgttggttac	tttggttttg	acaatgaaaa	atagaaaaca	aatagccttt	tatgctgaaa	69540

eolf-seq1

catcttatta	aagaaaat	ttttgtgat	ttatttcttt	atttttcata	ttgaaaaatt	69600
tttctttctg	ttaattagtt	ttaactctga	tgatcatcag	gggataattc	ttaggacttt	69660
cattactcaa	tgtaattgta	atagttgggt	cacctccttc	ttaatttgcg	tgtgtgtgta	69720
acaataaaat	gtactagtgc	aatgaacaaa	ctggttttta	catcattgaa	taaatgtaca	69780
ttaaatgcct	tctgtaccct	aggcgttata	ttgaaactga	tctaaatggt	tcactgtttg	69840
aaacttagaa	aagaagcagg	ctttctgagt	tttgttttgt	tttgttttga	tttttttgag	69900
gcggattctc	actctgttgc	ccaggcttga	gtgcagtggc	accatctcgg	cttactgcaa	69960
cctccacctc	tggggttcaa	gtgattctcc	tgccctcagcc	tcctgagtag	ctgggattac	70020
aggtgcacac	ctggctaatt	tttgtatttt	tagtagagac	agggtttcat	catgtttggcc	70080
tggctggtct	caaactcctg	acctcaagta	atccacctac	cttggcctcc	caaagtgtctg	70140
ggattatagg	tgtgagccac	tgcacctggc	cctgagttta	gaaaaatagg	atgtctaaat	70200
agaattaaag	aacaatgcat	ttccaaaaaa	ttgattttga	taagttgaat	ttcttttagaa	70260
catatacttt	acaatttata	tcacataaaa	ttttattcat	tactgtttat	tagtgagcta	70320
aagctgtttc	atataaatta	aatttgttat	tgttttgaag	taaaaataca	acacaagact	70380
ctagaaagag	actttaat	tatagtttaa	gatagctgtt	taaaagatat	aaggacatat	70440
aactattata	gaccagtggg	ccccaaactt	tttggtagca	gggaccagtt	tggtgaaaga	70500
cattttttcca	catactgggt	gggaggggtg	ttttgggatg	aaagtgttcc	acctcaggcc	70560
atcaggcatt	agattctcat	aaagagcgtg	caacctagat	ccttcgcatg	caccattcac	70620
aataggggtcc	acccttcttt	gagaatctaa	tgccgcagct	gatctgacag	gaggcagagc	70680
tcaggcagta	acgctcactt	gcccgccctt	cacctgctgc	tatgggccgg	gttcctaaca	70740
ggccacaaac	cagtaccggt	ctgtgcccag	gggttgagga	cccctgttat	agactaataa	70800
ccaactgaaa	tagaatagca	tagctatgag	tcaaagggtt	gtgtcttttg	catcaaagaa	70860
tagaaatgtc	tgcaaagggt	aagactacta	tgcaaatgtg	aaatgaggaa	gagtgtattat	70920
tttgacattg	cagtcatctc	ataaaagaac	tatagccaag	tctcgtgtag	gttctagaaa	70980
accactaaag	atggcgacca	tggtatcatg	ggggctgcat	tgtttcttat	tgtactttgtg	71040
ccattatttt	gttcttgcaa	tggtctttgt	gtttttgttt	tgtttttggt	tgtttaaatt	71100
ttctattctt	aaaaaaacac	aatctgatga	actctcccca	atctatgatt	cgttcctctt	71160
ggatcatgta	ttcccaccac	tcctctaata	tttggattgt	tggaggggga	ggaagaactt	71220
gatatgtatt	attttgagtt	gcccctgaca	gatagcagta	tggcatggta	agtgagaatg	71280
tgtagctata	tagggtagga	aaaggattaa	atagattcag	agaaataaaa	ctcccagtac	71340
aagccataca	acagatcaat	atacattagc	tttttactct	tctttgtgct	gctcatgtta	71400
gaccagtaat	tatttagaac	atggaaacaa	agtaaaataa	ccagttaatg	aattcattgt	71460
tttggctttt	gtatctgtta	gctactgcca	gaataatgtt	gcataataaa	gagccacaaa	71520
aatctcaaag	gcctacaaaa	attcactttt	atcctcacac	atctctggat	aactgcagtt	71580

eolf-seql

gggcttctct	aggctagact	caactaggaa	gcttggcttc	agtctaaaaa	ccttccagct	71640
gagattcctc	tactcagtat	ctctagtctt	tctggtagta	gtgggctagc	agaaacatac	71700
tgttctagt	accatggcag	aggtagaaaa	gaataagtgt	attttaagcc	ccttcttgtg	71760
ctatttttat	agatagccca	ttgtccaatc	caaataattat	gaaagagccc	aaaaaaggca	71820
aggagaaaaa	tctcaccttt	agtgggaggg	actgcaaagt	tgtttatggg	gaggggtaac	71880
gggaccaata	attcagtcta	ccgtagtttg	tacctttaat	agaaatcaaa	ccacttcttt	71940
atttttcagt	agtttgaata	gaagccttct	ttatttcata	gtatccagta	cacattaggc	72000
aaaaaaagag	aagaaaaaat	ttagtggcat	tttttgtttg	tttgttttat	actaaaattt	72060
ccctttgata	tgtgtctacc	acattcagat	taacatctat	tgaaaaatat	actacaggac	72120
gcattttag	ggtgtttgtt	ttgaagaata	gtataaaaaat	ttccataagt	ttcttatgca	72180
accacacata	ttttaacttg	atgttttatt	ctgcattttac	ttttgagcat	ccttaagaat	72240
ttgttaaaat	gcagaaatta	tgcagtattg	atttcaggaa	aaattgaagt	ggttacacat	72300
ggttgccttt	gccttaaaat	aaatccttat	ttggttctaa	cttgaacaat	attgaaagca	72360
caacaaaact	agctttttat	tatgtcacca	cacatttagt	gagttatgga	aagcattttg	72420
ttttaagaat	ggagttaact	atgtgttatt	cacgcttcta	gccattcttg	tcactcctgg	72480
ctactctcca	agcctgcctg	ttattcatac	atatttcttc	ttagtaagaa	atgcatcaaa	72540
atcccaggaa	catgtgctgc	tgactgttag	aagagtttta	gtggtgagag	attaatgtaa	72600
ttacttttgt	ttgagaaata	taattgggtca	cagttatata	catgtagctt	atatgagaag	72660
tacattcagt	tttaaaactc	attatgatta	attttacttt	ccttaaaaaa	tgaaaccaaa	72720
gagaatctaa	aatgtgtatg	cttctttcat	tcctaataat	ccagaatact	tagatatattt	72780
tatgtgaagt	aaatgcccag	atatctaaat	agatataata	ttattttaaat	ttaaggtata	72840
aacttttaca	tgacaaaatg	cttaatagcc	tataatctta	aaaacagaat	tattccaatt	72900
cccatattgt	atgttacttc	atcaaataat	accattatat	catgtttctt	gtactaaagt	72960
gtttcctgtg	aaataacgta	ataaaatggc	ctttagtagt	catgataata	tttaaatacg	73020
cattttctag	taaaatataa	tgcttattca	tttttttctt	ctagttctaa	agaaaaaaat	73080
gcaccaaag	catacactta	ctttatgata	atttctgaaa	cttaagtaga	gtttgggcct	73140
gcaacagact	tgtgttttct	agtagttatg	tttcattcat	gcagggtgga	gtggtcctat	73200
tagttttcct	taataagtcc	catatagctc	tggccagtct	ttcatagaat	gagttggtag	73260
gtctttcctc	caaagtttga	tttctcccat	ttttttcaca	ttgcaatttc	aaactttcag	73320
taataccatc	aagatgagac	agtaaaactat	tattagagtt	accacaagtt	tgaacaaagt	73380
tgattataca	tcgcaaacaa	ataaatactt	aaaaccttgt	tcatagagat	caggccttgc	73440
atacctacat	agtccaaaca	ttacattcct	gacatttaga	acattttaaat	gcaaactgtt	73500
ctttgttagg	gctttctcat	aactgaaata	tgagtcactt	gcaaaccata	atagattttg	73560
gctctgctac	atgatgaagt	gttctggatg	tcgtgaaaca	tttcaccag	acttatggca	73620

eolf-seql

gtagaattcc	cagtggtcac	ccaaaatagg	gaaaaaaatg	aagaacaaac	ttaaaggaaa	73680
tatgcagact	ctggcaccat	cctttcgtgg	caatacagct	ctttattggt	gttaagaaat	73740
ggaaatattt	agagcctaaa	cccataaact	atagtacaat	taggcgttga	atTTTTTTTT	73800
tgttccta	tacgaaattt	aactctatac	ttgattctca	tgtttaaggt	caggtcata	73860
agtgtttctt	tacacatcac	cctgatgcgg	tcatactgag	ttgtctccca	gcactgagct	73920
tctcactgca	ttgtgggcaa	actcatattc	cacactctac	actcatctca	ggcaggaaag	73980
gtggagtttt	ccttttcagg	gccaaaggaa	gcaacagctg	aggcgtgatg	gttgtactga	74040
tattggtgtg	ggtttcaatt	tggttagttt	gctttcaatt	tcaactcctc	acttgagatt	74100
ccatacagaa	aagtaaattg	taggcctcca	gcattctgtt	tcactctggt	gaataaaaaat	74160
tgTTTTgaat	gtaagattag	agTTTTtctt	tgcttaattt	tagtagtacc	tacacagcat	74220
aaactgaggc	atcatttagc	aaaatgttat	tgagttgaca	tcataatgac	ctattaaggg	74280
caatacacat	ttgaatgagc	tcagttattc	ttccaggttt	acacgtgcct	ttcatggtgt	74340
ttagtgtagc	agcttttgaa	gcagagatgg	gcaatgtgta	ggacctttta	ttccagtctc	74400
ctaagtggga	gatattctga	acaaaacata	ttaaggatat	TTTTtctgaa	gtTTTTgaaa	74460
TTTTaagtca	tgattcactt	ttcaaaagaa	gacatttatg	tggccaacaa	acatgaaaaa	74520
aagctcaaca	tcactgataa	tcagagagat	gcaaatcaaa	accacatgga	gataccatct	74580
catgccagtc	agaatggcaa	ttattaaaaa	gtcaggaaac	aatagatgct	tctgaggctg	74640
tggagaaata	agaacacttt	tacactgttg	ggggtaatgt	aagtaagttt	gaccattgta	74700
gaagacaatg	gcaattcctc	aaggatctag	aatcagaagt	accatttgac	ccagcaatcc	74760
cattactggg	tatataccca	aaggaatata	aatcattctg	ctataaagac	atatgcacat	74820
gtatgtttac	tgtagctcta	tttacaatag	caaagaaatg	gatccaaccc	aaatgcccac	74880
caatgataga	ctagacaaag	aaaatgtggg	acataacac	catggaatac	tatgcagcca	74940
taaaaaggaa	tgagatcatg	tccttttcag	ggaaatggat	gaagctggaa	gccgtcatcc	75000
tcagcaaact	aacacaggaa	cagaaaacca	tattctgcat	gctctcactc	ataagtggaa	75060
gttgaacaat	gagaacacgt	ggacacagag	aagggaacaa	cacacaccaa	ggcttggttg	75120
gggcagtggg	aggcaagggg	agggaagttg	gaggttggtt	caatcagtgc	agcaaaccac	75180
catggcacat	gtatacctat	gcaacaaacc	tacacattct	gcccattgat	cctgtttttc	75240
TTTTttagaa	gaaatgtttt	gttttaaaag	aaaaaaatag	taagtcatta	ttatgagtag	75300
ttactgaatt	atcataaaat	atcatttcat	aacataaaaa	ttatatatga	tagcatgttc	75360
ccacacaaaa	actaggaaat	caataggttt	gaattgcttt	aaaatatcat	tgtaatagtg	75420
gataactttg	attaatacat	ctttatatgc	cagtagaatg	cctatgttat	tattacattt	75480
gctgaatatg	ggactttaat	aaaaatgtaa	aaatgacctg	gatttgctta	aaaacagaaa	75540
tatttctaga	ggagaattta	catgctagac	atggataagt	tgtcagaatg	agcaggacac	75600
attattgctc	ttggaatctc	agaatataga	agtctcta	ttaaagtaata	taaatgatct	75660

eolf-seq1

tcagtatcct	gaagatat	ttt	gcaattac	ct	atgttggt	aa	tatataa	act	t	aaatcag	ag	75720			
ctacaaaata	ctattatt	ga	aataaat	att	tctgacaaa	ctgttact	tg	cttgtatt	tt			75780			
aaagcaatct	tgatggc	att	atctta	aat	at	ctttag	agat	aacactt	gtg	aactct	aaac	75840			
attat	tttt	gtg	caaag	tt	tgtcata	att	tatgtg	gttt	aagtga	caat	attacat	gag	75900		
acaatta	att	ttggag	tgtc	agttcc	acaa	atccaaa	aag	tcaataa	aagt	aaataa	ttat	75960			
ttttgcc	act	aaacaaa	aca	aaaaat	taag	cactatt	ttgc	cttgat	gcat	caggtg	ttac	76020			
tattttat	ag	tttgtac	agt	ttctgt	ctat	cctgcc	aact	atttaa	atgt	aagccat	tct	76080			
gaaaatg	gggt	atttat	atgt	tgc	atcttt	aa	gaaaaa	aga	aatag	cttt	tgtata	cgtt	76140		
ttaatag	taa	tcacttt	cac	tgatatt	ttac	agaga	attta	actata	gttt	ctttag	ttgt	76200			
aatacata	acc	tattgt	cttt	ctgctga	atg	tctgttt	tcc	agtggc	attg	ataag	acgaa	76260			
ctctcac	aga	ttatttt	atc	ttaata	tataa	agaa	cctaaaa	ata	ggcaag	aagt		76320			
gaataaa	atg	tttttta	aag	tagcc	catca	aatatt	at	tcatc	agaaa	ttatttt	ctt	76380			
gttgacata	aa	aatgcat	att	ttttat	gaaa	gatcatt	ctc	tctgtg	caaa	gatcag	agac	76440			
attgtgt	ctt	aggcac	atca	ttcag	cttg	tccacag	ccc	tggctg	tctc	cactact	ctg	76500			
gaaaaat	cag	tgccct	cag	taggag	gctt	aacatt	gttt	ttctta	gata	aatcact	tga	76560			
catttcag	tg	cctta	at	ttt	gactct	ctgt	aaaata	acag	aaatgg	aatg	gaaatg	gact	76620		
tgatgat	att	taacatt	cct	acaaaa	agta	ttagt	atgtt	gacttg	caaa	tgaatg	gatt	76680			
tctgaac	ttt	cagtgt	acta	caa	atcct	ac	ggctc	ccca	aa	gaaa	acaa	aagatt	gttt	76740	
ttcttct	ttta	tttgaga	acc	at	tttat	gta	gattg	cagga	aggtt	gtgaa	ttaaa	at	atg	76800	
tttagat	ttt	ttcatt	ccgt	tcatta	agaa	acattt	gatt	taagct	gcag	agagg	at	atg		76860	
cattta	agaa	tatgtt	ttaga	attgtg	gttg	aggtg	gcaac	caccat	gcaa	ttatc	agttt			76920	
attaac	agg	gaatga	actc	ataat	ggact	ttgct	at	ttt	agtc	attt	cc	ttta	actt	gta	76980
atataat	ctt	ctacttt	cat	aatat	caatt	t	aaattg	ggg	aaatag	catg	ttttat	catt			77040
agatcc	acaa	atatata	atg	gtttg	atatt	agcg	attgtt	aggta	atgat	tgttc	cttag				77100
ttatgt	agtt	gtatgt	tgaa	acattt	aaaa	aatta	atccc	catgt	tataat	aacatt	cttg				77160
atgtag	agca	aaataaa	atg	atagact	gca	tattata	aaaa	aaaag	agaaa	agcatt	tatat				77220
tattttat	gc	actatt	ccca	cagaa	atatt	ttttag	tttt	aaaat	atcca	tttg	accctt				77280
cagcaag	ctg	aatacc	agg	at	tttatt	cc	ttcag	cataa	agta	at	tttg	taaca	atatt		77340
t	aaagg	cata	tttcta	actt	aa	at	tttact	tttata	aaat	taccaa	aaga	cagat	cattt		77400
gtgaac	taat	tggtt	attag	ctcctt	ta	at	ctcag	tcatg	tgttt	gtctc	t	aaata	aaat		77460
tatttc	cattt	accag	agttt	tactg	ctcag	ggctc	agg	t	actcag	tcaa	gaaag	t	catt		77520
cttgtg	aa	gc	taccta	aatg	gtaaca	acgg	tagtgg	cag	gggtg	atacc	ttag	ct	caac		77580
cattag	ctgc	agctg	aa	gtg	ttatt	gtaa	gtca	agcaca	gatct	accaa	ctac	attt	ct		77640
tcta	attg	ta	gcagat	gaaa	ccacac	acat	tttta	aa	gga	ccagat	atct	aagc	acaa	ag	77700

eolf-seql

gtcaacattt	ggtaggcatg	cagaaaacat	ggaagtgcct	tatcttaacg	ggatcatgaa	77760
tcttcatctt	taaagggcag	tttttacaga	ttttcagaat	tgataacctta	agttgttctg	77820
aacttcaatt	acaaaagcta	ttgccagatt	gtgttttgtt	tttattcaaa	atgtagccac	77880
tcatgaagag	aaacttctga	gtttgaaatg	tgatttgtgt	ttttgcaaaa	tgtttatttg	77940
aatgcaattt	tacctccagt	ctaaacaaat	gtaaagataa	atgtaaaaca	ctaagagggg	78000
caatgctggc	actgaaagct	taactatgta	gtagtattgg	gtttgtcctt	taatttttac	78060
aacatatgct	tttttagttt	agaaataata	ttgtagactt	ttaagatctc	agaattttaa	78120
gctaaaccac	taataacaac	tgtcttcatt	atttaaagtg	atctaaattg	tatagaaata	78180
aaagggtttt	aagaattata	aaaatgtagt	tattgtttcc	tgcttttttc	tctaaacttc	78240
taatgttcaa	ttcttgtgtt	ttatataacg	ttttaaaata	aatcacacca	aaccttagtc	78300
taaagaaggt	atagtaatgg	ttggtgtcag	atctgagagt	gaaccaagca	catgttagga	78360
tttagaatca	tcaagataaa	tagtaacacc	aatggcaaca	aggaagcaat	ttaaagacaa	78420
atttctggaa	tcaagatgtc	aacagtgtat	tttcccaggg	atgactgctt	ctgtttgtaa	78480
atattgctat	taaagtacat	cacctatttt	ctacaaggga	tgctgacttg	tcttattttc	78540
ttttatatat	tttggtgact	aatacatact	tgttatgtga	cagattctaa	aatattcaat	78600
gaataaatgt	tagatttagt	gaccacatca	catgtaaatg	ggttcagaat	cttgcaattc	78660
ttggtagata	aaaccatggc	actaaggatc	tggtataagt	aagaaatggc	aggataacac	78720
ttatctatgc	taatgagttc	agatcttctc	tcctagataa	ttaaaaccgc	aggctactga	78780
gataactttg	ccaaaccatg	ctgaaagctt	ttcagttata	tctaaggaac	tgtggagtag	78840
agaaaagggg	atgggcaatt	aaggaaaaat	atctagattt	tcaagaaatg	gaatatgaag	78900
ttattcactt	ttctttttta	ttcttttttg	agacagagtc	tcactctgtc	gctgaggctg	78960
gagtgcagtg	atgccatctt	ggctcactgc	aacctctgca	tcctgggttc	aagcgattct	79020
cctgtctcag	cctcctgagt	agctgggatt	acaggtgcac	gccaccacgc	ccaactaatt	79080
tttgtatttt	cagtagtgat	ggggttttgc	catgttggcc	aggctggtat	tgaactcagg	79140
cttgtcctga	cctcaggtga	ttcccctgcc	taggcctccc	aaagcgttgg	gattacaggt	79200
gtgaaccacc	gcgcccggcc	attattcact	tttagaatga	caagatgaca	ctaatttttg	79260
gaaagaggat	agcctgattt	attaaataaa	tgacctatgg	aattcttact	aaaaatataa	79320
ctttgcatat	atcagaatat	aatgatgatg	aaatgggtcta	gatctgtata	tacaactggt	79380
ctatatagat	tcattcaaaa	aggtgtcggt	ttgaactcaa	taatatttaa	ctaaattttac	79440
tatctctact	aaagcaaaaa	gaaagacttt	tccgtatttg	aaatgaccaa	aatctcacag	79500
agcatacggg	atcacagact	tctagagcac	tatgtagtga	tcccctagtt	tagtttttta	79560
aaaaattttg	acagagagag	attgattaat	agttagttag	ttcttatgta	agtgatccag	79620
attccagatg	tgaatgaaat	gcacatttat	gaaaatatat	ttgtatagct	gtagcatata	79680
ttttaaaaac	atgattcatt	atgttttttt	aacacacacg	catgagactg	tgtaagtttt	79740

eolf-seql

ctttactgac	tgattagctc	tgtggcacta	ggtcgttcct	taccactgga	ctttcattaa	79800
ctcacctatc	caatgggaga	taaagttctt	aggtcatagg	gctctgctga	ggttttttata	79860
tgtatatatg	tgtgtgtagg	tgtgtatgta	tctacataca	catataacct	aaaaaaatca	79920
ggatatgttta	ttagttattt	tattaaaact	attaaaatat	agaattggct	tgctgaattc	79980
atggacccac	cagttacact	gagacatctt	ttaggtatac	tcaacttggt	cctagtgtgt	80040
gactctgttt	cctgatgtgc	ctttgatggg	catatttaat	tggtgtcaat	ctagaccttc	80100
cttacgctca	atttgatggt	cttccttgca	catacacact	tacatgcaca	catttacaca	80160
caccacacac	tacttacata	aacacacgta	cattttttca	caaagacatt	tacaaaatca	80220
tacatgcaca	cgcatgcatg	cgagcacaca	tgcacacaca	cacacccta	gcatgcacaa	80280
gggtggcttg	ttgctttccc	aataaagtca	taagattaca	gatgaaagac	aatttagaat	80340
tttttaaaat	tctatgaatc	taaaagttca	gagttgaatt	atgatgcatt	cagttacctt	80400
ttatttggtta	ttttttcttg	ttttaaggac	tatgcatata	tatgcaaaaa	atttacgtgt	80460
ataaagtga	gatatttagt	aatttctgaa	gaacattcat	tacatatatg	tatgtgtatg	80520
tgtgtgtgta	tatatatata	tatatatata	tatatatata	tatatataaa	atatgtatgt	80580
gtgtgtgtat	ttcaaagctc	ttcccacatg	aaaactcagt	gtacattcag	tatgtgccag	80640
ttgaacctgt	atgtgggact	ggaattctga	tttttaaaaa	taccttttct	caaagccttt	80700
ctctggctct	aagaagcttc	cagatctgtc	ctaacagctt	gaaaaccaag	atcttgactt	80760
tttatagaat	acttcactct	gtgccagaaa	ctgtgttaag	cattttcttt	acctatatca	80820
tcaggattta	gtcttcacaa	aatactctag	gacacatatt	attatactga	ttttaaaagg	80880
atggactgag	gctaagagaa	attaagtgcc	cgagttcatc	tagctaataa	gtgtcagaca	80940
ggaatttgaa	gtctgggtctc	tctaattcta	aaacccatga	tatttacaac	cctgcaagga	81000
agttggaaat	gcatcttcca	ggctgcagtt	gtagttattg	tgggcatttc	cttaaaggaa	81060
atgggtgtcga	gaatggttgt	tgctagccaa	aatcagaagt	gtcagatttc	taactgctga	81120
gacttgcttg	tcttcacat	tctctggact	catttgagcc	atttgtttta	tgatccactc	81180
ttctactaaa	aggtggaact	agaggtataa	caattattta	gtacttaatt	ttatatattg	81240
ttttctattt	ttataaattg	ctcattttatt	tgtctagctc	ttgtatatatt	cccattcatt	81300
ccttttcaga	taatgatgac	agtcctactt	actgcctctc	cccttcccac	agcttccatt	81360
cttcctggga	aaggagaaat	cagaattatt	ttgctctccc	cacttccttc	agattcatcc	81420
ttatcactca	tactgatgg	agtttttaca	gcataattat	aaaagatgac	attttatcct	81480
atgacaaaca	tgccctgggt	atataccta	taaatggatg	gggtgggtttt	tttaattaaat	81540
ggatgactta	atgttgatg	ccagctggga	agatttcagt	tttattagca	gctgtctttc	81600
cccttttctt	accagaactt	gagctattag	cacctaactc	aaaagagaaa	atacagagtt	81660
tgaagttatt	attttatact	tcacaaatcc	tttcttctaa	acattttttc	ttaggtgagg	81720
aagcaaacaa	ataactctgg	ctaggatctt	ttaaacaag	ctgttaatat	ttgcaaccta	81780

eolf-seql

tatccacatg	acatctgaaa	gaaatgatgg	cttagcttta	gtcacaaata	gagagtgctg	81840
atacgagtgg	aaatagaaag	aaaagatgta	tttttcttcc	cattaaaggt	tgagcgtgga	81900
ctttaaaggg	ggaaattctg	agtgattctt	aaaacaacat	gtgaactttt	ttatttcccc	81960
cagacattag	ttgccaatat	gtaaacattt	cagcaagaaa	ttttatacca	cctcctctgt	82020
ttgtcaggca	gcatttaatg	gttgaatgac	agacagtgtc	gagccttggc	agttccatag	82080
tgatgtgcaa	atctggggat	taaaatgaca	gttaatcagt	ggaccttttc	tagtataaac	82140
tccatggcca	ctatttaaaa	tcagttactt	atcaacaagg	cagacgattt	ttatttgcac	82200
tttatgtttt	cgtgtaaaga	tttcacaact	tttccctagg	ggtagtttct	gttgtttgga	82260
tgtagatgc	aaaggttcca	attcattttg	gcagtcttga	ttgcgtggat	tcctggtagt	82320
cattttaatt	ggtatcttgc	agacacgtgg	gagtcattca	cacattgttt	cctttttctt	82380
tgtaggtaga	aataacactt	caggatatca	atgacaatcc	accagtattt	ccaacggaca	82440
tgctggatct	cacggtagag	gagaacattg	gagatggctc	taagattatg	cagctgacag	82500
ccatggatgc	tgatgaggtg	gctcaagcat	gtctctgaat	ttgtgaaact	tcgtagtgca	82560
gtgatttatc	aaatttctag	gatatgttga	ctacttttat	taccaataaa	ttaaggttaa	82620
gcatgtgtgc	tcctttccaa	agaacattaa	ttcttgaaat	gtaacataaa	aatgttaaaa	82680
aagagattac	tatcaagagg	taattttcct	ctgatcagca	atccacaact	cacttgctgc	82740
ttgcacttta	ggttacttag	ccaaattatt	ttttttcttt	aataataaaa	atatctaaag	82800
aggtatctct	attttatgcc	attattattc	ccctttgcta	tcttatagca	gctaaggatt	82860
ggtttttatt	ttatttgtaa	ttgttaaaag	caaataatth	aaaactacag	aattttaagg	82920
tttagattac	tattttctat	atttatatat	taagttcagc	tatgtaatta	ttatgtttca	82980
aatggcatgg	aaacaaatac	tttgtgattt	gtatttttct	tatgaaaaaa	actccatagc	83040
ttattttctc	tttactgggt	aaggagttha	actaatgttc	tggagtthta	ggaagagaag	83100
taactttcca	gacaccagta	tctccttacc	tctttcccct	taagccaagc	cgaacacaga	83160
acagagaatt	taattttctt	cctctcatct	aaactcagaa	atatcagaaa	cttgattcct	83220
ggcatatgaa	tcagtgcctt	ataaatgtat	ttctgtaacc	ttaaaaatth	aaataaataa	83280
ataataaaat	aattttaact	gccaatacag	aaaggtaatg	acttagtcat	ttatacattt	83340
tgccaaaatc	taactattac	aatgaacaa	aataaagcat	acacatttag	gtaattgcaa	83400
tttgctatta	gaaaagatac	gatgttttat	gttttagtaca	ttctactcaa	ttttacaatg	83460
tgaagttcac	acttatttca	aatttagcta	gctttaaaag	agttatctga	cttaatatth	83520
ctattgttga	tagatatgtg	atatcattag	ccataattca	gtaaatatth	cattttctta	83580
aagtttatca	ttgataatat	acattttgat	ttatcaattc	ataaaaatth	attaactctt	83640
atttgaaagt	agcagcaata	acaaaaaact	catgtaattg	gcataggaca	attgacatca	83700
aataattgaa	attgtaatga	ctatttcatt	ggttatactc	taagaataga	gcaaataaaa	83760
ctcatttatt	tgaagtgatt	tatttctaac	actttaaaag	aatgaagtaa	taatcatgth	83820

eolf-seql

aattataata	gatattctaa	tgggatggct	atttactcca	tggaatatta	taattagagt	83880
gggattat	aataggaatt	acaggaatca	caggtagaat	tgcatttgga	aatttagttg	83940
ttttaatcat	catactgctc	tcttaagaaa	tggttat	agagattcca	acactcaccc	84000
ctttaatac	tggtctcttg	atactgttat	aattttat	ccttcccaat	atcttctctt	84060
taagaatatt	tcatgtaagt	attagtataa	atgcaatgct	gccagcattc	ttatcttctt	84120
ccatctgact	tccgtgtgtg	tggttggtga	tgtgtgcaca	cacttgcat	gcctccaagt	84180
tcatctttta	agctatgttt	acctttatga	tgagactaga	ggaagcctag	gaaggctcct	84240
atacatctag	gtatttagac	caacactggg	ttttgtgaat	ttttat	tttctactga	84300
gctttgtttt	ttaagtttaa	aaaaaatgt	aagtaacctt	gcagatgtta	tcacttagac	84360
atgctagtta	agaaaaatac	agaatgtaaa	gtgatgatag	ctaggatata	taagaagtac	84420
ttttgagatg	agacagagtc	gggtattagg	gccagaaaag	tataaggcta	taatgttgga	84480
atgaacaaga	gaattggagg	gaaggctgtt	agcaattcaa	gggtagagag	ggatgctgac	84540
aatatgtatg	agggtgtgact	gtgcctgaag	gcataaaaat	caccacattc	ttataactcg	84600
atgtgtttgt	gtgcgagtgt	agaaaggcag	agaggatgga	agggagtaac	taggtgcacc	84660
tacaacatta	aaggaaaggg	gggcatttca	ggaaaactac	aaccattgtt	ttttaagaa	84720
aaagctcaca	aagttgtttg	tcttcttaaa	tgcatttttc	tcttaaacaa	tttaataacg	84780
ttttaataac	tgctgactga	ctataactct	tgacacgagg	aactcacatg	tctttggttt	84840
catattaagt	agaatggctg	cctatggcat	ttagaatttt	gggctgtttt	ctttttgttg	84900
ttgttttttag	ttgcttataa	taaatattaa	tgctttttaga	taaacctttg	ttttat	84960
tactttattc	tcagctcctt	acctcttagc	caaatttttg	ggaaaatatt	ttaaaaattt	85020
tctctctttt	caaatcctgg	ctctgttttc	tttcttcac	tagtttgagt	aagactcgag	85080
attatgtagg	tcatcagcca	attgtgtaga	tttttaaaaa	ttatttat	acttttcatt	85140
aattacttta	cctaacatat	aagtgttagt	atgctatagg	aactcttgta	gggcactgta	85200
gaacaaagcc	tgggtaaagg	aattacaatt	ttataaaaca	acatgtacat	gttgaactta	85260
atttagatat	catttgaaat	gtgttgatc	aagatttaca	tgtttcagaa	gcacatgatt	85320
ccgtttgtct	cttgttccct	tttataaatt	atgctagtaa	tgggctagga	tactcaaact	85380
ttgcttcgtg	gtaccataca	tgtttttgaa	aatactat	aaggttctaa	tatgcatttg	85440
aaatttatag	ctatttactt	ttagaattcc	ttctatgtgc	ttttgtctct	gtggttcatc	85500
cggagagcag	aatattttta	accagcatta	tttccactgc	agtgaagctg	aaacatgata	85560
tttgtttctt	gttttggtgc	tgatatggca	tattttgaat	atttagtaaa	tagacttttc	85620
aaaagacct	attaaatcat	tactcttggc	cagatatttt	cagacattca	ctaataattat	85680
gaattcacca	catcagctga	ttttgaatat	gaaaaagatt	gttttttatc	aacacagcct	85740
gatatgttta	cctcttttca	gaaaaattat	tacaacttta	ggaatattat	tatttattac	85800
agcccatttg	tagacagggc	atttctaaat	atcaaaccat	ttttgtaata	gcattaaata	85860

eolf-seql

ggtttttgtt	tcttttcttt	accttaattt	ccaagtactt	actattttca	tgggtctgaa	85920
ttgaatgtag	ctacttccat	acctcaccca	ctttactaaa	ataatggaat	tcctagttaa	85980
acagaacaaa	tgtacagagt	gtggtcagat	gagaattctc	acatgcttat	tgaaagtttt	86040
tgtaaacca	taaaattaca	ataaatacgt	tagatattca	atgtacacct	gaatatacaa	86100
ggtaaatgtg	ggtaatgtct	tagactcagc	tgttccatta	ttaaatttaa	atgtgctttg	86160
aggcattcat	tttactaaat	gttaagactg	gcctgaagaa	tgcagtacaa	actaacacta	86220
aatatagcgg	gaatattttt	gcttttagact	gttagaaatc	atctccttat	atgtttgacc	86280
atgaaggaaa	aaatgtatgt	aagctatgat	ggaaaagatg	tatggaaact	gtggatgctg	86340
taatcccca	ctgtgtcagc	tttcatgcc	tatacactcc	aaacttacct	tcttccta	86400
attctcattg	agagctctgt	gtctttatat	tttaataaat	acattctttg	aggttaatta	86460
caataaatgg	tatatttgtt	ttaggtaagt	atattaaatt	aaagagtaat	ttttgaagtc	86520
aacatttcta	gcactactta	tacctagtgt	caaggtcaat	aataacatat	aataggaaat	86580
ctgatactgt	attttcccat	ggatatatgg	caactctagt	tatattttga	tttaaattat	86640
tcatttgcag	aagtctaagt	catcaaataa	atttaagcca	tcattgtttct	cttataagaa	86700
aatagtaaga	ataagaataa	aataacaact	atcattttcc	tgtgcttact	atctgtcaag	86760
ggttgttcta	ggtttttaaa	atatatgttc	actaaattaa	cctccaaaac	aatccttttt	86820
ggcaggtaat	attatcatcc	cagtgtacag	atgaggaaac	atgggcttgg	agagggttaag	86880
tatgtggtcc	aatgccacat	gactaataaa	tggagcacia	attcaaccac	aaaatatggc	86940
cccagagcat	cataatctca	tcagcacagg	gtatatataa	cgcagtattt	tgattgtaat	87000
atacagaatt	aagaaatatt	tctcttccct	cttcttctgc	cgatccttgc	ttctcttctt	87060
ttttcccat	ccttcacat	cattcagtc	ttatatgagt	gttcctatct	ctatctattc	87120
taatttaatt	tctgaacgac	tcttggtggc	tcaactgaca	cccacataaa	atgaccctca	87180
gatatttatt	ttaaacctca	ttcccaaatt	tctaattgcc	agataaccat	ttctatgatg	87240
ctattcttta	atccctaaat	acaccgcaa	taaaatttca	cttcctatct	atcctgcatc	87300
aaagcaggtc	ctattcttga	aatgtcctca	gtaagagtac	tctcttaatt	gccagccaaa	87360
gtaacttgaa	atttaaaaag	actttttttt	cttttttgc	tttactttgc	acatgggggt	87420
gttaaaaaag	tgagaatata	tatggaaatg	ttgagcaaat	gagagagcta	ttagtattat	87480
ttctattttc	aataatctgt	caaattttac	taatttgtcc	catgaattga	ttcagagcaa	87540
gacggccagg	attccaatcc	cttaatttct	tttaaaatgg	gcattctaat	agtacttacc	87600
ttgctagttt	gcctttaaca	aattaattag	tgccctggaa	ttgatgtgct	caaggtggcg	87660
tttagcagct	agcaaact	atgaatattc	tatttttctc	tccgccatct	ctctagttca	87720
gaattttgag	ggtcacagct	caaagacctg	agagtacgta	ggaaatcacc	cccattttca	87780
ttttccagaa	cagggacttt	cattttacag	aactgtttca	gcaacttggg	ggaaatgaag	87840
cctcagtctc	ttgggcccc	actgtattca	caatctgcct	tctctggcct	ctccctacac	87900

eolf-seql

tagtccatac	tgcaatatca	ataticcttaa	aagatttgctt	ccaattaaaa	caatattggg	87960
gttccttggc	tgtagaattg	aggcaaagtt	gtgttatatt	tgaagttctc	aaaaaatata	88020
ccgatactct	aacatttttag	cttgactttc	ttcttttggt	ctatatataa	attgtccact	88080
ctaacacact	gttcaacagt	aagccaagtc	catgaatagt	gaatgactgt	aaaatattgt	88140
attcatttga	tacgctttta	tttttatttt	attgtgataa	gaacattaat	gtgagatctg	88200
ccctttttaa	agattttctaa	atgtacaata	cagtattggt	aactataggc	acgatgttgt	88260
acagtagatc	tagaaattat	tcctcttgca	taagtgaaga	tgtataccca	tggcttataa	88320
gctcctgatt	tctccctact	gtctgtcctg	gaaaaccacc	attctactcc	ctgcttctat	88380
gtgtttgacc	atttttagata	cttcatatat	ataaatacct	accaagcagc	atttgtcctt	88440
ctgtgactat	ctaataaac	atccttaagg	ctcatccatg	tagtcacata	tggcaggatt	88500
tcgttttggt	tttgagctga	ataatattcc	tttgtatgta	tatacagggt	gagtatttct	88560
tatccgaaat	acttgggacc	agaagtgtct	caaattcctt	tttttttttt	ttaaattttg	88620
gaagttgcat	tatacatgct	gatttagcat	ccctaactctg	aaatgtcaaa	atctgaaatg	88680
ttccaataag	catttccttt	gaacatcata	ttggcacttg	gaaatgtttg	gattttgggg	88740
catttggatt	ttggattagt	tttgattagg	gatgctaaac	ctatatcacc	tttttttatt	88800
tattcgtttg	ttaatggcta	tttagtttgt	ttccaaatca	tgaccattgt	gaaaaaagga	88860
ttgctggatc	atacgggtgat	tctatttggt	atttttttga	ggacctccat	actgtttttc	88920
cacaacagct	gtatcatttt	gcattcccac	caacagtgtg	caagggttcc	aatttcccca	88980
cttcttcacc	aacacttggt	ttggttttatt	tgttatgata	gccatgccaa	cagggtgtgag	89040
gtgatttctc	attgtgggtt	tgatttgcac	ttccctgatg	attagtgaca	ctgagtattt	89100
tttatatact	tgttggcctt	tttttttttg	agacaagagt	ctcgctctgt	tacctaggct	89160
acagtacagt	ggtgcgatct	tggctcactg	caagctctgc	ctcccgagtt	catgccattc	89220
tcctgcatca	gcctcccagag	tagctgggac	tccaggctac	tggctaattgt	tttgaatttt	89280
tttttagtag	agacgggggt	tcactatggt	ggccaggatg	gtctcgatct	cctgacctca	89340
tgatccgccc	accttagcct	cccaaagtgc	tgggattaca	ggtgtgagcc	accacgcctg	89400
gccacttggt	ggccattttt	atgtattctt	ttaaagaaac	atctatataa	gaccttaacc	89460
atttttttat	tggattacca	aacttaatag	ctattatggt	gtaggactta	tttatatatt	89520
ttgaaaatta	actttctatc	agatatacag	tttgcaaata	ttttctcaca	tcccatagat	89580
tgccctttca	ttttctcgac	tgtttactgt	agagaaactt	tagtttgata	tactttcact	89640
tgtctgcttt	tgcttatggt	gcttgttttg	ggagtcatat	acatgaaata	attgcccagg	89700
ctgtctttta	gcaattttca	actaggagtt	ctatagtttc	aggtcttaat	tttaagtctt	89760
taatccattt	taaattgata	tttgtgtata	atgtatatatt	acattctttt	gcatatggat	89820
atccagtttt	ccaacacccc	cttgttgaag	tgactatcct	ttccccatta	tatatccttg	89880
gcacccttat	ggaatatcaa	ttgactatca	tgcatggatt	tatttatagg	cgttctagtc	89940

eolf-seql

tgtttggtt	gtctgtatgt	gtgtctttat	gccagcacia	tactttattc	attactgtaa	90000
ctttgtagta	tattttaaaa	tcaggaagca	caatacctct	aactttgttt	atctttctca	90060
agattgtttt	ggctatttag	gctcctttgt	ggtttcgtat	gaattttgga	attgctttac	90120
ctatttgat	aaaaaatgct	gttaggattt	tgatataaat	tgtattgaat	ttgtaaattg	90180
catagataac	atggacattt	taacaatatt	aagtcttcca	atgcatgaac	ttgggatgtc	90240
tttccatttg	tttgtatctt	tgttgatttc	tttcagcaat	gttttgtaat	ttggggcata	90300
caaagctttt	accgccttcg	ttagttagta	agtttatctc	tcattacctg	tttaagtctt	90360
ataatatcat	atgaacttaa	agccaaaaag	ccttcctttg	tcaaatacat	gttcaaaaaga	90420
aaatataagg	agcaatgctt	ttctacttcc	aatagctcag	atgcttggtc	tcttttttta	90480
gggtgcaaat	gctctcgtca	catacactat	cattagtggg	gctgatgata	gttttcgcat	90540
cgaccagaa	tccggagatc	tgatagcaac	caggcggttg	gacaggggaa	gccgctccaa	90600
atattcactg	ctagtctgtg	ctgatgatgg	tcttcagtcc	tcggatatga	gaattaatat	90660
cactgtcagt	gatgtgaatg	accatacacc	caaattttcc	agaccctgtg	actcttttga	90720
cattcctgag	gacacaatcc	ctggttaggtg	atgggtctct	tatgtgtatt	ttgcaagaat	90780
cgcttttgaa	ccaaaattac	atactatgtt	tcggctgctc	ttaatcaatg	attagttttt	90840
aatcatatac	tactagttaa	aaaaatata	atgctggatt	gttggatctt	ttcattaacg	90900
atctttggta	aaattctcaa	gcaaattggc	aaatttttta	ggatgaatga	ggtttagccat	90960
ttatgtgtct	gaaagtattt	gtgacatggg	ttattaattt	tctgtcaatc	acagttttgg	91020
tactctttct	gctttaaaaa	cgtctaattg	gatttggggg	ctatgtataa	aaagaacagc	91080
aaaaaaaaaa	tacatgaaaa	actgtgaata	ttgattctaa	cgctcactag	ctgtgtgacc	91140
aacggcaagt	taattcattt	ctcttagttt	caattctcta	tcctgtaaat	ggaaacagta	91200
attcctgtta	gagttaagg	aaaggataat	ttagaaagta	cattgagttt	gctaacacag	91260
ggcttggtta	ttagcaaatg	cccattaagt	gttataagaa	actgaatctt	taattataat	91320
cttgcttctt	tgaacatatt	atattgtgat	tttttttagt	ctgagtactc	aatatccatg	91380
tttctggtgt	gtgtgtgtat	gcttcattcc	cattattgga	aatttttatg	taaaattaaa	91440
attttattct	gaattacatt	tggaatgatt	attcatgata	agccatacat	tttagaaact	91500
ccatttgga	aaggaattaa	acatctacag	gagactcctt	ctacctgaag	ttttttcttc	91560
actcctcaag	atatcttggtg	caagtccttt	atggaaatcc	catcacactt	atttcttgac	91620
ttagttattg	caatgaccac	ataagttcta	gagtagtatc	accagggcat	aagtctatat	91680
attttttgga	atcctcagtt	cctgacacta	gcaatatgct	accttaaatg	ttgattgaat	91740
tcacagtat	atttatggat	aggtactgct	agatggaaac	ataacatcag	atatattatt	91800
aattcctcag	gaaatttatg	ctgaaacctg	aggtccactg	gatattctgat	atgtcacata	91860
ctgtattcaa	ataggggaaat	ggtaatatca	aaatctgcag	aatgttatgt	tactgtattt	91920
ttcatagcgg	ttttcagtta	agatatttta	ctgtacaaat	acattttttg	gtctctttct	91980

eolf-seql

atatgttctc	ttagtaatac	ttcttacttc	cttgatttta	tactattaat	ttattctttt	92040
gataggttct	ttggtagcag	ccatttttagc	cacggatgat	gactctgggtg	tgaatggaga	92100
aattacatat	attgtgaatg	aagatgatga	agatggcatc	tttttcctga	atcctattac	92160
tggggctctt	aatttgactc	gattattaga	ttatgaagta	cagcaatatt	atatactcac	92220
tgttcgagca	gaagatgggtg	ggggacaatt	tactaccatc	agagttttatt	tcaatattct	92280
agatgtaa	gataatccac	ctattttcag	cttgaattca	tacagcacat	ctttaatgga	92340
gaatctacct	gtgggatcta	ctgttcttgt	gtttaatgtt	actgatgcag	atgatgggat	92400
gtattttatt	taatataatt	tttaaaacat	ctataaactg	tcatacagatt	tataattacat	92460
ttattttattg	tgttgagctg	tcacaaaaat	gcattttgtg	aatatagggtt	ggaagttgag	92520
gaatagaatt	ataactgaac	tgtagaggat	tttaaaaatt	aagtacttta	tcggttaaat	92580
tcttattttat	aacagaaaac	ataccttgta	ttgtttttata	aactttatct	tatttttccc	92640
cctaaatgta	gggtcgtggt	tcaatttagc	aatgtagaag	tcataagacc	actttttttt	92700
gtataatttt	gtagataaaa	taaaaatatt	aggtttacat	atgttatttt	aacttgaaaa	92760
ggatagaatt	tcaaagcaaa	atgaaaccaa	agacttaagt	aaaaatactt	acgaatgcaa	92820
aaactaagtt	tcacattttt	ggctgacaaa	tagctaataa	tttttttttt	tttttgagac	92880
agagtttcac	tcttggtgcc	caggctggag	tgcaatgatg	caatctcagc	tactgcaac	92940
ctccacctcc	caggttcaag	caattctcct	gcctcagcct	cccgagtagc	taggattata	93000
ggcatgcacc	accacgcctg	gctaattttg	tatttttagt	agagacgggg	tttctccatg	93060
ttggtcaggc	taatctccaa	ctcctgacct	cagatgaccc	gcctgccttg	gcctcccaaa	93120
gtactgggat	tgcaggcgtg	agccactgca	cccagcccag	ctaataatat	tttaactagg	93180
tttcatttca	gctcgaacag	tctcagatct	gtttaattta	tgctaattgat	caagttaaaa	93240
ttttgcatta	aatttatact	ttacatgtgt	ttgatttgta	tttattgcaa	aagcaattgg	93300
caaactttat	tttaatagct	gactcctttg	gcctttcttc	taacacctgt	tttgtaagta	93360
tacatatcat	ataatatagc	attagagaaa	acattgtatg	gattatcaac	ctttaactga	93420
attgtctgga	aaattagtag	gtgtttttcc	cttatgttgg	atgcaactaa	attgtctcat	93480
caatatataa	aacaaggagc	agtactttga	agaagaaata	ggtctctatt	gacaggcata	93540
tctatctcaa	tttagaattg	ccttattctt	atgacttgga	tgatttggtga	aatctcagaa	93600
tactattcta	ttttaacatt	ctattctata	cttactttcc	ttctcatagt	gtctataaat	93660
ggcacttgga	acgatatgag	aagcaaaaag	gacagtattt	tatatatggt	tcaataagta	93720
aaatgggaaa	tactttcttt	agaattcatt	gagtaagagc	attttgatgt	ttcctcctct	93780
aatttaagtg	cagttaaaa	tgggcacaaa	gatatatcta	aaatagatac	agctgtaatg	93840
ctagtactac	tactattact	actactgttg	ctagtaacaa	tactttaatg	ttaacgatgt	93900
taataagaat	ctcaagaact	gacatctgcc	aagtgttttg	catgtaccca	gtcctggcct	93960
aagaacattg	cacactctat	ttcatgtacc	tcatacccagg	tctgtggatt	ggctccagtt	94020

eolf-seq1

agatatctgt	atataattga	ggttagtccc	tatttttgag	attggtttat	ctgctataac	94080
ttttagttag	tctacctatt	ccatagataa	gaatatatttc	aaagctaata	atgtattctt	94140
atttgcctg	tgactgtgct	caacttttct	acagagaaga	attttccacc	atgtttcttt	94200
ttgatttatt	agttatgtat	tagagagagc	ccattgtttc	atagaattgt	atgttttcct	94260
ggaataagtt	ttattttacca	tcataactta	aaatataggg	aaactgcgaa	gataccaaaa	94320
aattaaaaag	aaaaagaaaa	gaattttgtt	tgtcaaaaac	ctgctggaat	attccatgca	94380
catgtaagca	cagaaatata	ttgaccattg	tctctaagta	agtttttgtg	atattttttc	94440
tttaattgca	ttgagtaaaa	gtttcaagct	atattttattc	attgttttag	ttttgaatac	94500
gtttatcagt	gtaatttcct	gcaccttgac	ataaaatata	tgacacaatt	cctattcttt	94560
ctgaatttca	aggacagtga	taaggctata	caaaggtaag	cttgtttgta	aaactttcca	94620
gctcagttac	acaaaagggg	ctcaagtgtt	tcacagacaa	tattagtcag	acatttttta	94680
aaaataacaa	attaacaaat	aatctcaat	cactgatcag	aaggttccaa	tgaggtaata	94740
ttgtcatctt	tttagatgaa	ggaattttat	atgaaaataa	atgtcacaat	ctgttatctg	94800
tctatggatt	ctgtcagagt	ttaaaattta	gcttacatga	tgatttcata	aacataaatc	94860
agatctttta	ctgttttcac	aagaagggtg	atacctctgt	tagcatcaag	actactaagc	94920
atgcggtatt	acattgagga	aatatcgag	catcacggaa	atattctggc	tttgatgggt	94980
atttcgttat	cctataaatt	atttacctt	taaatattgg	gaagtcatat	taaaatgttt	95040
tgctaataat	acaattggaa	tttttgctga	ataaatgtag	ctatataata	ttggtgtaca	95100
atacagacca	ttgagtttca	tatattccag	tgacctgatg	accttggtga	aactgcttta	95160
taaagatggg	tgttattcaa	aacacttcta	tgtgttcgag	ctatgtgaaa	agttgacaaa	95220
tattagttct	ttatagaaat	tagaagataa	catttataga	ttgtgagtaa	atatacatat	95280
tttatagcat	gaaactatac	acctatactt	ttaaaatata	ttttactatt	tatatatatt	95340
tttatatatt	tataatatat	attttatgtg	ctgtgcttct	tagaacaaaa	ttattcatga	95400
gactgaaata	ctatatatag	atatctacat	atctatatat	agtgtgtgtg	tatgtgtgta	95460
tatatatata	tatatgacga	aaccataaaa	ccatatgtat	gcaataaaaac	tgccaggaag	95520
agtcatgtaa	ctaaatgact	tggagaacat	tgaacacaaa	tggttcacag	tgggctgttt	95580
gaagttaaaa	gatctggtgg	gccattaaag	cccactaaat	ttaaattgca	acacttatgg	95640
ctaaagctta	gaattcaaaa	caatgtaaaa	ataataattt	tacaataatg	tgtttactgt	95700
ctcatgggtc	agatatttgt	tgaaaaaata	gaaaaaaatg	gtctgagctt	agtatttttc	95760
agtatacttc	aaatattccg	ggagaaattt	gagttttgct	atgtctgcat	gtatttttta	95820
gatgtagtgt	atgtggccaa	agtcactttt	tagacttgct	agaaatgaaa	agttattttc	95880
tttacagtaa	agtaaagca	gatggattcc	atgacctgta	attgcagcaa	ttaattttca	95940
gttcctgaga	tgagagctac	ttcttctata	atatggcaat	attttatgta	aaaatagtta	96000
tattttttat	ttgtttcatc	aacaataatc	ttcagtttat	ttttaatgtt	gttacttaat	96060

eolf-seql

atatttgca	ttatgtat	gaatataaaa	gcaaattttt	cttttgttat	acttttagtt	96120
agcttaaaat	ttattacttc	ccttaccat	tcatctacca	aactttttgc	ctttataaaa	96180
gaggctgttc	tgctgtttac	aacaacgcta	taaaattttg	ggatcgtgtt	ctctttttgc	96240
ctctgcaatt	tagctgttta	ctcaaggaag	tagcatacat	gatggactaa	ggatgatcag	96300
atacttgatt	taattgctcc	cattcctgtt	gatttatgta	gaaatgttag	gccatgtaaa	96360
atgtcagtat	ttttaatgta	ttttgatctt	agatatgaaa	gattttatat	gcttctctag	96420
aattaaattt	tatatctttg	cttggttgga	tttattttca	ttcatgtgtt	ttcataactg	96480
catttctcaa	taatagtc	gtcccaaaa	gaatggggat	tcaatattta	ctgatgaact	96540
ttttttagg	aaatgcagaa	aattttctta	aaaagtaatt	aaacgtaact	atatatgtag	96600
atgttaatag	aaacacacgt	atacacataa	ttaaaaataa	attctgtgtg	tatatataga	96660
tactcaaata	tgtatatgtt	ataatgtttg	agtaaataa	tatacacaca	caatataatg	96720
tatatacgta	tatttacgtt	gtaatgaaag	tcctaaaagc	tttatatata	tatatgtgaa	96780
gatagtggaa	atttttatcc	tctaaagcct	gtggaatttt	aagacaaggg	gttgaaataa	96840
gctgttaacc	ttgttctagt	cagattctac	aattctgttt	ctttcctg	ggtgaattga	96900
cctctgacac	ctattagctt	tatttattca	tatttttcct	gatcttcaga	ctcctaagta	96960
ttctgaactt	tgtaatctct	tccttgttca	cttgtagta	gtcttaaata	aactataaag	97020
attaaaagtc	acaactcata	atgaggggga	aaaaataaac	tacgctttca	acgatttact	97080
caatcattgt	ttatcctaga	aatttttggt	aataagtc	tgtctgaaag	ttatattcat	97140
aaatattttt	cccatgtttc	aaattaggca	aaggatatta	gagacagtaa	agtcacagaa	97200
taagagtaag	tgtggcggtt	ttaaaaacat	tgagttctac	atggtagaaa	aaaatctcat	97260
actcaagtta	aatttgactt	cttaagaac	ttgatgaagt	tcaaaaaaag	gcaaaagtta	97320
actgaagtat	tgatagaata	atgagaaaga	atttttttta	agaaaagagt	aaaagggtag	97380
ttaaattgtt	ctagacgact	tttgccaaaa	gtgaacatca	cttctcatag	gtagaattca	97440
gaaacctgga	tagttgaaat	taatgttaga	aatatagaag	ctaattgtag	gtaattcagg	97500
ttagtcagta	gatatttgct	agtcccagaa	tatacatctt	tattaaagat	agattacctg	97560
gatgtacagt	acgtttttat	cataatatcc	tgtaattttt	ccaatgtcat	taggataaga	97620
tataaaaatg	cacatcggtt	caggccagag	aagaaaacat	cactctgagg	cagaaactga	97680
cttctttctg	ttttcactgc	ttatttggtt	tttaccttta	gttactaaaa	cagtaagatg	97740
atgtatatgc	tccacatcat	ttttgttata	agactctctg	caatcatttt	ctgaagttag	97800
gatttagaaa	caatttttaa	actaaaaaat	gacacatgat	cctaagaaaa	atcaacagta	97860
tctaaataca	gttcaataat	agcatgagca	tttatatttg	gaaagtttta	tgtataattt	97920
tactgctaac	aatttcttta	aaaatacttt	ttagaaactt	taaatatggt	taataaaatt	97980
tgaaagagaa	ctattgtctc	aaagggtccat	tacttagcta	gacacttaat	aggaattaat	98040
aagtatttat	tgattttgac	acgaaatata	gaagtacact	tacagcattc	atgactaatg	98100

eof-seq1

ccatacatca	gaacatttta	ttaccctttc	ttgaaaattg	gtgtcagcct	ccctaaatta	98160
ctaaagtta	aatgtttga	ctaatagtat	agcgtgtggc	actgttagtg	ttggaccatc	98220
aggaattatg	tgatagaaac	aaggaaatat	atagaaaaat	atctgctctc	tggaatat	98280
ttctcctctt	tacttttgta	atttaacatt	tcaacaccct	agtaaatagc	aagcagtata	98340
tagatcattt	gttcacagga	tttcctaaag	tgtgtttgga	tgcacggcat	atcaaacatg	98400
ccaaattact	tgctaaaagt	tttggtatag	cttgttctgc	aatcagcata	tgtttaagaa	98460
aattttttct	tccctttaat	ttcaggcatc	aactctcaat	tgacttatag	cattgcttca	98520
ggtgatagcc	ttgggcagtt	tactgttgac	aagaatggtg	tactcaaagt	cctaaaagct	98580
ttggatcggg	aaagtcagtc	cttctacaac	ttggttggtc	aagtgcata	cctgccacag	98640
attccagcct	ccagattcac	aagcactgct	caagtctcca	ttattttggt	ggatgtaaat	98700
gataaccac	cgacatttct	ttcccctaaa	ttgacataca	ttccagaaaa	tacacctatt	98760
gatactgttg	ttttcaaagc	tcaagcaact	gaccagata	gtggcccaaa	cagctatatt	98820
gagtacactc	tgctgaacc	tttgggaaac	aagttcagta	ttgggaccat	tgatggtgaa	98880
gtgaggctca	ctggagaact	ggacagagaa	gaagtttcta	attatactct	aacagtgggtg	98940
gctacagaca	aaggtcaacc	atctctctct	tcatctacag	aggttgtagt	tatggtactt	99000
gacatcaatg	ataacaacc	catctttgca	caagctttgt	ataaagtgga	gattaatgaa	99060
aacacactta	ctggaacaga	tataatacaa	gtgttcgcag	cagatggaga	tgaaggcaca	99120
aatggacagg	ttcgctatgg	cattgttaat	ggtaatacca	atcaggaatt	tcggatagac	99180
tctgtcacag	gtgccatcac	tgtcgctaaa	cctttggata	gagaaaagac	ccctacctac	99240
catttaactg	ttcaggcaac	agatcgaggc	agcacacca	gaactgatac	ctccacggtc	99300
agcattgttc	tactggatat	taatgacttt	gttcctgtat	ttgagctatc	tccatattct	99360
gtaaagtgtc	ctgagaattt	agggacacta	cccagaacaa	ttcttcaggt	cagtatat	99420
aaataaagca	agtattgtct	taattataag	acatctat	gaaaacctcc	cctcttctac	99480
agcgtttacg	cttcccctgt	tctctcctca	ttctcatcca	taaatgctca	attgcagata	99540
cagcaaattt	tgaaaaggaa	aggtttataa	acatcatacc	taagaacctc	ttaatttcct	99600
cattgatgaa	acttttgtat	tttactagct	ttcttttgtg	tatactcatg	ttgcacacat	99660
ttatgtattt	gtgtttttga	attttgttcc	acaaggataa	tatctgcaca	tagtaaaaaa	99720
ctaaaatgat	ggaaatgttt	gaaacttcgt	tataaatatt	gttctactct	tttccttcac	99780
atatttaact	acctaggtga	aactgctctt	aaaaat	atgaagcctt	ccaaaaatgc	99840
tgtgcattag	ctttacacat	atttttacac	aaatagactc	gggtgatata	tactatagtg	99900
tgccattttt	attttttact	tgaaaatcta	aaaatatatc	tttggaatct	cttaacatag	99960
ttttacctca	ttttttttta	atggaggcat	tttatttcat	gagatgcatt	gtttgtttta	100020
ctcacatctt	ggtatgtact	gttctacagg	tggtggcaag	agatgatgat	cgaggatcta	100080
acagcaaact	ctcatatggt	ctgtttggtg	gtaatgaaga	caatgctttt	actctctcag	100140

eolf-seql

ccagtggaga	acttggagta	acacagagtc	tggatcggga	aacaaaagag	cgctttgtct	100200
taatgattac	agctacagat	tcaggttaagt	ccattacacc	cttgttcatt	tgtagataat	100260
ttctaggcca	ggcacggtgg	ctcatgcctg	taaccccagc	actttgggag	gccaaggtgg	100320
atggattact	tgaggtcggg	agttcaagac	cagcctgacc	aacatggtga	aaccccatca	100380
ctactaaaaa	tacaaacatt	agctggacat	ggtggtgcgt	gcctgtaatc	ccagctactc	100440
agaaggctga	ggcaggagaa	tcgcttga	ccaggaggcg	gaggttgag	tgagccgaga	100500
tcacaccact	gttctccagc	ctgggcaaca	agaacgaaac	tcgtctcaaa	ataaacaat	100560
aaattaaata	ataataat	cttcataata	tgagtatgaa	gtat	tttgccatta	100620
aatgaaatat	ttgttcaact	ttactaatgc	ttgaaattct	gattgcctct	atgttattga	100680
tggcacatca	ttcactttat	gacatttata	tataagtggc	aagggttaa	ggacatcgcc	100740
acctaagccc	tattcccata	aaacagaatg	aattgttgcc	ctataagctt	attgagtacc	100800
tctggatgtg	accttacact	ctacttcctg	agctaggggc	atttaaagta	ctttagcttt	100860
ggaaacatgt	agatggttcc	aaccacttct	cttctgatag	acatgggtga	gtgagtctgt	100920
taggaggagc	tttactaga	aggtggctca	gtattcagtg	aagcattggt	ctaaatgtgc	100980
aggctgctca	agaacaaagt	cctggttcca	gggagccaaa	ctataagttc	ctgatgccat	101040
cagccttgaa	aatcagggtc	agggggaaac	caggacttgg	aattattagt	ataagtataa	101100
ataacagaag	tctaacccta	atttctatta	aataagaaat	atgcagatca	gatgtgtgaa	101160
gattctgccc	aatagagtta	tggaggattc	taagttatgg	agggtgagca	atcagattat	101220
cagtaacatt	atgatatgtg	gaagcctgtc	actcaaagct	ttaaaaatga	tgctgaagac	101280
catgatggga	ggcacaaatg	agtttcagtg	acattagtgt	cctaagtcac	ggtgttttgg	101340
cagctctaaa	aatgaaagca	ttaattaaac	cttgtttcaa	agcacagctc	tctatgggca	101400
ctgtttttcg	agtcgctctg	aaatagactg	gcatttctga	ggccactggg	ggataaatac	101460
tcaattagat	gtctgaagtt	cacttttatg	agtatacag	aaaacagaag	ttgtgaggaa	101520
agttgaactg	ggtgatcttg	aaattaattc	ccttggatac	tcttgatatg	aataaccact	101580
tttttcagga	gaatgtgagt	tttagacatc	cggttttaga	atctacagtt	taatcttatt	101640
ttccaagaat	gagatctttg	acagaggact	taaattacat	attcactgtt	ttcattcaaa	101700
agtcaaactt	gtagatgaca	tgagaaat	cggaaaaata	tggcagctat	tagatcccag	101760
atgcaatgtt	tttctcaaat	ctgtagtggt	ctaagggcct	ggaaaatatac	aaagtgtttc	101820
aaaaaaat	tgagagtta	attctttatc	tcacaaatca	cctttccttt	gcattttttt	101880
tgaactatta	ccttagccca	gagataggtc	aacttcatca	gtatggcaca	gattgcagtg	101940
gcagttttta	atcatgcaaa	ccactaaatg	tttcaatgtg	ggaggggagaa	aacattacca	102000
tttaaactct	catcatat	ttatttactg	actgcatggt	tacagagtag	cacatttgga	102060
aactctaact	actcctgtct	actgctccag	taagctacaa	ccacagtatc	atatgtatgc	102120
agtgctaaaa	gttacattac	taaattacaa	aaccggaaga	gggtataata	attatatctc	102180

eolf-seq1

atttttcctg	tagataatta	aattgctaaa	cagactacaa	ttccattact	gatgatatgt	102240
tgcttagcta	taacagaaag	tatggatatt	cggccttcac	tatgcattac	ttatagttat	102300
ttcttctgga	aatatttact	gtaccaagta	gaaactcata	ggaggctaac	acatccacct	102360
ggtatagtaa	tgcaggtact	actacatggt	ttaaaggaga	atttgctcaa	aagcagttat	102420
gtccttcata	tggttaggc	attctactcc	taagtagcct	ttcttacaag	agtttgcctt	102480
accattttct	catatgtgca	ataaataaaa	taatgtttta	aatggagcaa	gtagcaggaa	102540
attatcaggg	aaactagaag	agtatacttt	aaaaaatgaa	ttcagataat	taatttagaa	102600
atggaagtat	atcatgtagt	taaatacata	gactttatag	ttaaacccca	gttcacatcc	102660
tacctctgac	attcccagct	atatgacctt	caacaacttt	actattcctt	catgtttgta	102720
tctatgattg	gaaatactaa	tatctatatg	aaagtttatt	gatcaaatag	ataaaaagga	102780
atacttattc	tagctattaa	tgtcagtcag	catgtttact	agacatttca	agcttagtaa	102840
ggccaaagta	acacttttga	cttctattca	cctccctacc	ttaaataaat	tgcttcatag	102900
atcatttcac	aattgctgaa	ggcaaacctt	gttattattc	ttcattcctc	ttcctctgta	102960
caccatatcc	aacaaattca	ttaacaagga	gactcagctt	caaaaatgtc	caaaagtgtc	103020
ctgaatttat	ccacttttct	ttacctcaa	aacgacctcc	ttagtctaag	ctggggtagt	103080
atgatagctt	gctaactgcc	tatcttttct	cctgcatggt	gcattattca	acaggcaacc	103140
caagaacatt	taaaactata	aattagataa	tcatacccta	tctcttgcat	agacagcatg	103200
cagtgatttc	taagaataaa	atttaaagt	cttaccattg	actacatggg	attcaataac	103260
ttgggtctctg	tccatttatc	tgaaccctc	caccaccacc	agctgccacc	tttattttga	103320
gccagagtcg	tgcactggcc	ccagctcacc	ctttgtctcc	tgtcagttct	gcatttagta	103380
tcatcacatt	attagattgt	aattggccaa	catggaagta	tttacacct	ggaaatcagt	103440
aagtgccttg	aatgtagttg	gcctgtttct	tgaagcagt	tgctaaacat	ttactgaata	103500
ctgccaatgc	caaccaatca	atcaggcttc	cttaaaaatg	ccaacctttc	tgccatgttg	103560
gccttttgca	cttgtagttc	tctctgcctg	gaattttcta	ttctacagcg	agctgtttgg	103620
tttggtttgg	tgaggggagaa	gggcatccat	gtcatggtca	ttttgtcatt	atttttagata	103680
aaatgtcaac	ttctcagaga	ggacttgtct	gaccagtaat	gttatgtttg	ccctttccct	103740
tttcccagtg	tcactctatc	aacttcctct	ttatgatttc	ttaacacaaa	ttcctatcta	103800
aaattgtgtt	cttctacata	aaatatatga	gtatatagag	tttgtttacc	ttatccttct	103860
ctatcagatt	tccagagaaa	gtaaacttcc	taagtcttat	tcaaaatggg	attctcagaa	103920
acacttagaa	aaggacctgc	aacataatag	gtgcttaata	aatatttggt	gaatgagtaa	103980
gttatatatg	ttgaataatg	atagttgtca	tttgaaagac	aacctattat	tttaatatgc	104040
aactgttatt	tatatattat	taacatactt	atatttaggt	tattgttata	tattcattgt	104100
ttgcagattt	ttttaagaa	acttccaaaa	gaaaaaagtg	caaatcattt	ttaattcatg	104160
gctgaaattc	cagaagtttt	tgctacattg	gctgtggtca	ttcaaagtga	cctctctttt	104220

eolf-seql

gaaaagcagc	acaagtgttt	aaagctttgt	ggtgttttagt	gtgatgtgac	aaattgcagt	104280
cacatgtaag	gacccagtga	agcattttat	ggctttaatt	cagtttcaag	tgcttaaaat	104340
actgcttgag	ctatattctc	atgactttcc	cctgaacctt	ctggctctga	ttcaattctg	104400
ttatctatta	gacgtttcta	gacaggtcgt	attgctactc	tgtgctttac	tatccacctt	104460
ttcttactct	ggttcataag	atttaattca	aaacctgcat	gagcagaaac	tacatgcttc	104520
tgaatagttt	ttgtttgttt	gtttgttttg	gagagggagt	ctcactctgt	tgtgcaggct	104580
ggtgtgtagt	ggcatgatct	tggctcactg	caaccttcgc	ctcccgggtt	caaacaattc	104640
tcctgcctca	gcctcccaag	taactgggac	tacaggcaca	tgcttggtta	atTTTTTTTT	104700
atTTtagtag	agacagggtt	tcaccatgtt	gccaggctgg	tctcgaacct	ctgagcacag	104760
acaatccatc	tgcttggcc	tcccaaagtg	ctaggcgtga	gccactgctc	ctggcctgaa	104820
tagtttcacc	attcgacaat	tctttttatac	ctggttttcc	caaagcaaac	aattgtgaat	104880
cttccatata	tcccacatat	ctaagcactt	tctaagcaca	cgtggcaatt	ggtttcacat	104940
agcttaaata	taagggccca	tcatttcaca	ccaacttaat	atgaaaaatt	tgcttgTTTT	105000
aaattttatt	atggaaattt	tgggtgttcac	ataaattatt	ccaacagata	tatacttacg	105060
caagtaattt	gtccagacct	tttagaattt	ttttaactca	agatgagatt	ataccctcaa	105120
aaataaattt	aaatgctgtg	aggcattaat	atctgccact	actctttcag	ggaactgaat	105180
taatgtgcga	gaaagcagta	aaacaaactg	gtatgacact	ttggggatgc	tacagttata	105240
ctcagaggag	tttttaaaga	aagctacata	tgaaaaaatt	ctaagttaga	gaaatctgac	105300
attaagtgat	ggTTTTTTTT	tggccaggag	gtttcttgga	gatgagccag	tccacttcct	105360
ttattttcca	gataagaaaa	ttgaaggctg	ggatagataa	gcagtgtgct	agaacttgca	105420
gacccaggta	gtagcaaagt	caggtataat	atTTtagaatt	tctgcctttc	aactaaattc	105480
ttgctcatcc	atatcatatt	tattaaattt	ttttaaggaa	atcaggatat	tccttaaaat	105540
atattgctga	ctctctccat	gaaataaatt	tataaatatg	caattttaaaa	aatattttct	105600
tttttacttt	attcatttca	ctttaataaa	tgaacatttc	aactgctatt	tttctttccc	105660
caaataaata	aatgtttgaa	aacattttta	aatgaagcca	aattaagtgg	aatcagtaat	105720
ttcaatattg	gtattttgaa	aataagctta	aatttagaca	ttgtttaaat	ttaattgtta	105780
aataaagaag	atataaagaa	tttgtttaggc	tttatgccta	gaagatgata	atattggtaa	105840
ttatcactgc	caattatcat	tttgcattaa	ttaaaatcaa	actatgggtg	taatttaatg	105900
cactttataa	ataagttctg	attacagtta	gtgatatggt	ttgcctgtgt	gtccacccaaa	105960
tcgcatcttg	aattgtgggt	cccataatcc	ccatgtgtca	tgggaggggac	ctggtggaaa	106020
gttattgaat	catggggggca	gttacctcca	tgctgttctc	ctgatagtga	gtgagttctt	106080
atgagatcta	atggttttat	aaggggattt	tccccctttg	ctcagcactt	ctctctcctg	106140
ccaccatgtg	aagaaagacg	tgattgcttc	cccctccgct	gtgattgtaa	gtttcttgag	106200
gccttcccag	ccatgccaaa	ctgtgggtca	attaaacctc	tttcctttat	aaattaccca	106260

eolf-seql

gtcttgggta	tgtctttatt	agctgcatga	cagcagacta	atacaggtta	ctgatatcag	106320
agagagtagg	gcactgctgt	aaaaatacca	aagtgacttt	ggaactgggt	aactggcaga	106380
gactggaaca	gtttggaggg	ttcagaataa	gagagaaaaa	tgttggaaag	tttggaaactt	106440
cctacagact	ttttgaatgg	ctttgaccaa	aatgctgagg	tgttatggaa	aatgaagtcc	106500
aggctgaggt	ggtcacagat	ggagatgagg	aacttcttgg	aaactggagc	aaaggctcact	106560
cttgctatgc	aaagagactg	gcaacatttt	gcccctgccc	tagagatctg	tggaactttg	106620
aactggagag	agatgattta	aggtatctgg	cagaggaaat	ttctaaatga	caaaggattt	106680
aagatgaagc	agagcataaa	agtttgaaa	atttgcagcc	tgagattgca	atataaaaaga	106740
aaaacccatt	ttctggggag	aaattcaagc	ccactgcaga	aatttgcattg	agtaaccaag	106800
agctgaatga	taatcaccaa	gacagtggga	aaaatgtctc	caaggcatgt	cagagacctt	106860
ctcgacagcc	tctcccatca	caggcctgga	agtccaggag	gaaaaaatgg	tttccttggg	106920
tgggcccagg	gcacccctgc	tgtgtaaaac	ctagggatgt	ggtgccccac	atcatagtca	106980
ctctagccat	ggctaaaagg	ggccaagggt	cagctcaggc	tggtgcttca	gagggtacaa	107040
accctaagcc	ttggaagttt	ccacatggtg	ttgagcctgc	aggtgcacag	aggtcaagaa	107100
gtaaggtttg	ggaacctccg	cctgaatttc	agaggatgaa	aataagctta	aattttataca	107160
ttgtttaaat	ttaattgtta	aataaagaag	atatatgcct	gctggggcat	tgctcatgg	107220
agctgtgaga	agaaggccag	catcctccag	accctagaat	ggtagctcca	ctgacaactt	107280
gcagctatgc	acctggcaaa	gctgcaggca	ctcaccacca	gcctgtgaag	gcagctggga	107340
gtgggactgt	acctgcaaa	gccacagggg	cagagctgcc	caagaccatg	ggagcccatg	107400
tcttgcatca	gcatgccctg	gatgtgagac	atggagtcaa	aggagatcaa	tttggagctt	107460
taagctttta	ctgcccctct	gcattttgga	ctttcagggg	cctgtagccc	cttcattttg	107520
gccaattttct	cccatttgga	atgggtgtat	ttacctaatg	cctgtaccgt	attatatcta	107580
tgaagtaact	gctttgcttt	tgattttaca	ggctcatagg	tggaagggaat	gtaccttttc	107640
tcagataaga	ctttggactt	ggacttttga	gttaatgctg	aaataagtta	agactttggg	107700
agactgttgg	gaaggcatga	ttgtgttttg	aaatgtgagg	acatgagatt	tgagaggggc	107760
caggacaga	atgatatgat	ttggctgtgt	gccagccaa	atctcatcgt	gaattgtagt	107820
tcccttaatc	cccatgtgtc	ctgagaggga	cctagtgggt	ggtaattaaa	tcatgggggc	107880
agttacctcc	atgctgttct	cctaatagtg	agtgagttct	caggagatgt	gatggttcta	107940
taagggttc	acccacttc	actctgcaca	tctcatTTTT	ctctctcctg	ctgccttgtg	108000
aataaggaca	tgtttgcttc	tgattctgcc	acgattataa	gtttcctgag	gcctccccag	108060
ctctgggtta	attgtgagtc	aattaaacct	ctttccttta	taaattgccc	agtcccagggt	108120
atggccttat	agcagtgtga	gaagggatta	acacagtcag	tgagactatt	atacttctat	108180
gggcttattg	atatttaaca	agtctcttaa	tattgctttt	tcacaaaatg	tttatagagc	108240
actctactcc	agatattctt	ctaggtgctg	aagataggct	ggtgaagagg	tctctgtctt	108300

eolf-seql

tatacagctt	aaattacaat	cacaaaaata	gacagtaaaa	aataaacaat	atagtatata	108360
gattgggagt	gttatgaaac	atgatgcggt	taaattaact	ggcgagagag	tgtaaagtag	108420
ttacgtat	tacccat	gaaagttgaa	tctttggact	tgatggtaga	atcggaagga	108480
taggaagctg	caaaaaggca	cgaatcaggc	atgagtccta	gaatatttgg	atgaacaatt	108540
tggagatggg	gagaaaaaag	attttagggc	aaattacca	gacttagttt	ttggacatat	108600
tacgtttgaa	atattataac	taattgagat	gtcacgtaga	aagttaaata	taaaagttta	108660
gttctcagg	aagacattca	agtagagata	catcttagaa	agtcataaac	attagatgat	108720
attcattata	tgcacactta	gtgcttgtaa	gttcagaat	atgtattata	ttatctcatt	108780
taatctcaca	atagccctga	aagttaggga	ctagtatctc	aattttattg	atttataaaa	108840
caaccaacaa	aaatttgtgt	tataaaaact	aaacaacttg	tactgcccac	tcagctgttt	108900
gtcagtgact	acaggatttg	aggccaaccc	acttaacagg	tgatgatttc	ttacaatta	108960
ttaccaatt	cccaaagtgc	agcctgtcta	ccatattctg	ttttatatag	actatgttta	109020
tacgaatttc	ttccctttgg	attaaat	at	ttttatat	t	109080
gaagcaaaaa	atcttgtggt	tctctctaag	taaaatagct	ggtaaagtca	taatattcat	109140
gaattagaaa	tcacagcatt	attcccctca	ataaataaaa	aatatgtatc	caagggtttt	109200
attaagtata	aagtacaaag	cgaatcttag	atattatact	atgaacgtac	aatacatatg	109260
atatgctcat	acctgcatag	acaatgcagt	tagttgggct	gtatgtttgc	attgaatttg	109320
ggggtaggag	attaatctgc	gcacaaatta	aatatgttat	cctttatcct	ttatagataa	109380
ttctcagtct	gttgactaa	agggatatag	agattctgtc	tctagatttg	gcacaaaagt	109440
ttagttataa	agtatttgtg	tgtcagcata	aatagtaggt	cttcaggga	cagttcagtt	109500
attagcattt	ctaattaagg	gcatttatca	tccaactgaa	agggaatata	tttcattctt	109560
atgcagggat	tgaaaattgc	tttttaattg	agggaacat	gctgtttttg	caaagttaat	109620
gctaaaagct	aaaaggagt	atcatcatgc	tttattttat	tggtgagcac	ctggtaacat	109680
tttgaattgt	tgtctgtcac	attatttagt	tgaagctggt	cattgcatta	taaatggctc	109740
tgtaatcaaa	agagagggtca	gaattgtgta	atatgacatt	ttacatccga	agataattgt	109800
ttttaaatat	tccagaaaga	tcacattttg	tcaatattat	ttgtgggaat	gtatgataga	109860
aaagtttgcc	ttgtctgtta	tgatcaacat	ttttaataat	gaaaattgct	tgaaaacttt	109920
taaggcccca	ataattctat	aatcaaatc	atgctagagt	tgcttcaat	taccagacat	109980
gaaatgcatt	tgacttaatt	ttatttttga	gtctcgggca	gcttttggtta	ttccattgg	110040
catatttgtc	atagatggga	atcttgtttc	caaagttgat	aactgggttat	tgttttaatt	110100
cctcttattt	gtagcagact	ttctatgaag	tttgttagtg	atctaaatat	tattctaaat	110160
catttattta	aatagcattc	ttttaaatca	gctactcttt	agtcagaaaa	aaatatttct	110220
acatagaatt	ttatttgtgt	tttcttaaga	taaaactcca	gaaacattta	atttccaaaa	110280
ttccattgaa	taagagctaa	agttgccatc	aggttccata	gaattgaaat	ttgataaaac	110340

eolf-seql

agtttcaatc	tattatccat	ttactccatg	tgagctacaa	atctgagtat	acaaagtaaa	110400
ttaaactttg	aaatggcaat	aaactatgat	taatattttat	gataaaaattt	atagaaactg	110460
aatgataaag	attatataaa	atcaaaaacca	acatgatttc	attatgagga	tttcattatt	110520
ttcaaaaaag	ttttctaatt	ctatcttttt	gaaacaaacc	ttttttaaag	cttattttga	110580
taagtattct	taaatatata	atttgatatt	ttcactcagg	aggcaggcag	aggtaggttg	110640
agtttaaaat	taggtggtag	cctctagtgt	ttcagagttt	caataactgt	gttgaaattt	110700
ttgggtttct	ttaatgtcct	ccaaatagta	attcctcata	tgtgcttttt	gcaggcataa	110760
aatatttggg	tattattatt	ttttatttta	taatttttaa	aaattatgat	aagatgtact	110820
tatcattaca	tttctcattt	taacgatttt	ttaagtgtat	ggtttagtga	ttaagtatat	110880
tcactttgtt	gtgcaatttt	tcagtggcat	tgtcataact	ttactaaagt	aattatttta	110940
gttttacttc	atgcctttat	ttagtatgta	atttatctta	aggaaatata	gtgtttttga	111000
tagattcccta	tgcaaaaata	atgaaaaaaa	tattaagtgt	gtatatatct	aatttatata	111060
agcatatatg	tagaactaat	tagcagcaat	acattatttt	ataaaacaga	atttttaaaa	111120
tacagaagtg	ttgttaatat	ttaaattgtt	acataccttt	tgttttatgt	attttttgta	111180
ttcaaatttt	aatctaacca	cataatcttc	aatgctaata	taggatgact	gaatttcaat	111240
acatttttta	gtggatggct	tacttactgt	gagaaaaatg	agtttacttc	atggggaaaa	111300
aaagaagcta	atactttatt	acaacaaaca	caccgctagt	caggggaccc	atttaccaa	111360
tatttgatgt	caagaaagaa	aatggctttg	ttgcaaagca	acagaattaa	gttaagcaga	111420
attctatttc	tgctgaatag	ccttttatgt	ttcagagaag	tatttttgat	ttatagttgc	111480
tattataaaa	aatataatct	tcctgacatt	tgaacttcaa	tcgttttaac	tcattcatta	111540
cacttattat	ctgtgtatat	tctgatagag	cagtgcctg	aaactttttt	cttttttcaa	111600
atcttatttt	aagttttagg	ccagggtgcg	tggtcacac	ctgtaatctc	agcacttttg	111660
gaggctgagg	caggagatca	cttgaggcca	ggagttcgag	actagcctga	ccgacaaggt	111720
gaaaccccgt	ctctactaaa	aacacaaaaa	ttagccaagt	atggtgacac	atgcctgtaa	111780
tcccagctac	ttggaagggt	gagccaggag	aatcgcttga	acccgggagg	cggagggttg	111840
agtgagccga	gatcacaccg	ctgctcttca	gcctgggcaa	caagagcgaa	actccgtctc	111900
aaaaaaaaaa	gtcttatttt	aaattttctt	gaacttcatt	tgatatattt	gagctgacta	111960
agctaccagt	cttaaaggca	atgctagtta	ttagtttaaat	ggtttttcat	acttaagagt	112020
ataaaatgtg	actcacacaa	ggcccagggt	taactgtggt	atcataaata	attggaagat	112080
taacctgtgc	acagtctctc	tctctctctg	tctctcttcc	catgagtgtg	tgcattgtgca	112140
caatttgggt	tgtgtaaatt	ttaagatatg	ccatttcagaa	tttgggtttt	cttttttggc	112200
tattttatgt	gaaaactgaa	gaagaatttt	atcacttttt	ccatgtttat	gttatattta	112260
tgtttatatg	aatacatatg	tgcatacata	tgtacacaca	ctacatacaa	ctttacaaat	112320
ttaaatttga	aattttttca	tctgactact	aattgttaatt	aggtttttga	cttttctactg	112380

eolf-seql

gagttctgac	ttctaattca	aatatccact	gcattcttctt	aacctctaca	attacaagtt	112440
tctgagacct	tcacttttaa	ttttatttgt	atattttacc	cctttcattg	gctcactgtc	112500
ctctatcagg	agcccgtgtc	attatatacct	gcctctttgt	gattgcatct	ggttttcata	112560
aatcaatccc	aggtggaatt	gaacaatttt	gccctattac	accactacct	atataattca	112620
tcattatcag	atctatttga	gctaaacatt	ggccctagta	ttctgactct	tctcatggga	112680
ttcacgttta	attgggacct	tctgtttcta	agtagtacac	tatctgcaaa	actttgacct	112740
ttgtctgtag	tcttgttctc	tgacccagc	cttaggctaa	gtcccagact	ataaaagtat	112800
agtcctagat	tgtatatttc	tagaagtgtt	caattatgtg	aactttcatc	catgtagacc	112860
aggttttcat	atagaaaatt	agagaaagag	ttaatacaga	cagagcacia	gacctaattg	112920
tatgcattat	gggctaatat	aaaaattaat	taaacataat	tattcctgtt	ttcaattaac	112980
ttataactta	ataggacgtg	actggagtac	gttgataatt	ataataatat	agagcaaaac	113040
atctgcaata	agagtggcag	agttttatct	gagcttaatt	aacttagaaa	agattttttt	113100
taagaattca	aaactggctc	tctgtctatt	ctggctaaat	ggaaattggg	tcagttcttt	113160
gggtcttaag	ttgtttaaca	aatcaaaca	agaataccta	ctttatggaa	tctgtgcatt	113220
aatgagcaa	tacatgtata	aatatgtat	agatctggta	tcaaattgtg	tcaatgaaat	113280
atgtataaca	catgcatgta	tgtatatgca	cctataatttc	aatttagata	taaatatatg	113340
agcaaggttt	acagataatg	actctgattt	cagtttttga	cacactaatg	ttgagactct	113400
tcagtaactt	gcaagagcag	accaacaaat	gggcagttgg	atctgacagc	ccagaggcag	113460
cagaaagctt	tggacggaag	ataaagtaat	agtaaacatt	atgcagcact	tcaaatagga	113520
tgtatccact	acacggtggg	aaacagtaat	actccggaga	acctctccac	acagttaaaa	113580
ggaagggtta	catcacacac	cgggttctgt	cctgggggtg	gatgaggggg	gagggaaagc	113640
attaggagat	atacctaatt	taaatgatga	gttaattggg	gcagcacacc	aacatggcac	113700
atgtatacat	atgtaacaaa	cctgcacgtt	gtgcacatgt	accctagaac	ttaaagtata	113760
aaaaaaaaaa	aaaaagcaaa	cacacagaca	cagaaaagca	acaacaaaaa	cacagcgtct	113820
tcattcaatt	agcacataaa	agaagtgcc	agatctgtgg	tcgccaagga	ctaggaggatt	113880
tgtgtcactc	atctggcaca	aatgcagtga	aaataagatt	cacttgaaat	taagagacat	113940
tccatttttc	tcccttgatt	tcatttttct	gtgtaaagct	gatttgaggg	ttatgctatc	114000
agtcaacaag	caagatgttg	tagtgggatg	gaggggttgg	aagccccatt	cacaggaata	114060
atagtcaaac	acattggagg	cacgattcaa	atttcagggt	aattaaatct	cagtaaaagg	114120
cttagaaatg	tagaacaaaa	tttctgtaag	gtttcctatg	aaaaaaaaatt	tttaaaacta	114180
acaagacttg	tgtgcacatt	tcctggggta	ataagaaagt	tgagacagtt	gaagaaattg	114240
tacttcactt	ttcttgaggt	gggaaaaaaa	aataagaaga	gaactccaag	tgcttatgaa	114300
gtgggttggt	gctgataata	aggggagaaa	agggatactc	tggagaaagt	tcttggttg	114360
aaaacagact	catatagatg	tagaatcacc	tatggggctg	atcgtggctt	aaggatcatc	114420

eolf-seq1

tgccagtctt	gagaatcatt	tactaatctc	aaggatcaac	aatgatcct	caagccagaa	114480
ttgtctgttg	tcacctgagt	gctttgaaaa	tcatctggaa	aaataagttg	atattctttg	114540
gtatgaacac	agtgagactg	aacttgctgt	aagctttcct	tgataaacag	ggctcatttt	114600
ttactcccc	cagcatttgc	tttctacagt	atctacagta	atgtatcaac	agtagtaatg	114660
tatctacagt	aatatatggg	ttacagacaa	agaaagaaat	cacatattct	tgtccaaatg	114720
agtcagtcac	aatttaaatg	ggttttccat	atgtgtatca	ccagacactt	tagaataacca	114780
aatattaatg	taaagacttt	gactggcggt	tacttatttt	ctaattgtga	attacagcac	114840
aatgtgtata	tcagaaatat	tcagatcttt	cttgaaatct	cactgtaagt	cttaaaatac	114900
cacatttaaa	aatgtccaat	ttactatgtc	ttccataaag	ctgtgaattt	ttagagagct	114960
aaatgtctca	tgtattttta	ccacaagtga	atcattgaga	tgaattatta	ttcaaaatat	115020
tttctgaat	aatatgagac	tgaattgaaa	ggtttgggga	gggggcagaa	tcctgagagc	115080
tgtaatacag	aaaactatat	aataaaaaat	gactttttat	agtcaatttc	tgtgagtttt	115140
ttgggtctta	aaacaagtac	aagaagaaca	atgggtaaca	tagaatataa	tttatgtgct	115200
aggtagtgct	ctaagcacat	tacatttttc	tcaatacccc	tttggggtag	agtcctattat	115260
aattctcatt	ttatggatga	agattgattt	ttagttagta	gagtgaataa	tcagtaaaag	115320
agattaaaga	accctgcatc	tcctcccatc	ctttgcctct	ctggaacctt	gattaatgta	115380
tcccctcttt	cagtttctct	ctctcttcca	tgacacctcc	ttttgctcac	acaaatgcac	115440
acatatccc	taggtaattt	tttttttatg	caactgggtg	gaattctact	aacattattc	115500
agagcattaa	cttcattttc	ataaaattgt	atatagtga	acacacattc	aagaaattta	115560
agccaaacat	tggtactcaa	caatacactc	caaactgttt	atttttagcct	taatataattg	115620
cttgtgagaa	atttaaaatc	tatgccaaag	ttattgtgct	caaagtgtcc	acaaacttaa	115680
gctggccagt	agtgaaggct	cctccctgtt	gggcctcttc	acctcctgcc	tggtgctctt	115740
ctaggctcag	cgacagagct	gcttgtccag	acccccaag	cagcgcagga	agcagcactg	115800
ttccccctac	tggcagtacc	ttccagcttc	ttgtcagtgg	taaagactcc	agggctgctt	115860
tacatgggtc	acatctcagt	gacattcctc	actaggtctg	tggccttgaa	aaagctactt	115920
aaactttcta	aacttgagct	tactcatata	caaagtggag	atgacagcag	tgctgattta	115980
tggggattag	ataagacagt	ttatgtaaac	ttcttaaacc	agtgcattga	tatctaagga	116040
ctaaacaaat	atttactgtt	attgatattt	ctttcaatat	gttgcatgga	attttgacag	116100
tcttatttga	tgtgtttctt	atcgatcct	acattcatat	ctattttgtg	tgtgtgaaat	116160
atttgttgca	taattttacc	attgcttaca	gtaagcaagt	actaaaaagg	catttacatt	116220
tttttttagt	ttatagttca	ttatgcatat	taccaataga	ttgagggtta	tttttcctt	116280
tagtgtaaaa	tcaaacacta	ataggtaaga	tttctgaagt	cataaacttt	atgttaaatt	116340
tttagatatt	tcttagacgt	caaaattttt	tgactttgta	tgttaattta	aatgaaacac	116400
ttaatataaa	atatcttatg	atatatatat	atatatggca	acaatgatca	gtgtgcagtc	116460

eolf-seql

taaatttaat	tgcatcattt	tctgggaggt	atcatgcttc	tttattgtgc	tctgctcaac	116520
tgggtataca	cattctttca	tctaacctag	aattcacaaa	aataacagat	ctccaaaacc	116580
atttcattcc	ataatttccc	catctgttga	ttttggttcc	tatacacaca	tctgagcata	116640
aaagctcatt	ggtactaggc	cacgagtaat	tacaatctaa	gaacatagaa	gaatgattga	116700
atagtggtaa	aggaaatacc	agcaaatac	ttgactatta	gaaaataata	tggttaagggt	116760
gtgaatctca	ataccattct	gtgataatga	gggcactcca	taaacatttt	acaaataaat	116820
gaatgagtgg	ctttattttac	agaatattga	atggtaaagt	taagtagaat	ttaaattgtca	116880
tattaaggga	aataacttta	ttgaaggtaa	agtagtatct	taagcagaaa	aggagagtat	116940
ctggggtttt	attttatttt	acataaatgc	agttaaattg	atcttcattg	tttctattta	117000
gaagagtttg	agtttgaaaa	acggttttga	aaacacaacc	aacagcagat	aatttgtctt	117060
tcagttatgg	ggacagccca	cagaattcca	acacatatgg	catctagcct	tcaccacaaa	117120
attagtctag	tacagatagt	gtggcccaag	tgtttggcaa	atggtgggtt	ttcaccatat	117180
attgatagca	gctggaacag	gaaataaaaa	tgaatcattt	cacgttacat	tgaattttaa	117240
gtagaagcag	cacacatgat	tctgagttag	ctcatcatta	tgaagttatt	ctagcacgta	117300
gaagataaca	cttttgagat	ataacttgaa	gctatttttt	gtttcccaca	gacagtatgg	117360
gaaagggatt	taaataacct	agagactctg	gaatttgtga	tagtaacaat	gatagtcaca	117420
gctgagagtc	cagtttttaa	cattgccttg	ttagttggcc	agctcttcca	tgctgtggg	117480
tattcttcaa	atctggtttt	gtgctatttt	aatgtaattt	cagagaaatt	accggcagtg	117540
cctcttttgt	ggcattcaaa	tgatattgtt	gtgttctaca	ttgttgaatc	agcaccttta	117600
aaatagaata	agagcatgac	atatactttt	cgtgcagagt	tactaggaaa	gagttgaaat	117660
tctagttcac	aatgaaaac	atttgtcttg	taacaaaatt	aaaaatcact	caatcactta	117720
tgtgttcaga	aattttactt	tgatgtttcc	taaattctct	ttagtaattc	tgtctacagc	117780
taatttttgt	taaatttgtt	attttttgtt	tataaacatt	gagacttgat	tttcttttct	117840
ttttaggatc	ccctgccttg	actggaactg	gaacaatcaa	cgtcatagta	gatgatgtca	117900
atgacaatgt	ccccacattt	gccagtaaag	cgtatttcac	aacaattcct	gaggatgcac	117960
caactggaac	agatgtttta	ttggtaaatt	cctcagatgc	tgatgcttca	aagaatgcag	118020
ttataaggtc	agtacatttt	cctttgtaaa	gtttgtctgt	tttctcatta	aacattagtt	118080
tttgaactac	atgaatataa	tgtttaattt	aatgaacgt	catattaaca	catatcctct	118140
tcttgttatc	cattgctgat	agccaacaat	tcattaaatg	aagattcaaa	cagtaaacad	118200
tttacttatt	actctaagat	tttatttaat	ttttatttta	tttatatttt	tatcatatct	118260
catggttttg	tggtttggga	ctacactggg	tgcttctgtc	tcagtagggt	gactggtggc	118320
acttcacagt	atttacatgg	tgactgaatg	atctggaggg	gccaagatga	ctttgcatgc	118380
ctgctgcctt	ggcaggggtg	gttggaagg	tcaggatcat	cttggtcccc	tctgtcctca	118440
agtagtctca	gaacttcctg	atgtggttct	ttagcaaagt	agttggactt	tttagttggg	118500

eolf-seql

ggttctcaac	tccaagagcc	acaagtga	gctcccagaa	ctctcaaagg	tcagactcag	118560
atgtgccata	gcagcacttc	tataatactc	tgttgggtcaa	agcagtggtg	accagctcag	118620
attcactgtg	aggagaaaca	tgcatactc	gttgattgga	gaaatgtcaa	agaattttga	118680
ccatttttat	tccactacta	gctctaataa	gaatatttgt	gtattcttca	tttagtaa	118740
gtattttact	ttgcttaaat	cctcttaaaa	ttgagaacac	aaatatgata	acttgttcag	118800
agaggatgtg	aaagaaat	gagttgcaac	attttatcaa	cctagattgt	ccccttcttc	118860
cataatctatt	ctaaactaca	agaaatgaag	atctccaaag	gttctagaga	aaaactcaca	118920
cacataaata	ttttataccc	ctcctccact	ttctataggc	tgggtattagg	taaattagag	118980
ttggtttagat	ggctatgaaa	gtaatggagc	agaagataaa	atgtgagaca	ttaagaatta	119040
tcagctatgg	gtaccagata	tacggatatg	gtaatgagct	gattcatgtc	ttattttggt	119100
gtttgttacc	aattttcttt	taacaaaatc	attttgga	actggttttc	accacacaaa	119160
ttttaagaaa	cacattcaga	ccacaatact	tgggtctctct	aagaaatgac	ctttaagctg	119220
aaaggactga	gctatggaat	ggaattaatc	tcgttggttt	atctaagaag	gtcagcatgt	119280
ctgggaccaga	gtgagaaaagg	agtcagagag	gtaggcaggg	gctaaatcat	gcaggccata	119340
tacaggccat	atatgtcacg	atacagaatt	ggggttttcc	aatttacctt	taggtgagaa	119400
actactgggg	agttttaaac	agaagagaca	cataaactgg	tctacatttg	gatagaatct	119460
gatgagagag	gatttacgga	gagaaaccag	tgcaccattt	aggcactaat	taatatagtt	119520
atccaagtag	agtaactttg	tacttacgtg	gagaaatgaa	aattgagtaa	atagatttgg	119580
ggcatacctt	tgaattgga	tgtgagacag	gaaggggaac	atcacacacc	ggggcctgtc	119640
atgggggtcgg	gggagggggg	gagggatagc	attaggagat	atacctaata	taaatgatga	119700
gttaatgggt	gcagcacacc	aacatggcac	atgtatacat	atgtaacaaa	cctgcacatt	119760
gtgcacatgt	accctagaac	ttaaagtata	ataataaaaa	aaaaacaaag	aaattggacg	119820
tgagatcaaa	tgaagagag	aaatcagaat	catctaagtt	ttccactcaa	acacctaggc	119880
agatcatgat	atgatatcat	ttactgaaat	gggtagcatt	gaaggaggaa	cagttttgtg	119940
agaagtcaga	agtattctat	ttgaatacag	tttcaaata	ctgttactca	ttcattttaga	120000
gataccagtt	aggaagctgg	agatatgagt	gtggagctta	gggttgggg	tagggctgga	120060
tatacacatt	tgagagtc	cagtgttttag	aggacattta	aaaccaataa	actgaatgag	120120
aacacgtttg	cggagtgtat	tagtctgttc	tcatgtctgt	aataaagaca	tacctgagac	120180
tgggtaattt	ataaagaaaa	agaagtttaa	tgggcatata	gttcacatt	ggctggggag	120240
gcctcaaaat	catggccgaa	ggtgaggaag	agcaaaatca	cgtcttacat	ggtagcaggc	120300
aagagagctt	gtacagggga	actcccattt	ataaaaccat	cagttcttgt	gagacttatt	120360
cactaccaca	agaacagtat	gctcgaagct	gccccatga	ttcaattatc	tccacctgac	120420
cctgcccttg	acacatgggg	attattttta	tttatttatc	tatgtatttt	ttttgagatg	120480
gagtcttgct	ttgtcaccca	ggctggagtg	cagtggcaca	atctcagctc	actgcagcct	120540

eolf-seql

ctgcttccca	ggttccagt	attctcctgc	ctcagcctcc	tgggtagctg	ggattacagg	120600
tgcacgccac	cacactcggc	taatttttgt	atTTTTtagtt	gagatgggggt	ttcaccatgt	120660
tggccacact	ggtctccaac	tcctgatctc	aggtgatctg	cccacttccg	ccttccaaag	120720
tgctgggatt	acaggcatga	gccaccatgc	ctggccgaca	catggggatt	attacaattc	120780
agggtgagat	ttgagtgagg	acacagccaa	accatatcag	agagagtata	gcaggataag	120840
gaaagaggca	ctagaaccag	tcactgggaa	ttctccaaca	ctttaaaggt	aggttttagga	120900
ggaaagggtct	ccaaggagac	taggagttaa	ggtaggagtt	aagaagggtct	gaagttaagg	120960
aggcctgggt	agagacaaca	gaggaaatgc	aggacagaat	gaattatttg	catgcattgc	121020
aaaaggatgg	aaagctatat	acaaatttct	ttcagtgagc	tacatacaga	tttctttcag	121080
tggaccaaga	cttattccaa	gagaagagtt	gagttctcag	agtcctgtaa	agtcaaatca	121140
tagaggactg	agaaatttct	gtccagggtc	ataaccggtt	tgagtcattg	tacttagcac	121200
caaccagaga	gaggcaggta	caactgaact	tcttccaggt	tatgagcttc	aaaaggccac	121260
taaataccct	ttcttttact	tgtcttatac	caaagcatag	aaataataaa	aatcatatca	121320
taagattcaa	tccaaagtct	ttagcttaac	attaagagta	gaaccttggg	aattaagttg	121380
tgtggaattg	aatcctgact	ctactattac	tattgcatta	gtatgggcaa	attaacattt	121440
ctggacccgg	ttttcagtgg	attaagcaga	gtaataatga	aactaacttt	aaagagagta	121500
agtaaaataa	tttaagttag	ctggtttagaa	tagcaccagg	aacaaaaaac	aatgctcaat	121560
aaatgtcaac	ccatattgtt	ctaatacatgc	aaagcaccta	gccctctacc	tgtctatcat	121620
ttgttagtgc	taaataagtt	tctgataatg	atTTTtTgaag	agatgcccta	tctattgtaa	121680
tgttataatc	taataattct	ttatctgcca	tgcagatgct	gtttcttaga	cagtatatag	121740
aatattacca	atcagatata	gggaaattct	cttgatatgag	atgtataaat	tcctgaatat	121800
gaagttgaat	gtttacaaac	ttgatcctgt	cttccattga	gtcattcatt	tatttctata	121860
ataaagtaaa	tgctgtgatg	acctgctgtt	tttttctagt	gcatgttaaa	gattcattgc	121920
aaaatgctat	cctatgcttg	tgaattatgc	ttgtaaattt	ggtctagaaa	aattgtattc	121980
atactctcaa	actgttttac	aaagctgtac	tggtaggtct	gatgggattg	ttttgctttg	122040
gtagtatgta	ttttggttat	ttgattgggt	gattaaattt	tcttctttta	acatgagaat	122100
taacattata	cttttacata	cattgaaatc	caaaaacccc	atcagtgaat	atcttaaaat	122160
gactctacag	actatcatat	attcagttaa	aatgaaaatt	gaagctattt	ttgtcttggtg	122220
aataaaaaaac	attcaattca	cttgcaaatt	aacagggcaa	acaattattg	cagcttaaat	122280
agaaaatatt	ttcacagaca	aagtaaatag	ttattataac	ctcaacttta	tttactctgg	122340
tttgataaaa	tcttaatgga	atataatgta	ttttatgggt	gggtgtaata	actccttgct	122400
attcatggta	tcctgaagaa	aatctattct	ttcttcagat	taaaagagct	attggtttaa	122460
ttatttatct	cccatttaaa	ttttacatgg	ttcggttatt	tactgaacta	ctgttgggat	122520
ctccaggagc	ataaacTTTT	atgtgtctta	taagttaatt	TTTTTccaat	gatctagcat	122580

eolf-seql

gattttgcat	atagcatcca	gccaacaatg	tttctttttt	acttctacct	atttgatcaa	122640
actttgtatt	tctacaaatg	gtgtacttac	tttatgttat	acattttact	tcacctttag	122700
tattttccct	tatagaaaat	cagactgtat	taattcttag	tctttctcta	tccagattat	122760
gtctttgcct	tccacatatc	tattccagag	cttagctttt	acagatatgt	atcccccttt	122820
ctcccaactg	gaccaaactc	ctattcaagc	cccacttcta	attcttctgt	atcacaaccc	122880
tggagacagc	cacaaactcc	actgacaaa	tcaacattct	aaggaagatt	tcttttcttt	122940
tttttttttt	ttgagatgga	gtctcgctct	gtcaccagc	ctggcggtgt	gcgtcgtgat	123000
ctcagctcac	tgcaacctcc	gccttcagc	ttcacgccat	tctcctgtct	cagcctcctg	123060
agtagctggg	actacaggca	cccaccacca	tgcccggcta	atTTTTTTTT	ttttgtatTT	123120
ttagtagaga	tgggggtttc	ccgtgttagc	caggatggtc	tcgatcttct	gatctcgtga	123180
tctgcctgcc	ttggcctccc	aaagtgtctg	gattacaggc	gtgagccacc	gcgccccggc	123240
caggaataat	tcttaatatg	tgctattaat	ctcttcccat	tcaatttcct	ccaactcttt	123300
aattcaaaa	ttactcattt	ttcttgtgtt	tcttcaagtt	ctctctcttc	cttgaaccat	123360
gtagatatct	atataaatgc	tcattttacat	aagttagcgt	atctacagaa	atgctcagaa	123420
tttctgttga	attctgggtc	ttttatttgc	ctcccatggc	ctaggaaagt	catttttagtg	123480
cctcaaaggc	ttagtctctg	catcaataaa	aatgaacata	aaaatttata	ctttacagtt	123540
tgtgagacaa	acattttacta	accacctact	atgtatcaaa	cagtatgtat	ggaatcagtt	123600
aatatccata	aatgtctctg	gcataattat	taggacatag	aagtcactaa	attaattcaa	123660
ggtttctttt	ttctttttat	tcttctcata	tcatcttttt	tactcctaata	atattctttc	123720
ttttacaata	tctggtacat	aacagtgggt	gtcacttaaa	taaatgcatt	gaatgaacga	123780
ttttaataat	ctctggaatg	gctgctttta	ctcattctat	ttttactaca	acattcttga	123840
aagcttcaca	acctgttttc	tctgaccatt	tattcctgaa	aatcttttagt	ctgatttttt	123900
ttttccttca	ttgctttact	aaaaaaaggc	cctgtcagaa	gactactgaa	atTTTTTcaag	123960
tccagtgact	tttctaagtc	cttattctcc	tttacttttt	gcaatgttca	cactacaggc	124020
caggccatct	tttctttttg	gcattttttc	ctgctcaatg	tctatataaaa	tattattttct	124080
tatcatcctg	catctctgat	cacacacagt	ttgttttctg	tttctctttt	ctctctctgg	124140
aaagtaattt	gaatacttct	cactgcatta	ttttctcagt	acttgtgtgt	gtgtgtgtgt	124200
gtgtgtgtgt	gtgagagaga	gagagagaga	gagagagaga	gagagaattt	attccattgc	124260
tgcaagcatc	aattctgtga	acaaaacctc	caaactctgta	ctatcaactc	tgattccact	124320
ccaaaatttt	gcacccatat	ttataactcg	ctgatagaca	tattacactg	gaggttctgt	124380
tggcatcata	aacacagtgt	acctaaaatt	ctttgctttt	cctgtttctc	atTTTtggtt	124440
tctgctttgt	tttaataata	ttgtcttggg	ttgtttttta	ccacaccttg	cagctaaggg	124500
tcatcccctc	tcttatactc	aatcagtgga	caaattctca	tgtttcttct	tttctaattgc	124560
atctggcacc	cattcttttc	agtgcattcc	ttctgccaa	atcctagttc	agttcataat	124620

eolf-seql

tacatcatgc	ctgtactatt	ataataagaa	ttaactcact	tccacgcctc	tagttttctaa	124680
tccttccaat	ctatgtagta	cactgtcctg	taaaattatg	aagccctgac	tatgcaccaa	124740
aaatttatta	aactctcagg	agtttggaac	tctagggccc	ataagaagtg	caattttaata	124800
gaagagataa	ttttgtaatt	tcttaagtgt	agtaccgtat	aacaagtata	gtttaagcac	124860
agaatagggtg	gaaagaatag	tatggccaat	gatccttcaa	tgatactaag	tagaagtagt	124920
ttatggagaa	ataaaggaat	gaaagatatt	ctaggcaaag	acagtatcag	gtactaaggc	124980
aaagagctat	gcaaaaaaca	tggcattaga	gaaagaaagt	atttccatat	ggttggtgtg	125040
ggttaggaat	ggacttttga	taccatataa	aaaattcaaa	atttctttct	gcatctaagg	125100
agagaaaaca	tggaaatggt	ttaagcagca	agcacaaaaa	catgcctagt	tatatttcat	125160
aattatttct	ttcccagcat	tataggaaat	aatttgtaca	aagcaaagct	ggagtcagtg	125220
aattaaaggg	caatggcaga	agtatgcac	aacatgagca	tctcttggct	ctgctttaac	125280
aattatactt	ccttcctcaa	aatctttcaa	ttccagtttg	cctatggtat	aacccccagt	125340
cttcaaattc	tagtcacccc	ataaatggcc	ccagctaatt	ctgcaaaact	ctgcaacata	125400
tggccaaaag	ttcagtatta	ctggatcatt	ttctgctcat	gggacaagga	tctgtgcttt	125460
cccaagcctt	ataggtttgc	tcaattttatt	ctatatcttt	gaccagggct	tggcaaacta	125520
ctacctgcag	gccaaattgg	gcctagtgcc	tgtttttgta	aataaagtgt	tattggaaca	125580
cagccatgcc	cattcatgta	cctattgtct	ttggctgctc	ttgccatatg	atggtaagct	125640
gagtattgca	acagagaata	tatgacctgt	aaaactgaat	atctttacaa	tctggcccat	125700
tatataaaaag	gtttgctgac	cactagccta	gaccttcttt	tgtttctgcc	tttttgaaca	125760
ctattgaaag	atgggtagcc	cctttacaac	ttatgttaaa	tttacctttc	tctgaggaag	125820
ctttatttta	atcattccag	tcaagagtgt	tctgtcttct	gaatacctac	agtgacacct	125880
ctttactgtt	tcatagcact	ttactgtttt	gtaattacct	tttttttata	tctttctgtc	125940
ataaaggaca	taaacttgaa	accaggattt	tttttaacct	acttaaccgt	gtctctgttt	126000
tgaattttta	gtccctttat	ccatttaact	atctaaatat	aggttgagca	tcctaatct	126060
gaaagtccaa	aatctaaaat	gcaccaaact	cctaaacttt	ttgagcatga	acatgatgcc	126120
acaggtgga	aattccacac	ctgatacctt	tgctttctga	tgtttcaatg	ttcacaacc	126180
ttgtttcaag	caattatcaa	aaatattaga	taaaattatc	ttctggctat	gtatatgagg	126240
tatatgaaac	ataaatgaat	tttgtgttca	gacttgagac	ccatccccta	gatctctcat	126300
tatgtatatg	caaataattct	atccagagaa	atccaaacac	ccctgggtcc	aagaattttg	126360
gataatggat	actcaaccta	tgtatagata	gatatggata	gattgtatgt	aatagactat	126420
tacgttatac	atataatatta	tataggtcct	attatgttgg	taaacttaga	cttttaaagg	126480
ctcaccattt	atcaattaca	atgccaagtg	ctctttatac	aaaatatattt	taatagtcaa	126540
aactaccaa	taaaaagtaa	aatatgacct	ccactttaca	gataaagaaa	gaaggcttaa	126600
aaatgttaag	aaatttttgt	gaatttaagt	gctattcatg	gggtttaaat	ttatgtccaa	126660

eolf-seql

gtgaactatg	ttctaaagtc	cagtctctta	actaaatgat	catattctcc	cagcagacag	126720
tataatgcct	ataaccctag	tagatctcag	gaagaggcaa	agaagtttta	caaaatcaaa	126780
tggggatatt	ttaactttac	aaaagcaata	gttgatttag	ggttcagatc	acagtgggtc	126840
ctgtttatgc	aaataatttg	aaatagtaat	gtattctcaa	attagaaaat	aatttaacgt	126900
gtttattgat	tttcattgaa	ctaaatgtga	acaaattcta	tattgacaca	acttgagcaa	126960
gagtccatgt	tggccttcgc	aattggtaca	ttttccgtct	tcactacatt	ccctcagttg	127020
agttttacct	tccttctact	gtggaataat	gggaaaagtg	catggtgaag	tcataaagac	127080
agaaattcaa	actctagatc	tgctatttat	agattgtatg	tttctttgtg	caactacttt	127140
agtctctgtt	agattcagat	tcattatccc	taaacagtca	aaactaaaac	taaactataa	127200
ggatagtttt	gggatttaaa	taagagcata	tataaattgc	ccagtagtgt	gcttgacatg	127260
cactaagaaa	tcaataagct	cctggaaata	tttaagtaac	agcataaatg	tttaactggt	127320
aagaagatac	cacaagacac	aatctaataa	agtttttaac	tttacaaaaa	ttaatgcagg	127380
ccagagaagc	aagagaggtc	atcaggaggg	atgagaatag	aaccaagcct	caagtaagag	127440
atgtggcaaa	aatctagaca	tattatctta	actgtcgatc	tacgtacaga	gcttattgtg	127500
tttcttctat	ttttaaaatt	agaagtataa	attttcatcc	aactgggtgt	atagaacatc	127560
tcataattta	aataactttt	tatatgcttt	agaatctagt	gaagtctaga	aaaaattaat	127620
tagatattaa	tgactatttg	ctcattcatt	ttaaaaaata	ctaaatatat	tacctacttt	127680
aaaatagaca	gtcacacggg	caatagcatg	tgcaatagca	taaaattaaa	aaatcagaat	127740
ttataccata	ggtttctttg	tctgttttgt	gctgctatag	ctacagactg	ggtaatttat	127800
aaagaataga	agtgtatttg	gctcacagtt	ctggaggctg	ggaagtctaa	gggcatgggg	127860
cctgcttttg	gtgagtgttt	cctgtgtgtt	atttcatggc	agaagggcag	aaggcatcac	127920
atggtgagca	atcatgtgag	acagagagag	ggaatcaggc	tgaactcatt	cttttatcag	127980
aagctcactc	cctcaataac	taactcccac	ttccgtgata	atggcattaa	tccactcata	128040
atgatggaac	cctgatggtc	taattcacct	cttaaaggcc	ctacttctca	acattgttac	128100
aacactgtta	caatgactaa	tttcaaggaa	catttaaattg	atagcaagtc	tttttgaatg	128160
gatcatttag	tgaaactgga	ctaaaggcca	caccatttgc	ctatcaacac	attacgctta	128220
ataatacacc	atggtcttgg	catatacaaa	acatccagat	gaaaatttat	gttttttatc	128280
aatctcattt	tattttttatt	tgtgaatatt	tataggaata	aatatattgat	tgaaccttga	128340
tccttgccat	tataaaacta	aaaaagttta	tggcagcatg	gcttacttta	ttttcctatt	128400
aaattatttg	attatttcta	catccactga	cagcaacaag	gttcacaaaa	taaaattaca	128460
caattctcaa	atccagtttt	ctacactttg	taaaacgtta	aggtattttg	attattttgt	128520
gagtcctgaa	ttttcaagtt	ttaagaattc	atgtataaaa	cttgatattt	atattttgat	128580
aaagagaata	tatattatct	actgtaaagg	gcaataatta	tacctaatag	tcacttctgg	128640
cccaataact	atagttaatg	ctattttcac	acatgcctga	ttctgtcgtg	tgatttgcca	128700

eolf-seql

agcatattaa	aaatctgagt	gacacaaagt	atztatcaaa	tactgaagcc	atttctcaac	128760
caaaccactt	ctctattctt	tccctgtttt	gctatcattt	tataagactt	ctaatagttt	128820
taaatataag	gtcctcaaca	gttgattatt	tcactaaagt	aggataaaaa	atgctgaaat	128880
atttgtttta	agctgtgagc	ataataggag	aatgaacata	ctactggctg	caatatagtt	128940
ttttcccctg	cagttttatat	tagatatatg	ctgttgctat	gtttatatag	acacaaagca	129000
aactgtagaa	acatgcagcc	aactccaaca	agggtatcta	tttgttggta	taaaagaaga	129060
aaacttttaa	agatatctat	ttccatgcta	tctttcaact	ttaaaaatta	cggaccatag	129120
ccaatttctg	aaccttcaag	cttagctact	tctttcctgg	ctgatctttg	ggacctcacc	129180
ttatacacia	aatcaggaat	atatgcagac	aactgtactc	ttcagaaaga	agagagaagc	129240
ttttctcagt	ggaaactctt	gcccgttaac	ctatctgggt	agcatcaaaa	catccatgaa	129300
gatgtcatac	ctctcctgac	aagaaagcaa	caaaaccata	tgaggaatga	caaagacaga	129360
attaatcact	agaaaggctt	ttgtataaat	aatcagtcct	tgagttgttc	tgagaagcag	129420
atacatgtca	aatacagggt	ttgtcttaaa	agaatacaat	tttcaactga	tcttctctgg	129480
tttattatgg	tatacagcag	aaaaataatt	tttagtttca	tttaaaagat	attcatttgt	129540
aatcctgggt	actaaccaca	atattagagc	aagtcccctg	atztatgctt	ttaggctcat	129600
ttatttaaag	ccttaggggt	ttgtttgggt	gccttgacac	acttaagagt	cctaaaaacc	129660
ttgtgaagac	ttccttgaca	tcactggaca	tctcacgata	aagactgtca	atgtgatgtt	129720
cacagaaaat	ttgaaatatt	tattagctag	actagttgta	ttctttccaa	cattgttgta	129780
tgatctttct	tgtaacgttt	tcttgcatth	ctacctcagt	tttttaatta	tagtaaatag	129840
aagttacgat	attaaaaacta	tatgacatat	ccctatttct	gctttctgct	ttagttatag	129900
gatcatcggt	ggaaactctc	agttcacgat	caacccatcg	acaggacaaa	tcataccag	129960
cgcatgttta	gatagggaaa	caaaagataa	ttatactttg	gtagtgggtc	gcagtgatgc	130020
gggatcccca	gagcctcttt	ccagttccac	cagtgtgctt	gtcactgtga	ctgatgtcaa	130080
tgacaatcca	ccaagatttc	agcatcacc	atatgtcact	cacatcccat	ctcctactct	130140
tccaggtaat	caaccaaatt	ctgaggccac	atggatataa	acaaactatg	tatcagacat	130200
ttctataaaa	atatttatga	tattttacat	acatatttct	gatatagcct	aattttgcaa	130260
atcctctaaa	attcagggtg	ttttgtctga	tggaatgaa	aaaatgcttg	aaacttgaaa	130320
attaaccctt	tcttgctaga	ctaattgtgt	ataatgtttt	ataattgtta	tgtattatta	130380
tttcttaata	ttacttgaat	attataaata	attaacatat	atattacatc	atcgttaatg	130440
atgtttatgg	cctgagggtat	aactttgtgt	aagtttgcta	agaggagggg	cattgtctct	130500
attttgcatg	ccatatgccca	ctacctgaaa	catgatatgg	gagataatag	gcattcaact	130560
atgtttgtca	gtggaaaatg	aatatttgac	ttcaatthtt	catagatatg	ttttcaaaaa	130620
gtttaataaa	tggataattc	ttgttaatat	ttattttatt	ccaggthttta	caaatgaaaa	130680
ctgttctgtt	agcaagthtt	tggatccatt	tatgaatcat	tttcatattg	acaatatgca	130740

eolf-seql

tttatccttc	tgtatctctt	taaatttagt	ttgacatttg	ctaagaaagg	catactctaa	130800
gaactgcaca	aatctgccat	tttaattttt	aaaatgagtt	ttcaaagagg	aaaatataga	130860
aatatagctc	attattgatt	taatcttcct	tgctcggaaa	tatttttaat	tattagaaga	130920
aaaacttaac	agatagagtt	aacagatcct	cctttcagtg	atctttgatc	ttctattaat	130980
ctgagaatga	taccaatcta	aaatatagga	ttcataaatt	tatgtgccaa	ctttctatca	131040
aaggaaatgt	cagtatcaaa	atgataaata	cctgctaaag	gtcttcagat	gaaatgatgt	131100
tggcaggcat	ggttctaatt	acatccaatg	tgtggtggtg	caagataaaa	tttcctatgt	131160
aaaatgaggt	atgcttaagc	atcttttcct	cattggactt	ataaccactg	gcctttttaa	131220
aattaaagat	attttacttt	tgttaccgtt	tcttctgtag	gggtgagagt	gcaggtttgg	131280
gaatggtttc	tgaatgagta	gattgaaaat	atgtccttat	ggcagctttt	ctgcatattt	131340
ttacgacaat	ctgtttcatt	ggcactcagt	ctaagcacta	acttttggag	tccaagttga	131400
gtccattatc	cctcaattct	tatttcttac	tactttacaa	ttattttaat	tggtttatgt	131460
atatatctgt	gtatgtatat	acacacacat	ataaacatac	acatatgcac	ttttttttcc	131520
atctgataat	agttcacgta	taaaggaatt	ttgtcataaa	acagtgggga	caaggaataa	131580
atggtaatga	acatgatttt	tgttgacaag	attacatata	aagtgattgg	aagatatttt	131640
aagacacact	agagcaacgg	tatcattgca	ttgggtagag	gcatagcact	ttgcagagct	131700
cgcataattat	gtttcttgga	atgttgtttt	atgtgcagat	ttttctccta	gaaactatga	131760
tttttgaacg	attagcaagt	tcttttcctt	aggcttctct	caaaggcata	ctgaaaagta	131820
ttaaatacaa	cagactgtat	aaattttagt	tagaaaatgg	caggttagtc	tctgaagaca	131880
atcatagagc	agatttgact	tgtgaacctc	ggagaaaata	taggagatac	tgttctccct	131940
agtaatcatg	agaaaataag	gtcacatcaa	gcagcaatag	agtgtcttat	atgcacttat	132000
ctgctaccaa	atattttatt	taaattccac	gtgagtataa	ctgcacactt	tctcttttat	132060
aggttccttt	gtctttgcgg	ttacagtcac	agatgctgat	attggaccaa	attctgaact	132120
gcattattct	ctttcgggta	gaaattctga	aaaatttcac	attgaccac	tgaggggagc	132180
cattatggcc	gccggaccac	taaacggagc	ttcagaagtg	acattttctg	tgcatgtaaa	132240
agatggtggc	tcattttcaa	agacagattc	tacaacagtg	actgttagat	tcgtgaataa	132300
ggccgatttc	cctaaagtga	gagccaaaga	acaaacgttc	atgtttcctg	aaaaccaacc	132360
agtcagctct	cttgtcacca	ccatcacagg	atcctcttta	agaggagAAC	ctatgtcata	132420
ttatatcgca	agtgggaatc	ttggcaatac	tttcagatt	gatcagttaa	cagggcaggt	132480
gtctattagt	caacctctgg	attttgaaaa	gatacaaaaa	tatgttgtat	ggatagaggc	132540
cagagacggg	ggtttccttc	ctttctcctc	ttacgagaaa	cttgatataa	cagtattaga	132600
tgtcaatgat	aatgccccaa	tttttaagga	agaccatttt	atatctgaaa	tattggaaaa	132660
cctttcccct	cgaaaaatac	ttactgtttc	ggcaatggac	aaggacagtg	gacccaatgg	132720
acagttagat	tatgaaattg	ttaatggcaa	catggaaaat	agtttcagta	tcaatcatgc	132780

eolf-seql

tactggtgaa	attagaagcg	ttagaccttt	ggacagggaa	aaagtatctc	attatgtcct	132840
aaccataaaa	tcatcagaca	aaggggtcccc	gtctcagagt	acttcagtaa	aagtcatgat	132900
taacatttta	gatgaaaatg	ataatgcccc	taggttttct	cagatattta	gtgcccattgt	132960
tcctgaaaat	tcccccttag	gatacacagt	taccctgtgc	acaacttctg	atgaagacat	133020
tgggatcaat	gcaattagta	gatattctat	aatggatgca	agtcttccat	ttacaattaa	133080
tcccagcaca	ggggatattg	tcataagcag	acctttaaat	agggaagata	cagaccgtta	133140
cagaattcga	gtttccgcac	atgattctgg	gtggactgta	agtacagatg	tcacaatatt	133200
tgtgacagac	atcaatgaca	atgctccaag	athtagcaga	acttcctatt	athtagattg	133260
ccctgaactt	actgagattg	gctccaaagt	aactcaggta	tttgcaacag	atcctgatga	133320
gggatcaaat	ggacaagtgt	tttatttcat	aaaatcccaa	tcagaatatt	tcaggattaa	133380
tgccaccact	ggagagattt	tcaataaaca	gatcttaaaa	taccaaagt	tactggctt	133440
cagtaatgtg	aatatcaaca	ggcatagttt	tatagtgaca	tcttcagatc	gaggtaaacc	133500
ttccttaatt	agtgagacaa	cagttaccat	caatatagt	gacagtaatg	acaatgcacc	133560
tcaatttctt	aaaagtaaat	atttcactcc	agtcacaaaa	aatgttaagg	ttggtacgaa	133620
gttaatcaga	gttacagcaa	tagatgacaa	agattttgga	ctgaattcag	aagtggagta	133680
tttcatttct	aatgataacc	athtaggaaa	atttaagttg	gacaatgata	cggggtggat	133740
ttcagtagca	tcctccctga	tttctgactt	gaacaaaaac	ttttttatca	cagtcactgc	133800
aaaggataag	ggaaaccctc	cactttcttc	ccaagcaact	gttcacataa	ctgtcactga	133860
ggaaaactac	catacacctg	aattctctca	aagccacatg	agtgcaacca	tccttgagag	133920
ccatagcatt	gggtccattg	tcagaactgt	ttctgcaaga	gatagagatg	cagcgatgaa	133980
tggcttgatt	aagtacagca	tttcttcagg	aatgaagaa	ggcatttttg	caatcaattc	134040
ttctacaggt	atattaacac	tagccaaagc	tcttgattat	gagctatgcc	agaaacacga	134100
aatgacgatt	agtgtatag	atggaggatg	ggttgcaaga	actggttact	gcagtgtgac	134160
cgtaaatgtg	attgatgtga	atgataattc	tccagtattc	ctctctgatg	actatttccc	134220
tactgttttg	gaaaatgccc	caagtggaac	aacagttatc	cacctaaatg	caacagatgc	134280
tgactctgga	acaaatgctg	tgattgcgta	tactgtacag	tcatctgaca	gtgacctctt	134340
tgtcattgac	cctaacacag	gagtcataac	cactcaaggc	ttcttggatt	ttgaaaccaa	134400
gcagagctac	catcttactg	tgaaagcctt	caatgtcccc	gatgaggaaa	ggtgtagctt	134460
tgccactgtt	aatatacaat	taaaaggac	aatgaatat	gtgccccgtt	ttgtttccaa	134520
actttactat	tttgaaatct	cagaagcagc	tcctaaagg	actattgttg	gagaagtgtt	134580
tgctagcgac	cgtgatttgg	gcactgatgg	ggaggtagac	tatttgattt	ttggtaatat	134640
tcgaaagaag	ggtttccaga	tcaataagaa	gactggacag	atztatgttt	ctggaattct	134700
tgatcgagaa	aaagaagaaa	gggtgtcttt	gaaggatttg	gccaagaact	ttggcagcat	134760
tagagggtgca	gatatagatg	aggtcactgt	aatgtcacc	gtgcttgatg	caaatgaccc	134820

eolf-seql

acccattttt	actctaaaca	tctacagtgt	gcagatcagt	gaaggggtcc	caataggaac	134880
tcatgtgacc	tttgtcagt	cctttgactc	agactccatc	cccagctgga	gcagggttttc	134940
ttacttcatc	ggatcagggg	atgaaaatgg	tgccttttct	attaatccgc	agacaggaca	135000
gatcaccgtt	actgcagaat	tagatcgaga	aacccttccc	atctataatc	tctcagtttt	135060
ggctgttgat	tcagggaccc	cctcagctac	aggtagtgcc	tctttattag	tcaccctgga	135120
agatataaat	gataacgggc	ccatgctgac	tgtcagtga	ggagaagtca	tggaatacaa	135180
acggccaggc	actttggtga	tgacccttca	gtccactgac	cctgatctcc	ctccaaatca	135240
aggtcccttt	acttattact	tgctgagcac	aggtcctgcc	accagttatt	tcagtctgag	135300
cactgctgga	gttctgagca	caaccagaga	gattgacaga	gagcagattg	cagacttcta	135360
tctgtctgtg	gttaccaagg	attctggtgt	tcctcaaagt	tcttccacag	gaactgtgca	135420
tatcacagtt	atagaccaa	atgacaatcc	ttcacagtct	cggacggtgg	agatatttgt	135480
taattattat	ggtaacttgt	ttcccgggtg	gatttttaggc	tctgtgaagc	cacaggatcc	135540
agatgtgtta	gacagcttcc	actgctccct	tacttcagga	gttaccagcc	tcttcagtat	135600
tccagggggg	acttgtgatc	tgaattccca	gccaaagtcc	acagatggca	cgtttgatct	135660
gactgtcctt	agcaatgatg	gagttcacag	cacagtcacg	agcaacatcc	gagttttctt	135720
tgctggattt	tccaatgcca	cagtggataa	cagcatctta	cttcgtctcg	gcgtaccaac	135780
agtaaaggac	ttcttgacca	accactatct	tcatttttta	cgcattgcca	gctcacagct	135840
gacaggctta	gggactgctg	tgcaactgta	cagtgcata	gaagagaaca	atagaacggt	135900
tcttttgcca	gctgtgaagc	gaaatcataa	tcagtatgtg	aatcccagtg	gcgtagccac	135960
cttctttgaa	agcatcaaag	agatccttct	ccggcagagt	ggagtaaagg	tggaatctgt	136020
ggatcatgac	tcctgtgtgc	atggcccatg	tcagaatgga	gggagctgtc	tacgaagatt	136080
ggctgtgagc	tccgtattaa	aaagccgtga	gagtcttcca	gtcatcatcg	tggaacatga	136140
acctctgcag	cctttcttat	gcaagtgtct	gccaggatat	gcgggtagct	ggtgtgaaat	136200
agatatagat	gaatgtcttc	catcaccttg	ccacagtggg	ggaacctgtc	acaatttagt	136260
gggaggattt	tcatgcagct	gccagatgg	cttactgggt	agggcggtgtg	agagagatat	136320
caatgagtgc	ctgcagagtc	cttgcaagaa	tggtgccatc	tgccagaatt	ttccaggaag	136380
cttcaactgt	gtttgcaaaa	ctggatacac	aggtatgaca	acgtttgtac	ttttctcact	136440
aagacttttag	ccatgtcaag	tatattgaaa	cgaaataatt	ttatcatttt	ccaatgattt	136500
tcataataat	gagcataata	gtaacaaatg	tttttaaa	tttactgttg	gtcaaatact	136560
gttctaagca	ctttttatgt	atttgttttg	tttacttctt	acaagaaaac	ttatgaggta	136620
ggaatatttt	ccagtttcta	taggcaagga	agttgaagta	gagagtaagt	aattagggtt	136680
tctcagggtg	ttcagttact	ttgctgtaat	gtcactattc	aagtctacac	agttaaatcc	136740
agaacttaag	tgcttaatct	cgtagcgtct	cttacaagag	caaaaaagag	aataatatct	136800
acttaaaaga	gtattctaga	tattaaagga	taaaatatat	acaaaacata	agatttggac	136860

eolf-seql

cattttgtgt	gttaaataat	tgtaaacaat	gattgttggt	gattctttat	catcatcggt	136920
tttgtgacct	tttaaaatca	tagtcgtcat	tattatcgaa	atgtgatcca	catcgtaga	136980
agagcgagaa	tcatgttttc	agatttagat	taaaatgatg	tgttattggg	ccaggcaagg	137040
tggctcatgc	ctgtaatccc	agcactttgg	aaggccaagg	cgggcagatc	acgaggctga	137100
gagatcgaga	ccatcctggc	caacatgtga	aaacccatct	ctactaaaaa	tgcaaaaatt	137160
aactggg'gcgc	ggtgttggtgc	gcctgtagtc	ccagctactc	gggaggctga	ggcagaagaa	137220
tcacttaaat	tcgggaggca	gaggttgcag	tgagccgaga	tcgcgtcact	gcactccagc	137280
ctggcaacag	agcaagactc	tgtcttaaaa	aaaaaaaaaa	aatgggtgtgt	tattccta	137340
ggttgggtag	aaagcacaat	aggcttattt	ctcaagaaag	ctagaacaca	actgagccac	137400
agcttatctt	gacagactag	aaagcagcat	taaacatagc	agtaaaaatt	ttgaactagt	137460
ctttggcacc	ctagtgggat	atgatgtcca	tatatacata	gatctctacc	tatttctact	137520
ccatgtctat	atcattatta	tctatcaacc	tatctattag	ttaatcagtg	gttgatgttc	137580
cttcaaatgt	gaataaatgt	tatgctattg	ataagttcga	ggagagcaaa	attctatctt	137640
ataacttgca	cattatacat	ttgtaaagca	tgcatattac	attgagttac	tctgcagtat	137700
ttataaacat	aatttacagt	actagtagta	taggtagaat	caagatagat	tgctttaact	137760
ttttagatg	tattacagaa	taatatttta	agcaaagtga	tttctatgtt	atattttcaa	137820
aagtgtccat	tatgtgtata	ctgatgggtt	tatatttgga	gaattgaatc	acttgaggaa	137880
aatatagagc	aagtttgaaa	atgttgaaac	agaacatgca	gtctttgcct	tctaataaaa	137940
taactttgaa	atgtaaatga	agaaaaagtg	gcagaaaaca	tgtgtaatag	aaaaagtgat	138000
agatttcaca	gaatctgatt	tagctatagc	ttttgggaag	tcacctaacc	ttagctgatt	138060
cttcatttct	ctgtccacaa	aatgggaata	atcataagta	ctttcagggt	ttttgtaatg	138120
agtaaatata	atgtttgtaa	aacacctagt	acaggccagg	tgcatgggct	cacgcctgta	138180
atcccaggac	tttgggaggc	tgaggcaggt	ggatcacctg	aggtcaggag	ttcaagacca	138240
gcctgtccaa	catggtgaaa	cccatctcta	ctaaaaatac	aaaaattagc	tgggcgtggt	138300
ggcagggtgcc	tgtaatctca	gctactcagg	agactgaggc	agaggaattg	ctggaacccg	138360
ggagatggag	gttgtagtga	gctgaggctg	cgccattgca	ctccagccca	ggccgacaac	138420
agtaagactc	catttcaaaa	caaacaacaa	aaacccacgt	ggtacactgt	gcagtattca	138480
gtaattgcag	tctaattagt	agtagtaata	atgggtattag	tatagtggta	gtaatagagg	138540
agtaccacag	aatttttaaa	aagacatgaa	acctgtgtag	cggaagttaa	ctgtgagtct	138600
tatgagagtt	atttatatgc	taagatcatg	aataatagag	ctatatacat	gctgagggtca	138660
ggatttctag	aacacttccc	tcactctttc	ttacccatcc	ccaaaattac	tttatcggtc	138720
gggaattcaa	caataagagt	ttttatattc	tacattagtc	taatgcattt	attcacactt	138780
aggtttagat	tgagtttaca	tttagtccta	gaatgaagaa	agtgcaaatg	tattaggtat	138840
ggataagaaa	catggaaagt	actactggtg	tgaacaaagg	caccatttgc	tgatttttagc	138900

eolf-seql

ataaatgatg	agtaagttac	ttctgtctgg	cttgttttatt	tctttgtttc	atttcattta	138960
aataacatt	gcatactttt	ctaaacgtga	tagttgaaac	tcttaaaaaat	gccttttcctt	139020
acatcataaa	atattaataa	cattttatcaa	gcagttatgt	aaagcacttt	ttaaattctcc	139080
ttgcattata	gacattatta	catttagttc	ttacaactct	gtaagatgga	tattatgatt	139140
attgttccaa	ttttgaagac	caaaaaatta	agtcttcgag	tcattaaaag	agattagaca	139200
acttgcctcc	agccatggca	cagaaagtgt	tctaactagt	tttttactag	aaacttggct	139260
ctgggtgcctc	tgctatttat	atacatgtcg	cactcatcac	actttgattt	gcacttgcta	139320
tggagtgtta	tggtgagttc	tatggtgata	ttatttaaga	atgttttgtc	catcattcta	139380
ttaatactta	atcctcacag	aaagcctata	agacagtgt	ttgtctgaga	ctgatcagaa	139440
atcggaacta	ctctcagact	ttgaggcagg	aaagtatttg	ctacaaggaa	acagcttaca	139500
aaatcttcaa	actggctaag	aatacaggtc	aggaacattc	accaatgggc	gcagcaataa	139560
agacatggca	ggcattgcaa	gacaccgctg	ctgatcctct	tgcccacctg	cagtgtctgca	139620
ccaagtgatc	tgaggagaat	ggttcctgct	ttgcttttac	cattcagata	tcatcacagt	139680
cttttttgct	ggcagaatat	aaacttgaac	cccgttgga	gggagtctgg	aaaaggtagt	139740
tttcagactt	ccagcccttg	caatatggaa	aggtaggaac	gatgtctgaat	gtcagcagat	139800
gatatgtggc	tcaggaagat	gttattattc	ttcctgtttt	acactgtagg	aaattgagcc	139860
tacagtctgg	tgactccagg	gccagagctg	caaagtcta	tatcataaac	tctttctagg	139920
gaaggttgtt	tgaagttata	cattaacgtt	acatacttct	cctcagagtt	cacttcagtc	139980
ttcatttgca	tagtaggaga	taatccaact	gatcaggaat	gatataaaca	aacataaaat	140040
tgaatgatta	agatgaatct	tacatttttt	aaatcaagtt	tcaaattctg	tatgaaaaaa	140100
accatccagt	aaaactggca	gataattaat	gtctgacagt	tttatttcct	ttttgtattt	140160
tgtaggaaac	aatatgaaaa	aagcatagtg	agtggcaaat	gttaatccat	actttaaatt	140220
agaaatgtat	tgcttaaatt	tctatagttt	gttaattttt	ttttagagag	taatctctga	140280
aggatcattc	tgagttattc	tttttaccta	gtctctgcca	gatagcctgg	ctcaggaaga	140340
cagagcta	ataccaaaac	atcttaacat	ctaacctagt	cagagcta	aaaccataag	140400
acaaaattta	cacataactg	tatgtgtgcc	tcatagaatg	atttttttaa	aaattactca	140460
taatagctag	attttacttc	agttaacatg	aattaaattg	tagtgcctta	gtaaagcttc	140520
acttcttcaa	ggtctgtata	taatttttgg	ccatcagaat	tatttttaa	tactgtattt	140580
ttcatactct	acttttgtgg	gcttcacact	gcattttatc	aataggtttc	aaagtctgtg	140640
aaattacaaa	ttggagctgc	acaattttct	gaactttctg	cttaaaataa	tcctcagcca	140700
ctaccatac	ccagtttctc	tcatacacac	acacacacac	acacacacac	acacacacca	140760
ctgagtattt	tatgtggatt	tagaaattgt	gttaaggatt	agaagagtaa	gtggcttatg	140820
agttgatgca	aactaagaga	ctttatcccc	agaatcccct	aggggtgtgat	taaatgttag	140880
ctgaatggag	attttatgta	gagaacaact	tataaggacg	caagtatgaa	aatgataatc	140940

eolf-seql

atggaacaaa	aaataggaag	ggatatagtt	attatcatac	tgtcacaagt	ttattttctga	141000
aatatttctta	aagttttat	tcaagtctgt	aaccatgcac	ataagtataa	aacaactata	141060
ttttttaatg	aatgagtgat	ttagagggaa	tgaatttgta	taacatgtat	ttcttatctc	141120
ttttccttag	ttactggaaa	aagaaccaa	agaaaattga	aaaaaagtaa	catattcagt	141180
tataatcact	tcatatgttt	cattattaag	aaaattttct	tataattttt	atattaatat	141240
caccatatga	agctttgatt	aactgtaaca	taaattatta	gaaaagatgg	ataaagttta	141300
ttatagtata	ggccatgtga	aaaattaatt	tctaaatttt	cacaaaatgt	aatgacacca	141360
aaaattaaca	tcagttgtca	gtatgcctca	gtgaataaaa	actattattc	ctgccacata	141420
agtctagggg	ttcctagagg	aaaactttag	cctaataacg	acacatgtag	tattttatttt	141480
catatacaaa	tgaaaatgtc	ttgcacttaa	tagaacacta	attagaaagt	acagtaatag	141540
taaccacatc	aacatttgtc	tactgctgcc	aggttttcgc	tgtttgcatc	acattcctgg	141600
cattaaatcc	ttcatgggaa	tggatggtgt	tataaaatgc	agcattttga	tagagcttat	141660
ttataaatct	ggctatctta	taacataatt	agttcatagt	ctctttaacc	ttttccattc	141720
actttcacac	atctggatgc	atttcaggtg	tagtattttg	aataatgccg	ggggttttatt	141780
accttatgga	gaagttttcc	tatgttctca	attaagtccc	gatatttcag	gaaagatgag	141840
gtttgttcat	tcatcacttt	tatgtcattt	gacagtataa	acagtaaaat	tttttcagac	141900
ataccaactt	atatacagaa	tatgcatagt	aattttactg	agaaacttgc	cagatatttg	141960
ctttcataaa	gatggaaaga	gttactaaga	gtgattcttt	taaaattact	acggtcatgt	142020
attggtgttg	ttgatgatca	tgtgaccgga	aaacatata	atataaaaga	aatttagtaa	142080
atatatatga	aattaaat	tgtttgagat	aaagaagagt	ggctcatgta	agagacaata	142140
aagagtgcaa	ttatttttat	ttaatttgat	tcctgaaagc	agaattaggc	agtttacatt	142200
aggtaataca	ttaacttata	aaagcattaa	taacgtatgt	ttctaagaag	tagcttaaat	142260
gcttatttct	gtagaaaata	agcatatatt	tataagctta	tgaacattat	gtgtgtaatc	142320
atatgtaatc	atttgtagtc	tcattgaggt	tgtgtttgtg	cttgttttac	aagacaaagg	142380
taaaaacttt	ttttggttgt	tgcttttgtt	actggcagcc	cttattaaaa	catggtat	142440
ttgcttttgt	ttcaatgcaa	aaaagccata	aggctattga	acaggatact	tagactatct	142500
tcatagctcc	ttaacaataa	tgggaaacat	ttgcatactg	tgcaaaagac	agctactttt	142560
tgctaaaaata	atttggaata	tatataagat	aatgcctag	aatgaatagc	atatatttat	142620
tatagaattt	ctttattaat	aacataatca	atttagacct	aaaatggatt	tttagagttg	142680
cacatattct	cccatctcct	ctgtgtagaa	atacaggaga	tttaaaaata	atatttatgg	142740
tagtctaata	tgtatatata	atctaagatc	ttaaattgaa	ggctacatgt	atcataggg	142800
atcaaaaatt	atcgtatctt	catggagtg	tccaatttag	cagttgagaa	taaatttagc	142860
tctatttcac	ataatccaac	attaaaatgt	gcttggaaca	gtgaaacttg	aatatacatt	142920
cttgttgaaa	agaccatagg	tgattacaat	agattcagtt	tatgttcaac	acgtcatcac	142980

eolf-seql

atcttctgcc	cccaaacatg	aaaatagaca	caaaatttct	cctgtaagtt	taggaaagtc	143040
tgcggatacc	atggattcct	attatgcatt	tattttcacc	ttaagctatt	cccactttcc	143100
atgtgctaag	aatttacact	tcttcaagca	catctccttc	tagttatgat	aaatagtgtg	143160
tggcaacaca	attaattgat	ggatgtcaaa	gcaatgagat	caattttatt	ttctaaacag	143220
ctgctatggc	agtaaacata	tcttaatgga	aggaggcctc	ttgagttcaa	gaggaataaa	143280
tgcctgtctt	tgtgcaagtc	ctatcagcat	acttccaagc	ctgaaggcgt	ttggcaagta	143340
ttgttaattg	acttgtagca	ttaattaagt	taatgatcca	agattttgtt	tcacagtgtc	143400
tcaacacatc	agattattgt	accaagagca	tgttagagta	attcaaacta	ctgcattctc	143460
tgatactcat	tatgctatta	acactacaat	ttaagtagat	agacttgcac	aaaacaattc	143520
agaattttgt	taatttctaa	ttgggtaaaa	aagcataaac	tttccaaacc	tgagaaatat	143580
gcatttagaa	gctttctttt	gattctaagt	aaaattatgg	aatccttttc	tcacacaaaa	143640
gacacaggtg	ttttaataaa	taatttaaat	ttaaactctgt	tttcctacta	tgtctttgaa	143700
ttcaagtatc	tgctatggca	acctctgagt	tcatgaattg	taaaaaattt	ttactcttta	143760
aatggagaac	tcaattttta	aatagtaaat	aatttacata	ctctaccacc	aacagataag	143820
actatttttt	ccaaactcaa	caacaaattc	ctttatttta	cccaaacaa	agccatttta	143880
tctatttttt	taacttatat	tttaggttct	gggtacatgt	gaaggtttgg	tacataggta	143940
aactcatgtc	acagggttcg	ttatacagat	tatttcatca	actaggaatt	aagcccaata	144000
ccaaatagtg	atctttcctg	ctccccctcc	tcctcccacc	ctccaccctc	cagtagaccc	144060
cagtgtctgt	tgtttccttc	tctgtgtcca	tgtgttctca	tcatttagct	cccacttata	144120
agtgagaaca	ggtggtatth	ggttttctgt	tcctatgtta	gtttgctgag	gataatagcc	144180
tccagctcca	tccatgttcc	cacaaaagac	ataatcttgt	tcttttttat	gactgcatag	144240
tattccatga	tgtgtatgta	ccacattttc	tttatccaat	ctgtcattta	tcagcattta	144300
ggttaattcc	atgtctttgc	tattgtgaat	agtgtgtcat	tgcacattca	tttgtatgtg	144360
tctgtatggg	aaaatgattt	atattcctct	gggtatatac	ccagtaatgg	gattgttggg	144420
tcaaacagta	gttctgcttt	tagctcttga	ggaatagcca	ttattaatta	tttgaatta	144480
tccactaaga	caaagtaaaa	aggaacaacc	ttatttttta	actgaaatac	tgaatgcaag	144540
gttgaatttg	ttttttctta	acaatttcta	tttctatttg	tgtatacttg	aagaatcaga	144600
ttctattgag	aatttaagtt	ttataggaaa	ttcgttctca	aaattagtat	tttattgggt	144660
tgtaacatct	tctgccactt	tgtaatcact	gtatgtttta	ataaatgaat	aagtcttatt	144720
tgtgttagga	tatatttcca	ctcctcactc	tggagtaact	gcaatagcct	gtattttata	144780
tttaaattaa	actcagatgt	ctatgttaaa	atattttata	cagggttaaa	taagaattga	144840
ttcatataat	tatacacaaa	aagaacaaca	cgtaaatttc	atttggttgct	atttaactca	144900
agatttataa	aggtagtatt	tgtaaatgaa	attcaaaaaa	catatagtag	ctttatagga	144960
acaatgactt	gggattttata	ctcatatatt	tttgtcagag	agcacatatg	tccaattatt	145020

eolf-seq1

tgagtaagta	tacatagcag	taccctctac	atttgttact	tcttatttgt	tcctcatttc	145080
cagtcgttaa	gaagtgaagg	tggcaatttt	gtaaccctact	aacatgtttt	catgataaca	145140
aggctatatt	gaacacactt	ataaatacat	atataagtct	atgtatttta	tacatgttac	145200
ttttaacaca	actctaaaat	aatttttttg	ataaagaaag	gaatgaaaga	aagtaaaact	145260
gtacctagtc	aaaaagcaca	agtgaaaatt	atgtgtgctt	ttacagtga	aaccaaattg	145320
aaagagtaga	atattacttt	attgatgaca	actaatcaaa	aatatggcca	gtagacctta	145380
tgtatttgca	actgggaaat	actgtgctgt	aagaaaaaaa	aatctacatc	actaaaatgg	145440
ccttcacata	atcagttgaa	aaacaaaaca	ggaaagagtt	ctgtgaaacc	gcaactctct	145500
ggtgagaaat	caagcactat	ttgaagtttt	cctgcctatt	tctccaatgt	agtacactgc	145560
tacaatactt	aaaacctgat	ttctgtgccc	ataaatttgt	aacttgttta	ttttcatgcc	145620
cttgccttaa	caatacaaag	gtattctgaa	attgttagct	caatgttttg	ccttataagg	145680
aggttcccaa	tttatttata	agggaaaaaa	tgttgtgttt	atgattctgt	gatgtacaga	145740
aatgggctta	gtagcatca	tgagatctga	ctcacactta	taatttcaga	ccagaataag	145800
tgtggctccg	taatcaagcc	acaaaaacag	aaccaattta	aacaaaattt	tgactgtgtt	145860
ttaagcaaag	ttagtatgat	gaaatgaagt	atctatgctc	agcagtaggt	ctcgttgtgc	145920
atatagaatg	catatcattt	cctgagctat	ctaataaatg	cattagtga	attgggctgg	145980
gaagtagaaa	gtaacttcca	gaaacaaatg	atgtagtatt	tacaatccta	ctctcaatga	146040
aaagaaatta	actaagaatt	ctgtaacatc	tcactgcatt	atgaaatttg	aaaattagat	146100
cctaacgaat	gtatcaaag	attgcaatac	tttaaagtta	tagaacagtg	gtattagaac	146160
atgtttaagt	ttaggtaaaa	ataagtaaca	acaacaaaaa	caagtgggac	ttatactcca	146220
agttttatac	accacgtgat	caactaccat	agttttgtga	aacctggata	tgggagcaga	146280
agccctaaat	tggctctgtg	catagtttta	cagtttcaca	gacaatatat	tagcctccaa	146340
gaggctttta	ttcttcactt	ttgaaatgta	aatatttcct	ttgtatggat	taatactccc	146400
tactgaaatg	gaaacacagt	ctgaagacac	ttgtttgctt	tcttcactgc	catatcccc	146460
tccattatca	tgtctggccc	ataataagca	ctcactcaat	attagttgat	tcaatttaac	146520
aagatcatgt	atgagaaaag	tctttataaa	ctgaaaaata	tgctgttttag	gtattatcgc	146580
ttcagacaaa	agacaaagta	tacataatct	gtagtcaaga	ataaattttc	ataagcattt	146640
gaaaatatga	tgtgttttct	tatttcttat	tctgctttac	aacagatatg	tgtaattcaa	146700
gtgatatttc	ttagtagtag	aaagagtgtg	gtttgataaa	taagataagt	tattatcttt	146760
gaaataccta	agtcaagaaa	atctctgcag	tgaaaagaat	actgtaagtt	tcaactttct	146820
atctataaaa	tataaaagat	gaagggacat	tgacacagaa	aataaattca	gtgaaagcat	146880
ttaaatatgt	ttatcatgtc	atttctctgc	aaacagtatt	ttcttccaag	atgattatgt	146940
aaattatttc	ctaagtatta	taatgcacat	tttacaatag	gacaactaaa	caagatttta	147000
aattctaaga	tattattcta	atttccttat	gtcaagtaaa	acgtttttat	atttcttttc	147060

eolf-seql

tccgtgatat	gccttaggaa	agatTTTTac	gtatggtaat	gggtgaacgg	tgttaatata	147120
tttatgtatg	agatTTTaaa	aaaactgaat	ttgatataatt	ttaggggaaaa	tgtgtgaatc	147180
ttcagtcaat	tactgtgaat	gcaaccctg	ctttaatggg	ggttcctgcc	aaagtgggtg	147240
ggattcttat	tattgtcatt	gtccatttgg	tgagtaaaac	ttatttggtg	atataaaata	147300
taagtttatt	tttgcacaca	gttttagcaat	tttgTTTTat	tatgagtatg	aaagacccaa	147360
aaattattgt	tttcatgga	aggTTTTatt	aaaataaaat	cttaaagtgt	taacatttgt	147420
aaaagttatg	gaaatcccat	tgaatacatt	gcattgggtca	ttactagaaa	aagagtcaac	147480
tcaagataat	tgaattaata	ttgtttccat	aggatatttc	cccccaaaga	tttatggata	147540
tcttcttttc	agctgagaag	ttatgaaata	aaaaaattct	gtaagcactc	tttcacgtca	147600
ctctctatTT	caaatcttta	agagtagtca	aagtaagggt	ttttgTTTgt	ttcactTTtg	147660
tgaatTTTgc	tttattTTTT	atTTTTgttt	tttacattag	tttttaattt	tgTTTTttat	147720
gttaattcag	ccactTTTat	tagaaggact	tagtaactat	acctgacgtt	ttcataatag	147780
gctTTTTgta	gctgatacta	cctgactaat	aaaatttcag	actaatctgt	cttttgata	147840
agaaaaattg	ttaaaaagaa	ctTTTTtgta	tacatacata	tttattcacc	ctagtggaat	147900
gaactaaaag	attccttcca	ggctttatcc	agctgttacc	cattactgtg	ccagccaaaa	147960
accatgagat	tcagaggaag	catttgtatt	agcttggctt	gtttcataag	tttgtgatta	148020
ttccattctt	tttaaaggct	gctttacacc	acagcataga	atccatctcc	aaatgactct	148080
gtctcttttc	tttttttttt	tgtccccttt	gtatatctat	ttatttattt	ttttattata	148140
ctttaagttc	tagggtaatg	tgcacacgt	gcaggTTTgt	tacatatgta	tacatgtgcc	148200
atgttggttt	gctgcacca	tcaactcgtc	atttacatta	ggtatTTTctc	ctaagtctat	148260
ccctcccccc	ttccccacc	catgacaggt	cacggtgtgt	gaagatcccc	ttcctgtgtc	148320
caagtgttct	cattgttcaa	ttcccaccta	tgagtgagaa	catgcggtgt	ttggtTTTTt	148380
gtccttgcca	tagtttgctg	agaatgatgg	tttccagctt	catctatgtc	tcttttctta	148440
agcaagaaaag	agcaaggata	tttttctagt	cttccttttg	gcatataact	gtgctatatg	148500
gacctgaaca	gtaaagctca	atctatagta	gataatagaa	tttaaaagac	atacgagtt	148560
cctaataacc	tgtataattt	actaggtatt	tttaatttcc	aaacaacttc	atgactatct	148620
gtttttatta	agcacatcca	tagaatgata	aagacaaaca	aaatagaaaa	atatctaatt	148680
ttgaggaatg	tattttacca	atggTTTTga	ggcccagaaa	ttggctgatt	tgcccaaagt	148740
caaaaaatga	agttgaggca	aaactacccc	aagacgatgt	agcaactaga	acacaatttt	148800
ttattttcag	tccagtatga	cattcacaga	accctTTTTt	atacaatttc	tttgaaattc	148860
taacaatgcc	tgtgaagtaa	tgaaagggtat	atcaagggtca	aaataaccac	aacttgagat	148920
gtccaaaaac	tttttctttc	tttcaatggg	gtctcatcat	tttaagtggg	gctgctttct	148980
acagataacc	acagtcaaat	ttcatgggtt	aacttaacat	tttgagataa	aagataaggg	149040
gattagagtg	taaactagaa	atgattttca	agtgactgaa	cagagatggt	catattttta	149100

eolf-seql

gggatccctt	tgcaaatttt	aaggatttaa	gttttgagga	ttttgagttg	caaatttggg	149160
gatttaagaa	aattgataca	caataaaaac	aagttgctgc	tgcagtgtag	tggtacaact	149220
gtcgttgcct	attaagtgga	actacttgag	gggccaaatg	taccttcttg	tcactctgta	149280
gacatcgcca	ggggaagagg	aatagcacia	tgtaaattaa	aatagacaca	aatcacacat	149340
agccggcagt	gcaaatttct	ccccctattc	cttccagggg	caaagacaaa	aaacattatc	149400
taaacttaga	tattgtcagt	tgacaacata	agcacttaca	aaagaaaaca	aaaatcactg	149460
aaacactgct	atgtaatttg	aaactaaaga	gatagaagca	gaaacaaaaa	tgatttttgt	149520
tctcaaattg	aatgtggatg	aaaggtacaa	ataaccatgt	cagatggcat	gcctcaaata	149580
aatagccaga	ggtaggtagt	tacacttgca	tcctttaaaa	caaaacttta	tcattttgaa	149640
gtagaaaaa	agttttttgc	actgttttagc	ttctcatcaa	taaaagattg	gctattttgga	149700
tttcaaaaaa	ttttttcgat	acttagattt	tttaatttaa	attacatctt	aggaaaaaca	149760
tagtgcttca	gacattataa	aggcgacatg	tataattata	acttcttaga	attaagatgc	149820
gacctttctg	tgaaaacagt	acaaaaacct	tttaagaata	aatatittta	attccataaa	149880
gaaatatttt	catgtttgaa	aatacagtat	caatttgaat	taaaatgtaa	gtatctatat	149940
actttctcca	tatatattaca	ctcaaataat	cagcacattg	ttatagattt	attgaagttt	150000
attcagaaga	gacctaatg	aacacataat	acaaattttt	tcagtagtat	ttttatttca	150060
tttatatgct	ttatttttcc	ttttacttta	acttcactta	ctctttctgc	atagatagca	150120
tatttatata	caaattatta	atacatataa	attataaata	ttaaatatag	atgccacaga	150180
aatgtataaa	atacaaatac	aaattctaca	ggatagatat	aagtatataa	tgtataagat	150240
tatactatgt	ataaaaatatt	atctctatat	atcatatata	tgacataaca	tatatatcaa	150300
taaatatcat	ttctataatt	cctttgcctt	ttcttcaact	ttggttaaag	attaaaaatt	150360
aaaaattatg	tataatttct	tttttttttt	ttttgagacg	gagtctcgct	ctgtcgccca	150420
ggctggagtg	cagtggcatg	ttctaggctc	actgcaagct	cagcctccca	ggttcacgcc	150480
attctcctgc	ctcagcctcc	cgagtagctg	tgactgcagg	tgcttgccac	catgcccggc	150540
taattttttt	ttgtattttt	agtagaaacg	gggtttcacc	gtgttagcca	ggatggtcct	150600
gatctcctga	cctcgtgatc	cgcccacctc	ggcctcccaa	agtgtctgga	ttacaggcgt	150660
gagccaccat	gcctggccaa	aatgatgttt	aatttctact	cattttataat	aaatattatt	150720
tcagtctgga	cagaaaagga	aaagataaat	aacacaaact	tttatagcaa	cttctaggct	150780
gttttaattt	taaaaatgtt	ctgatataac	atgtggtagt	caaaatagct	agacaatcag	150840
tagatctggc	ctcaaatttt	ggctgtttct	cttggttctg	tgaccttagg	caagttttaa	150900
atactctata	aaataatggc	attggttcct	tctagctgaa	caattctctc	actctaaatt	150960
ttatgcattt	atgggacata	taaagccaaa	attaagaaat	gaaacttttg	caagttaata	151020
agaatcatga	ggtattggca	tgggttaatt	ttccaatcat	ttgccacagt	ctactaatat	151080
ttgtgggaaa	agaatttttg	cataacattg	taacatcaat	aaaactcatt	tttcaagttt	151140

eolf-seql

gaaaaagaac	cagcaciaaac	aatgggaat	gctgactttc	agaaaaacag	acagctat	151200
taaagtagcc	tgctataaat	catacccaca	gaggggtataa	aacaagaaag	agataaaaaac	151260
ttaaaagaca	gttatttcct	ttcctaaacc	aatgattcca	cttgtcagat	tttgtggccc	151320
ttgaaaataa	catgaatata	ggtactgatt	ttaaaaaaat	caaaacaaat	gcatttgcca	151380
tcttcaattg	agttgaaata	gtttttaaga	actatatatt	atgaaggaag	tatgttggct	151440
gaaaattgta	gcataatata	acttttaaaa	gatcaacaaa	tttgggccgc	ttgcggtagc	151500
tcatgcctgt	aatcccaaca	ctttgggagg	ctgaggcagg	cggatcacct	gaggtcagga	151560
gttcaagacc	agcctgacca	acaaggtgaa	atctcgtctc	tattaaaaat	acaaaattag	151620
ccaggcatgg	ttcccggcac	ctataatccc	agcttctcgg	gaagctgaga	caagagaatc	151680
gcttgaaccc	agtaggcaga	ggttgacgtg	agcaggcact	ctagtctagg	caacaagagc	151740
aaaactctgt	cccaaaataa	aaaaaataaa	aaaaaaatca	atgaattttg	aaacgtttct	151800
gggaaagaaa	tctcttcaga	catactccat	tccactaagc	ctttcatttt	gagaaacaaa	151860
acatacttag	atatgttccc	taattagaca	atgaaaaata	attacatcag	ttaatcattt	151920
ctgccatgtt	ttaaagatca	ttcattcata	aagatcatta	actattttaa	ttttagttta	151980
gatgaaattt	tttggaaagt	aaaaaaagtt	gttaaaagat	atctcatttt	ataattcaaa	152040
aatattttaa	tcaaaatata	taataaaatt	ttcatgaaat	tttatgccag	tttgtcaatt	152100
ttccctccaa	caggtgtctt	tggaaaacac	tgcgagttga	acagttatgg	atttgaggag	152160
ttatcataca	tggaaatttc	aagcttggac	ccaataaca	actatattta	tgtcaaattt	152220
gccacgatta	aaagtcatgc	cttattgctt	tacaactatg	acaaccagac	aggcgaccgg	152280
gctgagtttt	tggcccttga	aattgccgaa	gaaagactaa	gattctctta	taatttaggc	152340
agtggtagat	ataagctcac	caccatgaag	aaggtgtcag	atggacattt	tcacactgtg	152400
attgccagga	gagcaggaat	ggtaagatat	ttcattttat	tgttggttga	tatccaactg	152460
gatcttcaaa	taaagtatga	attgggggtgc	aatcatgtt	aaattagggt	tattcattaa	152520
atgaacactt	tagttatgaa	aaacttagac	ataatatttt	tcttttgctc	atgacaactc	152580
tgttcaaaaa	caataaaaag	gagaacaatt	gagaatatag	cctagtgcgt	gaaataattt	152640
cattgatatt	ttttgtatgt	ttttaaggcc	atgtcaggac	tatacttaaa	ataactacct	152700
ttctttccta	agtatttctg	ccttgactaa	gtatttctgc	cttgactgaa	gaaacaattt	152760
aggaacagag	gagacttttc	tacaaaatct	acataaaaata	acttaatcaa	aaacacttta	152820
ttgttaaaaa	atggtaacaa	tagtcttagc	tagtcatagt	ctttttgctg	gtggaggggtc	152880
ttgccttgat	attggtggct	cctgactgag	ccaggtagta	gtggctgaag	attcgtgggtg	152940
ggggctatgg	aatgtcttta	aaataaaaca	acaggaaacg	ttgtcacatt	gattaactcc	153000
tttttcatga	aagatttctc	tgtagcattt	gaggctat	gattgatacc	attttaccca	153060
cagatgaaat	tgtttcaaac	ttgaagtcaa	gcctctctca	aaccttgatg	ctaatttatt	153120
aattaagcct	atggaatatt	ctaaatcctc	tgttgtcatt	tcaacaatgt	tcacagcatc	153180

eolf-seq1

ttcacctgga	gtaagttgta	tcttaataaa	ccgcttcctt	tgtttatccc	taagaagcag	153240
cttctcatcc	tttcatgttt	gttttgcaag	attgtagcag	ctcaatcaca	tcttcgggct	153300
tcacttcaaa	ttctagttct	cccactgtgt	ctaccacatt	ggcaattact	tcctccattg	153360
aagtctggaa	gccctcaagc	tcatccatga	gagtcaaaaa	tcaacttcct	ccgaactcct	153420
tttaatat	gatatattga	cctccttcca	ttaatcatga	atgttcttca	tggcatctag	153480
aatggtgact	cctttccaga	aggtttttaa	tttactttgc	ccagacctat	cagaggaatc	153540
atcatctgtg	gcagctatag	ccttatgaaa	tgtatTTTTT	aaataatagg	acttgaaagt	153600
ccaagtgact	ctttgatcca	taggctgtag	tctggatgct	gtgttagcaa	gcatgaaaac	153660
aacactaatc	tccttataca	tcattgtcag	agcttttggg	tgaccagggtg	cattgtcagt	153720
gagcagtaat	attttgaaag	gaatcttttt	ttccgagtag	tagatcttaa	cagtaggcta	153780
aaaaatat	aataaaccat	gctgtaaaca	gatgcactgt	catccaggca	tttctgttta	153840
ctgatagagc	acagatgcag	tagatttagc	ataattctta	aagaccctag	gattttta	153900
atggaaaagg	agcactgggt	tcaatttcaa	gacaccagct	atattcacc	ctgatgagag	153960
agtcagccta	tcctttgaag	cttttaacc	aggcattcac	ttcttttctc	tagctatgaa	154020
aatcctagat	gacatcttct	aataaaaggc	tgTTTTTTT	cattgaaagt	ctgttcttta	154080
gtgtaaccac	cttcatcaat	gaccttagct	agatcttctg	gataacttgc	tgcagcttct	154140
atatcaccat	tcactgcttt	gctttgtcct	actaccttac	agagatgact	tctttcctta	154200
aacctcatga	gccaacctct	gctacattcc	aacttttctt	ctgtactttc	ctcacctctc	154260
tcagccttca	tgcaatggaa	gagagttagt	gcctttttct	agattagatg	ttggcttaag	154320
ggaatgttgt	aacaggtttg	atcttctatc	cagactgcta	aaactttctc	catatcagca	154380
ataaggctgt	cttgctttct	tatcatttgt	atattcactg	gagtagcacc	tttaatttcc	154440
ttcaagaact	tttactttgc	atttacagct	cggctaacta	tttggcacia	gaagcctatt	154500
tggcctatct	tgactttcga	aatgccttcg	tcactaagct	tattcatttt	tacattttca	154560
tataaagtga	gagaaatgca	actcttcctt	tcacttgagc	acttagaggc	cattgtaggg	154620
ttattcggtg	gcataatttc	agtagtggtt	tatctcaagg	tacaaggaag	cctgaggata	154680
ggtagagaga	ccagagacag	ataattgctg	gaacagccag	aacataaata	acatttatca	154740
attaagcttg	ccatcgtata	tggcacggtt	catgttgcca	caaaataatt	ataatagtaa	154800
catccaagga	cacttcactc	atcacagatc	accataccac	ataaaataat	aatgaaatat	154860
ttgaaatatt	gtgagaatta	ttcaaagtgt	actcacagtc	acaaagtaag	cacatgctgt	154920
tggaaaaatg	gtgctgatag	acttgctgga	tgcaggatta	ccagaaacct	tcaattggta	154980
aaaaataaaa	tatctgcaaa	gtgcaataaa	gtgaagagca	ataaaatgag	gcatgcatgt	155040
atttatagat	tatattgatt	ttattatgtg	gctttcatgt	tacaagaatg	acatatctat	155100
ttaggacttg	tgtttattaa	ataaatactt	ttctttataa	aggaaaatgc	atcacatctt	155160
ttctttatta	atgtttgaaa	atatttgaca	tagtataata	gaatggaatg	gcttatttat	155220

eolf-seql

tttttattct	ttatttatct	tcacaactat	ctctccatat	ttcccccatc	tctaacagct	155280
atcaaggatt	tttaataaga	aatgctaac	aaatctgtct	taaagtat	ttgcacttta	155340
actttgagcc	tttaaaagt	tagttactgg	tggccaggcg	gggtgggtca	cgcctgtaat	155400
cccagcactt	tgggaggccg	aggcggg	atcacgaggt	caggagatcg	agaccatcct	155460
ggctaacaca	gtgaaaccct	gtctctacta	aaaatacaaa	aaaaaaaaaa	aaaaaaaaaa	155520
aaaaaaaaat	tagcccggca	tagcgggtgtg	cgcctgtagt	cccagctgct	ggggataggg	155580
aggagaatgg	cgtgaacctg	ggaggcggag	cttgacgtga	gccgagatct	cgccactgca	155640
cgccagcctg	ggtgacagag	caagactctg	tctcaaaaaa	aaaaaaaaaa	agggtagtta	155700
ctggtaagat	ttataattca	ccctagataa	aggaattgtg	taaaatgtta	aattgtctgt	155760
taaaaagaaa	gcctagccaa	aacaacaaaa	taagtgcctt	taaatcattt	taaatgaaaa	155820
aacttggtat	gtaaatgatt	ataattgtat	ttctgacttc	atggcaatct	ttaaaatata	155880
tgacaactta	tatagtcctt	agactgatca	tatgaatcat	acatttgtgt	gactatagag	155940
aaatttttgc	cactaaatgt	atggaatatg	ttatattgct	gaatgcatat	cagcaatatt	156000
cagaagtaat	atttaaaatg	tttttaacca	agcttttgc	agtttttttc	cctatgacac	156060
gtagttaatt	ttaaaggcta	aaatttatgc	aatctataat	taccaatttc	ataagggcat	156120
aagacagaaa	ctaccttata	atattaatta	tttttgacca	gtacacataa	cagacaatct	156180
attatgaaag	aacaaaat	gtcatttgat	ctcaggaata	ttttataaat	ccatgtttat	156240
tttgaattgg	catcagatac	aatgacattt	ctctcctcca	ctctaattta	ctacaacatt	156300
aaaggaaatt	taagcaagtt	ttaaaataca	gaactat	taattatgag	ggggaaaaag	156360
aataatgatt	agctttaaat	ataaccaatt	gattgtgtca	acatgggtcaa	gggtagctgc	156420
tcagacatgt	cattcacgga	tatcgccaca	tccatcaaac	tgcattcagg	gtcctaccag	156480
gttattaaat	gtatgttact	tgaaatattg	gtgagaaaac	aacagaagta	ttgtatgggt	156540
tttatcaatc	attttagtta	tagatgggtt	tccatttcct	tttgaactta	gtgttaatat	156600
tttccagctg	gaacattttt	ctaatatatt	taatttatat	agtgtttact	taataaaatt	156660
acccccaaca	ttccaaaaat	gttgtcaaga	cataatgtta	tattttatat	tttaattcta	156720
atatgccac	atttccatat	tattgtaaag	gttaatat	atcataatta	aaattttatt	156780
tctgtgaatt	aggtgcttaa	acaggtgttg	gtcacctga	attatcacca	acacaacca	156840
catataacct	tttgaagtaa	aataatggaa	tattttactt	gatcttggtc	tcaatgaagt	156900
ttacattatg	agtagtgcct	aaaaatccac	ctgacttta	tgaacattag	tagaggtata	156960
acaaacaaat	cttgataaa	atatattttc	tgattagtat	aggttactgc	actgattttt	157020
gcttgagatt	ttaaaaatcc	agcattctct	ggaagaatat	agatttaatc	aattctagta	157080
ttcctgatga	ttgatgtaac	cagaaatatt	gggccttaaa	gaattagaaa	aacatttaga	157140
gattgatata	tatagattgg	gtcacatta	gccataataa	tatcctaaaa	ctgatgagta	157200
atagtagaca	tcacctcacc	cccattctcc	acacatatgt	aagataacca	tattttctgat	157260

eolf-seql

atgttgtcaa	gtatactata	atgtaaaata	aacgatttta	cctgatgacc	tccaaggtct	157320
ctttaaactt	catgagcatt	tgattctatc	agacaaggac	atgggatcaa	gaggtgagtg	157380
gagaaggatg	cagtttcatt	tgtattattg	tgaccatagt	catcaatttt	taataatacc	157440
aaatgtgaaa	aaaactctgt	cattattact	tgagtcatag	gaaaaatgtc	ttcctgtttc	157500
agaaaacatc	caaaataagg	cccctactgg	attctgaatt	tgtcattttc	tacattttcaa	157560
aataattttg	gttggaact	ggcaaaatca	ttaacctcta	agctttaagt	cattgcatag	157620
ttgggataaa	acattttaat	ttatggtggt	aaagctataa	aaattcaaca	gtaaaagaga	157680
atttaactct	gaagattaaa	ttgcataagc	ttactattaa	aataaaacat	ctcctccatt	157740
attctttctt	tgagttgtat	cagcaagctt	ttagatgtat	acgaaatatt	aacaatgact	157800
aaaatataat	tatgttatcc	aaggttatth	ttctaattga	ggcattttata	aatatccatg	157860
tggtactttc	tagtttatga	tacttttagg	gatctctaca	aggatacttg	cataatatat	157920
gtggagagat	gtgttcaatc	aagtagtcac	ctaagcagca	gaagttgaat	tataaaaacc	157980
taatactgct	tttgagattg	gatgtcaccg	cattttacag	ataactgaaa	ataatcataa	158040
ctatcaaaaag	agtaaactaa	atggggcatg	aatgacttgc	cagagaattg	gaagtataaa	158100
tttttcctac	aaatgttagt	atthattata	atthacttga	aaaaaatggc	aaaaaaaatt	158160
ccatgtggct	cacaagagtt	tactgtatag	agcttataat	aattaactta	gaaacattta	158220
agaatatgtt	agccagtaat	atthgataaa	caattaataa	atggattata	cattcacctc	158280
agtctttgtt	tttaaaatgt	gagatacttc	agataaattt	ttacaagtct	cccattttaaa	158340
tatatgtttt	atggatactg	cctaaaaatc	ataagcaata	ttgataaaaag	taggatatta	158400
aggaaattaa	tcattttcat	tcctaataga	agtggcctga	ttttttaata	cagaaaattt	158460
gatatccaaa	actttgcatt	taagtttggc	atgttattag	tcaacttgct	taacttcctg	158520
cactgttttc	tacatttgct	ttgctcttat	taaactgaaa	tgataagcat	cctgataaat	158580
gaatagtgtc	attgtattta	tatttctctg	ctacatatgt	aacaaatttg	gattaaccct	158640
gtctgtggca	ttcgtaaatt	tagaataacg	ctttattgtc	tgcatggga	gaaacctttc	158700
aacctcttgt	ccatttgat	aatgaattat	tgctattcct	gtgatatact	ggcactacac	158760
tccatccttc	ttacaatttc	agcaagtaaa	gtgtgcaaag	tttgtcattt	gtcaaatttt	158820
aatgaagttt	ggggaacaaa	ggaggtgtat	cacaatagca	ttggagatta	cacaataata	158880
tagatataca	actttggtct	tagactgcac	tgagccatc	ctcacttgct	ggtactcatt	158940
atacaggact	ctgacttgta	tggttatcat	gttctgaggc	cttttaacca	taaatttatg	159000
actttgttta	tcaatcaaaa	ggagtattca	tatgttctac	taaacagaag	gcttttgtct	159060
caagggata	cgcacccctt	agaatgcaaa	aatactactt	agtcattatt	taaatactat	159120
tggggattht	ttactgtaaa	gtgatctaca	gtaatacatc	ctgattatac	agaaatatgc	159180
tgtaatgtta	tttataaata	attattctta	acaaaaatga	gaggagcact	tacttgattt	159240
aacaaatttc	aaattttaat	ccaaatattt	aaattttcat	agattgctat	atagtattta	159300

eolf-seql

tattgtat	ttt	tccta	aatc	ttt	gtaa	atg	tggct	gaa	at	cat	att	aga	aa	taag	act	ttt	159360							
gaaa	atca	aa	atta	agt	gt	cttt	gtta	cat	agc	ttg	ga	cagt	aca	aa	aac	acg	ttt	159420						
tta	agatt	gt	aat	ctac	agg	aag	atg	ttt	c	agac	ctatt	gt	tgt	att	att	c	taaaaa	agat	159480					
taac	ggc	att	ttt	atc	ttt	tt	cac	ctata	aa	acag	ggga	gcag	gag	agg	at	tttt	taag	159540						
gtac	cc	ttt	ac	ctc	ata	gg	tata	gata	gt	cata	at	tt	tag	ttt	gaga	tat	caa	agaa	159600					
acat	gtg	ccc	at	gatt	caat	att	tata	aatta	tgt	gatt	ttat	ac	att	aa	atc	aag	atg	ttat	159660					
cat	ag	ttt	ct	aag	tcat	gtt	cac	ataga	ag	caag	tcat	gg	gtag	tgt	tg	ctg	gaa	agg	c	159720				
ta	atag	ggg	ac	gg	taga	actc	aa	agtt	gaat	gtt	ctt	ctt	ctt	ctt	ctt	agg	cag	cct	c	159780				
ctta	act	gtg	gact	cct	gtt	ctg	aga	acca	ag	agcc	cagga	tatt	gt	act	gt	tc	ag	ta	atgt	159840				
ggc	ag	ttt	ca	gat	gact	gg	aag	gaatag	ag	attag	ttta	ttt	tt	att	at	tact	t	aaa	aat	159900				
tttt	taaa	aat	aa	act	ttata	cct	aaaa	ata	att	atag	gat	gct	aag	tag	t	ac	ata	aag	ct	159960				
ta	agat	at	ttt	cc	ctc	tc	caa	at	ttt	cata	atata	aa	aat	ag	tca	at	aatt	act	gtg	160020				
caaa	atgt	gt	taaa	atgt	gt	gaa	atga	agt	gg	taga	aa	ta	agg	ata	aaa	at	tgg	agaaa	ag	160080				
gaa	att	aa	at	agcc	cag	ta	gtc	ttt	gg	aa	agatt	c	atga	aa	ta	tg	ac	ctt	c	160140				
att	ctg	aaaa	ac	atg	tag	ga	t	aa	agac	ctc	agt	t	ctt	tca	aat	gc	gtt	t	c	160200				
cgt	gaaa	att	atta	acag	at	tttt	tcc	at	agc	act	t	aaa	gct	gag	caca	gc	ag	ta	atct	160260				
acc	agaaa	aat	aag	t	at	ttt	gaaa	aaa	atg	ata	aa	aca	gag	aaaa	ata	ag	tag	t	cac	160320				
cat	cat	gat	cat	catt	cat	tgc	ct	caat	c	aact	tatt	gg	cat	cc	ctt	gc	att	gat	caac	160380				
tt	act	gata	t	cttt	at	cat	ct	ctt	cagg	g	aagg	agc	agt	aat	cta	ac	gt	aa	atatta	160440				
gag	ttg	t	ca	taatt	ct	taca	gc	att	ttt	att	ttcc	ct	tga	gag	tat	gct	c	tt	ctt	gtt	160500			
act	cag	tatt	gt	gata	aat	at	ac	at	cta	act	t	gact	aat	tg	aaa	acata	aat	tt	ccata	aat	160560			
att	tatt	at	tt	cata	aat	c	gga	agt	ct	aa	caact	ct	gtg	tgt	gatt	gg	ac	act	ctt	ct	160620			
ac	at	tttt	c	att	gaa	att	tat	ca	acta	ta	ata	aat	gt	caaaaa	aa	g	ctat	att	ca	c	160680			
t	cttt	ttc	ga	act	aa	catt	ata	ct	aaaa	aaa	t	gta	at	ctt	t	tg	ac	act	aat	attt	tat	ct	160740	
t	ccatt	at	ttt	at	ttt	agg	act	ctt	gat	gtt	c	ag	ccaa	atag	ag	ttac	ag	tt	ggag	gtat	ca	160800		
gat	ct	ctaga	acca	at	cctt	cag	aga	agag	gac	ac	gtg	ga	aag	ccat	gat	ttt	gtt	gggt				160860		
gt	ata	atg	ga	gtt	gcag	tc	aat	gga	agg	c	ctct	gga	acc	cag	cca	agct	ttg	gcag	cac			160920		
aag	gc	atc	cct	ag	at	cag	tat	ggc	gatt	ttt	ctt	act	gt	ttt	ta	agaa	aaaa	aat	gca			160980		
aaaa	ag	tat	g	ctt	cag	t	gag	cat	caaa	aga	t	gaa	att	tatt	at	gct	caa	aat	ct	ct	aaaa	aat	161040	
ac	caa	at	gat	tt	acatt	gtt	tt	ga	at	ttt	t	aata	ct	tata	c	ctt	t	gaa	att	tt	gg	cata	aaa	161100
g	tat	gat	att	ta	att	agaa	atta	aat	at	gt	tt	ct	ag	att	c	tt	ata	cat	at	at	at	at	at	161160
at	at	at	gcat	gt	ggg	cat	gt	at	gt	ttt	t	cc	ct	t	taca	gag	ag	tt	gtg	aag	att	aa	aat	161220
tag	tt	aa	gtt	gg	taa	att	at	aaaa	aa	gg	gtt	cc	ag	cac	ag	ag	ag	at	at	gtag	at	gt	ta	161280
g	ccat	cat	gg	ac	ac	ataga	ctt	tatt	tca	catt	aa	atag	ttt	tact	t	at	ag	ac	ata	cat				161340

eolf-seql

attcctaaaa	acttgataca	gctttaaaaa	caggcaataa	cttgattaat	tatgaactgt	161400
aaggcttttt	tatttgatta	ttaattaggt	ttctagcaat	aacttaggga	tgttagaaat	161460
tacatatattt	attttaaaat	tccttttggt	cattatcgaa	gtttgaaaaa	ttctgaaaaa	161520
atacaaggaa	gaaaacaaaa	ttaacctata	atctaaccac	ccagagacaa	ctactcttag	161580
gttattgtca	tgttttgact	gcttagtata	ccaagatgtg	aatgtgctat	attttaactg	161640
ttgctataca	ctttagttat	ttccaatttt	attaatatac	caattaccct	gtgatgaaca	161700
cattttcaca	aaaatctttg	ctcacattat	tttttgatg	agattaccag	aaataaaaact	161760
attaaaggca	aagctaggaa	tactttctaa	tgtttgtaac	ttaagtattt	taataacatt	161820
ttctatttgc	ctttcttttc	ctacatgttg	ttactgtttt	gttaciaagt	cacactagtt	161880
cgttattatt	attaatcaaa	cagtacagaa	aaacaaagga	ttgggattgc	caccattggt	161940
aatacttcgg	tgtgcatcct	tttatatctc	cgtgttcaca	caagtacttt	tttaaatact	162000
aatttttttt	ttcatttaga	gatattttgt	gaacatcttt	ttaggtcaaa	acctactgaa	162060
acaaaacttt	tagacttacc	tttaactcct	ctgtttctgt	tagaccttat	gtccagaatg	162120
atgtttctgt	ttgtttgttt	gtttgctttt	tgagacagag	tcttgttctg	tcgcccaggc	162180
tggagtgcga	tggcgggatc	tcggccccct	gcaacctcca	cctcctgggt	tcaagcaatt	162240
atctgcctca	gcctccggag	tagctgggat	tacaggtgcc	tgccaccacg	cacagctaatt	162300
ttttgtattt	ttagtagaga	cggggtttca	ccatgttgac	caggctgggtc	ttgaactcct	162360
gacctcatga	tccaccacct	cagcctccca	aagtgtctggg	attatagagg	agagccactg	162420
caccagcct	agaatgggtt	ttaaaacata	agtcagttaa	cttttcactt	cttgggtcaa	162480
agtgcttcaa	tagcttccca	tctcaccag	cttcaaagcc	aaaatcctga	ccctgaatga	162540
aaacattttt	atgatctgcc	atctcccttc	acttcctgaa	catatctaac	tattcttctt	162600
cttgtgccct	gagctccaac	catgttgggc	ctcgggtgtt	ctcaaacaatg	gcagtacgct	162660
ttcacttcaa	ggctttctca	ctggctgttt	cctctagctg	aaaagatatt	ctaccagata	162720
tacttcattc	ccttatttta	tttaggtctt	aacaaagatt	aagattaatt	cactgcctaa	162780
tctaaagatt	cagcaaacc	gcaaactcac	tatacccttt	ctcaccttga	ttttctctat	162840
agctattttt	ttctttattt	tctgcctctt	ccacaagaaa	aaataagtac	ttcctcagta	162900
cacgggttatt	ttttcattac	tttacttcca	tgcttagaac	agtgcttagc	atatggtagg	162960
cattcaataa	acattagttg	catgagtatc	ctgatagaca	tgtgtcaaaa	aatatgtggt	163020
ccctggatca	tatgtattaa	ccaaagtgtt	tatttgacca	aggtatttta	ttcaagtaag	163080
aattaattta	aagaagaaat	tgtcacagct	ttctcattat	tatataagac	ataatttttt	163140
ttgaatcttc	tttagtgtga	ggcagactat	gttttctagg	aaaacttctg	gtttgattag	163200
tttctccaaa	tgtagttgta	acttgagctt	caaataatgg	agtgcttgaa	attaacaag	163260
ctaataaaaag	tgtatattga	gttttagcaa	acttctcctc	atcttttatg	tgcgttattg	163320
ttctcattat	gatttatattt	agatgcccta	ggctggaagg	cgcttgtagt	cgcagcccat	163380

eolf-seql

gccaacatgg	tggcacatgt	atggattact	ggatcatggca	gcagtgtcat	tgcaaagagg	163440
gactcactgg	gaaatactgt	gaaaaatgta	tgtaaggtct	tccgtcttcc	cctggaaatt	163500
ttaataacta	tgaaaagtaa	aatatatgca	cccaagtatg	taatcaaatt	aaaaattatg	163560
ctttcattct	aaatattaaa	atattaaatg	gacaataatt	ggtaaaaatac	agtgacattt	163620
taaaaattat	ttttgtaacc	tgaagaagaa	tgatatacct	ttaaaaaatc	gtttactaac	163680
taaatctcta	gcttccactt	taaaggtatt	ttattcactt	atTTTTgttt	gttttatttc	163740
ttagaattct	aggcaatcta	aaagatcaaa	ggttatagtt	aggctTTTTt	tcatattatc	163800
tgccTTTggg	ggatattttt	ctggtgaatt	tttTgtcata	aaaaggtata	cacactaaat	163860
cactcaacac	tgagatcaaa	acatcataca	gagccatcat	aatatgttaa	aattaatgtt	163920
gatactttca	ttttaatgta	caagtagtag	aattaatttt	gaatattact	ttttaaaatc	163980
ctttcatcat	tgtcttctaa	gcctaagtgt	attattttaga	cattaatgat	gttcatatca	164040
tcattagaaa	atggtgctct	ctaatttcga	gctgcacatc	tcactaacta	accctaattg	164100
ttcctctttt	gtaaaaattc	ttcattttca	aacaagtggt	tactacttaa	ctccattgca	164160
ggatctgac	tacatttaag	gagtcatttg	attaaattat	attatgaaaa	caaatagaaa	164220
tgcataataa	aattgaggat	ataatataat	ctaaaaggtc	ttagcagaaa	gtgtaattgt	164280
gtgtaataat	attagatata	atgaaaacat	agaaaatata	tactgtcatg	tgattttcaa	164340
tgtaataaat	atttattaag	gagcctaatt	atatctgaaa	tatgagtcat	tggttagata	164400
aataccagag	acactttttc	ttaaatcatg	atataactca	catactataa	aatgtattct	164460
tttaaagtgt	atctttcagg	gctgaaatcc	atttgagctc	atTTTcttaa	tattctttct	164520
ttagctatat	tatttgTTTT	tataacttaa	gcttcaatat	ttctggaatg	tggaTTTTt	164580
tcagattaca	ataaactata	atatacatac	tgattataca	tgatgataaa	ttatatgtga	164640
tgattactga	aaataaagtt	agttaccgat	gtaaataactt	gattgaacac	ttctttgtcc	164700
taatttatag	catactagag	actaaagatt	acaaatcatt	ttaaccatgc	aaacgtatat	164760
tttggaaca	cagtgaaaat	gattacaaac	aaatttttca	agtacatatt	accaacaagt	164820
gcctgtcttt	agatattcat	aatttacgta	atgtggcaaa	tagtttagta	aaatattttcc	164880
caaaggtta	atgactgtca	tagagtattt	taagttcatg	gttctgaaat	gcattttaaac	164940
atgtgaaatc	aacttatata	atgattcata	aatggaaatt	atTTTTtaag	agtagagttg	165000
ggggacatta	attcccaaaa	cgacattttc	attgtccttt	ttatatTTTT	gtcactatag	165060
aaaacactcc	aagaaatgcc	aatgaatgc	attcattttc	cTTTTtttcc	tttgacttcc	165120
agctgttact	cctgacactg	ccttatcatt	agaaggcaaa	gggcgcttg	actaccacat	165180
gagtcagaat	gagaagcggg	aatatttggt	aaggcaaagc	ttacgagggtg	ccatgttgga	165240
gcTTTTggt	gtgaacagtc	tggaagtaaa	atttaggacc	agaagcgaga	atggcgTTTT	165300
aatccatatc	caagaaagca	gcaattacac	tactgtgaag	gtgagataaa	agctaattggt	165360
gacttcattt	gattagaccg	cctgccgtgt	agtggTTTTa	atcactttcc	ccataatttc	165420

eolf-seql

tgtccttttc	tttacaaccc	attagagttc	cgactaatgc	tgggcactat	tccaatgtca	165480
tctatcttaa	ctattcccca	ggcattggcc	agagtaacaa	agatctgaat	ggtttggttt	165540
ctacacactt	ttgtgttgct	ttagagtaga	gaaccctgcc	aggtaggcca	gcacacaaag	165600
aattagttgc	aatctatttt	tctggtaaga	atttatatca	cttcttttct	tactttttaga	165660
caaagcaaac	caaaaatata	atgtttgttt	gaaatacaaa	aatatttttc	tccaacaatt	165720
atttcaaata	ttgatatgta	tatgtcaatt	gacaggatta	gaataaggaa	aaacattttg	165780
aaataagcaa	aaacattttg	aaattatatg	atttctggag	catatattca	attctctata	165840
taaactctgt	ggagtaaagt	atatttgga	ttcattataa	ttttacttaa	cctttccaaa	165900
taatttttaa	ataatcttaa	aaattatgct	tcatgagaac	aatggattta	tcattaggct	165960
tttacataat	ttgttttttc	ttatctgtaa	ataagatact	agacttatat	acagatgaat	166020
aatttcatta	gatatccatt	tttgcacg	cccttagctt	tctgaagttt	taaacctatg	166080
ttctgctttc	tttcccacaa	ataagtcac	tcctagacca	acagtttctt	tagtttagtt	166140
atatttactg	ccttcatta	atattacttt	gtatcattct	actgataatt	ttttatataa	166200
atttttagtaa	attcttaaga	taacaaatcc	agatttcctg	aattattttc	atctattagt	166260
caatatttaa	taactactcc	agggatagtt	cacagagaaa	aagagcaatt	tgttcagaaa	166320
aattatttgg	tttaattcac	atataatact	aaaaataaaa	atagatgttc	acttctaaac	166380
ttcagcctct	ttcatcctca	aaatttttct	ctgtgcaagc	caaccatgat	tatgttgcat	166440
ataaatatat	ttaataagta	gtacaaaaac	caatatttct	taccttctca	aatgataatt	166500
cctctagtcc	agtcatttcc	aactaggata	gattttaccc	ccatgggaca	tttggcaata	166560
tctggagaca	ttttcaattg	tcacggttag	gagttgggag	agtacttctg	gcgtctagcg	166620
gtagaggcca	agaatgctgc	taaacagtag	cacttcacaa	caaagagtta	tctggcccca	166680
aatatcatta	gtgccaaatg	gcagacactc	tacccttttc	ccttacaaga	gaacatcttc	166740
aggttttaac	tttacctcta	ttgaagcaaa	ggaccaggtt	ccagagttaa	taaaacaact	166800
gtaaaagaga	acacataagc	cattgtatta	cattattatc	tggctacttat	aattttcatt	166860
gaaaatggta	ttagaagtaa	acaaagtaaa	gaagcaaaaa	aagaaataga	tcctcatctt	166920
ctataagaaa	catattttat	atggtttgag	aggctttgac	attgaggtct	gtgtgttatc	166980
tgtaagttg	cttccaagtc	ttcgtgccat	ttaaatagaca	tatgaaatat	ttctgtacta	167040
acgtacactt	aaagccaagg	aattcagtc	aaatacaatg	tggttgaaaa	aaatcagaga	167100
cacatttttt	tcttacttaa	ggaaaaagct	gaatgtcagg	atccattttt	gtcaccataa	167160
attcttctac	ttccaacagg	acagcgcata	caactccaga	ttttgttagc	ttggtagcaa	167220
taacttaatt	tttttcttga	aaggaaagta	agtgcacaa	aataaaaaaa	tgaataatac	167280
agaccaaagt	gcatagtttt	atatgaaaat	tttgaaaaga	agcttttcaa	aggggcttgg	167340
caggtaaaga	gaataggtta	gaaaaaataa	caacagtgaa	ttaagaataa	ctaagtaaac	167400
caaaagaaag	tggctgttgt	aagcaggcaa	attatttgga	tgataggagt	atcaagtgtc	167460

eolf-seql

tatacagact	aggaagctag	ttaggatgga	cttttactta	tcaattagct	tattggtcac	167520
caagacccca	gggttccggt	tttttttttt	tttttttttg	ctccttttct	gatcctttct	167580
ttaactcttt	cttatgggtt	gcattctctc	tctctcattc	tcttttctat	cattctttct	167640
ctctctctct	acagacacac	atacacacac	acacacacac	acacacacac	acacacacgc	167700
agacagaaga	tgaggacatt	ttgtgaaaaa	tgaggaagg	tggtgggtaa	atgggattcc	167760
atgtggctag	aagagagaga	gggtgtcagt	gtcaggtgtg	ggcagcaata	gtgatgagag	167820
gagagagaag	aatatgtaga	atcaattggg	tctattcaga	aaaagaaaaa	attaagaaaa	167880
gaaagtttca	gagagaaagg	caaaaggaaa	gcataattgt	gtaaaacttt	gtaggccaat	167940
atttaactca	tttcacaaat	ctctcttcat	tcatggcatg	ccctatagct	ccatatttga	168000
tgttctgtaa	taatagtaat	gtgatggact	ttatttctac	tctaaatcag	ttcttttgtg	168060
tttgtctggt	ttttttaagt	gggcaacata	ggtgatacag	aataattgga	ataaggaatt	168120
caaagctcta	tagattcaaa	ttaaataaat	gaacaaataa	atgcagtcac	gagttgcata	168180
atgacaggaa	tgcatctcga	taaatgcatt	gttaggtgat	ttcattcttg	tgcaaaccac	168240
atagagtga	cttgctcaaa	cctagatggt	acaacctact	atacacctag	gctatatgga	168300
atagtctatt	gctcctgtgc	tataaacctg	tatggcatgt	ttactgtact	aaatactgta	168360
ggcaattgtg	acacagtgga	aagtatttgt	gtatataatc	atatccaaaa	ataaaaaagg	168420
tacagtaaaa	aggctgcatt	gaagattttt	ggggggatgg	gggacagcct	gggcaacagg	168480
gtcttgctct	gttgcccagg	ctggagtgca	gtggcatgat	ctcggtcac	tgcagcctct	168540
gcctcctggg	ctcaatgtat	cctcccacct	cagcctccca	agtagatggg	actacaggtg	168600
tgcgtaacca	tgccgggcta	acttttgtat	ttttttgtag	ggatgagggt	tcacatgttg	168660
cctaaattgc	acttactgtg	actgaagctt	gtaggactga	aagttgctct	gagtcagaga	168720
gtcattaagc	aagtgggtgg	tcaatgtgaa	ggcctaagac	attattatac	acttctgcag	168780
actttataaa	cactgtatgc	ttaggttaca	ttaaatttat	caaaaatatt	tttcttcaat	168840
aataaattaa	ctttagctta	ctgtaactct	tttagtttat	aaacttaaaa	tttttaactt	168900
ttttctcttt	tgtaataaca	attaaaacac	aaatacattg	tacagctgta	caaaaatatt	168960
ttctttcctt	atacccttat	tccataagct	ttttttctat	tttaaaagtt	ttttatttca	169020
ttttattttt	acttttaaac	ttttgcatta	gtaactaaga	aacaaaaaaa	cacattagcc	169080
tcagcctaca	cagggtcagt	atcatcaaat	ccctgtcttc	cacctccaca	tcttgtccca	169140
gtggaaggtc	ttcagggaca	ataacacaga	tggaactgtc	atctcctatg	ataacaatgc	169200
cttcttctgg	aatcccacct	aaaggacctg	gatgaggctg	gtttacagct	attttttata	169260
tcattagaag	cagtaccctc	taaaataatg	attaaaaaaa	cgggtgtagta	aatgcataaa	169320
ccactaatat	agtcatttat	tatcaaattg	catgtgatat	acttttatac	aactggcagc	169380
tcagtaggct	tgcttacacc	tgtatccccg	caatgagtaa	ttcgttgtgc	tatgacatta	169440
caatggctac	taggtcacta	ggcaataata	atttttcagc	tcctatgggt	catcattgac	169500

eolf-seql

tgtttattaa	taaataaaac	caagcaaaaa	ttagcatgat	gtttttaaag	tgaagaatta	169560
tataagtgtt	aagtacagta	ctgccaggga	gaaggaaaac	attaagaatg	ttataatggg	169620
aacttatatt	cttatccacc	ccaatttgtg	gtatattcca	agtgtctctt	catcaaaaat	169680
ttattgaata	aaaggatgac	atgatgaaat	caattaggag	gaaagagctg	ggagaaggct	169740
tttccttttt	ttttttttca	aaaaggactc	cagctataac	caaagaaagt	tgctgttttt	169800
actgtgtgtc	atgagatgtt	gcccathttga	tgaaatgtta	ttgtcattta	gctagaatth	169860
tctgtttttt	tttttttagt	tggtactgaa	atatattatt	atctggaaaa	attggcttta	169920
ataaaatatt	gctatatgaa	taacatatgt	aaatgtgtta	gacatctttt	cggtaaagta	169980
caaatgaact	gatttttagt	tttaccagat	gtgtttgtta	catgtagaaa	tagcatttga	170040
tctgagtgc	aaaataaact	gatccatctt	ttcattcccg	ttatttgagg	aacagtgcc	170100
ctgcatcccc	ctgccaacac	accagctctg	tctggcagtg	gtaacaggat	tatgctccct	170160
gaaccaaagt	ttcatcttgc	ctcataaatt	atctcatttt	ctaaaatggg	ctactcagga	170220
tactggaaac	tcggtagctg	gaaactggag	tgggagcacc	ctgttacc	atgttctcct	170280
ggacaaaata	aaataaacca	aatatccttt	agataaattg	taaaagacag	ccaaagtga	170340
ggcttgccca	gacacctcat	taagaattca	ctctttgttc	atcatagttt	ttgatctcaa	170400
taaatgatat	aaacaatagg	catcattttt	tcctaaaatt	tgtgtgtaaa	agatgagagg	170460
taaaacaatt	attttcatct	ttatttttaa	actatgcttc	ccttttagct	gagcattctt	170520
tttctttttg	caagtggttt	tcacaatttt	ttagtactat	gggcctttta	ctaaacgaac	170580
cagcataaca	cactccaatg	gcaggttgtc	attggaatac	aaataattta	aaaagggtata	170640
atttaattat	cttaaatgga	cattcgcccc	tttattattt	caattgtgtt	ctggaaaata	170700
attcatcaag	ttttgagaaa	ttaggtatac	atataagaat	acgttgaaaa	ccattgaaac	170760
ttaaatgtaa	aagtacatgt	tgccataaaat	tagagacaaa	gtgtgtaagt	atattctaata	170820
acaaccagat	tcttcagcta	ttctatctgc	tgtggactgg	tcaaaaattt	aagtttagtt	170880
ttgttaatga	tttttattta	agcataccat	attttaattg	catactattt	ttaatatgtt	170940
ttacagatta	agaatggcaa	agtatatatt	acatccgatg	caggaattgc	tggaagagtg	171000
gagagaaata	ttcctgaagt	atatgttgca	gacggccact	ggcacacttt	tctaattggg	171060
aaaaatggaa	cagcaacagt	attgtctgtt	gacagaatat	ataacagaga	tattatccac	171120
cctactcagg	acttcggtgg	ccttgatgtg	cttactatat	cacttgagg	aattccaccc	171180
aatcaagcac	atcgagatgc	ccaaacaggt	aaatgccttt	attaagtaga	gtcacaaggg	171240
aagtaaaatt	gttcttcaaa	aagtaattgc	tttttcttgt	ggcaagacta	cacatttaac	171300
atgaatctca	tatacagaac	aatttcattc	aataaaattt	atgtttaaaa	aagtagtttg	171360
atgtctgata	atatcaatta	taaatatacct	aagaatgtca	taactatctt	cagaaagttt	171420
gtaataaact	attagccacc	actttctcga	gagcttgc	ctttcttacc	aaggttgtaa	171480
ttcagtccat	agtgttttga	tgctttgctt	gtccaccaag	catttcatat	acatttgttc	171540

eolf-seql

atttatttat	tcattcacag	ccactctctt	catagaccat	taatggagac	aaacattaat	171600
caaattctta	cacaagtaac	tgcattattc	taatgtgtga	taaataatac	aaatgaagaa	171660
tgtagaattc	taaaatatag	tgaaaaaaga	gaaaggaagg	ggaattttgc	tgtggaattg	171720
acatgtatac	ataaatctga	atgatgagga	ggatgaaagt	gtacgaaagg	ttaatttatg	171780
ttgataggaa	tttttttaaa	gaaatcgttt	aagccaaagt	tatagaagac	aacacattgg	171840
aggctaacat	cataggcaaa	tgatgaagtt	ggagaatgaa	gcaacttcct	gaccatgttg	171900
cagtttttgt	cttatttaca	gagcaatggg	aagtaattga	aaactttaat	cacagtagga	171960
tcaagttaga	tatgcagtaa	tattacagat	cattcaggct	acagcatgga	gaatgaattg	172020
gaggaggaca	cgagtggatc	tacagaaatg	agttgggatc	tgggcaagat	gtcttctgag	172080
ctcctactag	tgtggtggct	gaggagttag	aaagaaatgg	ataggcaaga	aatattcttg	172140
gaactaaaat	caaccaaact	gttagtgatt	atggtaaaat	tcaaggaggt	ttctacttct	172200
caactcaaag	aagggtaggt	cagcaagaga	ggaaactgca	gaaccctcca	aaagcagcat	172260
atgtctgaga	aatattagat	ttggtttggg	acatttttga	tttgaagcat	ctttgagaaa	172320
atccttttga	tggatgggct	ggaaatcaga	aatagacttt	agctggaaat	atatatttaa	172380
gagtggtcag	tgtcaagcag	gtaactgaag	tactggacat	ggatgtgatc	acctaacatg	172440
agggcgtaga	gtgaaaagaa	agcctgggac	gtcatcttga	ttaaccgtaa	gagttaatgg	172500
ttatgtagag	gagaataagt	cggaaaagaa	gactaagtaa	taggaagaaa	atcaggagta	172560
taggaacaaa	aagaaaagat	gtcacaaaag	ctcatggaaa	aaatatatca	agaatgagaa	172620
tgtcactatg	gtagaatgat	gcattaaata	agaggaaaaa	aatgcatgtg	agactaatag	172680
atttaaggca	taaaagttaa	agtccaggtc	ataagtcctt	tttatatggg	tattatagaa	172740
tgttgtgaga	aaacaaacca	atggaaatta	cgctttttgt	agtgtcaaaa	tagattgttg	172800
ggccctgaga	taggaatatc	agcactgtta	acacactcaa	gtgtaatgaa	gtgtttctta	172860
actttgcatt	ttatctttat	cattccccta	aggagacact	taatatagtc	taaactttgc	172920
catccccaag	tcataaaatg	ttaacaccag	aggatatgtt	ttatctgcct	tttagaggcc	172980
cacaaaccat	tgtaatagct	aagatttttt	tgttttgctc	ccaagaacc	tatgtttcac	173040
acctttgggtg	tattatcacc	ttcaatggga	atgcatgatt	tagtagttga	agccattggc	173100
ctatttcatg	ttctttacaa	atttaaaaaa	tatatatttt	atttgtatgt	atgcaatttt	173160
tggatatatg	gatgtaaaaa	ggaaggaaat	tgataaataa	atgagtaaga	aaaagaaaat	173220
tcagcctgcc	caagtcattc	ataaatcttc	agaatgagtg	ggattcaagc	aatctgaccc	173280
atgtttggtc	atggtaatct	taacgcacct	tgctaagtta	taagatgcac	agcttaatta	173340
tctttcagct	ggatgatggg	tctgagactg	aggtttctgt	attcatgtat	tcatatgagg	173400
tgattgtgga	gcttctcttt	acaagaaccc	agcagtgtag	tataagctct	tttttttttt	173460
tttttttttt	gtaaaaagcc	ttactccttc	ttcttctccc	agcaggtttt	gatggctgca	173520
ttgcttctat	gtggtatggg	ggagaaagtc	ttccttttcag	cggaagcat	agcttggcct	173580

eolf-seql

ccatctcaaa	aacagatccc	tcagtgaaga	ttggctgccg	tggcccgaac	atttgtgcc	173640
gcaacccttg	ctggggtgat	ttgctgtgca	ttaatcagtg	gtatgcctac	aggtgtgtcc	173700
ctcctgggga	ctgtgcctcc	cacccgtgcc	agaatggtgg	cagctgtgag	ccaggcctgc	173760
actccggctt	cacctgtagc	tgccagact	cgcacacggg	aaggacctgt	gagatggtgg	173820
tggcctgtct	tggcgtctc	tgtcctcagg	ggaagggtgtg	caaagctgga	agtcctgcgg	173880
ggcatgtctg	tgttctgagt	cagggccctg	aagagatctc	tctgcctttg	tgggctgtgc	173940
ctgccatcgt	gggcagctgc	gcaaccgtct	tggccctcct	ggtccttagc	ctgatcctgt	174000
gtaaccagtg	cagggggaag	aaggccaaaa	atcccaaaga	ggagaagaaa	ccgaaggaga	174060
agaagaaaaa	gggaagttag	aacgttgctt	ttgatgacct	tgacaatatc	cctccctatg	174120
gggatgacat	gactgtgagg	aagcagcctg	aagggaaccc	aaaaccagat	atcattgaaa	174180
gggaaaaccc	ctaccttatt	tatgatgaaa	ctgatattcc	tcacaactca	gaaaccatcc	174240
ccagcgcccc	tttggcatct	ccagagcagg	agatagagca	ctatgacatt	gacaacgcca	174300
gcagcatcgc	cccttcggat	gcagacatca	ttcaactact	caagcagttc	cgagccaca	174360
cacaaaaatt	ttcaatccag	aggcacagtc	ccctaggctt	tgcaaggcaa	tcccccatgc	174420
ccttaggagc	aagcagtttg	acttaccagc	cttcatatgg	tcaaggtttg	agaaccagct	174480
ccctaagcca	ctcagcatgc	ccaactccca	accctctgtc	tcgacacagt	ccagcccctt	174540
tctccaaatc	ttctacgttc	tatagaaaca	gccagcaag	ggaattgcat	cttcctataa	174600
gggatggtaa	tactttggaa	atgcatggtg	acacctgcca	acctggcatt	ttcaactatg	174660
ccacaaggct	gggaaggaga	agcaagagtc	ctcaggccat	ggcatcacat	ggttctagac	174720
cagggagtcg	cctaaagcag	ccgattgggc	agattccact	ggaatcttct	cctccagtcg	174780
gactttctat	tgaagaagtg	gagaggctca	acacacctcg	ccctagaaac	ccaagtatct	174840
gcagtgcaga	ccatgggagg	tcttcttcag	aggaggactg	cagaaggcca	ctgtctagaa	174900
caaggaatcc	agcggatggc	attccagctc	cagaatcctc	ttctgatagt	gactcccatg	174960
aatctttcac	ttgctcagaa	atggaatatg	acagggagaa	gccaatggta	tataacttcca	175020
gaatgcccac	attatctcaa	gtcaatgaat	ctgatgcaga	tgatgaagat	aattatggag	175080
ccagactgaa	gcctcgaagg	taccacggtc	gcagggccga	gggaggacct	gtgggcaccc	175140
aggcagcagc	accaggcact	gctgacaaca	cactgcccac	gaagctaggg	cagcaagcag	175200
ggactttcaa	ctgggacaac	cttttgaact	ggggccctgg	ctttggccat	tatgtagatg	175260
tttttaaaga	tttggcatct	cttcagaaa	aagcagcagc	aatgaagaa	ggcaaagctg	175320
ggacaactaa	accagtcccc	aaagatgggg	aagcagaaca	gtatgtgtga	agtttatgta	175380
ctggcactat	aaaatataaa	aacaagaaat	aataactcaa	ccattgtaaa	gttgctgact	175440
aggttgggtc	acatttgaaa	aacaggccag	tatggactag	tgggtggagg	aaaactttaa	175500
aaataataac	cacaatgctg	ctgaaacaga	ctcacaacaa	ctcttaattt	aaacatgtgt	175560
ggttgaattt	atttcctgc	atgcattgtg	ttttgtaact	agttatgtgg	catgcagcat	175620

eolf-seql

ttggaaaatt	tttcttattt	accagtgttt	gatttgtgat	ttttaaaaat	tgataacctt	175680
accattgcag	aaaagaactt	gtgctttccc	agtggcggtat	gtgtattgtt	tcaactgtat	175740
tattataatt	atattttgca	ttgcaagatt	cttgatgtta	aaccaatcct	tgtaaagtgt	175800
aaaaaggaa	cctcctatcg	tggaatgaaa	gattaagtat	attaacactt	ttcagaatga	175860
tagtttctgt	atttgatgtt	gctcagaaat	gtctcagtat	ttgagtaagt	tttcatgac	175920
agtgggtact	gaaattaagt	cattttgttc	agcactttta	cgctttctta	tagaattgtc	175980
ttaaaacttc	tgatccttg	agcaaatgat	tatagtctcc	tgactttcat	gaggcttcca	176040
ttaggaacag	aatgattgca	tgttgtcccc	agaacactgc	caccttgcta	tgcgaaatgat	176100
gttctcagca	gcacttctaa	gaaacactct	taaaagttat	ttattgaaaa	tttttcgtat	176160
gcttttaata	ttttaagaa	ttgacctaa	gaaagcttat	gattggactt	attttccaac	176220
cagataacat	ttactctaag	taccagttt	ttataattta	tatgaaatca	gatttcaaca	176280
cttactttgt	cattttgtag	atcatttttt	taaaatactg	tgtaaaaact	ttttttacac	176340
ctaagctgtg	tttttgatac	tgatattttc	ctatgctgaa	tagttttctt	actttcaggg	176400
aaggtaaaga	aatacttttt	ttatatttgt	tacttatgta	acattcatat	ttttctcatt	176460
ttgatatttg	taacatactg	tatgctttct	acttgtaa	gtcaacaata	gaattaaaat	176520
atttatttta	aata					176534

<210> 5
 <211> 16123
 <212> DNA
 <213> Homo sapiens

<400> 5	
gggagccagg	accatggact tagcaccaga cagggctact ggccgcccgt ggctcccgtt 60
gcacactcta	tcagtatctc agctccttcg agtgttttgg ctactgtcat tgcttccggg 120
gcaggcctgg	gtccacgggg ccgagccgag ccagggtgttc caagtgtctg aagagcaacc 180
tccaggcact	ctggtaggca ccatccagac gcgccccggc ttcacctaca ggctcagcga 240
aagccacgcc	ctgtttgcca taaacagtag caccggagcc ctgtacacca cctccaccat 300
cgaccgcgag	agcctgccc gcgacgtgat caacctgggtg gtcctttcca gcgcgcccac 360
ctaccccacc	gaagtgcgag tgctggtgcg ggacctcaat gacaacgccc ccgttttccc 420
ggacccctct	atcgtggtca ctttcaagga agacagtagc agcggacgcc aagtcattctt 480
agacaccgcc	accgactcgg acatcggtc aaacgggtgtg gaccaccgct cctaccgcat 540
catccgcggc	aatgaggcgg ggcgcttccg tctggacatc accctgaacc cgagcggcga 600
gggagcggtc	ctgcatctgg tgtccaaggg cggactggac cgtgagggtca ctccgcagta 660
ccagtccttg	gttgagggtg aggacaaggg tgagcctaag cggcgggggt accttcaggt 720
aaacgtgact	gtgcaagaca ttaatgacaa cccccgggtt tttggcagtt ctactacca 780
ggcggggggtg	cctgaggacg cggttgtggg ttccagcgct ctccagggtg cggcgggcga 840

eolf-seq1						
cgcgagacgag	ggcaccaacg	cggacatccg	ctatcgccctg	caggacgagg	ggacccccctt	900
ccaaatggac	cctgagacgg	gacttatcac	ggtgcgggag	cccctggact	tcgaagctcg	960
gcgccaatac	tcgcttacgg	tgcaggcgat	ggacagaggc	gtgccttccc	tcactgggcg	1020
cgccgaggcg	ctgattcagc	tgctggacgt	gaatgacaat	gacccggtag	tgaagttccg	1080
ctacttcccc	gccacctcgc	gctacgcctc	ggtagatgag	aatgctcaag	tgggcaccgt	1140
ggtggctctg	ctcaccgtga	cggacgcaga	ttctcccgcg	gccaacggga	acatctccgt	1200
gcaaattctc	gggggcaatg	agcagcgcca	ctttgaagtg	caaagcagca	aagtgccgaa	1260
cctgagccta	atcaagggtg	ccagcgcctt	ggaccgcgag	cgcattccctt	cctacaacct	1320
cacagtttcc	gtctctgata	actacggggc	gccccctggc	gcagcagtcc	aggcgcgctc	1380
ttctgtggca	agcctggtga	tttttgtaa	tgacatcaat	gaccatcctc	ctgtcttttc	1440
acagcaagtg	tacagagtga	acctgagcga	ggaggcgcct	ccgggaagct	atgtgagtgg	1500
gatatctgcc	actgatggcg	actctggtct	caatgcta	ctgcgttaca	gcattgtctc	1560
tggcaatgga	ctgggatggt	tccatatcag	tgaacatagc	ggcctcgtga	ccactgggtc	1620
ctctgggggc	ctggaccgtg	aacttgcttc	ccagattggt	ctgaatataa	gtgcccggga	1680
ccaggaggtt	cacccaagg	tgtcctatgc	ccagcttgta	gtaactctcc	tagatgtgaa	1740
tgatgaaaag	ccagtattta	gccagccaga	agggtatgat	gtgtctgtgg	ttgagaatgc	1800
cccaacaggg	acagaactgt	tgatgctcag	ggcaactgac	ggggacctgg	gtgacaacgg	1860
aacagtgcgc	ttctccttac	aagaggcaga	gactgaccgg	aggtccttcc	gtctggatcc	1920
tgtgtctggg	aggttgagta	ctatttcctc	cttggacaga	gaagagcaag	ccttctactc	1980
cctgttggtt	ctggccacag	atctgggctc	ccctccccag	tcattcaatgg	ctcgcataaa	2040
tgtgagtctt	ctggatataa	atgataacag	ccctgtcttc	taccgggtcc	aatactttgc	2100
tcacattaag	gagaatgagc	ctggaggtag	ctacatcacc	actgtgtctg	ccactgaccc	2160
agacttgggt	accaatggta	ctgtcaaata	tagcatatct	gctggggaca	ggtctcggtt	2220
tcagggtcaat	gctcagagt	gggttatctc	tacaagaatg	gccctagaca	gagaagaaaa	2280
aacagcttat	cagttgcaa	tagtagctac	tgatggtggc	aatttacaat	ctcccaacca	2340
ggcaatagta	accatcactg	tattggacac	tcaagacaac	ccacctgtat	tcagtcaggt	2400
tgcctacagc	tttgtgggtt	ttgagaacgt	ggcgtggga	tatcatgtgg	gtagtgtgtc	2460
tgcattccacc	atggatctca	attccaacat	cagttatctc	attactactg	gggatcagaa	2520
aggatgtttt	gctatcaacc	aggctactgg	gcagcttacc	acagcaaatg	tgattgatag	2580
agaagagcaa	tccttttatc	agctgaagg	agtggccagt	gggggcacag	tgactggaga	2640
cactatgggt	aacataacag	ttaaggattt	gaatgacaac	tctccccatt	tccttcaggc	2700
aatagagagt	gtaaatgtgg	tggagaattg	gcaggcaggt	cacagcattt	tccaggccaa	2760
agctgtggac	cctgatgaag	gtgtcaatgg	catggtactc	tatagtctga	agcaaaaccc	2820
caagaacctg	tttgctatca	atgaaaagaa	tggcactatt	agtctgcttg	ggcccctgga	2880

						eolf-seql	
tgttcatgct	ggctcctacc	aaatagagat	cttggcatct	gacatgggtg	tcccacagct	2940	
ctcctctagt	gtcatcttaa	cagtttatgt	ccatgatgta	aatgacaatt	caccagtgtt	3000	
tgaccaactc	tcttatgaag	tcaccctttc	tgagtcagaa	cctgtgaatt	ctcgattctt	3060	
taaagtacaa	gcttctgata	aggattcagg	agcaaatggt	gaaattgcat	acaccattgc	3120	
tgaaggaaat	acaggggatg	cttttggcat	attcccagat	ggtcaattgt	atataaaaag	3180	
tgaactggac	cgtgaacttc	aagacagata	tgttttaatg	gttggttgctt	ctgacagagc	3240	
agtggaaccc	cttagtgcta	ctgtgaatgt	tactgtaatt	ttagaagatg	taaatgataa	3300	
cagacctctt	tttaacagta	ccaattacac	attttacttc	gaagaagagc	agagggtctg	3360	
gtcgtttgtg	ggcaaagtaa	gtgctgtaga	taaagacttt	gggcaaagt	gagaagtaag	3420	
gtattctttt	gaaatggtgc	agccagattt	tgagttgcat	gccatcagt	gggaaattac	3480	
aaatactcat	cagtttgaca	gggagtctct	tatgaggcgg	agagggactg	ctgtgtttag	3540	
ctttacagtc	atagcaacag	atcaggggat	ccctcagcct	ctcaaggatc	aggccactgt	3600	
acatgtttac	atgaaggata	taaatgataa	tgctcccaaa	tttttaaaag	acttttacca	3660	
agctacaata	tcagaatcag	cagccaatct	gacacaagt	ttaagagtat	ctgcctcaga	3720	
tgttgatgaa	ggtaataatg	gacttattca	ctattctata	ataaaaggaa	atgaagaaag	3780	
acagtttgct	atagacagta	cctctggtca	ggtaacacta	attggcaa	tagactatga	3840	
agcaacacct	gcctattccc	ttgtaattca	agcagtggat	tcaggggaca	tccccctcaa	3900	
ttcaacgtgt	actttaaata	ttgatatttt	agatgaaaat	gacaataccc	cttctttccc	3960	
taaatcaaca	ctctttgttg	atgttttgga	aaacatgaga	attggtgaac	tcgtgtcctc	4020	
tgttactgca	actgattccg	attcaggtga	caatgctgat	ttatattaca	gtattactgg	4080	
gactaacaac	cacggaactt	ttagcattag	cccaaact	gggagtattt	ttcttgccaa	4140	
aaaactggac	tttgaaacac	agtctttgta	taaattaaat	ataacagcaa	aagaccaagg	4200	
aagacctcct	cgttcatcta	caatgtcagt	ggttattcac	gtgagggact	ttaatgacaa	4260	
tcctcctagc	tttcctcctg	gagatatttt	caagtctatt	gttgagaaca	ttcccatcgg	4320	
tacatctgtc	atttcagtga	ctgcacatga	ccctgatgca	gacattaatg	gtcaactatc	4380	
ctacacaatc	attcaacaga	tgccaagagg	caaccacttt	accatagatg	aagtcaaagg	4440	
gactatatat	actaatgctg	aaatagatcg	ggaatttgct	aatctctttg	agttgactgt	4500	
aaaagccaat	gatcaagctg	tgccaataga	aactagacgg	tatgctttga	agaacgtgac	4560	
cattttgggt	acagacctca	atgacaatgt	cccaatgttt	atatcacaaa	acgcccttgc	4620	
tgagaccca	tcagctgtga	ttgggtccgt	tctgacaaca	attatggctg	ctgaccacaga	4680	
tgaagggtgct	aatggagaaa	tagagtatga	gatcatcaat	ggggacacag	acaccttcat	4740	
tgttgatcgt	tatagtggag	acctgagagt	ggcttcagcg	ttggtgcctt	cacagttgat	4800	
ctacaatctc	atagtttcag	caacagacct	tgggcctgaa	aggaggaaat	cgaccactga	4860	
attgaccatc	attcttcagg	gccttgatgg	acctgttttt	actcaacca	aatatataac	4920	

eolf-seq1								
tat	ttt	gaag	gaaggagaac	ccattggcac	aaacgtgata	tcaatagaag	cagctagccc	4980
cag	aggatct	gaggccccag	tggagtatta	tattgtttca	gttcgttgtg	aagaaaaaac		5040
tg	tggacgc	ctctttacta	ttggacgaca	tactggtata	attcagaccg	cagccattct		5100
gg	accgggag	caaggagcat	gtctttacct	ggtggatggt	tatgccatag	aaaaatcaac		5160
tg	cttttccc	agaacacaga	gagcagaggt	agaaataaca	cttcaggata	tcaatgacaa		5220
tcc	accagta	tttccaacgg	acatgctgga	tctcacggta	gaggagaaca	ttggagatgg		5280
ct	ctaagatt	atgcagctga	cagccatgga	tgctgatgag	ggtgcaaata	ctctcgtcac		5340
ata	cactatc	attagtggag	ctgatgatag	ttttcgcata	gaccagaat	ccggagatct		5400
ga	tagcaacc	aggcggttgg	acagggaacg	ccgctccaaa	tattcactgc	tagttcgtgc		5460
tg	atgatggt	cttcagtcct	cggatatgag	aattaatatc	actgtcagtg	atgtgaatga		5520
cc	atacacc	aaattttcca	gaccctgtga	ctcttttgac	attcctgagg	acacaatccc		5580
tg	gttctttg	gtagcagcca	tttagccac	ggatgatgac	tctggtgtga	atggagaaat		5640
tac	atatatt	gtgaatgaag	atgatgaaga	tggcatactt	ttcctgaatc	ctattactgg		5700
gg	tctttaat	ttgactcgat	tattagatta	tgaagtacag	caatattata	tcctcactgt		5760
tc	gagcagaa	gatgggtggg	gacaatttac	taccatcaga	gtttatttca	atattctaga		5820
tg	aaatgat	aatccaccta	ttttcagctt	gaattcatac	agcacatctt	taatggagaa		5880
tct	acctgtg	ggatctactg	ttcttgtgtt	taatgttact	gatgcagatg	atggcatcaa		5940
ct	ctcaattg	acttatagca	ttgcttcagg	tgatagcctt	gggcagttta	ctgttgacaa		6000
ga	atgggtgta	ctcaaagtcc	taaaagcttt	ggatcgggaa	agtcagtcct	tctacaactt		6060
gg	tgtttcaa	gtgcatgacc	tgccacagat	tccagcctcc	agattcacia	gcactgctca		6120
agt	ctccatt	at	tttgtttg	atgtaaata	taaccaccg	acatttcttt	cccctaaatt	6180
gac	atacatt	ccagaaaata	cacctattga	tactgttggt	ttcaaagctc	aagcaactga		6240
ccc	agatagt	ggcccaaaca	gctatattga	gtacactctg	ctgaaccctt	tggaacaa		6300
gt	cagtatt	gggaccattg	atggtgaagt	gaggctcact	ggagaactgg	acagagaaga		6360
agt	tttcta	tatactctaa	cagtgggtggc	tacagacaaa	ggtcaaccat	ctctctcttc		6420
at	ctacagag	gttgtagtta	tggtacttga	catcaatgat	aacaaccca	tctttgcaca		6480
ag	ctttgtat	aaagtggaga	ttaatgaaaa	cacacttact	ggaacagata	taatacaagt		6540
gt	tcgacga	gatggagatg	aaggcacia	tgacaggtt	cgctatggca	ttgttaatgg		6600
ta	ataccaat	caggaatttc	ggatagactc	tgtcacaggt	gccatcactg	tcgctaaacc		6660
tt	tggataga	gaaaagaccc	ctacctacca	tttaactgtt	caggcaacag	atcgaggcag		6720
ca	caccaga	actgatacct	ccacggtcag	cattgttcta	ctggatatta	atgactttgt		6780
tc	ctgtattt	gagctatctc	catattctgt	aaatgtccct	gagaatttag	ggacactacc		6840
ca	gaacaatt	cttcaggtgg	tggaagaga	tgatgatcga	ggatctaaca	gcaaactctc		6900
at	atgttctg	tttgggtgga	atgaagacia	tgcttttact	ctctcagcca	gtggagaact		6960

eolf-seq1						
tggagtaaca	cagagtctgg	atcgggaaac	aaaagagcgc	tttgtcttaa	tgattacagc	7020
tacagattca	ggatcccctg	ccttgactgg	aactggaaca	atcaacgtca	tagtagatga	7080
tgtcaatgac	aatgtcccca	catttgccag	taaagcgtat	ttcacaacaa	ttcctgagga	7140
tgcaccaact	ggaacagatg	ttttatttgt	aaatgcctca	gatgctgatg	cttcaaagaa	7200
tgcagttata	aggatcatcg	gtggaaactc	tcagttcacg	atcaacccat	cgacaggaca	7260
aatcatcacc	agcgcattgt	tagataggga	aacaaaagat	aattatactt	tggtagtggg	7320
ctgcagtgat	gcgggatccc	cagagcctct	ttccagttcc	accagtgtgc	ttgtcactgt	7380
gactgatgtc	aatgacaatc	caccaagatt	tcagcatcac	ccatatgtca	ctcacatccc	7440
atctcctact	cttccaggtt	cctttgtctt	tgcggttaca	gtcacagatg	ctgatattgg	7500
accaaattct	gaactgcatt	attctctttc	gggtagaaat	tctgaaaaat	ttcacattga	7560
cccactgagg	ggagccatta	tggccgccgg	accactaaac	ggagcttcag	aagtgcattt	7620
ttctgtgcat	gtaaaagatg	gtggctcatt	tccaaagaca	gattctacaa	cagtgcactgt	7680
tagattcgtg	aataaggccg	atttccctaa	agtgagagcc	aaagaacaaa	cgttcatggt	7740
tcctgaaaac	caaccagtca	gctctcttgt	caccaccatc	acaggatcct	ctttaagagg	7800
agaacctatg	tcatattata	tcgcaagtgg	gaatcttggc	aatactttcc	agattgatca	7860
gttaacaggg	caggtgtcta	ttagtcaacc	tctggatttt	gaaaagatac	aaaaatatgt	7920
tgtatggata	gaggccagag	acggtgggtt	ccctcctttc	tcctcttacg	agaaacttga	7980
tataacagta	ttagatgtca	atgataatgc	cccaattttt	aaggaagacc	catttatatc	8040
tgaaatattg	gaaaaccttt	cccctcgaaa	aatacttact	gtttcggcaa	tggacaagga	8100
cagtggaccc	aatggacagt	tagattatga	aattgttaat	ggcaacatgg	aaaatagttt	8160
cagtatcaat	catgctactg	gtgaaattag	aagcgttaga	cctttggaca	gggaaaaagt	8220
atctcattat	gtcctaacca	taaaatcatc	agacaaaggg	tccccgtctc	agagtacttc	8280
agtaaaagtc	atgattaaca	tttttagatga	aaatgataat	gcccctaggt	tttctcagat	8340
atttagtgcc	catgttcctg	aaaattcccc	cttaggatac	acagttaccc	gtgtcacaac	8400
ttctgatgaa	gacattggga	tcaatgcaat	tagtagatat	tctataatgg	atgcaagtct	8460
tccattttaca	attaatccca	gcacagggga	tattgtcata	agcagacctt	taaatagggg	8520
agatacagac	cgttacagaa	ttcgagtttc	cgcacatgat	tctgggtgga	ctgtaagtac	8580
agatgtcaca	atatttgtga	cagacatcaa	tgacaatgct	ccaagattta	gcagaacttc	8640
ctattattta	gattgccctg	aacttactga	gattggctcc	aaagtaactc	aggtattttgc	8700
aacagatcct	gatgagggat	caaatggaca	agtgttttat	ttcataaaaat	cccaatcaga	8760
atatttcagg	attaatgcca	ccactggaga	gattttcaat	aaacagatct	taaaatacca	8820
aaatgtcact	ggcttcagta	atgtgaatat	caacaggcat	agtttttatag	tgacatcttc	8880
agatcgaggt	aaaccttcct	taattagtga	gacaacagtt	accatcaata	tagtggacag	8940
taatgacaat	gcacctcaat	ttcttaaaaag	taaatatattc	actccagtca	ccaaaaatgt	9000

eolf-seql						
taaggttggt	acgaagttaa	tcagagttac	agcaatagat	gacaaagatt	ttggactgaa	9060
ttcagaagtg	gagtatttca	tttctaata	taaccattta	ggaaaattta	agttggacaa	9120
tgatacgggg	tggatttcag	tagcatcctc	cctgatttct	gacttgaacc	aaaacttttt	9180
tatcacagtc	actgcaaagg	ataagggaaa	ccctccactt	tcttcccaag	caactgttca	9240
cataactgtc	actgaggaaa	actaccatac	acctgaattc	tctcaaagcc	acatgagtgc	9300
aaccatccct	gagagccata	gcattgggtc	cattgtcaga	actgtttctg	caagagatag	9360
agatgcagcg	atgaatggct	tgattaagta	cagcatttct	tcaggaaatg	aagaaggcat	9420
ttttgcaatc	aattcttcta	caggtatatt	aacactagcc	aaagctcttg	attatgagct	9480
atgccagaaa	cacgaaatga	cgattagtgc	tatagatgga	ggatgggttg	caagaactgg	9540
ttactgcagt	gtgaccgtaa	atgtgattga	tgtgaatgat	aattctccag	tattcctctc	9600
tgatgactat	ttccctactg	ttttggaaaa	tgccccaagt	ggaacaacag	ttatccacct	9660
aaatgcaaca	gatgctgact	ctggaacaaa	tgctgtgatt	gcgtatactg	tacagtcatc	9720
tgacagtgac	ctctttgtca	ttgaccctaa	cacaggagtc	ataaccactc	aaggcttctt	9780
ggattttgaa	accaagcaga	gctaccatct	tactgtgaaa	gccttcaatg	tccccgatga	9840
ggaaagggtg	agctttgcc	ctgttaatat	acaattaaaa	gggacaaatg	aatatgtgcc	9900
ccgttttggt	tccaaacttt	actattttga	aatctcagaa	gcagctccta	aagggtactat	9960
tgttggagaa	gtgtttgcta	gcgaccgtga	tttgggcact	gatggggagg	tacactattt	10020
gatttttggt	aatagtcgaa	agaagggttt	ccagatcaat	aagaagactg	gacagattta	10080
tgtttctgga	attcttgatc	gagaaaaaga	agaaagggtg	tctttgaagg	tattggccaa	10140
gaactttggc	agcattagag	gtgcagatat	agatgaggtc	actgtaaatg	tcaccgtgct	10200
tgatgcaa	gacccacca	tttttactct	aaacatctac	agtgtgcaga	tcagtgaagg	10260
ggtcccaata	ggaactcatg	tgacctttgt	cagtgccttt	gactcagact	ccatccccag	10320
ctggagcagg	ttttcttact	tcacgggac	agggaaatgaa	aatgggtgcct	tttctattaa	10380
tccgcagaca	ggacagatca	ccgttactgc	agaattagat	cgagaaaccc	ttcccatcta	10440
taatctctca	gttttggtg	ttgattcagg	gacccctca	gctacaggta	gtgcctcttt	10500
attagtcacc	ctggaagata	taaatgataa	cgggcccag	ctgactgtca	gtgaaggaga	10560
agtcatggaa	aacaaacggc	caggcacttt	ggtgatgacc	cttcagtcca	ctgaccctga	10620
tctccctcca	aatcaaggct	cctttactta	ttacttgctg	agcacaggtc	ctgccaccag	10680
ttatttcagt	ctgagcactg	ctggagttct	gagcacaacc	agagagattg	acagagagca	10740
gattgcagac	ttctatctgt	ctgtgggttac	caaggattct	ggtgttcctc	aaatgtcttc	10800
cacaggaact	gtgcatatca	cagttataga	ccaaaatgac	aatccttcac	agtctcggac	10860
ggtggagata	tttgtttaatt	attatggtaa	cttgtttccc	ggtgggattt	taggctctgt	10920
gaagccacag	gatccagatg	tgtagacag	cttccactgc	tcccttactt	caggagttac	10980
cagcctcttc	agtattccag	ggggtacttg	tgatctgaat	tcccagccaa	ggtccacaga	11040

eolf-seq1						
tggcacgttt	gatctgactg	tccttagcaa	tgatggagtt	cacagcacag	tcacgagcaa	11100
catccgagtt	ttctttgctg	gattttccaa	tgccacagtg	gataacagca	tcttacttcg	11160
tctcggcgta	ccaacagtaa	aggacttctt	gaccaaccac	tatcttcatt	ttttacgcat	11220
tgccagctca	cagctgacag	gcttagggac	tgctgtgcaa	ctgtacagtg	catatgaaga	11280
gaacaataga	acgtttcttt	tggcagctgt	gaagcgaaat	cataatcagt	atgtgaatcc	11340
cagtggcgta	gccaccttct	ttgaaagcat	caaagagatc	cttctccggc	agagtggagt	11400
aaaggtggaa	tctgtggatc	atgactcctg	tgtgcatggc	ccatgtcaga	atggagggag	11460
ctgtctacga	agattggctg	tgagctccgt	attaaaaagc	cgtgagagtc	ttccagtcac	11520
catcgtggca	aatgaacctc	tgcagccttt	cttatgcaag	tgtctgccag	gatatgcggg	11580
tagctggtgt	gaaatagata	tagatgaatg	tcttccatca	ccttgccaca	gtggtggaac	11640
ctgtcacaa	ttagtgggag	gattttcatg	cagctgccca	gatggcttca	ctggtagggc	11700
gtgtgagaga	gatatcaatg	agtgcctgca	gagtccttgc	aagaatggtg	ccatctgccca	11760
gaattttcca	ggaagcttca	actgtgtttg	caaaactgga	tacacagggg	aaatgtgtga	11820
atcttcagtc	aattactgtg	aatgcaaccc	ctgctttaat	ggtgggttcct	gccaaagtgg	11880
tgtggattct	tattattgtc	attgtccatt	tgggtgtctt	ggaaaacact	gcgagttgaa	11940
cagttatgga	tttgaggagt	tatcatacat	ggaatttcca	agcttggacc	ccaataacaa	12000
ctatatattat	gtcaaatttg	ccacgattaa	aagtcatgcc	ttattgcttt	acaactatga	12060
caaccagaca	ggcgaccggg	ctgagttttt	ggcccttgaa	attgccgaag	aaagactaag	12120
attctcttat	aatttaggca	gtggtacata	taagctcacc	accatgaaga	aggtgtcaga	12180
tggacatttt	cacactgtga	ttgccaggag	agcaggaatg	gcagcctcct	taactgtgga	12240
ctcctgttct	gagaaccaag	agccaggata	ttgtactgtc	agtaatgtgg	cagtttcaga	12300
tgactggact	cttgatgttc	agccaaatag	agttacagtt	ggaggtatca	gatctctaga	12360
accaatcctt	cagagaagag	gacacgtgga	aagccatgat	tttggtgggt	gtataatgga	12420
gtttgcagtc	aatggaaggc	ctctggaacc	cagccaagct	ttggcagcac	aaggcatcct	12480
agatcaatgc	cctaggctgg	aaggcgcttg	tactcgcagc	ccatgccaac	atggtggcac	12540
atgtatggat	tactggatcat	ggcagcagtg	tcattgcaaa	gagggactca	ctgggaaata	12600
ctgtgaaaaa	tctgttactc	ctgacactgc	cttatcatta	gaaggcaaag	ggcgcttgga	12660
ctaccacatg	agtcagaatg	agaagcgggg	atatttggtta	aggcaaagct	tacgaggtgc	12720
catgttggag	ccttttggtg	tgaacagtct	ggaagtaaaa	tttaggacca	gaagcgagaa	12780
tggcgtttta	atccatatcc	aagaaagcag	caattacact	actgtgaaga	ttaagaatgg	12840
caaagtatat	tttacatccg	atgcaggaat	tgctgggaaa	gtggagagaa	atattcctga	12900
agtatatgtt	gcagacggcc	actggcacac	ttttctaatt	gggaaaaatg	gaacagcaac	12960
agtattgtct	gttgacagaa	tatataacag	agatattatc	caccctactc	aggacttcgg	13020
tggccttgat	gtgcttacta	tatcacttgg	aggaattcca	cccaatcaag	cacatcgaga	13080

						eolf-seql	
tgcccaaaca	gcagggttttg	atggctgcat	tgctttctatg	tggtatggtg	gagaaagtct		13140
tcctttcagc	gggaagcata	gcttggcctc	catctcaaaa	acagatccct	cagtgaagat		13200
tggctgccgt	ggcccgaaca	tttgtgccag	caaccctgc	tggggtgatt	tgctgtgcat		13260
taatcagtgg	tatgcctaca	ggtgtgtccc	tcctggggac	tgtgcctccc	acccgtgcca		13320
gaatggtggc	agctgtgagc	caggcctgca	ctccggcttc	acctgtagct	gccagactc		13380
gcacacggga	aggacctgtg	agatggtggt	ggcctgtctt	ggcgctcctt	gtcctcaggg		13440
gaaggtgtgc	aaagctggaa	gtcctgcggg	gcatgtctgt	gttctgagtc	agggccctga		13500
agagatctct	ctgcctttgt	gggctgtgcc	tgccatcgtg	ggcagctgcg	caaccgtctt		13560
ggccctcctg	gtccttagcc	tgatcctgtg	taaccagtgc	agggggaaga	aggccaaaaa		13620
tcccaaagag	gagaagaaac	cgaaggagaa	gaagaaaaag	ggaagtgaga	acgttgcttt		13680
tgatgaccct	gacaatatcc	ctccctatgg	ggatgacatg	actgtgagga	agcagcctga		13740
agggaacca	aaaccagata	tcattgaaag	ggaaaacccc	taccttatct	atgatgaaac		13800
tgatattcct	cacaactcag	aaaccatccc	cagcgccctt	ttggcatctc	cagagcagga		13860
gatagagcac	tatgacattg	acaacgccag	cagcatcgcc	ccttcggatg	cagacatcat		13920
tcaacactac	aagcagttcc	gcagccacac	acaaaaat	tcaatccaga	ggcacagtcc		13980
cctaggcttt	gcaaggcaat	cccccatgcc	cttaggagca	agcagtttga	cttaccagcc		14040
ttcatatggt	caaggtttga	gaaccagctc	cctaagccac	tcagcatgcc	caactcccaa		14100
ccctctgtct	cgacacagtc	cagccccctt	ctccaaatct	tctacgttct	atagaaacag		14160
cccagcaagg	gaattgcatc	ttcctataag	ggatggtaat	actttggaaa	tgcatggtga		14220
cacctgccaa	cctggcattt	tcaactatgc	cacaaggctg	ggaaggagaa	gcaagagtcc		14280
tcaggccatg	gcatcacatg	gttctagacc	agggagtcgc	ctaaagcagc	cgattgggca		14340
gattccactg	gaatcttctc	ctccagtcgg	actttctatt	gaagaagtgg	agaggctcaa		14400
cacacctcgc	cctagaaacc	caagtatctg	cagtgcagac	catgggaggt	cttcttcaga		14460
ggaggactgc	agaaggccac	tgtctagaac	aaggaatcca	gcggatggca	ttccagctcc		14520
agaatcctct	tctgatagtg	actcccatga	atctttcact	tgctcagaaa	tggaatatga		14580
cagggagaag	ccaatggtat	atacttccag	aatgccc aaa	ttatctcaag	tcaatgaatc		14640
tgatgcagat	gatgaagata	attatggagc	cagactgaag	cctcgaaggt	accacggtcg		14700
cagggccgag	ggaggacctg	tgggcacca	ggcagcagca	ccaggcactg	ctgacaacac		14760
actgccc atg	aagctagggc	agcaagcagg	gactttcaac	tgggacaacc	ttttgaactg		14820
gggccctggc	tttggccatt	atgtagatgt	ttttaagat	ttggcatctc	ttccagaaaa		14880
agcagcagca	aatgaagaag	gcaaagctgg	gacaactaaa	ccagtcccca	aagatgggga		14940
agcagaacag	tatgtgtgaa	gtttatgtac	tggcactata	aaatataaaa	acaagaaata		15000
atactcaaac	cattgtaaag	ttgctgacta	ggttgggtca	catttgaaaa	acaggccagt		15060
atggactagt	ggtggaggga	aaactttaaa	aataataacc	acaatgctgc	tgaaacagac		15120

eolf-seq1

tcacaacaac	tcttaattta	aacatgtgtg	gttgaattta	tttccctgca	tgcattgtgt	15180
tttgtaacta	gttatgtggc	atgcagcatt	tggaataatt	ttcttattta	ccagtgtttg	15240
atttgtgatt	tttaaaaatt	gataccttta	ccattgcaga	aaagaacttg	tgctttccca	15300
gtggcgtatg	tgtattgttt	caactgtatt	attataatta	tattttgcat	tgcaagattc	15360
ttgatgttaa	accaatcctt	gtaaagtgtg	aaaaggaacc	ctcctatcgt	ggaatgaaag	15420
attaagtata	ttaacacttt	tcagaatgat	agtttctgtg	tttgatgttg	ctcagaaatg	15480
tctcagtatt	tgagtaagtt	ttacatgaca	gtgggtactg	aaattaagtc	attttgttca	15540
gcactttaac	gctttcttat	agaattgtct	taaaacttct	ggatccttga	gcaaagtatt	15600
atagtctcct	gactttcatg	aggcttccat	taggaacaga	atgattgcat	gttgtcccca	15660
gaacactgcc	accttgctat	gcgaatgatg	ttctcagcag	cacttctaag	aaacactcct	15720
aaaagttatt	tattgaaaat	ttttcgtatg	cttttaatat	tttaaagaat	tgacctaaag	15780
aaagcttatg	attggactta	ttttccaacc	agataacatt	tactctaagt	accagttttt	15840
tataatttat	atgaaatcag	atttcaacac	ttactttgtc	attttgtaga	tcattttttt	15900
aaaatactgt	gtaaaaactt	tttttacacc	taagctgtgt	ttttgatact	gatattttcc	15960
tatgctgaat	agttttctta	ctttcagggg	aggtaaagaa	atactttttt	tatattttgt	16020
acttatgtaa	cattcatatt	tttctcattt	tgatatttgt	aacatactgt	atgcttttcta	16080
cttgtaaagt	tcaacaatag	aattaaaata	tttattttaa	ata		16123

<210> 6
 <211> 9669
 <212> DNA
 <213> Homo sapiens

<400> 6	
atggtaacaa	cggtagtggc agtgggtgat accttagctc aaccattagc tgcagctgaa 60
gtgtttattg	tagaaataac acttcaggat atcaatgaca atccaccagt atttccaacg 120
gacatgctgg	atctcacggg agaggagaac attggagatg gctctaagat tatgcagctg 180
acagccatgg	atgctgatga ggggtgcaat gctctcgtca catacactat cattagtgga 240
gctgatgata	gttttcgcat cgaccagaa tccggagatc tgatagcaac caggcggttg 300
gacaggggaa	gccgctccaa atattcactg ctagttcgtg ctgatgatgg tcttcagtcc 360
tcggatatga	gaattaatat cactgtcagt gatgtgaatg accatacacc caaattttcc 420
agaccctgtg	actcttttga cattcctgag gacacaatcc ctgggttcttt ggtagcagcc 480
attttagcca	cggatgatga ctctgggtgtg aatggagaaa ttacatatat tgtgaatgaa 540
gatgatgaag	atggcatcct tttcctgaat cctattactg gggctctttaa ttgactcga 600
ttattagatt	atgaagtaca gcaatattat atcctcactg ttcgagcaga agatgggtggg 660
ggacaattta	ctaccatcag agtttatttc aatattctag atgtaaatga taatccacct 720
attttcagct	tgaattcata cagcacatct ttaatggaga atctacctgt gggatctact 780
gttcttgtgt	ttaatgttac tgatgcagat gatggcatca actctcaatt gacttatagc 840

eolf-seql

attgcttcag	gtgatagcct	tgggcagttt	actgttgaca	agaatggtgt	actcaaagtc	900
ctaaaagctt	tggatcgga	aagtcagtcc	ttctacaact	tggttgttca	agtgcattgac	960
ctgccacaga	ttccagcctc	cagattcaca	agcactgctc	aagtctccat	tattttgttg	1020
gatgtaaatg	ataaccacc	gacatttctt	tcccctaaat	tgacatacat	tccagaaaat	1080
acacctattg	atactgttgt	tttcaaagct	caagcaactg	accagatag	tggcccaaac	1140
agctatattg	agtacactct	gctgaaccct	ttgggaaaca	agttcagtat	tgggaccatt	1200
gatggtgaag	tgaggctcac	tggagaactg	gacagagaag	aagtttctaa	ttatactcta	1260
acagtgggtg	ctacagacaa	aggtcaacca	tctctctctt	catctacaga	ggttgtagtt	1320
atggtacttg	acatcaatga	taacaacccc	atctttgcac	aagctttgta	taaagtggag	1380
attaatgaaa	acacacttac	tggaacagat	ataatacaag	tgttcgcagc	agatggagat	1440
gaaggcacia	atggacaggt	tcgctatggc	attgttaatg	gtaataccaa	tcaggaattt	1500
cggatagact	ctgtcacagg	tgccatcact	gtcgtctaac	ctttggatag	agaaaagacc	1560
cctacctacc	atttaactgt	tcaggcaaca	gatcgaggca	gcacaccag	aactgatacc	1620
tccacggtca	gcattgttct	actggatatt	aatgactttg	ttcctgtatt	tgagctatct	1680
ccatattctg	taaatgtccc	tgagaattta	gggacactac	ccagaacaat	tcttcagggtg	1740
gtggcaagag	atgatgatcg	aggatctaac	agcaaactct	catatgttct	gtttggtggt	1800
aatgaagaca	atgcttttac	tctctcagcc	agtggagaac	ttggagtaac	acagagtctg	1860
gatcgggaaa	caaaagagcg	ctttgtctta	atgattacag	ctacagattc	aggatccctt	1920
gccttgactg	gaactggaac	aatcaacgtc	atagtagatg	atgtcaatga	caatgtcccc	1980
acatttgcca	gtaaagcgta	tttcacaaca	attcctgagg	atgcaccaac	tggaacagat	2040
gttttattgg	taaatgcctc	agatgctgat	gcttcaaaga	atgcagttat	aaggatcatc	2100
ggtggaaact	ctcagttcac	gatcaaccca	tcgacaggac	aaatcatcac	cagcgcattg	2160
ttagataggg	aaacaaaaga	taattatact	ttggtagtgg	tctgcagtga	tgcgggatcc	2220
ccagagcctc	tttccagttc	caccagtgtg	cttgtcactg	tgactgatgt	caatgacaat	2280
ccaccaagat	ttcagcatca	cccatatgtc	actcacatcc	catctcctac	tcttccagggt	2340
tcctttgtct	ttgcggttac	agtcacagat	gctgatattg	gaccaaattc	tgaactgcat	2400
tattctcttt	cgggtagaaa	ttctgaaaaa	tttcacattg	accactgag	gggagccatt	2460
atggccgccc	gaccactaaa	cggagcttca	gaagtgcacat	tttctgtgca	tgtaaaagat	2520
ggtggctcat	ttcaaagac	agattctaca	acagtgcactg	ttagattcgt	gaataaggcc	2580
gatttcccta	aagtgcagac	caaagaacaa	acgttcatgt	ttcctgaaaa	ccaaccagtc	2640
agctctcttg	tcaccacat	cacaggatcc	tctttaagag	gagaacctat	gtcatattat	2700
atcgcaagtg	ggaatcttgg	caatactttc	cagattgatc	agttaacagg	gcagggtgtct	2760
attagtcaac	ctctggattt	tgaaaagata	caaaaatatg	ttgtatggat	agaggccaga	2820
gacggtgggt	tccctccttt	ctcctcttac	gagaaacttg	atataacagt	attagatgtc	2880

eolf-seql

aatgataatg	ccccaatttt	taaggaagac	ccatttatat	ctgaaatatt	ggaaaacctt	2940
tcccctcgaa	aaatacttac	tgtttcggca	atggacaagg	acagtggacc	caatggacag	3000
ttagattatg	aaattgttaa	tggcaacatg	gaaaatagtt	tcagtatcaa	tcattgctact	3060
ggtgaaatta	gaagcgtag	acctttggac	agggaaaaag	tatctcatta	tgtcctaacc	3120
ataaaatcat	cagacaaagg	gtccccgtct	cagagtactt	cagtaaaagt	catgattaac	3180
attttagatg	aaaatgataa	tgcccctagg	ttttctcaga	tatttagtgc	ccatgttcct	3240
gaaaattccc	ccttaggata	cacagttacc	cgtgtcacaa	cttctgatga	agacattggg	3300
atcaatgcaa	ttagtagata	ttctataatg	gatgcaagtc	ttccatttac	aattaatccc	3360
agcacagggg	atattgtcat	aagcagacct	ttaaataagg	aagatacaga	ccgttacaga	3420
attcgagttt	ccgcacatga	ttctgggttg	actgtaagta	cagatgtcac	aatatttgtg	3480
acagacatca	atgacaatgc	tccaagattt	agcagaactt	cctattattt	agattgccct	3540
gaacttactg	agattggctc	caaagtaact	caggtatttg	caacagatcc	tgatgaggga	3600
tcaaattggac	aagtgtttta	tttcataaaa	tccaatcag	aatatttcag	gattaatgcc	3660
accactggag	agattttcaa	taaacagatc	taaaatacc	aaaatgtcac	tggcttcagt	3720
aatgtgaata	tcaacaggca	tagttttata	gtgacatctt	cagatcgagg	taaaccttcc	3780
ttaattagtg	agacaacagt	taccatcaat	atagtggaca	gtaatgacaa	tgcacctcaa	3840
tttcttaaaa	gtaaataattt	cactccagtc	acaaaaaatg	ttaaggtttg	tacgaagtta	3900
atcagagtta	cagcaataga	tgacaaagat	tttgactga	attcagaagt	ggagtatttc	3960
atttctaattg	ataaccattt	aggaaaattt	aagttggaca	atgatacggg	gtggatttca	4020
gtagcatcct	ccctgatttc	tgacttgaac	caaaactttt	ttatcacagt	cactgcaaag	4080
gataagggaa	accctccact	ttcttcccaa	gcaactgttc	acataactgt	cactgaggaa	4140
aactaccata	cacctgaatt	ctctcaaagc	cacatgagtg	caaccatccc	tgagagccat	4200
agcattgggt	ccattgtcag	aactgtttct	gcaagagata	gagatgcagc	gatgaatggc	4260
ttgattaagt	acagcatttc	ttcaggaaat	gaagaaggca	tttttgcaat	caattcttct	4320
acaggtatat	taacactagc	caaagctctt	gattatgagc	tatgccagaa	acacgaaatg	4380
acgattagtg	ctatagatgg	aggatgggtt	gcaagaactg	gttactgcag	tgtgaccgta	4440
aatgtgattg	atgtgaatga	taattctcca	gtattcctct	ctgatgacta	tttccctact	4500
gttttgaaa	atgcccgaag	tgaacaaca	gttatccacc	taaatgcaac	agatgctgac	4560
tctggaacaa	atgctgtgat	tgcgtatact	gtacagtcac	ctgacagtga	cctctttgtc	4620
attgacccta	acacaggagt	cataaccact	caaggcttct	tggattttga	aaccaagcag	4680
agctaccatc	ttactgtgaa	agccttcaat	gtccccgatg	aggaaagggtg	tagctttgcc	4740
actgttaata	tacaattaaa	agggacaaat	gaatatgtgc	cccgttttgt	ttccaaactt	4800
tactattttg	aaatctcaga	agcagctcct	aaaggtacta	ttgttggaga	agtgtttgct	4860
agcgaccgtg	atttgggcac	tgatggggag	gtacactatt	tgatttttgg	taatagtcga	4920

eolf-seq1

aagaaggggtt	tccagatcaa	taagaagact	ggacagat	ttt	atgtttctgg	aattcttgat	4980
cgagaaaaag	aagaaaggg	gtctttgaag	gtattggcca	agaactttgg	cagcattaga		5040
ggtgcagata	tagatgaggt	caactgtaa	gtcaccgtgc	ttgatgcaa	tgaccacccc		5100
atctttactc	taaacatcta	cagtgtgcag	atcagtgaag	gggtcccaat	aggaactcat		5160
gtgacctttg	tcagtgcctt	tgactcagac	tccatcccca	gctggagcag	gttttcttac		5220
ttcatcggat	cagggaaatga	aaatgggtgcc	ttttctatta	atccgcagac	aggacagatc		5280
accgttactg	cagaattaga	tcgagaaacc	cttcccatct	ataatctctc	agttttggct		5340
gttgattcag	ggacccccctc	agctacaggt	agtgcctctt	tattagtcac	cctggaagat		5400
ataaatgata	acggggcccat	gctgactgtc	agtgaaggag	aagtcatgga	aaacaaacgg		5460
ccaggcactt	tggtgatgac	ccttcagtcc	actgaccctg	atctccctcc	aaatcaaggt		5520
ccctttactt	attacttgct	gagcacaggt	cctgccacca	gttattttcag	tctgagcact		5580
gctggagttc	tgagcacaac	cagagagatt	gacagagagc	agattgcaga	cttctatctg		5640
tctgtgggta	ccaaggattc	tggtgttcct	caaatgtctt	ccacaggaac	tgtgcatatc		5700
acagttatag	acaaaaatga	caatccttca	cagtctcgga	cggtggagat	atttggtaat		5760
tattatggta	acttgtttcc	cggtgggatt	ttaggtctctg	tgaagccaca	ggatccagat		5820
gtgtagaca	gcttccactg	ctcccttact	tcaggagtta	ccagcctctt	cagtattcca		5880
gggggtactt	gtgatctgaa	ttcccagcca	aggtccacag	atggcacggt	tgatctgact		5940
gtccttagca	atgatggagt	tcacagcaca	gtcacgagca	acatccgagt	tttctttgct		6000
ggattttcca	atgccacagt	ggataacagc	atcttacttc	gtctcggcgt	accaacagta		6060
aaggacttct	tgaccaacca	ctatcttcat	tttttacgca	ttgccagctc	acagctgaca		6120
ggcttaggga	ctgctgtgca	actgtacagt	gcataatgaag	agaacaatag	aacgtttctt		6180
ttggcagctg	tgaagcgaaa	tcataatcag	tatgtgaatc	ccagtggcgt	agccaccttc		6240
tttgaaagca	tcaaagagat	ccttctccgg	cagagtggag	taaaggtgga	atctgtggat		6300
catgactcct	gtgtgcatgg	cccatgtcag	aatggagggg	gctgtctacg	aagattggct		6360
gtgagctccg	tattaaaaag	ccgtgagagt	cttccagtca	tcacgtggc	aaatgaacct		6420
ctgcagcctt	tcttatgcaa	gtgtctgcca	ggatatgcgg	gtagctgggtg	tgaaatagat		6480
atagatgaat	gtcttccatc	accttgccac	agtgggtggaa	cctgtcacia	tttagtggga		6540
ggattttcat	gcagctgccc	agatggcttc	actggtaggg	cgtgtgagag	agatatcaat		6600
gagtgccctg	agagtccttg	caagaatgg	gccatctgcc	agaattttcc	aggaagcttc		6660
aactgtgttt	gcaaaactgg	atacacaggt	gtctttggaa	aacactgcga	gttgaacagt		6720
tatggatttg	aggagtattc	atacatggaa	tttccaagct	tggaccccaa	taacaactat		6780
atttatgtca	aatttgccac	gattaaaagt	catgccttat	tgctttacaa	ctatgacaac		6840
cagacaggcg	accgggctga	gtttttggcc	cttgaaattg	ccgaagaaag	actaagattc		6900
tcttataatt	taggcagtgg	tacatataag	ctcaccacca	tgaagaaggt	gtcagatgga		6960

eolf-seql

cattttcaca	ctgtgattgc	caggagagca	ggaatggcag	cctccttaac	tgtggactcc	7020
tgttctgaga	accaagagcc	aggatattgt	actgtcagta	atgtggcagt	ttcagatgac	7080
tggactcttg	atgttcagcc	aaatagagtt	acagttggag	gtatcagatc	tctagaacca	7140
atccttcaga	gaagaggaca	cgtggaaagc	catgattttg	ttgggtgtat	aatggagttt	7200
gcagtcaatg	gaaggcctct	ggaaccagc	caagctttgg	cagcacaagg	catcctagat	7260
cagtatggcg	attttatttc	ttactgtttt	aaagaaaaaa	aatgcaaaaa	agtatgcttc	7320
actgttactc	ctgacactgc	cttatcatta	gaaggcaaag	ggcgcttgga	ctaccacatg	7380
agtcagaatg	agaagcggga	atatttggtt	aggcaaagct	tacgaggtgc	catgtttggag	7440
ccttttggtg	tgaacagtct	ggaagtaaaa	tttaggacca	gaagcgagaa	tggcgtttta	7500
atccatatcc	aagaaagcag	caattacact	actgtgaaga	ttaagaatgg	caaagtatat	7560
tttacaatcc	atgcaggaat	tgctgggaaa	gtggagagaa	atattcctga	agtatatgtt	7620
gcagacggcc	actggcacac	ttttctaatt	gggaaaaatg	gaacagcaac	agtattgtct	7680
gttgacagaa	tatataacag	agatattatc	caccctactc	aggacttcgg	tggccttgat	7740
gtgcttacta	tatcacttgg	aggaattcca	cccaatcaag	cacatcgaga	tgcccaaaca	7800
gcaggttttg	atggctgcat	tgcttctatg	tggatgggtg	gagaaagtct	tcctttcagc	7860
gggaagcata	gcttggcctc	catctcaaaa	acagatccct	cagtgaagat	tggctgccgt	7920
ggcccgaaca	tttgtgccag	caaccctgc	tggggtgatt	tgctgtgcat	taatcagtgg	7980
tatgcctaca	ggtgtgtccc	tcctggggac	tgtgcctccc	accgtgccca	gaatggtggc	8040
agctgtgagc	caggcctgca	ctccggcttc	acctgtagct	gccagactc	gcacacggga	8100
aggacctgtg	agatgggtgt	ggcctgtctt	ggcgctcctc	gtcctcaggg	gaagggtgtgc	8160
aaagctggaa	gtcctgcggg	gcatgtctgt	gttctgagtc	agggccctga	agagatctct	8220
ctgcctttgt	gggctgtgcc	tgccatcggt	ggcagctgcg	caaccgtctt	ggccctcctg	8280
gtccttagcc	tgatcctgtg	taaccagtgc	agggggaaga	aggccaaaaa	tcccaaagag	8340
gagaagaaac	cgaaggagaa	gaagaaaaag	ggaagtgaga	acgttgcttt	tgatgaccct	8400
gacaatatcc	ctccctatgg	ggatgacatg	actgtgagga	agcagcctga	agggaaccca	8460
aaaccagata	tcattgaaag	ggaaaacccc	taccttatct	atgatgaaac	tgatattcct	8520
cacaactcag	aaaccatccc	cagcgcccct	ttggcatctc	cagagcagga	gatagagcac	8580
tatgacattg	acaacgccag	cagcatcgcc	ccttcggatg	cagacatcat	tcaacactac	8640
aagcagttcc	gcagccacac	acaaaaattt	tcaatccaga	ggcacagtcc	cctaggcttt	8700
gcaaggcaat	cccccatgcc	cttaggagca	agcagtttga	cttaccagcc	ttcatatggt	8760
caaggtttga	gaaccagctc	cctaagccac	tcagcatgcc	caactcccaa	ccctctgtct	8820
cgacacagtc	cagccccctt	ctccaaatct	tctacgttct	atagaaacag	cccagcaagg	8880
gaattgcatc	ttcctataag	ggatggtaat	actttggaaa	tgcatggtga	cacctgccaa	8940
cctggcattt	tcaactatgc	cacaaggctg	ggaaggagaa	gcaagagtcc	tcaggccatg	9000

eolf-seql

```

gcatcacatg gttctagacc agggagtcgc ctaaagcagc cgattgggca gattccactg      9060
gaatcttctc ctccagtcgg actttctatt gaagaagtgg agaggctcaa cacacctcgc      9120
cctagaaacc caagtatctg cagtgcagac catgggaggt cttcttcaga ggaggactgc      9180
agaaggccac tgtctagaac aaggaatcca gcggatggca ttccagctcc agaatcctct      9240
tctgatagtg actcccatga atctttcact tgctcagaaa tggaatatga cagggagaag      9300
ccaatggtat atacttccag aatgccc aaa ttatctcaag tcaatgaatc tgatgcagat      9360
gatgaagata attatggagc cagactgaag cctcgaaggt accacggctg cagggccgag      9420
ggaggacctg tgggcaccca ggcagcagca ccaggcactg ctgacaacac actgcccattg      9480
aagctagggc agcaagcagg gactttcaac tgggacaacc ttttgaactg gggccctggc      9540
tttggccatt atgtagatgt ttttaaagat ttggcatctc ttccagaaaa agcagcagca      9600
aatgaagaag gcaaagctgg gacaactaaa ccagtcacca aagatgggga agcagaacag      9660
tatgtgtga                                     9669

```

<210> 7
 <211> 551
 <212> DNA
 <213> Homo sapiens

```

<400> 7
gtgatgttca cagaaaattht gaaatattta ttagctagac tagttgtatt ctttccaaca      60
ttgttgtatg atctttcttg taacgttttc ttgcatttct acctcagttt ttttaattata      120
gtaaataga gttacgatat taaaactata tgacatatcc ctatttctgc tttctgcttt      180
agttatagga tcatcggtgg aaactctcag ttcacgatca acccatcgac aggacaaatc      240
atcaccagcg cattgttaga tagggaaaca aaagataatt atactttggt agtggctctgc      300
agtgatgcgg gatccccaga gcctctttcc agttccacca gtgtgcttgt cactgtgact      360
gatgtcaatg acaatccacc aagatttcag catcacccat atgtcactca catcccatct      420
cctactcttc cagggttcctt tgtctttgcg gttacagtca cagatgctga tattggacca      480
aattctgaac tgcatatttc tctttcgggt agaaattctg aaaaatttca cattgaccca      540
ctgagggggag c                                     551

```

<210> 8
 <211> 4981
 <212> PRT
 <213> Homo sapiens

<400> 8

Met Asp Leu Ala Pro Asp Arg Ala Thr Gly Arg Pro Trp Leu Pro Leu
 1 5 10 15

His Thr Leu Ser Val Ser Gln Leu Leu Arg Val Phe Trp Leu Leu Ser
 20 25 30

eolf-seql

Leu Leu Pro Gly Gln Ala Trp Val His Gly Ala Glu Pro Arg Gln Val
35 40 45

Phe Gln Val Leu Glu Glu Gln Pro Pro Gly Thr Leu Val Gly Thr Ile
50 55 60

Gln Thr Arg Pro Gly Phe Thr Tyr Arg Leu Ser Glu Ser His Ala Leu
65 70 75 80

Phe Ala Ile Asn Ser Ser Thr Gly Ala Leu Tyr Thr Thr Ser Thr Ile
85 90 95

Asp Arg Glu Ser Leu Pro Ser Asp Val Ile Asn Leu Val Val Leu Ser
100 105 110

Ser Ala Pro Thr Tyr Pro Thr Glu Val Arg Val Leu Val Arg Asp Leu
115 120 125

Asn Asp Asn Ala Pro Val Phe Pro Asp Pro Ser Ile Val Val Thr Phe
130 135 140

Lys Glu Asp Ser Ser Ser Gly Arg Gln Val Ile Leu Asp Thr Ala Thr
145 150 155 160

Asp Ser Asp Ile Gly Ser Asn Gly Val Asp His Arg Ser Tyr Arg Ile
165 170 175

Ile Arg Gly Asn Glu Ala Gly Arg Phe Arg Leu Asp Ile Thr Leu Asn
180 185 190

Pro Ser Gly Glu Gly Ala Phe Leu His Leu Val Ser Lys Gly Gly Leu
195 200 205

Asp Arg Glu Val Thr Pro Gln Tyr Gln Leu Leu Val Glu Val Glu Asp
210 215 220

Lys Gly Glu Pro Lys Arg Arg Gly Tyr Leu Gln Val Asn Val Thr Val
225 230 235 240

Gln Asp Ile Asn Asp Asn Pro Pro Val Phe Gly Ser Ser His Tyr Gln
245 250 255

Ala Gly Val Pro Glu Asp Ala Val Val Gly Ser Ser Val Leu Gln Val
260 265 270

Ala Ala Ala Asp Ala Asp Glu Gly Thr Asn Ala Asp Ile Arg Tyr Arg
275 280 285

Leu Gln Asp Glu Gly Thr Pro Phe Gln Met Asp Pro Glu Thr Gly Leu
290 295 300

eolf-seql

Ile Thr Val Arg Glu Pro Leu Asp Phe Glu Ala Arg Arg Gln Tyr Ser
305 310 315 320

Leu Thr Val Gln Ala Met Asp Arg Gly Val Pro Ser Leu Thr Gly Arg
325 330 335

Ala Glu Ala Leu Ile Gln Leu Leu Asp Val Asn Asp Asn Asp Pro Val
340 345 350

Val Lys Phe Arg Tyr Phe Pro Ala Thr Ser Arg Tyr Ala Ser Val Asp
355 360 365

Glu Asn Ala Gln Val Gly Thr Val Val Ala Leu Leu Thr Val Thr Asp
370 375 380

Ala Asp Ser Pro Ala Ala Asn Gly Asn Ile Ser Val Gln Ile Leu Gly
385 390 395 400

Gly Asn Glu Gln Arg His Phe Glu Val Gln Ser Ser Lys Val Pro Asn
405 410 415

Leu Ser Leu Ile Lys Val Ala Ser Ala Leu Asp Arg Glu Arg Ile Pro
420 425 430

Ser Tyr Asn Leu Thr Val Ser Val Ser Asp Asn Tyr Gly Ala Pro Pro
435 440 445

Gly Ala Ala Val Gln Ala Arg Ser Ser Val Ala Ser Leu Val Ile Phe
450 455 460

Val Asn Asp Ile Asn Asp His Pro Pro Val Phe Ser Gln Gln Val Tyr
465 470 475 480

Arg Val Asn Leu Ser Glu Glu Ala Pro Pro Gly Ser Tyr Val Ser Gly
485 490 495

Ile Ser Ala Thr Asp Gly Asp Ser Gly Leu Asn Ala Asn Leu Arg Tyr
500 505 510

Ser Ile Val Ser Gly Asn Gly Leu Gly Trp Phe His Ile Ser Glu His
515 520 525

Ser Gly Leu Val Thr Thr Gly Ser Ser Gly Gly Leu Asp Arg Glu Leu
530 535 540

Ala Ser Gln Ile Val Leu Asn Ile Ser Ala Arg Asp Gln Gly Val His
545 550 555 560

Pro Lys Val Ser Tyr Ala Gln Leu Val Val Thr Leu Leu Asp Val Asn
565 570 575

eolf-seql

Asp Glu Lys Pro Val Phe Ser Gln Pro Glu Gly Tyr Asp Val Ser Val
580 585 590

Val Glu Asn Ala Pro Thr Gly Thr Glu Leu Leu Met Leu Arg Ala Thr
595 600 605

Asp Gly Asp Leu Gly Asp Asn Gly Thr Val Arg Phe Ser Leu Gln Glu
610 615 620

Ala Glu Thr Asp Arg Arg Ser Phe Arg Leu Asp Pro Val Ser Gly Arg
625 630 635 640

Leu Ser Thr Ile Ser Ser Leu Asp Arg Glu Glu Gln Ala Phe Tyr Ser
645 650 655

Leu Leu Val Leu Ala Thr Asp Leu Gly Ser Pro Pro Gln Ser Ser Met
660 665 670

Ala Arg Ile Asn Val Ser Leu Leu Asp Ile Asn Asp Asn Ser Pro Val
675 680 685

Phe Tyr Pro Val Gln Tyr Phe Ala His Ile Lys Glu Asn Glu Pro Gly
690 695 700

Gly Ser Tyr Ile Thr Thr Val Ser Ala Thr Asp Pro Asp Leu Gly Thr
705 710 715 720

Asn Gly Thr Val Lys Tyr Ser Ile Ser Ala Gly Asp Arg Ser Arg Phe
725 730 735

Gln Val Asn Ala Gln Ser Gly Val Ile Ser Thr Arg Met Ala Leu Asp
740 745 750

Arg Glu Glu Lys Thr Ala Tyr Gln Leu Gln Ile Val Ala Thr Asp Gly
755 760 765

Gly Asn Leu Gln Ser Pro Asn Gln Ala Ile Val Thr Ile Thr Val Leu
770 775 780

Asp Thr Gln Asp Asn Pro Pro Val Phe Ser Gln Val Ala Tyr Ser Phe
785 790 795 800

Val Val Phe Glu Asn Val Ala Leu Gly Tyr His Val Gly Ser Val Ser
805 810 815

Ala Ser Thr Met Asp Leu Asn Ser Asn Ile Ser Tyr Leu Ile Thr Thr
820 825 830

Gly Asp Gln Lys Gly Met Phe Ala Ile Asn Gln Val Thr Gly Gln Leu
835 840 845

eolf-seql

Thr Thr Ala Asn Val Ile Asp Arg Glu Glu Gln Ser Phe Tyr Gln Leu
850 855 860

Lys Val Val Ala Ser Gly Gly Thr Val Thr Gly Asp Thr Met Val Asn
865 870 875 880

Ile Thr Val Lys Asp Leu Asn Asp Asn Ser Pro His Phe Leu Gln Ala
885 890 895

Ile Glu Ser Val Asn Val Val Glu Asn Trp Gln Ala Gly His Ser Ile
900 905 910

Phe Gln Ala Lys Ala Val Asp Pro Asp Glu Gly Val Asn Gly Met Val
915 920 925

Leu Tyr Ser Leu Lys Gln Asn Pro Lys Asn Leu Phe Ala Ile Asn Glu
930 935 940

Lys Asn Gly Thr Ile Ser Leu Leu Gly Pro Leu Asp Val His Ala Gly
945 950 955 960

Ser Tyr Gln Ile Glu Ile Leu Ala Ser Asp Met Gly Val Pro Gln Leu
965 970 975

Ser Ser Ser Val Ile Leu Thr Val Tyr Val His Asp Val Asn Asp Asn
980 985 990

Ser Pro Val Phe Asp Gln Leu Ser Tyr Glu Val Thr Leu Ser Glu Ser
995 1000 1005

Glu Pro Val Asn Ser Arg Phe Phe Lys Val Gln Ala Ser Asp Lys
1010 1015 1020

Asp Ser Gly Ala Asn Gly Glu Ile Ala Tyr Thr Ile Ala Glu Gly
1025 1030 1035

Asn Thr Gly Asp Ala Phe Gly Ile Phe Pro Asp Gly Gln Leu Tyr
1040 1045 1050

Ile Lys Ser Glu Leu Asp Arg Glu Leu Gln Asp Arg Tyr Val Leu
1055 1060 1065

Met Val Val Ala Ser Asp Arg Ala Val Glu Pro Leu Ser Ala Thr
1070 1075 1080

Val Asn Val Thr Val Ile Leu Glu Asp Val Asn Asp Asn Arg Pro
1085 1090 1095

Leu Phe Asn Ser Thr Asn Tyr Thr Phe Tyr Phe Glu Glu Glu Gln
1100 1105 1110

eolf-seql

Arg	Ala	Gly	Ser	Phe	Val	Gly	Lys	Val	Ser	Ala	Val	Asp	Lys	Asp
	1115					1120					1125			
Phe	Gly	Pro	Asn	Gly	Glu	Val	Arg	Tyr	Ser	Phe	Glu	Met	Val	Gln
	1130					1135					1140			
Pro	Asp	Phe	Glu	Leu	His	Ala	Ile	Ser	Gly	Glu	Ile	Thr	Asn	Thr
	1145					1150					1155			
His	Gln	Phe	Asp	Arg	Glu	Ser	Leu	Met	Arg	Arg	Arg	Gly	Thr	Ala
	1160					1165					1170			
Val	Phe	Ser	Phe	Thr	Val	Ile	Ala	Thr	Asp	Gln	Gly	Ile	Pro	Gln
	1175					1180					1185			
Pro	Leu	Lys	Asp	Gln	Ala	Thr	Val	His	Val	Tyr	Met	Lys	Asp	Ile
	1190					1195					1200			
Asn	Asp	Asn	Ala	Pro	Lys	Phe	Leu	Lys	Asp	Phe	Tyr	Gln	Ala	Thr
	1205					1210					1215			
Ile	Ser	Glu	Ser	Ala	Ala	Asn	Leu	Thr	Gln	Val	Leu	Arg	Val	Ser
	1220					1225					1230			
Ala	Ser	Asp	Val	Asp	Glu	Gly	Asn	Asn	Gly	Leu	Ile	His	Tyr	Ser
	1235					1240					1245			
Ile	Ile	Lys	Gly	Asn	Glu	Glu	Arg	Gln	Phe	Ala	Ile	Asp	Ser	Thr
	1250					1255					1260			
Ser	Gly	Gln	Val	Thr	Leu	Ile	Gly	Lys	Leu	Asp	Tyr	Glu	Ala	Thr
	1265					1270					1275			
Pro	Ala	Tyr	Ser	Leu	Val	Ile	Gln	Ala	Val	Asp	Ser	Gly	Thr	Ile
	1280					1285					1290			
Pro	Leu	Asn	Ser	Thr	Cys	Thr	Leu	Asn	Ile	Asp	Ile	Leu	Asp	Glu
	1295					1300					1305			
Asn	Asp	Asn	Thr	Pro	Ser	Phe	Pro	Lys	Ser	Thr	Leu	Phe	Val	Asp
	1310					1315					1320			
Val	Leu	Glu	Asn	Met	Arg	Ile	Gly	Glu	Leu	Val	Ser	Ser	Val	Thr
	1325					1330					1335			
Ala	Thr	Asp	Ser	Asp	Ser	Gly	Asp	Asn	Ala	Asp	Leu	Tyr	Tyr	Ser
	1340					1345					1350			
Ile	Thr	Gly	Thr	Asn	Asn	His	Gly	Thr	Phe	Ser	Ile	Ser	Pro	Asn
	1355					1360					1365			

eolf-seql

Thr	Gly 1370	Ser	Ile	Phe	Leu	Ala 1375	Lys	Lys	Leu	Asp	Phe 1380	Glu	Thr	Gln
Ser	Leu 1385	Tyr	Lys	Leu	Asn	Ile 1390	Thr	Ala	Lys	Asp	Gln 1395	Gly	Arg	Pro
Pro	Arg 1400	Ser	Ser	Thr	Met	Ser 1405	Val	Val	Ile	His	Val 1410	Arg	Asp	Phe
Asn	Asp 1415	Asn	Pro	Pro	Ser	Phe 1420	Pro	Pro	Gly	Asp	Ile 1425	Phe	Lys	Ser
Ile	Val 1430	Glu	Asn	Ile	Pro	Ile 1435	Gly	Thr	Ser	Val	Ile 1440	Ser	Val	Thr
Ala	His 1445	Asp	Pro	Asp	Ala	Asp 1450	Ile	Asn	Gly	Gln	Leu 1455	Ser	Tyr	Thr
Ile	Ile 1460	Gln	Gln	Met	Pro	Arg 1465	Gly	Asn	His	Phe	Thr 1470	Ile	Asp	Glu
Val	Lys 1475	Gly	Thr	Ile	Tyr	Thr 1480	Asn	Ala	Glu	Ile	Asp 1485	Arg	Glu	Phe
Ala	Asn 1490	Leu	Phe	Glu	Leu	Thr 1495	Val	Lys	Ala	Asn	Asp 1500	Gln	Ala	Val
Pro	Ile 1505	Glu	Thr	Arg	Arg	Tyr 1510	Ala	Leu	Lys	Asn	Val 1515	Thr	Ile	Leu
Val	Thr 1520	Asp	Leu	Asn	Asp	Asn 1525	Val	Pro	Met	Phe	Ile 1530	Ser	Gln	Asn
Ala	Leu 1535	Ala	Ala	Asp	Pro	Ser 1540	Ala	Val	Ile	Gly	Ser 1545	Val	Leu	Thr
Thr	Ile 1550	Met	Ala	Ala	Asp	Pro 1555	Asp	Glu	Gly	Ala	Asn 1560	Gly	Glu	Ile
Glu	Tyr 1565	Glu	Ile	Ile	Asn	Gly 1570	Asp	Thr	Asp	Thr	Phe 1575	Ile	Val	Asp
Arg	Tyr 1580	Ser	Gly	Asp	Leu	Arg 1585	Val	Ala	Ser	Ala	Leu 1590	Val	Pro	Ser
Gln	Leu 1595	Ile	Tyr	Asn	Leu	Ile 1600	Val	Ser	Ala	Thr	Asp 1605	Leu	Gly	Pro
Glu	Arg 1610	Arg	Lys	Ser	Thr	Thr 1615	Glu	Leu	Thr	Ile	Ile 1620	Leu	Gln	Gly

eolf-seql

Leu	Asp 1625	Gly	Pro	Val	Phe	Thr 1630	Gln	Pro	Lys	Tyr	Ile 1635	Thr	Ile	Leu
Lys	Glu 1640	Gly	Glu	Pro	Ile	Gly 1645	Thr	Asn	Val	Ile	Ser 1650	Ile	Glu	Ala
Ala	Ser 1655	Pro	Arg	Gly	Ser	Glu 1660	Ala	Pro	Val	Glu	Tyr 1665	Tyr	Ile	Val
Ser	Val 1670	Arg	Cys	Glu	Glu	Lys 1675	Thr	Val	Gly	Arg	Leu 1680	Phe	Thr	Ile
Gly	Arg 1685	His	Thr	Gly	Ile	Ile 1690	Gln	Thr	Ala	Ala	Ile 1695	Leu	Asp	Arg
Glu	Gln 1700	Gly	Ala	Cys	Leu	Tyr 1705	Leu	Val	Asp	Val	Tyr 1710	Ala	Ile	Glu
Lys	Ser 1715	Thr	Ala	Phe	Pro	Arg 1720	Thr	Gln	Arg	Ala	Glu 1725	Val	Glu	Ile
Thr	Leu 1730	Gln	Asp	Ile	Asn	Asp 1735	Asn	Pro	Pro	Val	Phe 1740	Pro	Thr	Asp
Met	Leu 1745	Asp	Leu	Thr	Val	Glu 1750	Glu	Asn	Ile	Gly	Asp 1755	Gly	Ser	Lys
Ile	Met 1760	Gln	Leu	Thr	Ala	Met 1765	Asp	Ala	Asp	Glu	Gly 1770	Ala	Asn	Ala
Leu	Val 1775	Thr	Tyr	Thr	Ile	Ile 1780	Ser	Gly	Ala	Asp	Asp 1785	Ser	Phe	Arg
Ile	Asp 1790	Pro	Glu	Ser	Gly	Asp 1795	Leu	Ile	Ala	Thr	Arg 1800	Arg	Leu	Asp
Arg	Glu 1805	Arg	Arg	Ser	Lys	Tyr 1810	Ser	Leu	Leu	Val	Arg 1815	Ala	Asp	Asp
Gly	Leu 1820	Gln	Ser	Ser	Asp	Met 1825	Arg	Ile	Asn	Ile	Thr 1830	Val	Ser	Asp
Val	Asn 1835	Asp	His	Thr	Pro	Lys 1840	Phe	Ser	Arg	Pro	Val 1845	Tyr	Ser	Phe
Asp	Ile 1850	Pro	Glu	Asp	Thr	Ile 1855	Pro	Gly	Ser	Leu	Val 1860	Ala	Ala	Ile
Leu	Ala 1865	Thr	Asp	Asp	Asp	Ser 1870	Gly	Val	Asn	Gly	Glu 1875	Ile	Thr	Tyr

eolf-seql

Ile	Val 1880	Asn	Glu	Asp	Asp	Glu 1885	Asp	Gly	Ile	Phe	Phe 1890	Leu	Asn	Pro
Ile	Thr 1895	Gly	Val	Phe	Asn	Leu 1900	Thr	Arg	Leu	Leu	Asp 1905	Tyr	Glu	Val
Gln	Gln 1910	Tyr	Tyr	Ile	Leu	Thr 1915	Val	Arg	Ala	Glu	Asp 1920	Gly	Gly	Gly
Gln	Phe 1925	Thr	Thr	Ile	Arg	Val 1930	Tyr	Phe	Asn	Ile	Leu 1935	Asp	Val	Asn
Asp	Asn 1940	Pro	Pro	Ile	Phe	Ser 1945	Leu	Asn	Ser	Tyr	Ser 1950	Thr	Ser	Leu
Met	Glu 1955	Asn	Leu	Pro	Val	Gly 1960	Ser	Thr	Val	Leu	Val 1965	Phe	Asn	Val
Thr	Asp 1970	Ala	Asp	Asp	Gly	Ile 1975	Asn	Ser	Gln	Leu	Thr 1980	Tyr	Ser	Ile
Ala	Ser 1985	Gly	Asp	Ser	Leu	Gly 1990	Gln	Phe	Thr	Val	Asp 1995	Lys	Asn	Gly
Val	Leu 2000	Lys	Val	Leu	Lys	Ala 2005	Leu	Asp	Arg	Glu	Ser 2010	Gln	Ser	Phe
Tyr	Asn 2015	Leu	Val	Val	Gln	Val 2020	His	Asp	Leu	Pro	Gln 2025	Ile	Pro	Ala
Ser	Arg 2030	Phe	Thr	Ser	Thr	Ala 2035	Gln	Val	Ser	Ile	Ile 2040	Leu	Leu	Asp
Val	Asn 2045	Asp	Asn	Pro	Pro	Thr 2050	Phe	Leu	Ser	Pro	Lys 2055	Leu	Thr	Tyr
Ile	Pro 2060	Glu	Asn	Thr	Pro	Ile 2065	Asp	Thr	Val	Val	Phe 2070	Lys	Ala	Gln
Ala	Thr 2075	Asp	Pro	Asp	Ser	Gly 2080	Pro	Asn	Ser	Tyr	Ile 2085	Glu	Tyr	Thr
Leu	Leu 2090	Asn	Pro	Leu	Gly	Asn 2095	Lys	Phe	Ser	Ile	Gly 2100	Thr	Ile	Asp
Gly	Glu 2105	Val	Arg	Leu	Thr	Gly 2110	Glu	Leu	Asp	Arg	Glu 2115	Glu	Val	Ser
Asn	Tyr 2120	Thr	Leu	Thr	Val	Val 2125	Ala	Thr	Asp	Lys	Gly 2130	Gln	Pro	Ser

eolf-seql

Leu	Ser	Ser	Ser	Thr	Glu	Val	Val	Val	Met	Val	Leu	Asp	Ile	Asn
	2135					2140					2145			
Asp	Asn	Asn	Pro	Ile	Phe	Ala	Gln	Ala	Leu	Tyr	Lys	Val	Glu	Ile
	2150					2155					2160			
Asn	Glu	Asn	Thr	Leu	Thr	Gly	Thr	Asp	Ile	Ile	Gln	Val	Phe	Ala
	2165					2170					2175			
Ala	Asp	Gly	Asp	Glu	Gly	Thr	Asn	Gly	Gln	Val	Arg	Tyr	Gly	Ile
	2180					2185					2190			
Val	Asn	Gly	Asn	Thr	Asn	Gln	Glu	Phe	Arg	Ile	Asp	Ser	Val	Thr
	2195					2200					2205			
Gly	Ala	Ile	Thr	Val	Ala	Lys	Pro	Leu	Asp	Arg	Glu	Lys	Thr	Pro
	2210					2215					2220			
Thr	Tyr	His	Leu	Thr	Val	Gln	Ala	Thr	Asp	Arg	Gly	Ser	Thr	Pro
	2225					2230					2235			
Arg	Thr	Asp	Thr	Ser	Thr	Val	Ser	Ile	Val	Leu	Leu	Asp	Ile	Asn
	2240					2245					2250			
Asp	Phe	Val	Pro	Val	Phe	Glu	Leu	Ser	Pro	Tyr	Ser	Val	Asn	Val
	2255					2260					2265			
Pro	Glu	Asn	Leu	Gly	Thr	Leu	Pro	Arg	Thr	Ile	Leu	Gln	Val	Val
	2270					2275					2280			
Ala	Arg	Asp	Asp	Asp	Arg	Gly	Ser	Asn	Ser	Lys	Leu	Ser	Tyr	Val
	2285					2290					2295			
Leu	Phe	Gly	Gly	Asn	Glu	Asp	Asn	Ala	Phe	Thr	Leu	Ser	Ala	Ser
	2300					2305					2310			
Gly	Glu	Leu	Gly	Val	Thr	Gln	Ser	Leu	Asp	Arg	Glu	Thr	Lys	Glu
	2315					2320					2325			
Arg	Phe	Val	Leu	Met	Ile	Thr	Ala	Thr	Asp	Ser	Gly	Ser	Pro	Ala
	2330					2335					2340			
Leu	Thr	Gly	Thr	Gly	Thr	Ile	Asn	Val	Ile	Val	Asp	Asp	Val	Asn
	2345					2350					2355			
Asp	Asn	Val	Pro	Thr	Phe	Ala	Ser	Lys	Ala	Tyr	Phe	Thr	Thr	Ile
	2360					2365					2370			
Pro	Glu	Asp	Ala	Pro	Thr	Gly	Thr	Asp	Val	Leu	Leu	Val	Asn	Ala
	2375					2380					2385			

eolf-seql

Ser	Asp	Ala	Asp	Ala	Ser	Lys	Asn	Ala	Val	Ile	Arg	Ile	Ile	Gly
	2390					2395					2400			
Gly	Asn	Ser	Gln	Phe	Thr	Ile	Asn	Pro	Ser	Thr	Gly	Gln	Ile	Ile
	2405					2410					2415			
Thr	Ser	Ala	Leu	Leu	Asp	Arg	Glu	Thr	Lys	Asp	Asn	Tyr	Thr	Leu
	2420					2425					2430			
Val	Val	Val	Cys	Ser	Asp	Ala	Gly	Ser	Pro	Glu	Pro	Leu	Ser	Ser
	2435					2440					2445			
Ser	Thr	Ser	Val	Leu	Val	Thr	Val	Thr	Asp	Val	Asn	Asp	Asn	Pro
	2450					2455					2460			
Pro	Arg	Phe	Gln	His	His	Pro	Tyr	Val	Thr	His	Ile	Pro	Ser	Pro
	2465					2470					2475			
Thr	Leu	Pro	Gly	Ser	Phe	Val	Phe	Ala	Val	Thr	Val	Thr	Asp	Ala
	2480					2485					2490			
Asp	Ile	Gly	Pro	Asn	Ser	Glu	Leu	His	Tyr	Ser	Leu	Ser	Gly	Arg
	2495					2500					2505			
Asn	Ser	Glu	Lys	Phe	His	Ile	Asp	Pro	Leu	Arg	Gly	Ala	Ile	Met
	2510					2515					2520			
Ala	Ala	Gly	Pro	Leu	Asn	Gly	Ala	Ser	Glu	Val	Thr	Phe	Ser	Val
	2525					2530					2535			
His	Val	Lys	Asp	Gly	Gly	Ser	Phe	Pro	Lys	Thr	Asp	Ser	Thr	Thr
	2540					2545					2550			
Val	Thr	Val	Arg	Phe	Val	Asn	Lys	Ala	Asp	Phe	Pro	Lys	Val	Arg
	2555					2560					2565			
Ala	Lys	Glu	Gln	Thr	Phe	Met	Phe	Pro	Glu	Asn	Gln	Pro	Val	Ser
	2570					2575					2580			
Ser	Leu	Val	Thr	Thr	Ile	Thr	Gly	Ser	Ser	Leu	Arg	Gly	Glu	Pro
	2585					2590					2595			
Met	Ser	Tyr	Tyr	Ile	Ala	Ser	Gly	Asn	Leu	Gly	Asn	Thr	Phe	Gln
	2600					2605					2610			
Ile	Asp	Gln	Leu	Thr	Gly	Gln	Val	Ser	Ile	Ser	Gln	Pro	Leu	Asp
	2615					2620					2625			
Phe	Glu	Lys	Ile	Gln	Lys	Tyr	Val	Val	Trp	Ile	Glu	Ala	Arg	Asp
	2630					2635					2640			

eolf-seql

Gly	Gly	Phe	Pro	Pro	Phe	Ser	Ser	Tyr	Glu	Lys	Leu	Asp	Ile	Thr
	2645					2650					2655			
Val	Leu	Asp	Val	Asn	Asp	Asn	Ala	Pro	Ile	Phe	Lys	Glu	Asp	Pro
	2660					2665					2670			
Phe	Ile	Ser	Glu	Ile	Leu	Glu	Asn	Leu	Ser	Pro	Arg	Lys	Ile	Leu
	2675					2680					2685			
Thr	Val	Ser	Ala	Met	Asp	Lys	Asp	Ser	Gly	Pro	Asn	Gly	Gln	Leu
	2690					2695					2700			
Asp	Tyr	Glu	Ile	Val	Asn	Gly	Asn	Met	Glu	Asn	Ser	Phe	Ser	Ile
	2705					2710					2715			
Asn	His	Ala	Thr	Gly	Glu	Ile	Arg	Ser	Val	Arg	Pro	Leu	Asp	Arg
	2720					2725					2730			
Glu	Lys	Val	Ser	His	Tyr	Val	Leu	Thr	Ile	Lys	Ser	Ser	Asp	Lys
	2735					2740					2745			
Gly	Ser	Pro	Ser	Gln	Ser	Thr	Ser	Val	Lys	Val	Met	Ile	Asn	Ile
	2750					2755					2760			
Leu	Asp	Glu	Asn	Asp	Asn	Ala	Pro	Arg	Phe	Ser	Gln	Ile	Phe	Ser
	2765					2770					2775			
Ala	His	Val	Pro	Glu	Asn	Ser	Pro	Leu	Gly	Tyr	Thr	Val	Thr	Arg
	2780					2785					2790			
Val	Thr	Thr	Ser	Asp	Glu	Asp	Ile	Gly	Ile	Asn	Ala	Ile	Ser	Arg
	2795					2800					2805			
Tyr	Ser	Ile	Met	Asp	Ala	Ser	Leu	Pro	Phe	Thr	Ile	Asn	Pro	Ser
	2810					2815					2820			
Thr	Gly	Asp	Ile	Val	Ile	Ser	Arg	Pro	Leu	Asn	Arg	Glu	Asp	Thr
	2825					2830					2835			
Asp	Arg	Tyr	Arg	Ile	Arg	Val	Ser	Ala	His	Asp	Ser	Gly	Trp	Thr
	2840					2845					2850			
Val	Ser	Thr	Asp	Val	Thr	Ile	Phe	Val	Thr	Asp	Ile	Asn	Asp	Asn
	2855					2860					2865			
Ala	Pro	Arg	Phe	Ser	Arg	Thr	Ser	Tyr	Tyr	Leu	Asp	Cys	Pro	Glu
	2870					2875					2880			
Leu	Thr	Glu	Ile	Gly	Ser	Lys	Val	Thr	Gln	Val	Phe	Ala	Thr	Asp
	2885					2890					2895			

eolf-seql

Pro	Asp 2900	Glu	Gly	Ser	Asn	Gly 2905	Gln	Val	Phe	Tyr	Phe 2910	Ile	Lys	Ser
Gln	Ser 2915	Glu	Tyr	Phe	Arg	Ile 2920	Asn	Ala	Thr	Thr	Gly 2925	Glu	Ile	Phe
Asn	Lys 2930	Gln	Ile	Leu	Lys	Tyr 2935	Gln	Asn	Val	Thr	Gly 2940	Phe	Ser	Asn
Val	Asn 2945	Ile	Asn	Arg	His	Ser 2950	Phe	Ile	Val	Thr	Ser 2955	Ser	Asp	Arg
Gly	Lys 2960	Pro	Ser	Leu	Ile	Ser 2965	Glu	Thr	Thr	Val	Thr 2970	Ile	Asn	Ile
Val	Asp 2975	Ser	Asn	Asp	Asn	Ala 2980	Pro	Gln	Phe	Leu	Lys 2985	Ser	Lys	Tyr
Phe	Thr 2990	Pro	Val	Thr	Lys	Asn 2995	Val	Lys	Val	Gly	Thr 3000	Lys	Leu	Ile
Arg	Val 3005	Thr	Ala	Ile	Asp	Asp 3010	Lys	Asp	Phe	Gly	Leu 3015	Asn	Ser	Glu
Val	Glu 3020	Tyr	Phe	Ile	Ser	Asn 3025	Asp	Asn	His	Leu	Gly 3030	Lys	Phe	Lys
Leu	Asp 3035	Asn	Asp	Thr	Gly	Trp 3040	Ile	Ser	Val	Ala	Ser 3045	Ser	Leu	Ile
Ser	Asp 3050	Leu	Asn	Gln	Asn	Phe 3055	Phe	Ile	Thr	Val	Thr 3060	Ala	Lys	Asp
Lys	Gly 3065	Asn	Pro	Pro	Leu	Ser 3070	Ser	Gln	Ala	Thr	Val 3075	His	Ile	Thr
Val	Thr 3080	Glu	Glu	Asn	Tyr	His 3085	Thr	Pro	Glu	Phe	Ser 3090	Gln	Ser	His
Met	Ser 3095	Ala	Thr	Ile	Pro	Glu 3100	Ser	His	Ser	Ile	Gly 3105	Ser	Ile	Val
Arg	Thr 3110	Val	Ser	Ala	Arg	Asp 3115	Arg	Asp	Ala	Ala	Met 3120	Asn	Gly	Leu
Ile	Lys 3125	Tyr	Ser	Ile	Ser	Ser 3130	Gly	Asn	Glu	Glu	Gly 3135	Ile	Phe	Ala
Ile	Asn 3140	Ser	Ser	Thr	Gly	Ile 3145	Leu	Thr	Leu	Ala	Lys 3150	Ala	Leu	Asp

eolf-seql

Tyr	Glu 3155	Leu	Cys	Gln	Lys	His 3160	Glu	Met	Thr	Ile	Ser 3165	Ala	Ile	Asp
Gly	Gly 3170	Trp	Val	Ala	Arg	Thr 3175	Gly	Tyr	Cys	Ser	Val 3180	Thr	Val	Asn
Val	Ile 3185	Asp	Val	Asn	Asp	Asn 3190	Ser	Pro	Val	Phe	Leu 3195	Ser	Asp	Asp
Tyr	Phe 3200	Pro	Thr	Val	Leu	Glu 3205	Asn	Ala	Pro	Ser	Gly 3210	Thr	Thr	Val
Ile	His 3215	Leu	Asn	Ala	Thr	Asp 3220	Ala	Asp	Ser	Gly	Thr 3225	Asn	Ala	Val
Ile	Ala 3230	Tyr	Thr	Val	Gln	Ser 3235	Ser	Asp	Ser	Asp	Leu 3240	Phe	Val	Ile
Asp	Pro 3245	Asn	Thr	Gly	Val	Ile 3250	Thr	Thr	Gln	Gly	Phe 3255	Leu	Asp	Phe
Glu	Thr 3260	Lys	Gln	Ser	Tyr	His 3265	Leu	Thr	Val	Lys	Ala 3270	Phe	Asn	Val
Pro	Asp 3275	Glu	Glu	Arg	Cys	Ser 3280	Phe	Ala	Thr	Val	Asn 3285	Ile	Gln	Leu
Lys	Gly 3290	Thr	Asn	Glu	Tyr	Val 3295	Pro	Arg	Phe	Val	Ser 3300	Lys	Leu	Tyr
Tyr	Phe 3305	Glu	Ile	Ser	Glu	Ala 3310	Ala	Pro	Lys	Gly	Thr 3315	Ile	Val	Gly
Glu	Val 3320	Phe	Ala	Ser	Asp	Arg 3325	Asp	Leu	Gly	Thr	Asp 3330	Gly	Glu	Val
His	Tyr 3335	Leu	Ile	Phe	Gly	Asn 3340	Ser	Arg	Lys	Lys	Gly 3345	Phe	Gln	Ile
Asn	Lys 3350	Lys	Thr	Gly	Gln	Ile 3355	Tyr	Val	Ser	Gly	Ile 3360	Leu	Asp	Arg
Glu	Lys 3365	Glu	Glu	Arg	Val	Ser 3370	Leu	Lys	Val	Leu	Ala 3375	Lys	Asn	Phe
Gly	Ser 3380	Ile	Arg	Gly	Ala	Asp 3385	Ile	Asp	Glu	Val	Thr 3390	Val	Asn	Val
Thr	Val 3395	Leu	Asp	Ala	Asn	Asp 3400	Pro	Pro	Ile	Phe	Thr 3405	Leu	Asn	Ile

eolf-seql

Tyr	Ser	Val	Gln	Ile	Ser	Glu	Gly	Val	Pro	Ile	Gly	Thr	His	Val
	3410					3415					3420			
Thr	Phe	Val	Ser	Ala	Phe	Asp	Ser	Asp	Ser	Ile	Pro	Ser	Trp	Ser
	3425					3430					3435			
Arg	Phe	Ser	Tyr	Phe	Ile	Gly	Ser	Gly	Asn	Glu	Asn	Gly	Ala	Phe
	3440					3445					3450			
Ser	Ile	Asn	Pro	Gln	Thr	Gly	Gln	Ile	Thr	Val	Thr	Ala	Glu	Leu
	3455					3460					3465			
Asp	Arg	Glu	Thr	Leu	Pro	Ile	Tyr	Asn	Leu	Ser	Val	Leu	Ala	Val
	3470					3475					3480			
Asp	Ser	Gly	Thr	Pro	Ser	Ala	Thr	Gly	Ser	Ala	Ser	Leu	Leu	Val
	3485					3490					3495			
Thr	Leu	Glu	Asp	Ile	Asn	Asp	Asn	Gly	Pro	Met	Leu	Thr	Val	Ser
	3500					3505					3510			
Glu	Gly	Glu	Val	Met	Glu	Asn	Lys	Arg	Pro	Gly	Thr	Leu	Val	Met
	3515					3520					3525			
Thr	Leu	Gln	Ser	Thr	Asp	Pro	Asp	Leu	Pro	Pro	Asn	Gln	Gly	Pro
	3530					3535					3540			
Phe	Thr	Tyr	Tyr	Leu	Leu	Ser	Thr	Gly	Pro	Ala	Thr	Ser	Tyr	Phe
	3545					3550					3555			
Ser	Leu	Ser	Thr	Ala	Gly	Val	Leu	Ser	Thr	Thr	Arg	Glu	Ile	Asp
	3560					3565					3570			
Arg	Glu	Gln	Ile	Ala	Asp	Phe	Tyr	Leu	Ser	Val	Val	Thr	Lys	Asp
	3575					3580					3585			
Ser	Gly	Val	Pro	Gln	Met	Ser	Ser	Thr	Gly	Thr	Val	His	Ile	Thr
	3590					3595					3600			
Val	Ile	Asp	Gln	Asn	Asp	Asn	Pro	Ser	Gln	Ser	Arg	Thr	Val	Glu
	3605					3610					3615			
Ile	Phe	Val	Asn	Tyr	Tyr	Gly	Asn	Leu	Phe	Pro	Gly	Gly	Ile	Leu
	3620					3625					3630			
Gly	Ser	Val	Lys	Pro	Gln	Asp	Pro	Asp	Val	Leu	Asp	Ser	Phe	His
	3635					3640					3645			
Cys	Ser	Leu	Thr	Ser	Gly	Val	Thr	Ser	Leu	Phe	Ser	Ile	Pro	Gly
	3650					3655					3660			

eolf-seql

Gly	Thr	Cys	Asp	Leu	Asn	Ser	Gln	Pro	Arg	Ser	Thr	Asp	Gly	Thr
	3665					3670					3675			
Phe	Asp	Leu	Thr	Val	Leu	Ser	Asn	Asp	Gly	Val	His	Ser	Thr	Val
	3680					3685					3690			
Thr	Ser	Asn	Ile	Arg	Val	Phe	Phe	Ala	Gly	Phe	Ser	Asn	Ala	Thr
	3695					3700					3705			
Val	Asp	Asn	Ser	Ile	Leu	Leu	Arg	Leu	Gly	Val	Pro	Thr	Val	Lys
	3710					3715					3720			
Asp	Phe	Leu	Thr	Asn	His	Tyr	Leu	His	Phe	Leu	Arg	Ile	Ala	Ser
	3725					3730					3735			
Ser	Gln	Leu	Thr	Gly	Leu	Gly	Thr	Ala	Val	Gln	Leu	Tyr	Ser	Ala
	3740					3745					3750			
Tyr	Glu	Glu	Asn	Asn	Arg	Thr	Phe	Leu	Leu	Ala	Ala	Val	Lys	Arg
	3755					3760					3765			
Asn	His	Asn	Gln	Tyr	Val	Asn	Pro	Ser	Gly	Val	Ala	Thr	Phe	Phe
	3770					3775					3780			
Glu	Ser	Ile	Lys	Glu	Ile	Leu	Leu	Arg	Gln	Ser	Gly	Val	Lys	Val
	3785					3790					3795			
Glu	Ser	Val	Asp	His	Asp	Ser	Cys	Val	His	Gly	Pro	Cys	Gln	Asn
	3800					3805					3810			
Gly	Gly	Ser	Cys	Leu	Arg	Arg	Leu	Ala	Val	Ser	Ser	Val	Leu	Lys
	3815					3820					3825			
Ser	Arg	Glu	Ser	Leu	Pro	Val	Ile	Ile	Val	Ala	Asn	Glu	Pro	Leu
	3830					3835					3840			
Gln	Pro	Phe	Leu	Cys	Lys	Cys	Leu	Pro	Gly	Tyr	Ala	Gly	Ser	Trp
	3845					3850					3855			
Cys	Glu	Ile	Asp	Ile	Asp	Glu	Cys	Leu	Pro	Ser	Pro	Cys	His	Ser
	3860					3865					3870			
Gly	Gly	Thr	Cys	His	Asn	Leu	Val	Gly	Gly	Phe	Ser	Cys	Ser	Cys
	3875					3880					3885			
Pro	Asp	Gly	Phe	Thr	Gly	Arg	Ala	Cys	Glu	Arg	Asp	Ile	Asn	Glu
	3890					3895					3900			
Cys	Leu	Gln	Ser	Pro	Cys	Lys	Asn	Gly	Ala	Ile	Cys	Gln	Asn	Phe
	3905					3910					3915			

eolf-seql

Pro	Gly 3920	Ser	Phe	Asn	Cys	Val 3925	Cys	Lys	Thr	Gly	Tyr 3930	Thr	Gly	Lys
Met	Cys 3935	Glu	Ser	Ser	Val	Asn 3940	Tyr	Cys	Glu	Cys	Asn 3945	Pro	Cys	Phe
Asn	Gly 3950	Gly	Ser	Cys	Gln	Ser 3955	Gly	Val	Asp	Ser	Tyr 3960	Tyr	Cys	His
Cys	Pro 3965	Phe	Gly	Val	Phe	Gly 3970	Lys	His	Cys	Glu	Leu 3975	Asn	Ser	Tyr
Gly	Phe 3980	Glu	Glu	Leu	Ser	Tyr 3985	Met	Glu	Phe	Pro	Ser 3990	Leu	Asp	Pro
Asn	Asn 3995	Asn	Tyr	Ile	Tyr	Val 4000	Lys	Phe	Ala	Thr	Ile 4005	Lys	Ser	His
Ala	Leu 4010	Leu	Leu	Tyr	Asn	Tyr 4015	Asp	Asn	Gln	Thr	Gly 4020	Asp	Arg	Ala
Glu	Phe 4025	Leu	Ala	Leu	Glu	Ile 4030	Ala	Glu	Glu	Arg	Leu 4035	Arg	Phe	Ser
Tyr	Asn 4040	Leu	Gly	Ser	Gly	Thr 4045	Tyr	Lys	Leu	Thr	Thr 4050	Met	Lys	Lys
Val	Ser 4055	Asp	Gly	His	Phe	His 4060	Thr	Val	Ile	Ala	Arg 4065	Arg	Ala	Gly
Met	Ala 4070	Ala	Ser	Leu	Thr	Val 4075	Asp	Ser	Cys	Ser	Glu 4080	Asn	Gln	Glu
Pro	Gly 4085	Tyr	Cys	Thr	Val	Ser 4090	Asn	Val	Ala	Val	Ser 4095	Asp	Asp	Trp
Thr	Leu 4100	Asp	Val	Gln	Pro	Asn 4105	Arg	Val	Thr	Val	Gly 4110	Gly	Ile	Arg
Ser	Leu 4115	Glu	Pro	Ile	Leu	Gln 4120	Arg	Arg	Gly	His	Val 4125	Glu	Ser	His
Asp	Phe 4130	Val	Gly	Cys	Ile	Met 4135	Glu	Phe	Ala	Val	Asn 4140	Gly	Arg	Pro
Leu	Glu 4145	Pro	Ser	Gln	Ala	Leu 4150	Ala	Ala	Gln	Gly	Ile 4155	Leu	Asp	Gln
Cys	Pro 4160	Arg	Leu	Glu	Gly	Ala 4165	Cys	Thr	Arg	Ser	Pro 4170	Cys	Gln	His

eolf-seql

Gly	Gly	Thr	Cys	Met	Asp	Tyr	Trp	Ser	Trp	Gln	Gln	Cys	His	Cys
	4175					4180					4185			
Lys	Glu	Gly	Leu	Thr	Gly	Lys	Tyr	Cys	Glu	Lys	Ser	Val	Thr	Pro
	4190					4195					4200			
Asp	Thr	Ala	Leu	Ser	Leu	Glu	Gly	Lys	Gly	Arg	Leu	Asp	Tyr	His
	4205					4210					4215			
Met	Ser	Gln	Asn	Glu	Lys	Arg	Glu	Tyr	Leu	Leu	Arg	Gln	Ser	Leu
	4220					4225					4230			
Arg	Gly	Ala	Met	Leu	Glu	Pro	Phe	Gly	Val	Asn	Ser	Leu	Glu	Val
	4235					4240					4245			
Lys	Phe	Arg	Thr	Arg	Ser	Glu	Asn	Gly	Val	Leu	Ile	His	Ile	Gln
	4250					4255					4260			
Glu	Ser	Ser	Asn	Tyr	Thr	Thr	Val	Lys	Ile	Lys	Asn	Gly	Lys	Val
	4265					4270					4275			
Tyr	Phe	Thr	Ser	Asp	Ala	Gly	Ile	Ala	Gly	Lys	Val	Glu	Arg	Asn
	4280					4285					4290			
Ile	Pro	Glu	Val	Tyr	Val	Ala	Asp	Gly	His	Trp	His	Thr	Phe	Leu
	4295					4300					4305			
Ile	Gly	Lys	Asn	Gly	Thr	Ala	Thr	Val	Leu	Ser	Val	Asp	Arg	Ile
	4310					4315					4320			
Tyr	Asn	Arg	Asp	Ile	Ile	His	Pro	Thr	Gln	Asp	Phe	Gly	Gly	Leu
	4325					4330					4335			
Asp	Val	Leu	Thr	Ile	Ser	Leu	Gly	Gly	Ile	Pro	Pro	Asn	Gln	Ala
	4340					4345					4350			
His	Arg	Asp	Ala	Gln	Thr	Ala	Gly	Phe	Asp	Gly	Cys	Ile	Ala	Ser
	4355					4360					4365			
Met	Trp	Tyr	Gly	Gly	Glu	Ser	Leu	Pro	Phe	Ser	Gly	Lys	His	Ser
	4370					4375					4380			
Leu	Ala	Ser	Ile	Ser	Lys	Thr	Asp	Pro	Ser	Val	Lys	Ile	Gly	Cys
	4385					4390					4395			
Arg	Gly	Pro	Asn	Ile	Cys	Ala	Ser	Asn	Pro	Cys	Trp	Gly	Asp	Leu
	4400					4405					4410			
Leu	Cys	Ile	Asn	Gln	Trp	Tyr	Ala	Tyr	Arg	Cys	Val	Pro	Pro	Gly
	4415					4420					4425			

eolf-seql

Asp	Cys	Ala	Ser	His	Pro	Cys	Gln	Asn	Gly	Gly	Ser	Cys	Glu	Pro
	4430					4435					4440			
Gly	Leu	His	Ser	Gly	Phe	Thr	Cys	Ser	Cys	Pro	Asp	Ser	His	Thr
	4445					4450					4455			
Gly	Arg	Thr	Cys	Glu	Met	Val	Val	Ala	Cys	Leu	Gly	Val	Leu	Cys
	4460					4465					4470			
Pro	Gln	Gly	Lys	Val	Cys	Lys	Ala	Gly	Ser	Pro	Ala	Gly	His	Val
	4475					4480					4485			
Cys	Val	Leu	Ser	Gln	Gly	Pro	Glu	Glu	Ile	Ser	Leu	Pro	Leu	Trp
	4490					4495					4500			
Ala	Val	Pro	Ala	Ile	Val	Gly	Ser	Cys	Ala	Thr	Val	Leu	Ala	Leu
	4505					4510					4515			
Leu	Val	Leu	Ser	Leu	Ile	Leu	Cys	Asn	Gln	Cys	Arg	Gly	Lys	Lys
	4520					4525					4530			
Ala	Lys	Asn	Pro	Lys	Glu	Glu	Lys	Lys	Pro	Lys	Glu	Lys	Lys	Lys
	4535					4540					4545			
Lys	Gly	Ser	Glu	Asn	Val	Ala	Phe	Asp	Asp	Pro	Asp	Asn	Ile	Pro
	4550					4555					4560			
Pro	Tyr	Gly	Asp	Asp	Met	Thr	Val	Arg	Lys	Gln	Pro	Glu	Gly	Asn
	4565					4570					4575			
Pro	Lys	Pro	Asp	Ile	Ile	Glu	Arg	Glu	Asn	Pro	Tyr	Leu	Ile	Tyr
	4580					4585					4590			
Asp	Glu	Thr	Asp	Ile	Pro	His	Asn	Ser	Glu	Thr	Ile	Pro	Ser	Ala
	4595					4600					4605			
Pro	Leu	Ala	Ser	Pro	Glu	Gln	Glu	Ile	Glu	His	Tyr	Asp	Ile	Asp
	4610					4615					4620			
Asn	Ala	Ser	Ser	Ile	Ala	Pro	Ser	Asp	Ala	Asp	Ile	Ile	Gln	His
	4625					4630					4635			
Tyr	Lys	Gln	Phe	Arg	Ser	His	Thr	Pro	Lys	Phe	Ser	Ile	Gln	Arg
	4640					4645					4650			
His	Ser	Pro	Leu	Gly	Phe	Ala	Arg	Gln	Ser	Pro	Met	Pro	Leu	Gly
	4655					4660					4665			
Ala	Ser	Ser	Leu	Thr	Tyr	Gln	Pro	Ser	Tyr	Gly	Gln	Gly	Leu	Arg
	4670					4675					4680			

eolf-seql

Thr	Ser	Ser	Leu	Ser	His	Ser	Ala	Cys	Pro	Thr	Pro	Asn	Pro	Leu
	4685					4690					4695			
Ser	Arg	His	Ser	Pro	Ala	Pro	Phe	Ser	Lys	Ser	Ser	Thr	Phe	Tyr
	4700					4705					4710			
Arg	Asn	Ser	Pro	Ala	Arg	Glu	Leu	His	Leu	Pro	Ile	Arg	Asp	Gly
	4715					4720					4725			
Asn	Thr	Leu	Glu	Met	His	Gly	Asp	Thr	Cys	Gln	Pro	Gly	Ile	Phe
	4730					4735					4740			
Asn	Tyr	Ala	Thr	Arg	Leu	Gly	Arg	Arg	Ser	Lys	Ser	Pro	Gln	Ala
	4745					4750					4755			
Met	Ala	Ser	His	Gly	Ser	Arg	Pro	Gly	Ser	Arg	Leu	Lys	Gln	Pro
	4760					4765					4770			
Ile	Gly	Gln	Ile	Pro	Leu	Glu	Ser	Ser	Pro	Pro	Val	Gly	Leu	Ser
	4775					4780					4785			
Ile	Glu	Glu	Val	Glu	Arg	Leu	Asn	Thr	Pro	Arg	Pro	Arg	Asn	Pro
	4790					4795					4800			
Ser	Ile	Cys	Ser	Ala	Asp	His	Gly	Arg	Ser	Ser	Ser	Glu	Glu	Asp
	4805					4810					4815			
Cys	Arg	Arg	Pro	Leu	Ser	Arg	Thr	Arg	Asn	Pro	Ala	Asp	Gly	Ile
	4820					4825					4830			
Pro	Ala	Pro	Glu	Ser	Ser	Ser	Asp	Ser	Asp	Ser	His	Glu	Ser	Phe
	4835					4840					4845			
Thr	Cys	Ser	Glu	Met	Glu	Tyr	Asp	Arg	Glu	Lys	Pro	Met	Val	Tyr
	4850					4855					4860			
Thr	Ser	Arg	Met	Pro	Lys	Leu	Ser	Gln	Val	Asn	Glu	Ser	Asp	Ala
	4865					4870					4875			
Asp	Asp	Glu	Asp	Asn	Tyr	Gly	Ala	Arg	Leu	Lys	Pro	Arg	Arg	Tyr
	4880					4885					4890			
His	Gly	Arg	Arg	Ala	Glu	Gly	Gly	Pro	Val	Gly	Thr	Gln	Ala	Ala
	4895					4900					4905			
Ala	Pro	Gly	Thr	Ala	Asp	Asn	Thr	Leu	Pro	Met	Lys	Leu	Gly	Gln
	4910					4915					4920			
Gln	Ala	Gly	Thr	Phe	Asn	Trp	Asp	Asn	Leu	Leu	Asn	Trp	Gly	Pro
	4925					4930					4935			

ecdf-seql

Gly Phe Gly His Tyr Val Asp Val Phe Lys Asp Leu Ala Ser Leu
4940 4945 4950

Pro Glu Lys Ala Ala Ala Asn Glu Glu Gly Lys Ala Gly Thr Thr
4955 4960 4965

Lys Pro Val Pro Lys Asp Gly Glu Ala Glu Gln Tyr Val
4970 4975 4980

<210> 9
<211> 3222
<212> PRT
<213> Homo sapiens

<400> 9

Met Val Thr Thr Val Val Ala Val Gly Asp Thr Leu Ala Gln Pro Leu
1 5 10 15

Ala Ala Ala Glu Val Phe Ile Val Glu Ile Thr Leu Gln Asp Ile Asn
20 25 30

Asp Asn Pro Pro Val Phe Pro Thr Asp Met Leu Asp Leu Thr Val Glu
35 40 45

Glu Asn Ile Gly Asp Gly Ser Lys Ile Met Gln Leu Thr Ala Met Asp
50 55 60

Ala Asp Glu Gly Ala Asn Ala Leu Val Thr Tyr Thr Ile Ile Ser Gly
65 70 75 80

Ala Asp Asp Ser Phe Arg Ile Asp Pro Glu Ser Gly Asp Leu Ile Ala
85 90 95

Thr Arg Arg Leu Asp Arg Glu Arg Arg Ser Lys Tyr Ser Leu Leu Val
100 105 110

Arg Ala Asp Asp Gly Leu Gln Ser Ser Asp Met Arg Ile Asn Ile Thr
115 120 125

Val Ser Asp Val Asn Asp His Thr Pro Lys Phe Ser Arg Pro Val Tyr
130 135 140

Ser Phe Asp Ile Pro Glu Asp Thr Ile Pro Gly Ser Leu Val Ala Ala
145 150 155 160

Ile Leu Ala Thr Asp Asp Asp Ser Gly Val Asn Gly Glu Ile Thr Tyr
165 170 175

Ile Val Asn Glu Asp Asp Glu Asp Gly Ile Phe Phe Leu Asn Pro Ile
180 185 190

Thr Gly Val Phe Asn Leu Thr Arg Leu Leu Asp Tyr Glu Val Gln Gln
Page 121

colf-seql

195

200

205

Tyr Tyr Ile Leu Thr Val Arg Ala Glu Asp Gly Gly Gly Gln Phe Thr
 210 215 220
 Thr Ile Arg Val Tyr Phe Asn Ile Leu Asp Val Asn Asp Asn Pro Pro
 225 230 235 240
 Ile Phe Ser Leu Asn Ser Tyr Ser Thr Ser Leu Met Glu Asn Leu Pro
 245 250 255
 Val Gly Ser Thr Val Leu Val Phe Asn Val Thr Asp Ala Asp Asp Gly
 260 265 270
 Ile Asn Ser Gln Leu Thr Tyr Ser Ile Ala Ser Gly Asp Ser Leu Gly
 275 280 285
 Gln Phe Thr Val Asp Lys Asn Gly Val Leu Lys Val Leu Lys Ala Leu
 290 295 300
 Asp Arg Glu Ser Gln Ser Phe Tyr Asn Leu Val Val Gln Val His Asp
 305 310 315 320
 Leu Pro Gln Ile Pro Ala Ser Arg Phe Thr Ser Thr Ala Gln Val Ser
 325 330 335
 Ile Ile Leu Leu Asp Val Asn Asp Asn Pro Pro Thr Phe Leu Ser Pro
 340 345 350
 Lys Leu Thr Tyr Ile Pro Glu Asn Thr Pro Ile Asp Thr Val Val Phe
 355 360 365
 Lys Ala Gln Ala Thr Asp Pro Asp Ser Gly Pro Asn Ser Tyr Ile Glu
 370 375 380
 Tyr Thr Leu Leu Asn Pro Leu Gly Asn Lys Phe Ser Ile Gly Thr Ile
 385 390 395 400
 Asp Gly Glu Val Arg Leu Thr Gly Glu Leu Asp Arg Glu Glu Val Ser
 405 410 415
 Asn Tyr Thr Leu Thr Val Val Ala Thr Asp Lys Gly Gln Pro Ser Leu
 420 425 430
 Ser Ser Ser Thr Glu Val Val Val Met Val Leu Asp Ile Asn Asp Asn
 435 440 445
 Asn Pro Ile Phe Ala Gln Ala Leu Tyr Lys Val Glu Ile Asn Glu Asn
 450 455 460
 Thr Leu Thr Gly Thr Asp Ile Ile Gln Val Phe Ala Ala Asp Gly Asp

eolf-seql															
465											470	475	480		
Glu	Gly	Thr	Asn	Gly	Gln	Val	Arg	Tyr	Gly	Ile	Val	Asn	Gly	Asn	Thr
				485					490					495	
Asn	Gln	Glu	Phe	Arg	Ile	Asp	Ser	Val	Thr	Gly	Ala	Ile	Thr	Val	Ala
			500					505					510		
Lys	Pro	Leu	Asp	Arg	Glu	Lys	Thr	Pro	Thr	Tyr	His	Leu	Thr	Val	Gln
		515					520					525			
Ala	Thr	Asp	Arg	Gly	Ser	Thr	Pro	Arg	Thr	Asp	Thr	Ser	Thr	Val	Ser
	530					535					540				
Ile	Val	Leu	Leu	Asp	Ile	Asn	Asp	Phe	Val	Pro	Val	Phe	Glu	Leu	Ser
545					550					555					560
Pro	Tyr	Ser	Val	Asn	Val	Pro	Glu	Asn	Leu	Gly	Thr	Leu	Pro	Arg	Thr
				565					570					575	
Ile	Leu	Gln	Val	Val	Ala	Arg	Asp	Asp	Asp	Arg	Gly	Ser	Asn	Ser	Lys
			580					585					590		
Leu	Ser	Tyr	Val	Leu	Phe	Gly	Gly	Asn	Glu	Asp	Asn	Ala	Phe	Thr	Leu
		595					600					605			
Ser	Ala	Ser	Gly	Glu	Leu	Gly	Val	Thr	Gln	Ser	Leu	Asp	Arg	Glu	Thr
	610					615					620				
Lys	Glu	Arg	Phe	Val	Leu	Met	Ile	Thr	Ala	Thr	Asp	Ser	Gly	Ser	Pro
625					630					635					640
Ala	Leu	Thr	Gly	Thr	Gly	Thr	Ile	Asn	Val	Ile	Val	Asp	Asp	Val	Asn
				645					650					655	
Asp	Asn	Val	Pro	Thr	Phe	Ala	Ser	Lys	Ala	Tyr	Phe	Thr	Thr	Ile	Pro
			660					665					670		
Glu	Asp	Ala	Pro	Thr	Gly	Thr	Asp	Val	Leu	Leu	Val	Asn	Ala	Ser	Asp
		675					680					685			
Ala	Asp	Ala	Ser	Lys	Asn	Ala	Val	Ile	Arg	Ile	Ile	Gly	Gly	Asn	Ser
	690					695					700				
Gln	Phe	Thr	Ile	Asn	Pro	Ser	Thr	Gly	Gln	Ile	Ile	Thr	Ser	Ala	Leu
705					710					715					720
Leu	Asp	Arg	Glu	Thr	Lys	Asp	Asn	Tyr	Thr	Leu	Val	Val	Val	Cys	Ser
				725					730					735	
Asp	Ala	Gly	Ser	Pro	Glu	Pro	Leu	Ser	Ser	Ser	Thr	Ser	Val	Leu	Val

eolf-seql

740

745

750

Thr Val Thr Asp Val Asn Asp Asn Pro Pro Arg Phe Gln His His Pro
 755 760 765
 Tyr Val Thr His Ile Pro Ser Pro Thr Leu Pro Gly Ser Phe Val Phe
 770 775 780
 Ala Val Thr Val Thr Asp Ala Asp Ile Gly Pro Asn Ser Glu Leu His
 785 790 795 800
 Tyr Ser Leu Ser Gly Arg Asn Ser Glu Lys Phe His Ile Asp Pro Leu
 805 810 815
 Arg Gly Ala Ile Met Ala Ala Gly Pro Leu Asn Gly Ala Ser Glu Val
 820 825 830
 Thr Phe Ser Val His Val Lys Asp Gly Gly Ser Phe Pro Lys Thr Asp
 835 840 845
 Ser Thr Thr Val Thr Val Arg Phe Val Asn Lys Ala Asp Phe Pro Lys
 850 855 860
 Val Arg Ala Lys Glu Gln Thr Phe Met Phe Pro Glu Asn Gln Pro Val
 865 870 875 880
 Ser Ser Leu Val Thr Thr Ile Thr Gly Ser Ser Leu Arg Gly Glu Pro
 885 890 895
 Met Ser Tyr Tyr Ile Ala Ser Gly Asn Leu Gly Asn Thr Phe Gln Ile
 900 905 910
 Asp Gln Leu Thr Gly Gln Val Ser Ile Ser Gln Pro Leu Asp Phe Glu
 915 920 925
 Lys Ile Gln Lys Tyr Val Val Trp Ile Glu Ala Arg Asp Gly Gly Phe
 930 935 940
 Pro Pro Phe Ser Ser Tyr Glu Lys Leu Asp Ile Thr Val Leu Asp Val
 945 950 955 960
 Asn Asp Asn Ala Pro Ile Phe Lys Glu Asp Pro Phe Ile Ser Glu Ile
 965 970 975
 Leu Glu Asn Leu Ser Pro Arg Lys Ile Leu Thr Val Ser Ala Met Asp
 980 985 990
 Lys Asp Ser Gly Pro Asn Gly Gln Leu Asp Tyr Glu Ile Val Asn Gly
 995 1000 1005
 Asn Met Glu Asn Ser Phe Ser Ile Asn His Ala Thr Gly Glu Ile

colf-seql

1010						1015						1020			
Arg	Ser	Val	Arg	Pro	Leu	Asp	Arg	Glu	Lys	Val	Ser	His	Tyr	Val	
1025						1030					1035				
Leu	Thr	Ile	Lys	Ser	Ser	Asp	Lys	Gly	Ser	Pro	Ser	Gln	Ser	Thr	
1040						1045					1050				
Ser	Val	Lys	Val	Met	Ile	Asn	Ile	Leu	Asp	Glu	Asn	Asp	Asn	Ala	
1055						1060					1065				
Pro	Arg	Phe	Ser	Gln	Ile	Phe	Ser	Ala	His	Val	Pro	Glu	Asn	Ser	
1070						1075					1080				
Pro	Leu	Gly	Tyr	Thr	Val	Thr	Arg	Val	Thr	Thr	Ser	Asp	Glu	Asp	
1085						1090					1095				
Ile	Gly	Ile	Asn	Ala	Ile	Ser	Arg	Tyr	Ser	Ile	Met	Asp	Ala	Ser	
1100						1105					1110				
Leu	Pro	Phe	Thr	Ile	Asn	Pro	Ser	Thr	Gly	Asp	Ile	Val	Ile	Ser	
1115						1120					1125				
Arg	Pro	Leu	Asn	Arg	Glu	Asp	Thr	Asp	Arg	Tyr	Arg	Ile	Arg	Val	
1130						1135					1140				
Ser	Ala	His	Asp	Ser	Gly	Trp	Thr	Val	Ser	Thr	Asp	Val	Thr	Ile	
1145						1150					1155				
Phe	Val	Thr	Asp	Ile	Asn	Asp	Asn	Ala	Pro	Arg	Phe	Ser	Arg	Thr	
1160						1165					1170				
Ser	Tyr	Tyr	Leu	Asp	Cys	Pro	Glu	Leu	Thr	Glu	Ile	Gly	Ser	Lys	
1175						1180					1185				
Val	Thr	Gln	Val	Phe	Ala	Thr	Asp	Pro	Asp	Glu	Gly	Ser	Asn	Gly	
1190						1195					1200				
Gln	Val	Phe	Tyr	Phe	Ile	Lys	Ser	Gln	Ser	Glu	Tyr	Phe	Arg	Ile	
1205						1210					1215				
Asn	Ala	Thr	Thr	Gly	Glu	Ile	Phe	Asn	Lys	Gln	Ile	Leu	Lys	Tyr	
1220						1225					1230				
Gln	Asn	Val	Thr	Gly	Phe	Ser	Asn	Val	Asn	Ile	Asn	Arg	His	Ser	
1235						1240					1245				
Phe	Ile	Val	Thr	Ser	Ser	Asp	Arg	Gly	Lys	Pro	Ser	Leu	Ile	Ser	
1250						1255					1260				
Glu	Thr	Thr	Val	Thr	Ile	Asn	Ile	Val	Asp	Ser	Asn	Asp	Asn	Ala	

colf-seql

1265						1270						1275			
Pro	Gln	Phe	Leu	Lys	Ser	Lys	Tyr	Phe	Thr	Pro	Val	Thr	Lys	Asn	
	1280					1285					1290				
Val	Lys	Val	Gly	Thr	Lys	Leu	Ile	Arg	Val	Thr	Ala	Ile	Asp	Asp	
	1295					1300					1305				
Lys	Asp	Phe	Gly	Leu	Asn	Ser	Glu	Val	Glu	Tyr	Phe	Ile	Ser	Asn	
	1310					1315					1320				
Asp	Asn	His	Leu	Gly	Lys	Phe	Lys	Leu	Asp	Asn	Asp	Thr	Gly	Trp	
	1325					1330					1335				
Ile	Ser	Val	Ala	Ser	Ser	Leu	Ile	Ser	Asp	Leu	Asn	Gln	Asn	Phe	
	1340					1345					1350				
Phe	Ile	Thr	Val	Thr	Ala	Lys	Asp	Lys	Gly	Asn	Pro	Pro	Leu	Ser	
	1355					1360					1365				
Ser	Gln	Ala	Thr	Val	His	Ile	Thr	Val	Thr	Glu	Glu	Asn	Tyr	His	
	1370					1375					1380				
Thr	Pro	Glu	Phe	Ser	Gln	Ser	His	Met	Ser	Ala	Thr	Ile	Pro	Glu	
	1385					1390					1395				
Ser	His	Ser	Ile	Gly	Ser	Ile	Val	Arg	Thr	Val	Ser	Ala	Arg	Asp	
	1400					1405					1410				
Arg	Asp	Ala	Ala	Met	Asn	Gly	Leu	Ile	Lys	Tyr	Ser	Ile	Ser	Ser	
	1415					1420					1425				
Gly	Asn	Glu	Glu	Gly	Ile	Phe	Ala	Ile	Asn	Ser	Ser	Thr	Gly	Ile	
	1430					1435					1440				
Leu	Thr	Leu	Ala	Lys	Ala	Leu	Asp	Tyr	Glu	Leu	Cys	Gln	Lys	His	
	1445					1450					1455				
Glu	Met	Thr	Ile	Ser	Ala	Ile	Asp	Gly	Gly	Trp	Val	Ala	Arg	Thr	
	1460					1465					1470				
Gly	Tyr	Cys	Ser	Val	Thr	Val	Asn	Val	Ile	Asp	Val	Asn	Asp	Asn	
	1475					1480					1485				
Ser	Pro	Val	Phe	Leu	Ser	Asp	Asp	Tyr	Phe	Pro	Thr	Val	Leu	Glu	
	1490					1495					1500				
Asn	Ala	Pro	Ser	Gly	Thr	Thr	Val	Ile	His	Leu	Asn	Ala	Thr	Asp	
	1505					1510					1515				
Ala	Asp	Ser	Gly	Thr	Asn	Ala	Val	Ile	Ala	Tyr	Thr	Val	Gln	Ser	

colf-seql

1520						1525						1530			
Ser	Asp	Ser	Asp	Leu	Phe	Val	Ile	Asp	Pro	Asn	Thr	Gly	Val	Ile	
	1535					1540					1545				
Thr	Thr	Gln	Gly	Phe	Leu	Asp	Phe	Glu	Thr	Lys	Gln	Ser	Tyr	His	
	1550					1555					1560				
Leu	Thr	Val	Lys	Ala	Phe	Asn	Val	Pro	Asp	Glu	Glu	Arg	Cys	Ser	
	1565					1570					1575				
Phe	Ala	Thr	Val	Asn	Ile	Gln	Leu	Lys	Gly	Thr	Asn	Glu	Tyr	Val	
	1580					1585					1590				
Pro	Arg	Phe	Val	Ser	Lys	Leu	Tyr	Tyr	Phe	Glu	Ile	Ser	Glu	Ala	
	1595					1600					1605				
Ala	Pro	Lys	Gly	Thr	Ile	Val	Gly	Glu	Val	Phe	Ala	Ser	Asp	Arg	
	1610					1615					1620				
Asp	Leu	Gly	Thr	Asp	Gly	Glu	Val	His	Tyr	Leu	Ile	Phe	Gly	Asn	
	1625					1630					1635				
Ser	Arg	Lys	Lys	Gly	Phe	Gln	Ile	Asn	Lys	Lys	Thr	Gly	Gln	Ile	
	1640					1645					1650				
Tyr	Val	Ser	Gly	Ile	Leu	Asp	Arg	Glu	Lys	Glu	Glu	Arg	Val	Ser	
	1655					1660					1665				
Leu	Lys	Val	Leu	Ala	Lys	Asn	Phe	Gly	Ser	Ile	Arg	Gly	Ala	Asp	
	1670					1675					1680				
Ile	Asp	Glu	Val	Thr	Val	Asn	Val	Thr	Val	Leu	Asp	Ala	Asn	Asp	
	1685					1690					1695				
Pro	Pro	Ile	Phe	Thr	Leu	Asn	Ile	Tyr	Ser	Val	Gln	Ile	Ser	Glu	
	1700					1705					1710				
Gly	Val	Pro	Ile	Gly	Thr	His	Val	Thr	Phe	Val	Ser	Ala	Phe	Asp	
	1715					1720					1725				
Ser	Asp	Ser	Ile	Pro	Ser	Trp	Ser	Arg	Phe	Ser	Tyr	Phe	Ile	Gly	
	1730					1735					1740				
Ser	Gly	Asn	Glu	Asn	Gly	Ala	Phe	Ser	Ile	Asn	Pro	Gln	Thr	Gly	
	1745					1750					1755				
Gln	Ile	Thr	Val	Thr	Ala	Glu	Leu	Asp	Arg	Glu	Thr	Leu	Pro	Ile	
	1760					1765					1770				
Tyr	Asn	Leu	Ser	Val	Leu	Ala	Val	Asp	Ser	Gly	Thr	Pro	Ser	Ala	

colf-seql

1775						1780						1785			
Thr	Gly	Ser	Ala	Ser	Leu	Leu	Val	Thr	Leu	Glu	Asp	Ile	Asn	Asp	
	1790					1795					1800				
Asn	Gly	Pro	Met	Leu	Thr	Val	Ser	Glu	Gly	Glu	Val	Met	Glu	Asn	
	1805					1810					1815				
Lys	Arg	Pro	Gly	Thr	Leu	Val	Met	Thr	Leu	Gln	Ser	Thr	Asp	Pro	
	1820					1825					1830				
Asp	Leu	Pro	Pro	Asn	Gln	Gly	Pro	Phe	Thr	Tyr	Tyr	Leu	Leu	Ser	
	1835					1840					1845				
Thr	Gly	Pro	Ala	Thr	Ser	Tyr	Phe	Ser	Leu	Ser	Thr	Ala	Gly	Val	
	1850					1855					1860				
Leu	Ser	Thr	Thr	Arg	Glu	Ile	Asp	Arg	Glu	Gln	Ile	Ala	Asp	Phe	
	1865					1870					1875				
Tyr	Leu	Ser	Val	Val	Thr	Lys	Asp	Ser	Gly	Val	Pro	Gln	Met	Ser	
	1880					1885					1890				
Ser	Thr	Gly	Thr	Val	His	Ile	Thr	Val	Ile	Asp	Gln	Asn	Asp	Asn	
	1895					1900					1905				
Pro	Ser	Gln	Ser	Arg	Thr	Val	Glu	Ile	Phe	Val	Asn	Tyr	Tyr	Gly	
	1910					1915					1920				
Asn	Leu	Phe	Pro	Gly	Gly	Ile	Leu	Gly	Ser	Val	Lys	Pro	Gln	Asp	
	1925					1930					1935				
Pro	Asp	Val	Leu	Asp	Ser	Phe	His	Cys	Ser	Leu	Thr	Ser	Gly	Val	
	1940					1945					1950				
Thr	Ser	Leu	Phe	Ser	Ile	Pro	Gly	Gly	Thr	Cys	Asp	Leu	Asn	Ser	
	1955					1960					1965				
Gln	Pro	Arg	Ser	Thr	Asp	Gly	Thr	Phe	Asp	Leu	Thr	Val	Leu	Ser	
	1970					1975					1980				
Asn	Asp	Gly	Val	His	Ser	Thr	Val	Thr	Ser	Asn	Ile	Arg	Val	Phe	
	1985					1990					1995				
Phe	Ala	Gly	Phe	Ser	Asn	Ala	Thr	Val	Asp	Asn	Ser	Ile	Leu	Leu	
	2000					2005					2010				
Arg	Leu	Gly	Val	Pro	Thr	Val	Lys	Asp	Phe	Leu	Thr	Asn	His	Tyr	
	2015					2020					2025				
Leu	His	Phe	Leu	Arg	Ile	Ala	Ser	Ser	Gln	Leu	Thr	Gly	Leu	Gly	

eolf-seql														
2030					2035					2040				
Thr	Ala	Val	Gln	Leu	Tyr	Ser	Ala	Tyr	Glu	Glu	Asn	Asn	Arg	Thr
	2045					2050					2055			
Phe	Leu	Leu	Ala	Ala	Val	Lys	Arg	Asn	His	Asn	Gln	Tyr	Val	Asn
	2060					2065					2070			
Pro	Ser	Gly	Val	Ala	Thr	Phe	Phe	Glu	Ser	Ile	Lys	Glu	Ile	Leu
	2075					2080					2085			
Leu	Arg	Gln	Ser	Gly	Val	Lys	Val	Glu	Ser	Val	Asp	His	Asp	Ser
	2090					2095					2100			
Cys	Val	His	Gly	Pro	Cys	Gln	Asn	Gly	Gly	Ser	Cys	Leu	Arg	Arg
	2105					2110					2115			
Leu	Ala	Val	Ser	Ser	Val	Leu	Lys	Ser	Arg	Glu	Ser	Leu	Pro	Val
	2120					2125					2130			
Ile	Ile	Val	Ala	Asn	Glu	Pro	Leu	Gln	Pro	Phe	Leu	Cys	Lys	Cys
	2135					2140					2145			
Leu	Pro	Gly	Tyr	Ala	Gly	Ser	Trp	Cys	Glu	Ile	Asp	Ile	Asp	Glu
	2150					2155					2160			
Cys	Leu	Pro	Ser	Pro	Cys	His	Ser	Gly	Gly	Thr	Cys	His	Asn	Leu
	2165					2170					2175			
Val	Gly	Gly	Phe	Ser	Cys	Ser	Cys	Pro	Asp	Gly	Phe	Thr	Gly	Arg
	2180					2185					2190			
Ala	Cys	Glu	Arg	Asp	Ile	Asn	Glu	Cys	Leu	Gln	Ser	Pro	Cys	Lys
	2195					2200					2205			
Asn	Gly	Ala	Ile	Cys	Gln	Asn	Phe	Pro	Gly	Ser	Phe	Asn	Cys	Val
	2210					2215					2220			
Cys	Lys	Thr	Gly	Tyr	Thr	Gly	Val	Phe	Gly	Lys	His	Cys	Glu	Leu
	2225					2230					2235			
Asn	Ser	Tyr	Gly	Phe	Glu	Glu	Leu	Ser	Tyr	Met	Glu	Phe	Pro	Ser
	2240					2245					2250			
Leu	Asp	Pro	Asn	Asn	Asn	Tyr	Ile	Tyr	Val	Lys	Phe	Ala	Thr	Ile
	2255					2260					2265			
Lys	Ser	His	Ala	Leu	Leu	Leu	Tyr	Asn	Tyr	Asp	Asn	Gln	Thr	Gly
	2270					2275					2280			
Asp	Arg	Ala	Glu	Phe	Leu	Ala	Leu	Glu	Ile	Ala	Glu	Glu	Arg	Leu

colf-seql

2285						2290						2295			
Arg	Phe	Ser	Tyr	Asn	Leu	Gly	Ser	Gly	Thr	Tyr	Lys	Leu	Thr	Thr	
	2300					2305					2310				
Met	Lys	Lys	Val	Ser	Asp	Gly	His	Phe	His	Thr	Val	Ile	Ala	Arg	
	2315					2320					2325				
Arg	Ala	Gly	Met	Ala	Ala	Ser	Leu	Thr	Val	Asp	Ser	Cys	Ser	Glu	
	2330					2335					2340				
Asn	Gln	Glu	Pro	Gly	Tyr	Cys	Thr	Val	Ser	Asn	Val	Ala	Val	Ser	
	2345					2350					2355				
Asp	Asp	Trp	Thr	Leu	Asp	Val	Gln	Pro	Asn	Arg	Val	Thr	Val	Gly	
	2360					2365					2370				
Gly	Ile	Arg	Ser	Leu	Glu	Pro	Ile	Leu	Gln	Arg	Arg	Gly	His	Val	
	2375					2380					2385				
Glu	Ser	His	Asp	Phe	Val	Gly	Cys	Ile	Met	Glu	Phe	Ala	Val	Asn	
	2390					2395					2400				
Gly	Arg	Pro	Leu	Glu	Pro	Ser	Gln	Ala	Leu	Ala	Ala	Gln	Gly	Ile	
	2405					2410					2415				
Leu	Asp	Gln	Tyr	Gly	Asp	Phe	Ile	Ser	Tyr	Cys	Phe	Lys	Glu	Lys	
	2420					2425					2430				
Lys	Cys	Lys	Lys	Val	Cys	Phe	Thr	Val	Thr	Pro	Asp	Thr	Ala	Leu	
	2435					2440					2445				
Ser	Leu	Glu	Gly	Lys	Gly	Arg	Leu	Asp	Tyr	His	Met	Ser	Gln	Asn	
	2450					2455					2460				
Glu	Lys	Arg	Glu	Tyr	Leu	Leu	Arg	Gln	Ser	Leu	Arg	Gly	Ala	Met	
	2465					2470					2475				
Leu	Glu	Pro	Phe	Gly	Val	Asn	Ser	Leu	Glu	Val	Lys	Phe	Arg	Thr	
	2480					2485					2490				
Arg	Ser	Glu	Asn	Gly	Val	Leu	Ile	His	Ile	Gln	Glu	Ser	Ser	Asn	
	2495					2500					2505				
Tyr	Thr	Thr	Val	Lys	Ile	Lys	Asn	Gly	Lys	Val	Tyr	Phe	Thr	Ser	
	2510					2515					2520				
Asp	Ala	Gly	Ile	Ala	Gly	Lys	Val	Glu	Arg	Asn	Ile	Pro	Glu	Val	
	2525					2530					2535				
Tyr	Val	Ala	Asp	Gly	His	Trp	His	Thr	Phe	Leu	Ile	Gly	Lys	Asn	

colf-seql

2540						2545						2550			
Gly	Thr	Ala	Thr	Val	Leu	Ser	Val	Asp	Arg	Ile	Tyr	Asn	Arg	Asp	
2555						2560					2565				
Ile	Ile	His	Pro	Thr	Gln	Asp	Phe	Gly	Gly	Leu	Asp	Val	Leu	Thr	
2570						2575					2580				
Ile	Ser	Leu	Gly	Gly	Ile	Pro	Pro	Asn	Gln	Ala	His	Arg	Asp	Ala	
2585						2590					2595				
Gln	Thr	Ala	Gly	Phe	Asp	Gly	Cys	Ile	Ala	Ser	Met	Trp	Tyr	Gly	
2600						2605					2610				
Gly	Glu	Ser	Leu	Pro	Phe	Ser	Gly	Lys	His	Ser	Leu	Ala	Ser	Ile	
2615						2620					2625				
Ser	Lys	Thr	Asp	Pro	Ser	Val	Lys	Ile	Gly	Cys	Arg	Gly	Pro	Asn	
2630						2635					2640				
Ile	Cys	Ala	Ser	Asn	Pro	Cys	Trp	Gly	Asp	Leu	Leu	Cys	Ile	Asn	
2645						2650					2655				
Gln	Trp	Tyr	Ala	Tyr	Arg	Cys	Val	Pro	Pro	Gly	Asp	Cys	Ala	Ser	
2660						2665					2670				
His	Pro	Cys	Gln	Asn	Gly	Gly	Ser	Cys	Glu	Pro	Gly	Leu	His	Ser	
2675						2680					2685				
Gly	Phe	Thr	Cys	Ser	Cys	Pro	Asp	Ser	His	Thr	Gly	Arg	Thr	Cys	
2690						2695					2700				
Glu	Met	Val	Val	Ala	Cys	Leu	Gly	Val	Leu	Cys	Pro	Gln	Gly	Lys	
2705						2710					2715				
Val	Cys	Lys	Ala	Gly	Ser	Pro	Ala	Gly	His	Val	Cys	Val	Leu	Ser	
2720						2725					2730				
Gln	Gly	Pro	Glu	Glu	Ile	Ser	Leu	Pro	Leu	Trp	Ala	Val	Pro	Ala	
2735						2740					2745				
Ile	Val	Gly	Ser	Cys	Ala	Thr	Val	Leu	Ala	Leu	Leu	Val	Leu	Ser	
2750						2755					2760				
Leu	Ile	Leu	Cys	Asn	Gln	Cys	Arg	Gly	Lys	Lys	Ala	Lys	Asn	Pro	
2765						2770					2775				
Lys	Glu	Glu	Lys	Lys	Pro	Lys	Glu	Lys	Lys	Lys	Lys	Gly	Ser	Glu	
2780						2785					2790				
Asn	Val	Ala	Phe	Asp	Asp	Pro	Asp	Asn	Ile	Pro	Pro	Tyr	Gly	Asp	

colf-seql

2795						2800						2805			
Asp	Met	Thr	Val	Arg	Lys	Gln	Pro	Glu	Gly	Asn	Pro	Lys	Pro	Asp	
2810						2815					2820				
Ile	Ile	Glu	Arg	Glu	Asn	Pro	Tyr	Leu	Ile	Tyr	Asp	Glu	Thr	Asp	
2825						2830					2835				
Ile	Pro	His	Asn	Ser	Glu	Thr	Ile	Pro	Ser	Ala	Pro	Leu	Ala	Ser	
2840						2845					2850				
Pro	Glu	Gln	Glu	Ile	Glu	His	Tyr	Asp	Ile	Asp	Asn	Ala	Ser	Ser	
2855						2860					2865				
Ile	Ala	Pro	Ser	Asp	Ala	Asp	Ile	Ile	Gln	His	Tyr	Lys	Gln	Phe	
2870						2875					2880				
Arg	Ser	His	Thr	Pro	Lys	Phe	Ser	Ile	Gln	Arg	His	Ser	Pro	Leu	
2885						2890					2895				
Gly	Phe	Ala	Arg	Gln	Ser	Pro	Met	Pro	Leu	Gly	Ala	Ser	Ser	Leu	
2900						2905					2910				
Thr	Tyr	Gln	Pro	Ser	Tyr	Gly	Gln	Gly	Leu	Arg	Thr	Ser	Ser	Leu	
2915						2920					2925				
Ser	His	Ser	Ala	Cys	Pro	Thr	Pro	Asn	Pro	Leu	Ser	Arg	His	Ser	
2930						2935					2940				
Pro	Ala	Pro	Phe	Ser	Lys	Ser	Ser	Thr	Phe	Tyr	Arg	Asn	Ser	Pro	
2945						2950					2955				
Ala	Arg	Glu	Leu	His	Leu	Pro	Ile	Arg	Asp	Gly	Asn	Thr	Leu	Glu	
2960						2965					2970				
Met	His	Gly	Asp	Thr	Cys	Gln	Pro	Gly	Ile	Phe	Asn	Tyr	Ala	Thr	
2975						2980					2985				
Arg	Leu	Gly	Arg	Arg	Ser	Lys	Ser	Pro	Gln	Ala	Met	Ala	Ser	His	
2990						2995					3000				
Gly	Ser	Arg	Pro	Gly	Ser	Arg	Leu	Lys	Gln	Pro	Ile	Gly	Gln	Ile	
3005						3010					3015				
Pro	Leu	Glu	Ser	Ser	Pro	Pro	Val	Gly	Leu	Ser	Ile	Glu	Glu	Val	
3020						3025					3030				
Glu	Arg	Leu	Asn	Thr	Pro	Arg	Pro	Arg	Asn	Pro	Ser	Ile	Cys	Ser	
3035						3040					3045				
Ala	Asp	His	Gly	Arg	Ser	Ser	Ser	Glu	Glu	Asp	Cys	Arg	Arg	Pro	

eof-seq1

3050						3055						3060		
Leu	Ser	Arg	Thr	Arg	Asn	Pro	Ala	Asp	Gly	Ile	Pro	Ala	Pro	Glu
3065						3070					3075			
Ser	Ser	Ser	Asp	Ser	Asp	Ser	His	Glu	Ser	Phe	Thr	Cys	Ser	Glu
3080						3085					3090			
Met	Glu	Tyr	Asp	Arg	Glu	Lys	Pro	Met	Val	Tyr	Thr	Ser	Arg	Met
3095						3100					3105			
Pro	Lys	Leu	Ser	Gln	Val	Asn	Glu	Ser	Asp	Ala	Asp	Asp	Glu	Asp
3110						3115					3120			
Asn	Tyr	Gly	Ala	Arg	Leu	Lys	Pro	Arg	Arg	Tyr	His	Gly	Arg	Arg
3125						3130					3135			
Ala	Glu	Gly	Gly	Pro	Val	Gly	Thr	Gln	Ala	Ala	Ala	Pro	Gly	Thr
3140						3145					3150			
Ala	Asp	Asn	Thr	Leu	Pro	Met	Lys	Leu	Gly	Gln	Gln	Ala	Gly	Thr
3155						3160					3165			
Phe	Asn	Trp	Asp	Asn	Leu	Leu	Asn	Trp	Gly	Pro	Gly	Phe	Gly	His
3170						3175					3180			
Tyr	Val	Asp	Val	Phe	Lys	Asp	Leu	Ala	Ser	Leu	Pro	Glu	Lys	Ala
3185						3190					3195			
Ala	Ala	Asn	Glu	Glu	Gly	Lys	Ala	Gly	Thr	Thr	Lys	Pro	Val	Pro
3200						3205					3210			
Lys	Asp	Gly	Glu	Ala	Glu	Gln	Tyr	Val						
3215						3220								

<210> 10
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 10	
atattccaga aagatcacat tttgtcaata ttatttgtgg gaatgtatga tagaaaagtt	60
tgccttgtct gttatgatca acatttttaa taatgaaaat ygcttgaaaa cttttaaggc	120
cccaataatt ctataaatca aatcatgcta gagttgcctt caattaccag acatgaaatg	180
catttgactt aattttattt t	201

<210> 11
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 11

eolf-seq1

acattaagag tagaaccttg ggaattaagt tgtgtggaat tgaatcctga ctctactatt	60
actattgcat tagtatgggc aaattaacat ttctggaccc rgttttcagt ggattaagca	120
gagtaataat gaaactaact ttaaagagag taagtaaaat aatttaagtg agctgggttag	180
aatagcacca ggaacaaaaa a	201

<210> 12
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 12	
gaattacagc acaatgtgta tatcagaaat attcagatct ttcttgaaat ctactgtaa	60
gtcttaaaat accacattta aaaatgtcca atttactatg ycttccataa agctgtgaat	120
ttttagagag ctaaattgtct catgtatfff taccacaagt gaatcattga gatgaattat	180
tattcaaaat attttcctga a	201

<210> 13
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 13	
gcagtacctt ccagcttctt gtcagtggta aagactccag ggctgcttta catgggtcac	60
atctcagtga cattcctcac taggtctgtg gccttgaaaa rgctacttaa actttctaaa	120
cttgagctta ctcatatacc aaatggagat gacagcagtg ctgatttatg gggattagat	180
aagacagttt atgtaaactt c	201

<210> 14
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 14	
ataaatgaaa cattcaactg ctatfffftct ttccccaat aaataaatgt ttgaaaacat	60
ttttaaatga agccaaatta agtggaatca gtaatttcaa wattgggtatt ttgaaaataa	120
gcttaaattt agacattggt taaatttaat tgttaaataa agaagatata aagaatttgt	180
taggccttat gcctagaaga t	201

<210> 15
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 15	
caggagttcg agactagcct gaccgacaag gtgaaacccc gtctctacta aaaacacaaa	60
aattagccaa gtatggtgac acatgcctgt aatcccagct rcttggaagg ttgagccagg	120
agaatcgctt gaacccggga ggcggagggt gcagtgagcc gagatcacac cgctgctctt	180
cagcctgggc aacaagagcg a	201

eof-seq1

<210> 16
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 16
 ggacgtgaga tcaaatgaaa gagagaaatc agaatcatct aagttttcca ctcaaacc 60
 taggcagatc atgatatgat atcatttact gaaatgggta rcattgaagg aggaacagtt 120
 ttgtgagaag tcagaagtat tctatttgaa tacagtttca aatgactggt actcattcat 180
 ttagagatac cagttaggaa g 201

<210> 17
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 17
 gcagatgctg tttcttagac agtatataga atattaccaa tcagatatag ggaaattctc 60
 ttgtatgaga tgtataaatt cctgaatatg aagttgaatg yttacaaact tgatcctgtc 120
 ttccattgag tcattcattt atttctataa taaagtaa at gctgtgatga cctgctgttt 180
 ttttctagt catgttaaag a 201

<210> 18
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 18
 agaaatttaa aatctatgcc aagattattg tgctcaa atg tcccacaaac ttaagctggc 60
 cagtagtgaa ggtccctccc tgttgggcct cttcacctcc ygcttggtgc tcttctaggc 120
 tcagcgacag agctgcttgt ccagaccccc aaagcagcgc aggaagcagc actgttcccc 180
 ctactggcag taccttccag c 201

<210> 19
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 19
 atgggttctat aagggcttca cccacttca ctctgcacat ctcatttttc tctctcctgc 60
 tgccttgtga ataaggacat gtttgcttct gattctgcc yattataag tttcctgagg 120
 cctccccagc tctgggttaa ttgtgagtca attaaacctc tttcctttat aaattgcccc 180
 gtcccaggta tggccttata g 201

<210> 20
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 20
 agttgaatgt ttacaaactt gatcctgtct tccattgagt cattcattta tttctataat 60

eolf-seql

aaagtaaag ctgtgatgac ctgctgtttt tttctagtgc rtgttaaaga ttcattgcaa 120
aatgctatcc tatgcttggtg aattatgctt gtaaatttgg tctagaaaaa ttgtattcat 180
actctcaaac tgttttacaa a 201

<210> 21
<211> 201
<212> DNA
<213> Homo sapiens

<400> 21
tattcttctc atatcatctt ttttactcct aatatattct ttcttttaca atatctggta 60
cataacagtg gttgtcactt aaataaatgc attgaatgaa ygattttaat attctctgga 120
atggctgctt ttactcattc tttttttact acaacattct tgaaagcttc acaacctgtt 180
ttctctgacc atttattcct g 201

<210> 22
<211> 201
<212> DNA
<213> Homo sapiens

<400> 22
tttatttgcc tcccatggcc taggaaagtc attttagtgc ctcaaaggct tagtttctgc 60
atcaataaaa atgaacataa aaatttatac ttacagttt rtgagacaaa catttactaa 120
ccacctacta tgtatcaaac agtatgtatg gaatcagtta atatccataa atgtctctgg 180
cataattatt aggacataga a 201

<210> 23
<211> 201
<212> DNA
<213> Homo sapiens

<400> 23
gatacgagtg gaaatagaaa gaaaagatgt atttttcttc ccattaaagg ttgagcgtgg 60
actttaaagg gggaaattct gagtgattct taaaacaaca kgtgaacttt tttatttccc 120
ccagacatta gttgccaata tgtaaacatt tcagcaagaa attttatacc acctcctctg 180
tttgtcaggc agcatttaat g 201

<210> 24
<211> 201
<212> DNA
<213> Homo sapiens

<400> 24
tgagcttagt atttttcagt atacttcaaa tattccggga gaaatttgag ttttgctatg 60
tctgcatgta ttttttagat gtagtgtatg tggccaaagt yacttttttag acttgtcaga 120
aatgaaaagt ttttttcttt acagtaaagt aaatgcagat ggattccatg acctgtaatt 180
gcagcaatta attttcagtt c 201

eolf-seql

<210> 25
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 25
 agtagggcac tgctgtaaaa ataccaaagt gacttttgaa ctgggtaact ggcagagact 60
 ggaacagttt ggaggggttca gaataagaga gaaaaatggt sgaaagtttg gaacttccta 120
 cagacttttt gaatggcttt gacccaaatg ctgaggtggt atggaaaatg aagtccaggc 180
 tgaggtgggtc acagatggag a 201

<210> 26
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 26
 atatagtgtt tttgatagat tcctatgcaa aaataatgaa aaaaatatta agtgtgtata 60
 tatctaattt atataagcat atatgtagaa ctaattagca rcaatacatt attttataaa 120
 acagaatttt taaaatacag aagtgttggt aatattttaa ttgttacata ccttttgttt 180
 tatgtatttt ttgtattcaa a 201

<210> 27
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 27
 actaggccac gagtaattac aatctaagaa catagaagaa tgattgaata gtggtaaagg 60
 aaataaccagc aaatcacttg actattagaa aataatatgg kaaggttgtg aatctcaata 120
 ccattctgtg ataatgaggg cactccataa acattttaca aataaatgaa tgagtggctt 180
 tatttacaga atattgaatg g 201

<210> 28
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 28
 agcaaagctg gagtcagtga attaaagggc aatggcagaa gtatgcatca acatgagcat 60
 ctcttggttc tgctttaaca attatacttc cttcctcaaa rtctttcaat tccagtttgc 120
 ctatggtata acccccagtc ttcaaattct agtcacccca taaatggccc cagctaattc 180
 tgcaaaaactc tgcaacatat g 201

<210> 29
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 29
 aaagatatit tacttttggt accgtttctt ctgtaggggt gagagtgcag gtttgggaaat 60

eolf-seq1

ggtttctgaa tgagtagatt gaaaatatgt ctttatggca rcttttctgc atatttttac	120
gacaatctgt ttcattggca ctcagtctaa gcactaactt ttggagtcca agttgagtcc	180
attatccctc aattcttatt t	201

<210> 30
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 30	
gttcacctcc ttcttaattt gcgtgtgtgt gtaacaataa aatgtactag tgcaatgaac	60
aaactggttt ttacatcatt gaataaatgt acattaaatg ycttctgtac cctagggcgtt	120
atattgaaac tgatctaaat gtttctactgt ttgaaactta gaaaagaagc aggctttctg	180
agttttgttt tgttttgttt t	201

<210> 31
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 31	
tgactgtcat gaaagatttc tctgtagcat tcaatactgt ttgagagcat tttacacata	60
gtagaatgtc attcaaaact ggagtcaatc ctctcaaacc ytgccactct tttatcagct	120
aagttgattt attattctaa atattttgtt gtcattttcaa cggtattttac agcatcttca	180
ccaggaatag gttccatctc a	201

<210> 32
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 32	
atttgatagc cttttatttt tttttatttg tgataagaac attaattgtga gatctgccct	60
tttaaaagat ttctaaatgt acaatacagt attgttaact mtaggcacga tgttgtacag	120
tagatctaga aattattcct cttgcataag tgaagatgta taccatggc ttataagctc	180
ctgatttctc cctactgtct g	201

<210> 33
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 33	
tatctaagga actgtggagt agagaaaagg gaatgggcaa ttaaggaaaa atatctagat	60
tttcaagaaa tggaatatga agttattcac ttttcttttt hattcttttt tgagacagag	120
tctcactctg tcgctgaggc tggagtgcag tgatgccatc ttggctcact gcaacctctg	180
catcctgggt tcaagcgatt c	201

<210> 34

eolf-seql

<211> 201
<212> DNA
<213> Homo sapiens

<400> 34
ttaaaaaacag aattattcca attcccatat tgtatgttac ttcatacaat attaccatta 60
tatcatgttt cttgtactaa agtgtttcct gtgaaataac rtaataaaat ggcctttagt 120
atgcatgata atattttaa acgcattttc tagtaaaata taatgcttat tcattttttt 180
cttctagttc taaagaaaaa a 201

<210> 35
<211> 201
<212> DNA
<213> Homo sapiens

<400> 35
aacctagatc cttcgcatgc accattcaca ataggggtcca cccttctttg agaatctaata 60
gccgcagctg atctgacagg aggcagagct caggcagtaa ygctcacttg cccgcccctc 120
acctgctgct atggggccggg ttcctaacag gccacaaacc agtaccgggc tgtgcccagg 180
ggttggagac ccctgttata g 201

<210> 36
<211> 201
<212> DNA
<213> Homo sapiens

<400> 36
aaagaaaaaa atagtaagtc attattatga gtagttactg aattatcata aaatatcatt 60
tcataacata aaaattatat atgatagcat gttcccacac maaaactagg aaatcaatag 120
gtttgaattg ctttaaaata tcattgtaat agtggataac tttgattaat acatctttat 180
atgccagtag aatgcctatg t 201

<210> 37
<211> 201
<212> DNA
<213> Homo sapiens

<400> 37
ttaataaaaa tgtaaaaatg acctggattt gcttaaaaac agaaatattt ctagaggaga 60
atttacatgc tagacatgga taagttgtca gaatgagcag racacattat tgctcttgga 120
atctcagaat atagaagtct ctaatttaag taatataaat gatcttcagt atcctgaaga 180
tatttgcaat tacctatggt g 201

<210> 38
<211> 201
<212> DNA
<213> Homo sapiens

<400> 38
caccatgtcc agctaatttt tgtattttta gtggagacat ggtttcacca tggtggccag 60
gctgggtattg aactcgtgac ctcaggtaat ccaccacct yggcctccca aagtgccttg 120

eolf-seql

attacaggtg tgagccaccg cgcttggcca gacattgata ttttaactctt tcttaatacaa 180
attttgaact tatttcatac c 201

<210> 39
<211> 201
<212> DNA
<213> Homo sapiens

<400> 39
aggagaaata cctaatagtaa atgacgagtt aatgggtgca gtaaaccaac atggcatatg 60
tatacatatg taacaaacct gcacgttgtg cacgtgaacc stagatctta agtataatta 120
aaaataaata aataaatagg cctggcgcggtg tggctcatgc ctgtaatccc agtactttgg 180
gaggctgaga taggcgcatc a 201

<210> 40
<211> 201
<212> DNA
<213> Homo sapiens

<400> 40
tcaatagggc tacggcattc atgccttcct ttaaaaatta attgagggca agaaaccatt 60
gtttaatatg taatttcaaa catctagatg aagaaaatat mtgtattaga aaataataag 120
gactatgtat atatgatttc agacgatttc ctattttaaata aaattaggat aaatgacata 180
tttgttatag ggtgaaatgt t 201

<210> 41
<211> 201
<212> DNA
<213> Homo sapiens

<400> 41
agagtttcaa atgagtttgt gaatggatat catacccttc cacaatgac agagatggac 60
tattaaatca gagttggtag tttttgcttt tgtttactgt rtttctcatt caccctaaat 120
ggtcctatct ataacaagct ttggaaaagc accatgcacc tgaaattctt gcattctgat 180
gttcatacct agagagattt a 201

<210> 42
<211> 201
<212> DNA
<213> Homo sapiens

<400> 42
gctgatttcc ttgaaagtac tccctcctca ttctctacag taagccattg aatgttacta 60
gggatggaca ctaagcagaa agatttctga gtatctattc rtcttcccca atcagacagt 120
cctttaaatt taaagaagaa tgcctgaccc ttaagacagg gaggttcac atatttccca 180
ttctgacagt ttggaatgaa a 201

<210> 43
<211> 201

eofl-seql

<212> DNA
<213> Homo sapiens

<400> 43
catttgtttt gaattttcca gtatattaaa acaatggcta acaattatag ttgagagaaa 60
tatatttagg aaaagtaatg cattattcag cattctatta wctatactat attaacacat 120
gtgttatggg ctgaaattac accagtatca catgagggta aatgggttga aagtgtgaagt 180
ttaaagagt ttcaaagag t 201

<210> 44
<211> 201
<212> DNA
<213> Homo sapiens

<400> 44
ctactcagaa ggctgaggca ggagaatcgc ttgaaaccag gaggcggagg ttgcagtga 60
ccgagatcac accactgttc tccagcctgg gcaacaagaa ygaaactcgt ctcaaaataa 120
acaaataaat taaataataa taatttcttc ataatatgag tatgaagtat tttctgtttg 180
ccattaaatg aaatatttgt t 201

<210> 45
<211> 201
<212> DNA
<213> Homo sapiens

<400> 45
agaggatgatc tgacaagtgt tcattcaaac tctgcaacct tgattgagac tgtgctagat 60
gatataaaaa tacatatgcc ctaacaggga ggataggcaa mcaaacaatt aattttaaaa 120
ttgtgaattt acaaactgtg gggtattata tgctacagaa gccacacaga gaaagagtta 180
tttgctctgt ttcagaaaat a 201

<210> 46
<211> 201
<212> DNA
<213> Homo sapiens

<400> 46
tccagcctgg atctctggga gggagaagta gttccaaaga ttacagtgct taatcttaac 60
tctgaaaaca ctacttattg actctccact ggattccact ygcccaaatt ccctagatgg 120
atcttccttc aggatgaaac aacctaatt caagtgtcct aaactgtctt cctctccctc 180
ctgccattgc ctttccttgt t 201

<210> 47
<211> 201
<212> DNA
<213> Homo sapiens

<400> 47
tactgaacaa taatacatat gcacttaatt gtagtcatcc ccctgactat actcacaaaa 60
cttaacatgt ctttagggga ggaggatgga ttgcagatat rctattagag gcatagccat 120

eolf-seql

ctttacttca ttaaaagttt agtttactaa aatttgcaaa tgtttaaaat atgggtcttgc	180
ttaatttcac aaattctggg a	201

<210> 48
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 48 tagtcagggtg gagataattc accccacgtc ttaaggccaa atggaaaaaa tcttcttact	60
ctggaattag gtggttaagt atcttgattt taatggatgt ygttgttttc ctaataattg	120
agttatttgt attaaaatgc taaactggca atatatgccg atggccaatt tacctccaaa	180
tatattgagt tcatacatat t	201

<210> 49
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 49 acactgctgg catgtgcttt gtgaatatgt ttgaatcaag ggcctttaca aagggtcag	60
accttcctcc taggggggtg tcatttaccg tggatgctct ygtttgttgt ggtaaacagc	120
ctcagaaaac gtcttgacat tgtcaattcc aacagattaa tgaagtaact gggccataca	180
tcccttcccc ttacatatg a	201

<210> 50
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 50 gggcggggga actccagtgt gattataagt gagtatatag gaaaaaaga aatgaaatta	60
accttttttt ctttagaaat cttgtgttta attttatgtt ycagtgtttt aaataactga	120
aaccttatta tggacaaatt tacctgttat gtaggagaaa atgagtttca tttaccatct	180
tcatcagcga tccccaacct t	201

<210> 51
 <211> 201
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (101)..(101)
 <223> n is c or t

<400> 51 gctaaactgg caatatatgc cgatggccaa tttacctcca aatatattga gttcatacat	60
attcattaag tgggatattt tggagaatat actgcttata ygttcaaag caaataattt	120
aattcgctgt gatttataat actgttactc agtaaagga ctaaaggcag ggtaagattt	180

atcagtctta aaaatgtaac t

201

<210> 52
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 52
 tggggacccc ttatctacat ccacgttttc tatgtttgtg aagatttgat gtgggggttat 60
 gggtttgagg agctaaaaat tatagttagt agaaggaaag rcagctagaa gtggaaagta 120
 aaatcactta cattgtactt ttactaggac ctatattgta ggtattataa atcatacaaa 180
 caagtttggt atacaaaaca t 201

<210> 53
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 53
 ctgtggccca ggggttgggg accccttattac tacatccacg ttttctatgt ttgtgaagat 60
 ttgatgtggg gttatgggtt tgaggagcta aaaattatag ytagtagaag gaaagacagc 120
 tagaagtgga aagtaaaatc acttacattg tacttttact aggacctata ttgtaggtat 180
 tataaatcat acaaacaagt t 201

<210> 54
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 54
 gttttttttc tgtcggcagt gtatcacaag tattttcctc agtggcctaa acagaccctg 60
 agtggaaaggc tggtaaaagc aacctcgtct gcatgcatca ytttgaatga tttcaaagag 120
 gaaagaagca gctgtgacaa tgttcacatg aaccactcag agtggcctta tctttgtagt 180
 ctaacaataa tagtacaccc t 201

<210> 55
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 55
 gtgaagtgtg agaatttgca aagccataat gatagaatca acccaaaggc cccagaaatt 60
 ttcaataatc tatcatcctt atttaaaatt attatacaat waaaaattgt gttttaatcg 120
 catgagtaga cagatgttta tgctgttatt cagcgaatct tgcaaaagtg agtghtaatc 180
 atagaataaa acaatgttgg a 201

<210> 56
 <211> 201
 <212> DNA
 <213> Homo sapiens

eolf-seql

<400> 56
aatatgtttt acagattaag aatggcaaag tatattttac atccgatgca ggaattgctg 60
ggaaagtgga gagaaatatt cctgaagtat atgttgcaga yggccactgg cacacttttc 120
taattgggaa aaatggaaca gcaacagtat tgtctgttga cagaatatat aacagagata 180
ttatccaccc tactcaggac t 201

<210> 57
<211> 201
<212> DNA
<213> Homo sapiens

<400> 57
atagaagcag cagcataaat atctatatag aattagccag gttctagtct ggcacatcat 60
cacatagtag cacatttaat gcccacaatt attctatgat rtagatacta ctagttttccc 120
cattttccta atgagaaaag tgagtcatag tcaggtggag ataattcacc ccacgtctta 180
aggccaaatg gaaaaaatct t 201

<210> 58
<211> 201
<212> DNA
<213> Homo sapiens

<400> 58
atttaaatit aaatcaaaca gttctcactg aaataattag gggtaaaatg gacctctgtt 60
gatgctatit gaaaaaacta tttgaacaat gagaacactt rgacacaggg tgggaaacat 120
cacacaccgg ggctgtcgt gaccggggcc tgtcgtgggg tgaggggagg ggagaggaat 180
agcattagga gaaataccta a 201

<210> 59
<211> 201
<212> DNA
<213> Homo sapiens

<400> 59
atttcaaagc ttattatit tccattacta cctaacactt gtgtatctct tcttcagctt 60
tcaaagagtt ttcaggtgag ttatctaatt tgaacattac rttacatctg tgaggttgat 120
tacagaaaag taattaacac attttagaga aaggaaaaca taaatgaaaa gagacttact 180
caaagtcaca aagtaacggg g 201

<210> 60
<211> 201
<212> DNA
<213> Homo sapiens

<400> 60
aaataactca tacaattcac ttttaagctgt ttctttgata tgcaattctt agccattact 60
ctttgagcct gtcgtactac tgtcattatt atcattatit ktgaccctgc cttttgcatt 120
ccgcatcatt acacattctt tagttcaaag tggagaacta atgtcttcct gcttcaagcg 180
aggctgtctt gtcagctctt t 201

eolf-seql

<210> 61
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 61
 aacaaaagat tgtttttctt ctttatttga gaaccatttt atgtagattg caggaagggt 60
 gtgaattaaa atatgttttag attttttcat tccgttcatt ragaaacatt tgatttaagc 120
 tgcagagagg atatgcattt aagaatatgt ttagaattgt gggtgaggtg gcaaccacca 180
 tgcaattatc agtttattaa c 201

<210> 62
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 62
 tgccagtga acctgtatgt gggactggaa ttctgatttt taaaaatacc ttttctcaaa 60
 gcctttctct ggctctaaga agcttcaga tctgtcctaa yagcttgaaa accaagatct 120
 tgacttttta tagaatactt cactctgtgc cagaaactgt gttaagcatt ttctttacct 180
 atatcatcag gatttagtct t 201

<210> 63
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 63
 tctgctataa gtgctataag taataatata gaaatagttg acctcacagt taatttatta 60
 agcaaatagt ggagaagatg ctagtaattt ctagaccttg yctcaggggc tgtgaatata 120
 ggaggggata agataaaaag tggctctttc attggagtat caattgtggg gagagattga 180
 atatcctcaa taatatctta a 201

<210> 64
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 64
 gctttggaaa agcaccatgc acctgaaatt cttgcattct gatgttcata cctagagaga 60
 tttatggtga cataagcagc caaatagcac aagtgaaatt ktatatgaag tatatgacat 120
 gcatgattca atatatatgc ccacttttaa atataccaat agtatatttg gactataata 180
 atgaattcat ttcaaatt g 201

<210> 65
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 65

eolf-seq1

aataaattag ttcaggacct tgttaaattgt gaggtcactc tgagatacca gtggaaatat	60
ccagcaggca gatggatatg tgaactggag cacaacagag wagtctagat taaaatttgc	120
atttggagtg tagtatccat gaaagtagcc acgagcttgg atatgtttgc caaaagaatg	180
tggactctct tctcatcatt c	201

<210> 66
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 66	
ttgatgacga attgaatgta gatgtggaag atgatggaag aaccaaggaa gatggccttag	60
tttctgcctt gagcaactaa gtggatgatg agttagggaa yaccggatga ggagtcataa	120
caagaagaca ataaattagt tcaggacctt gttaaattgt aggtcactct gagataccag	180
tggaaatatc cagcaggcag a	201

<210> 67
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 67	
ctccagctcc atccatgttc ctgcaaagga catgatcttg ttcttttaaat ggctgcgtag	60
tattccatgg tgtgtatgta ctatatatat atttttaatc yggctctacca ttgatgggta	120
tttgggttga ttccacgtct ttgccattgt gaatagtgtt gcaatgaaca taacatgtgc	180
atctttacaa tagaatgatg c	201

<210> 68
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 68	
acacatagaa aaaaatgtag gcttgtttagc atcaagtaag ttgccaaata tgatattgcc	60
ccttatataa cttgaataac tttaggtgtt acttaaatc rtaggcacat attggcatct	120
tcagagcaag atgaattaac actctggagt ttttatttta tttattttaa aatagattat	180
cacttgagaa aagacagcat c	201

<210> 69
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 69	
attggaagat attttaagac aactagagc aacggtatca ttgcattggg tagaggcata	60
gcactttgca gagctcgcat attatgtttc ttggaatgtt kttttatgtg cagatttttc	120
tcctagaaac tatgattttt gaacgattag caagttcttt tccctaggct tctctcaaag	180
gcatactgaa aagtattaaa t	201

eof-seq1

<210> 70
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 70
 ggagaaagt cttggcttga aaacagactc atatagatgt agaatcacct atggggctga 60
 tcgtggctta aggatcatct gccagtcttg agaatcattt rctaattctca aggatcaaca 120
 aatgatcctc aagccagaat tgtctgttgt cacctgagtg ctttgaaaat catctggaaa 180
 aataagttga tattctttgg t 201

<210> 71
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 71
 gttttcaaaa agtttaataa atggataatt cttgttaata tttatattat tccagggttt 60
 acaaatgaaa actgttctgt tagcaagttt atggatccat wtatgaatca ttttcatatt 120
 gacaatatgc atttattcctt ctgtatctct ttaaatttag ttgacattt gctaagaaag 180
 gcataactcta agaactgcac a 201

<210> 72
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 72
 tttttatggt gtttttatct taattactct aacagagaca aatttcatct aaagaggtga 60
 tatctaaagg aaatgtagag atcagaatat aggacagatt kttttaaaaa gtttgatatt 120
 tattattagg tgcctaataa atgctccttc tagtttatga agctttattt ctaaaactat 180
 aatctatggt tatgtgtggt t 201

<210> 73
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 73
 tcctccaatc ggcaagctcc aggccaccac tggtctgctt tctgttccca tgaagttgac 60
 tacttttgct aactgatata aatggaatca tacatatttg yttttctgtg tctggcttat 120
 ttacttagc ataatgtcct ccaggtagat ccaagttgta gtaaagtca gaatttcctt 180
 tttttttaa gaccgaatag t 201

<210> 74
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 74
 gaacatatta ctggtgaatg gggaagctgg cttaaaaaaa agggagggtc ttctcagaca 60

eolf-seq1

gttctctttt tacatacgtg gcacaatgat tcatgatttg ytatatgtg aatgttgaat 120
gtggaatatt tataggaatg caaatcacat ttcctttaca caatagtatt aaactgattt 180
caaagtgttt tgatatatgc t 201

<210> 75
<211> 201
<212> DNA
<213> Homo sapiens

<400> 75
aattatcaaa tcattttttca caacaataaa aattgtatac aaggcaaact atgtacatat 60
atgtgggtgt ccttaggaat aaatgcataa tttcaaagac rtggaatttg taagtgttag 120
tcatgttctc acctgtaata aagcaatgtg ttaatgaaat tgggtgctta tatatattta 180
tatataattt cttagtttga g 201

<210> 76
<211> 201
<212> DNA
<213> Homo sapiens

<400> 76
tctttgctga tggaatattg aacacgctct cactctgatg tacagttata gtgtatacta 60
ggtaagaaaa gagagtccca ggccaattta aacaatgata rggtttgctt ttctgaattc 120
tgagaagcta gttcagggga agaaatgaaa ccacagtgtg gagggtcgaa tgggtgaaggt 180
gaaaaattag tatcaagcct c 201

<210> 77
<211> 201
<212> DNA
<213> Homo sapiens

<400> 77
gtgacaagac taatataagt agaatatagt tgagttacag aatatgttgt aatagtcttt 60
acaatgcaca tccaatgaac atcatataga cagatattaa yatcaatata tctacacata 120
attgatatat agtatatatt ataataaata taagatatga taatataaca gataatataa 180
tagaaatcat agatatctgt a 201

<210> 78
<211> 201
<212> DNA
<213> Homo sapiens

<400> 78
cagtctctcg attgataata aaatttgtca ttttctcagt taaattgata cagattcttg 60
tagagcaaaa agacctaaag ataagatttg ggatagattt wtaccttaac ccaggtaata 120
aatagattat tcgggtactt taatagtaac aaaggaatca aatggaattt taattgaaat 180
gattttacta atatggatcat t 201

eolf-seql

<210> 79
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 79
 tattatcttc taattatcct tttaaataaa aaacatactt tcatgttggt atgagtatca 60
 taacccaaaag agaagagaaa cttcaaagag aaaactgaat yagtgagag taacttaatt 120
 tcagaagaaa atcgtacttt catataaatt catagtgaag ggtaactatg tgataaccagc 180
 attcagggaa caaatgccct t 201

<210> 80
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 80
 ctttgattga gtctgactgt catgaaagat ttctctgtag cattcaatac tgtttgagag 60
 cattttacac atagtagaat gtcattcaaa actggagtca rtcctctcaa accctgccac 120
 tcttttatca gctaagttga ttattattc taaatatttt gttgtcattt caacggtatt 180
 tacagcatct tcaccaggaa t 201

<210> 81
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 81
 ccacccttct ttgagaatct aatgccgcag ctgatctgac aggaggcaga gctcaggcag 60
 taacgctcac ttgcccgccc ctcacctgct gctatgggcc rggttcctaa caggccacaa 120
 accagtaccg gtctgtgccc aggggttgga gaccctgtt atagactaat aaccaactga 180
 aatagaatag catagctatg a 201

<210> 82
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 82
 catcaagatg agacagtaaa ctattattag agttaccaca agtttgaaca aagttgatta 60
 tacatcgcaa acaataaat acttaaaacc ttgttcatag rgatcaggcc ttgcatacct 120
 acatagtcca aacattacat tcctgacatt tagaacattt aaatgcaaac tgttctttgt 180
 tagggctttc tcataactga a 201

<210> 83
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 83
 gttgttggtt ttagttgctt ataataaata ttaatgcttt tagataaacc tttgttttat 60

eolf-seq1

tttctacttt attctcagct ccttacctct tagccaaatt wtggggaaaa tattttaaaa	120
attttctctc ttttcaaac ctggctctgt tttctttctt catctagttt gagtaagact	180
cgagattatg taggtcatca g	201

<210> 84
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 84	
tttttgaatt ttgttcaca aggataatat ctgcacatag taaaaaacta aaatgatgga	60
aatgtttgaa acttcgttat aaatattgtt ctactctttt scitcatata ttttaactacc	120
taggtgaaac tgctcttaaa aatttttatg aagccttcca aaaatgctgt gcattagctt	180
tacacatatt tttacacaaa t	201

<210> 85
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 85	
caagtagcag gaaattatca gggaaactag aagagtatac tttaaaaaat gaattcagat	60
aattaattta gaaatggaag tatatcatgt agttaaatat rtagacttta tagttaaacc	120
ccagttcaca tcctacctct gacattccca gctatatgac cttcaacaac tttactattc	180
cttcatgttt gtatctatga t	201

<210> 86
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 86	
tgggtcaatt aaacctcttt cctttataaa ttaccagtc ttgggtatgt ctttattagc	60
tgcatgacag cagactaata caggttactg atatcagaga ragtagggca ctgctgtaaa	120
aataccaaag tgactttgga actgggtaac tggcagagac tggaacagtt tggaggggttc	180
agaataagag agaaaaatgt t	201

<210> 87
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 87	
agaagtattc tatttgaata cagtttcaaa tgactgttac tcattcattt agagatacca	60
gtaggaagc tggagatatg agtgtggagc ttaggggttg rgtagggct ggatatacac	120
atttgagagt catcagtgtt tagaggacat ttaaaaccaa taaactgaat gagaacacgt	180
ttgcggagtg tattagtctg t	201

<210> 88

eolf-seql

<211> 201
<212> DNA
<213> Homo sapiens

<400> 88
ttaaaatgaa aattgaagct atttttgtct tgtgaataaa aaacattcaa ttcacttgca 60
aattaacagg gcaaacaatt attgcagctt aaatagaaaa yattttcaca gacaaagtaa 120
atagttatta taacctcaac tttatttact ctggtttgat aaaatcttaa tggaatataa 180
tgtattttat ggttggtggt a 201

<210> 89
<211> 201
<212> DNA
<213> Homo sapiens

<400> 89
gtttatgcaa ataatttgaa atagtaatgt attctcaaat tagaaaataa tttaacgtgt 60
ttattgattt tcattgaact aaatgtgaac aaattctata ytgacacaac ttgagcaaga 120
gtccatgttg gccttcgcaa ttggtacatt ttccgtcttc actacattcc ctcagttgag 180
ttttaccttc cttctactgt g 201

<210> 90
<211> 201
<212> DNA
<213> Homo sapiens

<400> 90
ataaatggta atgaacatga tttttgttga caagattaca tataaagtga ttggaagata 60
ttttaagaca cactagagca acggtatcat tgcattgggt rgaggcatag cactttgcag 120
agctcgcata ttatgtttct tggaatgttg ttttatgtgc agatttttct cctagaaact 180
atgatttttg aacgattagc a 201

<210> 91
<211> 201
<212> DNA
<213> Homo sapiens

<400> 91
tgtgaacctc ggagaaaata taggagatac tgttctccct agtaatcatg agaaaataag 60
gtcacatcaa gcagcaatag agtgtcttat atgcacttat ytgctaccaa atattttatt 120
taaattccac gtgagtataa ctgcacactt tctcttttat aggttccttt gtctttgcgg 180
ttacagtcac agatgctgat a 201

<210> 92
<211> 201
<212> DNA
<213> Homo sapiens

<400> 92
taaaaaagca taaactttcc aaacctgaga aatatgcatt tagaagcttt cttttgattc 60
taagtaaaat tatggaatcc ttttctcaca caaaagacac mggtgtttta aataataatt 120

eolf-seq1

taaatttaaa tctgttttcc tactatgtct ttgaattcaa gtatctgcta tggcaacctc 180
tgagttcatg aattgtaaaa a 201

<210> 93
<211> 201
<212> DNA
<213> Homo sapiens

<400> 93
ctccctcctc ccaccctcca ccctccagta gaccccgagt tctgttggtt ctttctctgt 60
gtccatgtgt tctcatcatt tagctccac ttataagtga raacaggtgg tatttggttt 120
tctgttccta tgtagtttg ctgaggataa tagcctccag ctccatccat gttcccacaa 180
aagacataat cttgttcttt t 201

<210> 94
<211> 201
<212> DNA
<213> Homo sapiens

<400> 94
gagattacca gaaataaaac tattaagggc aaagctagga atactttcta atgtttgtaa 60
cttaagtatt ttaataacat tttctatttg ctttctttt yctacatgtt gttactgttt 120
tggtacaaag tcacactagt tcgttattat tattaatcaa acagtacaga aaaacaaagg 180
attgggattg ccaccattgt t 201

<210> 95
<211> 201
<212> DNA
<213> Homo sapiens

<400> 95
atactgatta tacatgatga taaattatat gtgatgatta ctgaaaataa agttagttac 60
cgatgtaaat acttgattga acacttcttt gtcctaattt rtagcatact agagactaaa 120
gattacaaat cattttaacc atgcaaacgt atattttgga aacacagtga aaatgattac 180
aaacaaattt ttcaagtaca t 201

<210> 96
<211> 201
<212> DNA
<213> Homo sapiens

<400> 96
tgctcccaa gaacctatgt tccacacctt tggtgtatta tcaccttcaa tgggaatgca 60
tgatttagta gttgaagcca ttggcctatt tcatgttctt yacaaattta aaaaatatat 120
attttatttg tatgtatgca atttttggta tatgggatgt aaaaaggaag gaaattgata 180
aataaatgag taagaaaaag a 201

<210> 97
<211> 201

eolf-seq1

<212> DNA
<213> Homo sapiens

<400> 97
attatgacct gagaatttta atccatcccc tgtcaagttt tattggattt cctggaatac 60
agttactcta ctctgtagag ggcagagcaa ctccatcttg katgctcatc ttccatgtct 120
acttctgatt aaccccagtt ctgggaatgc ctctaataatt tccagtatat ctatagttcc 180
ttatgtaaga gcttgtaacta a 201

<210> 98
<211> 201
<212> DNA
<213> Homo sapiens

<400> 98
taagttagcc tgtaagtctt gctattgcat ccacttttta aatttggttca acaccagagc 60
tactgtgtgc caagcaccat atttagataa gtgagagatg rctcttgctt tcaagaggtt 120
tgcagttttt ggtgactaga ctttcccttt tccaaagtag tttaagattt gcatagctct 180
gtttgcagag aattatttaa a 201

<210> 99
<211> 201
<212> DNA
<213> Homo sapiens

<400> 99
ctctataata ttaatttcat attacatctt aagactttca tttaagcaaa ttacataact 60
cctaaaagggt gctgcattga ggccaggcac ggtggctcat rcctgtaatc ccagcacttt 120
gggaggccga gacagggtga tcacctgagg tcaggagttt cagaccagcc tggctaacat 180
ggtgaaaccc catttgtaact a 201

<210> 100
<211> 201
<212> DNA
<213> Homo sapiens

<400> 100
caataaattt gttaccttta tattcagaaa cctaattgaa tcggagtaga cgaggactaa 60
aagcataagg aataataatc actaatcttc actatctttc yttgtttgtg ttgcaaatat 120
tgtgtgttgg ctggtgttag gcatggtgaa atatatgaaa atgatattaa tataaaacaa 180
tgtccaagtc ctagaggcaa c 201

<210> 101
<211> 201
<212> DNA
<213> Homo sapiens

<400> 101
tcttgggtat gtctttatta gctgcatgac agcagactaa tacaggttac tgatatcaga 60
gagagtaggg cactgctgta aaaataccaa agtgactttg raactgggta actggcagag 120

	eolf-seql	
actggaacag	tttggagggt tcagaataag agagaaaaat gttggaaagt ttggaacttc	180
ctacagactt	tttgaatggc t	201