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Titolo

METODO PER DISEGNARE UNA PLURALITA' DI SEQUENZE NUCLEOTIDICHE SONDA SPECIFICHE PER UNA CORRISPONDENTE PLURALITA' DI SPECIE MICROBICHE E MICROARRAY COMPRENDENTE LE STESSE

DESCRIZIONE

del brevetto per invenzione industriale dal titolo:

"METODO PER DISEGNARE UNA PLURALITA' DI SEQUENZE NUCLEOTIDICHE SONDA SPECIFICHE PER UNA CORRISPONDENTE PLURALITA' DI SPECIE MICROBICHE E MICROARRAY COMPRENDENTE LE STESSE"

di MOLECULAR STAMPING S.R.L.

di nazionalità italiana

con sede: VIA MANZONI, 16

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La presente invenzione è relativa a un metodo per disegnare una pluralità di sequenze nucleotidiche sonda specifiche per una corrispondente pluralità di specie microbiche, a un microarray comprendente le stesse e a relativi usi nella diagnosi di batteriemia e/o sepsi.

Stato dell'Arte

La batteriemia, ovvero la presenza di batteri nel sangue dovuta a diversi tipi di infezione, è associata a elevatissimi tassi di morbilità e mortalità. E' stato valutato di recente che le manifestazioni più pericolose della batteriemia, la sepsi e lo shock settico, rappresentano la decima causa di morte negli Stati Uniti, costituendo tra l'altro un peso economico molto importante

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

per il paese. In Europa, si stima che 135'000 pazienti muoiono ogni anno per complicanze associate alla sepsi.

Le diverse forme di sepsi sono sempre associate a batteriemia o fungemia. Al contrario, la batteriemia e/o la fungemia non degenerano necessariamente in sepsi qualora vengano trattate precocemente ed efficacemente. In ogni caso, la diagnosi microbiologica precoce risulta piuttosto difficile, perché, fino a uno stadio avanzato della patologia, la carica microbica risulta essere piuttosto bassa (anche nell'ordine di 1 CFU/ml).

Se la batteriemia (o la fungemia) non è controllata in modo appropriato, tende immancabilmente a degenerare in sepsi, una sindrome clinica correlata al processo infettivo che porta a gravi alterazioni della risposta infiammatoria e della coagulazione.

Per questo motivo, è fondamentale identificare la batteriemia (o fungemia) in modo affidabile e rapido, utilizzando campioni con una carica batterica limitata, caratterizzando il patogeno a livello di specie e determinando la suscettibilità dello stesso agli antibiotici.

Identificato il patogeno responsabile, è possibile scegliere gli agenti antimicrobici più adatti, evitando il trattamento inutile con antibiotici non efficaci e migliorando la prognosi dei pazienti. Inoltre, si

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

diminuisce la probabilità che insorga resistenza agli antibiotici negli agenti microbici. Infine, si risparmia nel consumo di antibiotici e si diminuiscono i costi per la struttura sanitaria.

In un recente studio su una coorte di pazienti affetti da sepsi è stato evidenziato come, in seguito all'insorgere del caratteristico sintomo dell'ipotensione, ogni ora di ritardo nella somministrazione di una terapia efficace fosse associata a un diminuzione dell'8% nella sopravvivenza.

Attualmente, il "gold standard" per la diagnosi della batteriemia si basa sull'arricchimento del patogeno causativo mediante sistemi di emocoltura automatizzati con monitoraggio continuo, seguito da colorazione Gram, coltura su agar, e successiva identificazione biochimica e test della suscettibilità agli antibiotici. L'intero processo richiede da 24 a 72 ore.

Esistono in alternativa tecnologie basate sugli acidi nucleici, che però risultano ancora piuttosto costose, laboriose e non sufficientemente sensibili. Per queste ragioni, tali tecnologie sono ancora poco utilizzate di routine.

Le tecnologie basate sugli acidi nucleici si distinguono in due categorie: saggi da effettuare direttamente su campioni ematici e saggi da effettuare su

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

emocolture.

Per i saggi della prima categoria, è necessario eseguire un'amplificazione del DNA presente nel campione ematico per avere una quantità sufficiente di acido nucleico da analizzare. Le tecniche basate sulla PCR tradizionale sono in generale da evitare a causa dell'elevato rischio di contaminazione da carryover. Le tecniche basate sulla Real-time PCR, invece, sono più efficaci, ma risultano ancora eccessivamente costose perché possano essere utilizzate di routine.

Per i saggi della seconda categoria, la quantità di DNA estratto dall'emocoltura è in genere sufficiente senza che sia necessaria un'amplificazione, ma il saggio stesso deve avere caratteristiche di sensibilità e specificità elevatissime per poter distinguere tra numerose specie microbiche e il DNA genomico umano presente in quantità prevalente.

Vengono di seguito descritte brevemente le tecniche disponibili per saggi su emocoltura e gli svantaggi che le rendono ancora non soddisfacenti per un uso di routine.

Le tecniche basate su PCR patogeno-specifica, come già accennato, presentano problemi di contaminazione da carryover e scarsa possibilità di analizzare più patogeni in contemporanea.

Le tecniche basate su PCR ad ampio spettro (disegnate

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

quindi su geni conservati come quelli del RNA ribosomale), oltre ai suddetti svantaggi, richiedono inoltre ulteriori tecniche di identificazione come il sequenziamento, l'analisi di polimorfismi, o la real-time PCR specie-specifica.

Le tecniche basate su PCR multiplex consentono l'analisi solo di un numero limitato di geni in una singola reazione.

Le tecniche basate su FISH (fluorescence in situ hybridisation) con PNA (peptide nucleic acid) sono scarsamente automatizzabili e permettono l'analisi di un solo campione alla volta in presenza di un numero molto limitato di sonde specie-specifiche.

Negli ultimi anni, si è tentato di migliorare le caratteristiche diagnostiche degli approcci ad ampio spettro e multiplex mediante lo sviluppo di microarray con sonde di DNA specifici per la diagnosi della batteriemia (o della sepsi). Questi microarray sono costituiti da microchip rivestiti con un elevato numero di sonde di DNA in grado di identificare specie microbiche diverse ed eventualmente marker genetici di resistenza agli antibiotici.

Di recente, è stato lanciato sul mercato un kit di questo tipo con il nome commerciale di Prove-it Sepsis (Mobidiag, Helsinki, Finlandia). Il Prove-it Sepsis implica

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

previe emocoltura ed estrazione del DNA e una successiva PCR multiplex con ibridizzazione dei prodotti su microarray. Il tempo necessario per eseguire la PCR multiplex e l'ibridizzazione su microarray è di almeno tre ore. Il produttore sostiene che il kit presenta una sensibilità del 94% e una specificità del 96% ma non esistono al momento articoli scientifici che lo confermino.

Un altro kit di questo tipo, che è ancora soltanto a livello di prototipo, è il microarray descritto in Cleven B.E. et al., 2006, *Identification and characterisation of bacterial pathogens causing bloodstream infections by DNA microarray*, J. Clin. Microbiol. 44: 2389-2397. Il suddetto microarray permette l'identificazione in emocolture di tre importanti specie microbiche responsabili di batteriemia, Staphlococcus aureus, Escherichia coli e Pseudomonas aeruginosa, mediante estrazione del DNA e successiva ibridizzazione su microarray.

Malgrado quest'ultimo kit permetta l'identificazione di specie microbiche senza utilizzare una PCR multiplex, quindi riducendo il rischio di contaminazione da carryover, il numero di specie identificate è estremamente limitato (3 specie) e, soprattutto, la fase di ibridizzazione su microarray richiede un tempo estremamente lungo (almeno 18 ore), che in associazione ai tempi necessari per l'emocoltura e l'estrazione del DNA costituiscono un

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ritardo eccessivo per una diagnosi funzionale a una terapia efficace.

Si avverte pertanto la necessità di sviluppare un microarray con sonde ad alta specificità e sensibilità per un elevato numero di specie microbiche che consenta una diagnosi precoce, efficace e soprattutto veloce, della batteriemia e/o della sepsi.

Lo scopo della presente invenzione è pertanto quello di fornire un metodo per disegnare una pluralità di sequenze nucleotidiche sonda specifiche per una corrispondente pluralità di specie microbiche e un relativo microarray che consentano di ottenere una diagnosi veloce e specifica per un numero elevato di specie microbiche coinvolte nella batteriemia e/o nella sepsi.

Secondo la presente invenzione tale scopo è raggiunto mediante il metodo secondo la rivendicazione 1.

Secondo la presente invenzione viene inoltre fornito un microarray secondo la rivendicazione 6.

Definizioni

A meno che non sia specificato esplicitamente il contrario, i seguenti termini presentano il significato qui sotto indicato.

Per "percentuale di identità" si intende la percentuale di identità tra almeno due sequenze calcolata secondo l'algoritmo blastn fornito da NCBI (National Center

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

for Biotechnology Information) utilizzando i parametri standard.

Per "porzione conservata di sequenza genomica" si intende una porzione di sequenza di DNA genomico di un ceppo di una specie microbica che ha una percentuale di identità di almeno il 95%, preferibilmente di almeno il 97%, con una porzione di sequenza di DNA genomico di un altro ceppo della specie microbica.

Breve descrizione delle figure

Per una migliore comprensione della presente invenzione, viene nel seguito descritta una forma di realizzazione preferita, a puro titolo di esempio non limitativo e con riferimento ai disegni allegati, nei quali:

- la Figura 1 è un elettroferogramma dell'analisi di lunghezza di una delle sequenze nucleotidiche sonda prodotte mediante il metodo secondo la presente invenzione;

- la Figura 2 è una tabella in cui sono illustrati i risultati di specificità di ibridizzazione di DNA genomico certificato sul microarray secondo la presente invenzione;

- la Figura 3 è un ingrandimento di una prima area in alto a sinistra della tabella di Figura 2 che mette in evidenza i risultati per le specie Acinetobacter

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

baumannii, Enterobacter aerogenes, Enterobacter cloacae, Escherichia coli, Klebsiella pneumoniae, Pseudomonas aeruginosa, Proteus mirabilis, Serratia marcescens, Enterococcus faecalis;

- la Figura 4 è un ingrandimento di una seconda area centrale della tabella di Figura 2 che mette in evidenza i risultati per le specie Enterococcus faecium, Staphylococcus aureus, Staphylococcus epidermidis, Streptococcus pneumoniae, Streptococcus agalactiae, Streptococcus bovis, Streptococcus piogenes, Staphylococcus aureus meticillino-resistente, Enterococcus faecium vancomicino-resistente, Streptococcus pneumoniae penicillino-resistente e Aspergillus fumigatus;

- la Figura 5 è un ingrandimento di una terza area in basso a sinistra della tabella di Figura 2 che mette in evidenza i risultati per le specie Candida albicans, Candida glabrata, Candida parapsilosis, Candida tropicalis, Human adenovirus e Homo sapiens.

Descrizione dettagliata dell'invenzione

Il metodo per disegnare una pluralità di sequenze nucleotidiche sonda specifiche per una corrispondente pluralità di specie microbiche secondo la presente invenzione comprende le seguenti fasi.

In una prima fase (a) è fornita una pluralità di sequenze genomiche appartenenti a diversi ceppi della

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

pluralità di specie microbiche. La pluralità di sequenze genomiche è tipicamente ottenuta da banche dati di sequenze disponibili on-line. Nella fattispecie, la pluralità di sequenze genomiche è stata ottenuta dalla banca dati dell'NCBI (National Center for Biotechnology Information).

In una seconda fase (b), è stata allineata la pluralità di sequenze genomiche per ciascuna specie microbica.

In una terza fase (c), per ciascuna specie microbica, sono state identificate porzioni conservate di sequenza genomica in base all'allineamento della precedente fase (b). Per l'allineamento e l'identificazione delle porzioni conservate di sequenza genomica è stato utilizzato un programma informatico con impostazioni standard, di cui il tecnico del ramo è normalmente a conoscenza.

In una quarta fase (d), per ciascuna specie microbica, vengono selezionate almeno cinque diverse sequenze nucleotidiche sonda appartenenti a porzioni conservate di sequenza genomica e aventi una lunghezza da 300 a 2000 nucleotidi. Preferibilmente nella fase (d) vengono selezionate almeno dieci diverse sequenze nucleotidiche sonda appartenenti a porzioni conservate di sequenza genomica.

In una quinta fase (e), per ciascuna sequenza nucleotidica sonda selezionata nella precedente fase (d),

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

viene disegnata una coppia di primer per amplificare la sequenza nucleotidica sonda mediante PCR. Ciascun primer è disegnato in modo da avere una temperatura di melting (Tm) da 55°C a 65°C e una lunghezza da 15 a 30 nucleotidi. Ciascun primer è preferibilmente disegnato in modo da avere una temperatura di melting (Tm) da 59°C a 61°C, ancora più preferibilmente in modo da avere una lunghezza da 20 a 25 nucleotidi.

Ulteriori parametri preferiti per il disegno dei primer sono un contenuto di basi G e/o C in percentuale dal 20% al 60% e/o un contenuto di non più di due basi G e/o C in corrispondenza degli ultimi cinque nucleotidi all'estremità 3'.

Per disegnare i primer è stato utilizzato il programma informatico Primer-3 disponibile on-line all'indirizzo http://frodo.wi.mit.edu/ e sviluppato presso il Whitehead Institute e il Howard Hughes Medical Institute da Steve Rozen e Helen Skaletsky.

In una sesta fase (f), sono selezionate le sequenze nucleotidiche sonda con una percentuale di identità inferiore al 40% con ciascuna altra sequenza nucleotidica sonda. Preferibilmente, sono selezionate le sequenze nucleotidiche sonda con una percentuale di identità inferiore al 20% con ciascuna altra sequenza nucleotidica sonda.

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

Ulteriori parametri preferiti per il disegno delle sequenze nucleotidiche sonda sono un contenuto di non più di tre G e/o C consecutive, e/o un contenuto di non più di tre basi A o T o C uguali consecutive, e/o un contenuto di basi G e/o C in percentuale dal 10% al 50% (più preferibilmente dal 20% al 40%).

In una settima fase (g) sono selezionate le sequenze nucleotidiche sonda con una percentuale di identità inferiore al 10% con il DNA genomico umano, più preferibilmente con una percentuale di identità inferiore all'1%, ancora più preferibilmente con una percentuale di identità dello 0% con il DNA genomico umano.

Il microarray per la rivelazione di una pluralità di specie microbiche secondo la presente invenzione comprende almeno una sequenza nucleotidica sonda per almeno quattro diverse specie microbiche. Le diverse specie microbiche sono selezionate dal gruppo costituito da Acinetobacter baumannii, Enterobacter aerogenes, Enterobacter cloacae, Enterococcus faecalis, Enterococcus faecium, Escherichia coli, Klebsiella pneumoniae, Proteus mirabilis, Pseudomonas aeruginosa, Serratia marcescens, Staphylococcus aureus, Staphylococcus epidermidis, Streptococcus agalactiae, Streptococcus bovis, Streptococcus pneumoniae e Streptococcus piogenes. Ciascuna sequenza nucleotidica sonda ha una lunghezza da 300 a 2000 nucleotidi e ha una

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

percentuale di identità inferiore al 20% con ciascuna altra sequenza nucleotidica sonda.

Preferibilmente, l'almeno una sequenza nucleotidica sonda per Acinetobacter baumannii è SEQ ID NO:1-14, e/o l'almeno una sequenza nucleotidica sonda per Enterobacter aerogenes è SEQ ID NO:46-59, e/o l'almeno una sequenza nucleotidica sonda per Enterobacter cloacae è SEQ ID NO:60-70, e/o l'almeno una sequenza nucleotidica sonda per Enterococcus faecalis è SEQ ID NO:71-77, e/o l'almeno una sequenza nucleotidica sonda per Enterococcus faecium è SEQ ID NO:78-89, e/o l'almeno una sequenza nucleotidica sonda per Escherichia coli è SEQ ID NO:90-97, e/o l'almeno una sequenza nucleotidica sonda per Klebsiella pneumoniae è SEQ ID NO:102-104, e/o l'almeno una sequenza nucleotidica sonda per Proteus mirabilis è SEQ ID NO:105-111, e/o l'almeno una sequenza nucleotidica sonda per Pseudomonas aeruginosa è SEQ ID NO:112-115, e/o l'almeno una sequenza nucleotidica sonda per Serratia marcescens è SEQ ID NO:116-117, e/o l'almeno una sequenza nucleotidica sonda per Staphylococcus aureus è SEQ ID NO:118-131, e/o l'almeno una sequenza nucleotidica sonda per Staphylococcus epidermidis è SEQ ID NO:132, e/o l'almeno una sequenza nucleotidica sonda per Streptococcus agalactiae è SEQ ID NO:133-142, e/o l'almeno una sequenza nucleotidica sonda per Streptococcus bovis è SEQ ID NO:143-147, e/o l'almeno una sequenza nucleotidica

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

sonda per Streptococcus pneumoniae è SEQ ID NO:148-159, e/o l'almeno una sequenza nucleotidica sonda per Streptococcus piogenes è SEQ ID NO:161-169.

Il microarray comprende preferibilmente anche almeno una sequenza nucleotidica sonda per almeno una specie microbica selezionata dal gruppo costituito da Aspergillus fumigatus, Candida albicans, Candida glabrata, Candida parapsilosis e Candida tropicalis. Anche in questo caso l'almeno una sequenza nucleotidica sonda ha una lunghezza da 300 a 2000 nucleotidi e ha una percentuale di identità inferiore al 20% con ciascuna altra sequenza nucleotidica sonda.

Preferibilmente, l'almeno una sequenza nucleotidica sonda per Aspergillus fumigatus è SEQ ID NO:14-20, e/o l'almeno una sequenza nucleotidica sonda per Candida albicans è SEQ ID NO:21-29, e/o l'almeno una sequenza nucleotidica sonda per Candida glabrata è SEQ ID NO:30-35, e/o l'almeno una sequenza nucleotidica sonda per Candida parapsilosis è SEQ ID NO: 36-40 e/o l'almeno una sequenza nucleotidica sonda per Candida tropicalis è SEQ ID NO: 41-45.

Ancor più preferibilmente, il microarray comprende inoltre almeno una sequenza nucleotidica sonda per almeno un adenovirus umano. Anche in questo caso l'almeno una sequenza nucleotidica sonda ha una lunghezza da 300 a 2000

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

nucleotidi e ha una percentuale di identità inferiore al 20% con ciascuna altra sequenza nucleotidica sonda.

L'adenovirus umano è preferibilmente human adenovirus D, human adenovirus B oppure human adenovirus C, ancor più preferibilmente l'almeno una sequenza nucleotidica sonda per human adenovirus D è SEQ ID NO:98, e/o l'almeno una sequenza nucleotidica sonda per human adenovirus B è SEQ ID NO:99-100 e/o l'almeno una sequenza nucleotidica sonda per human adenovirus C è SEQ ID NO:101.

Il microarray secondo l'invenzione è utilizzato nella diagnosi di batteriemia e/o sepsi, in particolare nella diagnosi di infezioni nosocomiali.

Il tempo necessario per l'ibridizzazione tra il DNA di un campione da analizzare e le sequenze nucleotidiche sonda comprese nel microarray è preferibilmente minore di 2 ore, più preferibilmente minore di 1,5 ore, ancor più preferibilmente minore o uguale a un'ora.

Esempio 1: Microarray Sepsis-1H

Un esempio specifico ma non-limitativo del metodo per disegnare le sonde, del microarray recante le sonde stesse (microarray Sepsis-1H) e del relativo uso secondo la presente invenzione sono descritti nel seguito.

Nella fase (a) del metodo sono fornite le sequenze genomiche disponibili su NCBI di diversi ceppi delle seguenti specie microbiche.

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

Batteri Gram-negativi: Acinetobacter baumannii, Enterobacter aerogenes, Enterobacter cloacae, Escherichia coli, Klebsiella pneumoniae, Pseudomonas aeruginosa, Proteus mirabilis, Serratia marcescens.

Batteri Gram-positivi: Enterococcus faecalis, Enterococcus faecium, Enterococcus spp. vancomicino-resistente, Staphylococcus aureus, Staphylococcus aureus meticillino-resistente, Staphylococcus epidermidis, Streptococcus pneumoniae, Streptococcus pneumoniae penicillino-resistente, Streptococcus agalactiae, Streptococcus bovis, Streptococcus piogene.

Funghi: Aspergillus fumigatus, Candida albicans, Candida glabrata, Candida parapsilosis.

Virus: Human adenovirus.

Nella fase (b), è stata allineata la pluralità di sequenze genomiche per ciascuna specie microbica.

Nella fase (c), per ciascuna specie microbica, sono state identificate le porzioni conservate di sequenza genomica in base all'allineamento della precedente fase (b).

Nella fase (d), per ciascuna specie microbica, sono state selezionate dieci diverse sequenze nucleotidiche sonda appartenenti alle porzioni conservate di sequenza genomica e aventi una lunghezza media di 1500 nucleotidi.

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

Nella fase (e), per ciascuna sequenza nucleotidica sonda selezionata nella precedente fase (d), è stata disegnata mediante il programma informatico Primer-3 una coppia di primer per amplificare la sequenza nucleotidica sonda mediante PCR. Ciascun primer è stato disegnato in modo da avere una temperatura di melting (Tm) di 60°C ± 1°C e una lunghezza da 20 a 25 nucleotidi.

Il contenuto di basi G e/o C dei primer è in percentuale dal 20% al 60% e il contenuto di basi G e/o C in corrispondenza degli ultimi cinque nucleotidi all'estremità 3' non è maggiore di 2.

Nella fase (f), sono selezionate le sequenze nucleotidiche sonda con una percentuale di identità inferiore al 20% con ciascuna altra sequenza nucleotidica sonda, con un contenuto di non più di tre G e/o C consecutive, con un contenuto di non più di tre basi A o T o C uguali consecutive, e un contenuto di basi G e/o C in percentuale dal 20% al 40%.

Nella fase (g) sono state selezionate le sequenze nucleotidiche sonda con una percentuale di identità dello 0% con il DNA genomico umano.

Le sonde sono state prodotte utilizzando DNA genomico certificato per ciascuna specie microbica e reagenti standard e un normale termociclatore per PCR.

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

La lunghezza e la purezza di ciascuna sonda prodotta sono state verificate dopo la purificazione dei prodotti di amplificazione. La verifica è stata effettuata mediante lo strumento "Bioanalyzer Agilent 2100" che consente di ottenere un grafico (con rispettivi valori numerici) della distribuzione delle lunghezze dei vari filamenti presenti nel campione amplificato, consentendo pertanto di verificare la presenza (e la percentuale) di eventuali prodotti aspecifici. La sonda supera il controllo di qualità se una percentuale maggiore o uguale al 95% dei filamenti che la costituiscono ricadono all'interno dell'intervallo atteso di lunghezza. Tale valore definisce la percentuale di purezza necessaria per ottenere profili di ibridazione specifici della sonda sul microarray.

A titolo di esempio, viene riportato qui di seguito un estratto dell'analisi di una sonda, che ne indica i parametri di controllo di qualità. I parametri di controllo di qualità sono inoltre riassunti nella Figura 1.

CATEGORIE DI CONTROLLO DI QUALITÀ DELLE SONDE

La qualità delle sonde deve essere valutata mediante la misura della lunghezza e della % di purezza ottenuta mediante il BioAnalyzer Agilent 2100.

LUNGHEZZA: attesa teoricamente ± risoluzione di dimensioni dello strumento (% o bp):

±5% (per sonde con lunghezza da 100 a 1000 bp)

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

±15% (per sonde con lunghezza da 1000 a 7500 bp)

PUREZZA: > 95% area totale del prodotto a banda singola.

L'elettroferogramma della Figura 1 mostra il picco relativo alla sonda in questione (1445 bp), le cui dimensioni ricadono nell'intervallo di lunghezza atteso (1241-1679 bp). Il dato "% area totale" (100%) ne definisce l'indice di purezza. Il picco della sonda è compreso tra i picchi di due marcatori di lunghezza nucleotidica nota (50 bp e 10380 bp).

Le sonde così prodotte e verificate sono state spottate (depositate) su di un microarray costituito da un supporto di vetro silanizzato e funzionalizzato con gruppi aldeidici o epossidici. Le sonde vengono spottate sul microarray mediante uno spotter che utilizza la tecnologia inkjet a non-contatto (Marathon microarrayer, Arrayjet, United Kingdom).

Le specie microbiche rappresentate sul microarray Sepsi-1H sono definite dal seguente numero di sonde (Tabella 1).

Tabella 1

SPECIE MICROBICA/RESISTENZA	**NUMERO DI SONDE**	**SEQ ID NO:**
Acinetobacter baumannii	14	SEQ ID NO:1-14

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

Enterobacter aerogenes	13 (+ 1*)	SEQ ID NO:46-59
Enterobacter cloacae	10	SEQ ID NO:60-70
Escherichia coli	7	SEQ ID NO:90-97
Klebsiella pneumoniae	2 (+ 1*)	SEQ ID NO:102-104
Pseudomonas aeruginosa	3 (+ 1*)	SEQ ID NO:112-115
Proteus mirabilis	7	SEQ ID NO:105-111
Serratia marcescens	2	SEQ ID NO:116-117
Enterococcus faecalis	7	SEQ ID NO:71-77
Enterococcus faecium	9	SEQ ID NO:78-89
Enterococcus faecium Vancomicino-Resistenza	3	
Staphylococcus aureus	11	SEQ ID NO:118-131
Staphylococcus aureus Meticillino-Resistenza	3	
Staphylococcus epidermidis	1	SEQ ID NO:132
Streptococcus pneumoniae	6	SEQ ID NO:148-159
Streptococcus pneumoniae Penicillino-Resistenza	6	
Streptococcus agalactiae	10	SEQ ID NO:133-142
Streptococcus bovis	5	SEQ ID NO:143-147
Streptococcus pyogenes	10 (+ 1*)	SEQ ID NO:161-169
Human adenovirus	4	SEQ ID NO:98-101
Aspergillus fumigatus	6 (+ 1*)	SEQ ID NO:14-20
Candida albicans	9	SEQ ID NO:21-29
Candida glabrata	6	SEQ ID NO:30-35
Candida parapsilosis	5	SEQ ID NO: 36-40

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

Candida tropicalis	5	SEQ ID NO: 41-45
*Universal bacteria**	5*	

* Il microarray contiene anche 5 sonde comuni a tutte le specie batteriche ma non a funghi e virus: queste sonde fungono pertanto da controlli positivi per le specie batteriche gram+ e gram-.

Il DNA campione da analizzare viene marcato mediante reazione chimica con una serie di molecole di fluoroforo secondo tecniche note al tecnico del ramo. In particolare, è stato utilizzato il kit Kreatech "ULS™ arrayCGH Labelling", secondo cui un complesso di platino, a cui è attaccata una molecola di fluoroforo, si lega tramite legame di coordinazione alla guanina dell'acido nucleico. Il fluoroforo utilizzato per Sepsi-1H è la Cyanine3, ma possono essere utilizzati in alternativa diversi altri fluorofori.

Successivamente, il DNA campione marcato con fluoroforo viene portato a contatto con il microarray e lasciato un'ora a 60°C a contatto affinché il DNA campione marcato con fluoroforo ibridizzi alla corrispondente sonda complementare in sequenza.

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

Successivamente, il microarray viene sottoposto a uno o più cicli di lavaggio per eliminare di DNA campione marcato con fluoroforo non ibridizzato.

Il microarray viene quindi analizzato mediante un apposito scanner che rileva l'intensità di fluorescenza dei fluorofori e identifica di conseguenza DNA campione marcato con fluoroforo ibridizzato. In questo caso è stato utilizzato un comune scanner con risoluzione di almeno 10 μm e due canali di lettura (laser con eccitazione a λ=635 nm e λ=532 nm).

Esempio 2: Verifica della specificità delle sonde

La specificità di ciascuna sonda è stata valutata eseguendo ibridazioni di DNA genomico certificato su microarray Sepsi-1H. La specificità è stata analizzata considerando l'assenza di interazione molecolare con DNA genomico di altre specie e con il DNA genomico umano; questo ha consentito di assegnare uno specifico profilo di ibridazione a ciascuna specie.

Nella Figura 2 sono illustrati i profili di ibridazione di DNA genomico certificato di 21 specie microbiche e 3 resistenze agli antibiotici su Sepsi-1H. In ascisse sono riportate le due ibridazioni per ciascuna specie microbica, in ordinate le specie microbiche con i codici delle sonde ad esse associate. Il profilo di ibridazione è definito con codice colori:

cella nera: sonda accesa in modo specifico;

cella con righe trasversali: sonda accesa in modo aspecifico;

cella grigia: sonda non accesa per variabilità di comportamento delle sonde;

Il profilo di ibridazione di ciascuna specie ha esito positivo se almeno il 50% delle sonde sono definite da celle di colore nero in assenza di aspecifici (cella con righe trasversali).

Come si può vedere dalla Figura 2 e dagli ingrandimenti delle Figure 3-5, la specificità di ibridizzazione è del 100% per 21 specie e lievemente inferiore per le altre. In media, la specificità risulta essere del 98,5%, un valore molto più elevato che per qualsiasi altro microarray noto.

Dai dati riportati sopra, sono evidenti i vantaggi del metodo e del microarray secondo l'invenzione.

In particolare, il metodo secondo la presente invenzione permette di disegnare una pluralità di sonde che permettono di distinguere un numero molto più elevato di specie microbiche e con una specificità molto maggiore rispetto ai microarray noti.

Gli specifici parametri selezionati per disegnare le sonde permettono inoltre di ottenere delle sonde di lunghezza maggiore a quelle utilizzate nei microarray noti:

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ciò consente di ottenere dei tempi di ibridizzazione inferiori ai microarray noti e di conseguenza ottenere dei risultati diagnostici in tempi molto più brevi e compatibili con una scelta mirata e precoce del trattamento antimicrobico.

Grazie al fatto che le sonde hanno una percentuale di identità di sequenza con il DNA genomico minima, è possibile identificare con elevata specificità il DNA microbico senza che l'elevata quantità di DNA genomico umano necessariamente presente nel campione interferisca.

Grazie all'elevato numero di sonde specifiche per diverse specie microbiche comprese sul microarray secondo l'invenzione è possibile eseguire uno screening contemporaneo di un numero molto più elevato di specie microbiche rispetto ai microarray noti.

Inoltre, il microarray secondo l'invenzione comprende anche una serie di specie microbiche che non erano incluse nei microarray noti, ampliando quindi il numero di microorganismi che è possibile identificare. In particolare, non sono comprese solo specie batteriche, ma anche fungine e virali.

SEQUENCE LISTING

<110> Molecular Stamping

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(Iscrizione Albo nr. 1099/B)

<120> METODO PER DISEGNARE UNA PLURALITÀ DI SEQUENZE NUCLEOTIDICHE SONDA SPECIFICHE PER UNA CORRISPONDENTE PLURALITÀ DI SPECIE MICROBICHE E MICROARRAY COMPRENDENTE LE STESSE

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(Iscrizione Albo nr. 1099/B)

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(Iscrizione Albo nr. 1099/B)

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(Iscrizione Albo nr. 1099/B)

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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(Iscrizione Albo nr. 1099/B)

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Francesco FIUSSELLO
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(Iscrizione Albo nr. 1099/B)

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(Iscrizione Albo nr. 1099/B)

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(Iscrizione Albo nr. 1099/B)

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(Iscrizione Albo nr. 1099/B)

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(Iscrizione Albo nr. 1099/B)

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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gcaaacgctt aaagcacagt tagattctta caatctcaac aaaaaacgtt ttgatgtagg 1320

tattgacagt gaagttccat tacgtcaagc acagatttct gtagaaactg cgcgtaatga 1380

tgtagcgaac tacaaaactc aaattgctca agcacaaaac ttgttgaact tgcttgtagg 1440

ccaacctgtt ccacaaaact tgttacctac acaacctgta aaacgcattg ctcaacaaaa 1500

tgtgtttact gccggtttac caagtgactt gttaaataac cgtccggatg taaaagctgc 1560

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgaatacaac ttaagcgctg cgggtgcgaa t
1591

<210> 7

<211> 1558

<212> DNA

<213> Acinetobacter baumannii ATCC 17978

<220>

<221> source

<222> 1..1558

<223> /organism="Acinetobacter baumannii ATCC 17978"
/mol_type="unassigned DNA"

<400> 7

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gttcctactt 60

tacgtgcgga taaaccgctt gtaggtacag gtatggaagc gaacgttgca
cgtgactctg 120

gtgtgtgtgt aatcgcaaac cgtggcggtg taattgaata tgtagatgct
tctcgtatcg 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttattcgtgt aaacgaagat gaaatggttg caggtgaggc gggtgtagat atctataacc 240

tcatcaaata tacacgttca aaccaaaata cttgtattaa ccaaaatgtt atcgtgaact 300

tgggcgacaa agttgctcgt ggtgacatct tggcagacgg tccgtcaaca gacatgggtg 360

aacttgcgct tggtcaaaac atgcgtgtag cgttcatgac atggaatggt tacaactacg 420

aagactcgat cttgttatct gagcgtgtac ttcaagaaga ccgtttaacc tctattcaca 480

ttcaagaatt gtcatgtgta gcacgtgata ctaagttagg tgcagaagaa attactgccg 540

atattcctaa cgtaggtgaa gcggcgcttt ctaaacttga tgaatcaggt atcgtttata 600

tcggtgcaga agttactgct ggtgacatct tagttggtaa agtaacgcct aaaggtgaaa 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctcagttaac tcctgaagaa aaactgcttc gtgcaatttt tggtgagaaa gcagctgacg 720

ttaaagactc atctttacgt gttccatctg gtactaaagg tacagttatt gacgttcaag 780

tcttcactcg tgatggctta gagaaagatg accgtgcttt agcaattgaa aaagcacagc 840

ttgattctta ccgtaaagac ttgaaagaag aatacaagat cttcgaagaa gcggctcgtg 900

agcgtgtaat tcgtttgctt aaaggccaag agtctaatgg cggtggttca actaaacgtg 960

gtgataaact ttctgaagat ttattatctg gtttagagct tgttgactta cttgaaattc 1020

aaccagcaga tgaagcaatc gctgagcgtt taactcaaat tcaagtgttc ttgaaagaga 1080

agagcgcaga aatcgatgag aaattcgctg agaagaaacg taagcttgca acaggtgatg 1140

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aattaacaac tggcgtatta aaagttgtta aggtttactt agctgttaaa cgtcgtattc 1200

agcctggtga taagatggct ggtcgtcacg gtaacaaagg tgttgtatct aacatcttac 1260

ctgttgaaga catgccacat gatgctaacg gtgtgccagt agatatcgta ttgaacccgc 1320

tgggtgtacc atctcgtatg aacgtgggtc agattctaga gactcacttg ggtatggcgg 1380

ctaaagggct tggtgacaaa atcgaaaaaa tgttgaaaga acaacgtaca gttttagaac 1440

tgcgcgaatt cttagacaag atttataaca aagtcggtgg tgagcaagaa gatcttgata 1500

gcttgactga tgaagaaatt ctagcgcttg caggtaactt gcgtgcgggt gtgccttt 1558

<210> 8

<211> 1475

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Acinetobacter baumannii AB307-0294

<220>

<221> source

<222> 1..1475

<223> /organism="Acinetobacter baumannii AB307-0294"

/mol_type="unassigned DNA"

<400> 8

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ctttattagt tacagcaagt gtaggggacg gtttgatagc attgacacga tcagaaagac 120

gtacgtccac ggcaatattc ctcttatggg attaaaaata aaaagcacac tatcttatcg 180

caaaaattaa gcaatttgcg gatgtgggga tttttagatg taaaaaagtt taatttagga 240

aagatcttgt tgcggtttta ttcaattgaa gctttttttcg aaagaaacaa gaaaaatcct 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttataataag ccgcaatcga aatatcgaga atgaatcatg actgagcaac agccaaaaca 360

gaaaaaggct ttggtgaaat tgccatttcc aatgccgaat gaaagtaacc aagcaggcga 420

tgctgtacac aaccaagtac gtccgaaacc tgaacaatat gcagatagaa cttggatgcc 480

accgcgtggt actcgtcgtt ctatgggtaa gcgctaattt aaataaaaaa acaggcaata 540

tgcctgtttt tttatggtag aagaatttct tgataataac ttttttttctt ttgatacata 600

tgatgatctg cgcgttttag catatcttca acttgttcat tttcttttgt tgtggcgtgc 660

ccaatcgcaa tactaatagg gtgacttgaa taatattgat tatctatatt aaaaagctcc 720

tgaatggttt gcagcatcat taaaacattc gcttcatctg caccaggcat taaaattaca 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aattcgtcgc caccgattcg agaagctgta taagcagtat tcataattgc ctgatttaaa 840

atattaccta ctcgacgtaa taaaccatca ccaatatcat ggccaagttg atcattggtt 900

tcctttaggc cgttcatgtc taaaaaaatt gaagaaacag ggcgaataat actgcgattt 960

aaacgattaa gctcttctgt aaaaaaagct cggttataaa gtttggtcag tacatcatgc 1020

tggcctaagt attctagata attttcggct ttctttcgtg cagtaatatc tgtaagcgca 1080

acctgtacca atccccaagt ctcttcataa ccggggaata cggtaaattg caataagaca 1140

tttctaattt ggccatctaa cgcatagtta acggcttcac gcttgtggtg aatatttcct 1200

tgccagagtt caatcagctg ttctctaaaa gtttccacca tctcttcggc aaaaatttta 1260

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgggtatttt ttaacagagt ggttttatct ggtgctttaa ataaatcgag agtcgactga 1320

ttgacgtcta aaattaaaat gtcttctatg cattggcgaa caaattcagg atgtacatct 1380

aaaaaagtcc taaagtcttc aattcctaat agcctaagct gatcaattct atttttaata 1440

cggctaaaat cttcaaccca aagcgaagtt gggga 1475

<210> 9

<211> 1473

<212> DNA

<213> Acinetobacter baumannii AB307-0294

<220>

<221> source

<222> 1..1473

<223> /organism="Acinetobacter baumannii AB307-0294"
/mol_type="unassigned DNA"

<400> 9

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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gttccgttat ttcaacttaa aaggtttaat gaacctaagt actgctgagt acgacgctct 120

acaaccagtg caatggccag tctggagtaa aaaccaggac gctaaagctg ttcaacaact 180

gtttggcaag ggccagttta gtcacaaaaa taccaaggca aaattgattt cgactgttgc 240

aatcgatccg gtacatgcag tttcagaaga ttatccgctc attttgaaca cgggacgtat 300

tcgtgatcaa tggcacacca tgacgcgtac tggtttgtca ccaaatttga ccagtcaccg 360

tgccgaacca ttttgcgaga ttcatccgag tgatgccttg aaatttggtg tgcgtgatca 420

aggcttggta gaagttcgtt cgaaatgggg cagttgtgta ctacgcgtga cattctcatc 480

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aggtgtccgt cgtgggcaaa tttttgcacc gattcactgg actgaacagg tcgcatccga 540

cgcccgtatt ggtaaagtcg ttaatccaga agttgatgca atttcaggtg agcccgagtt 600

caaacatacg cctgtaacca ttcagccgtt ctataccact tggcaaggtg tgctctatat 660

tcgtgaagga tacgagtcgc acattcaaga atcgctacat cactgtgcat ggtggactaa 720

agtcaaaatg gtgaaaacca atcgctatga acttgcagac cgccaaactt ttaatgatac 780

tcaaaagaat ctgaaaagct ttttgccatt tgctgatgaa acctttgaat ggttaagcat 840

agaagatatt tcttcacagc tgagccatag cgttattttg aaagatggca ttgtaattgc 900

aagtctatat attgcaccgc cagatttatt gccagaccgt gactgggtag caagtctgtt 960

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

taaacgagaa cgtttgagcg ccttgcaccg taaagcttta ctagcaggta tgccaatgtc 1020

ggctaccaat aatgatgggc ctttggtgtg tagttgtttt aaagtaggta agaataaaat 1080

tatcgaagca ataaaaacac aaaacattac ccatgaaaaa caggtcactg cttgtttaaa 1140

agctggtggc aattgtggat catgtttacc tgaaatccgt ggcttaatta aagcttgcca 1200

gcaagaggta gaagtgtgaa taagggatat cccataactg atctggtcat tctggcgggt 1260

ggacaagccc gccgtatgaa tggtttaaat aagctgttgc agcaattcga tggcgatacg 1320

caacttctta agattcatca aaagctaaaa tcttcagtat ctgaaatttg ggtgaatagt 1380

catcgagact attcaatcta tcaaagtatt gtgcctgata ttaaatgttt tcaagatgat 1440

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gcttctggtt ttttcggccc gcttatgggg atg 1473

<210> 10

<211> 1441

<212> DNA

<213> Acinetobacter baumannii AB307-0294

<220>

<221> source

<222> 1..1441

<223> /organism="Acinetobacter baumannii AB307-0294"
/mol_type="unassigned DNA"

<400> 10

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gtcttgatgg caaagtaatt ggtatgacaa cttatggtga gtcagcacca gcaaaagact 120

tgttccaatt cttcggtatt acaactgagg ctgtagttgc tgcggtgaaa gagttaactg 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cttaatcttt tgagcagaat aaaaagcgtc ccgattgggg cgcttttta tgggctattt 240

aaatgttaag ttcagtttgg atcgtaatat tagaagttaa aagcttatga atagggcagt 300

tttcagcaac ttttaataat cttttatgct gatcctcagt aaattcacct tttagagtaa 360

ttttacgctc aatattattt tgacctgctt ctggatcacc atttggattt aatgctaaat 420

caacttgtac atgctcaatt ttgatgcctt tgtgatttgc atacatttct agtgtaattg 480

tagtgcaagc tcctaaagcc gataataaaa gctgaaccgg atttggagct gtatcttgtc 540

caccttttgtc ggtgggttca tctgcaaacc attgatgacc cgaaggatcg gtaagtgtta 600

ctcgataagg aattgaagta ctttgtgctt gggcagtgtt aaccatgttt taccttgtta 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tttatcaata aaatcgtagt aaaaattaat agatctgaaa gcttcgaata gaagaatacc 720

tatactttat aatatggttt ttgaataaca actgtaacgc ttttattgtt gcatggatga 780

aacatatcgt tttataaaga atagtgaatt aaattacttg atgtatacac taacgactat 840

atcaataaag gatacgaaaa atgcatctta aaacattaag cttcagttta gcagtagcat 900

tggcaagtac agttacatta gctgcaccag tggactataa aattgatcca acacacacag 960

ctactgtttt ctcgtggaat cacttcggct tttcaactcc aagtgctaac ttctcggaca 1020

tccaaggtgt aattaaagtt gataatgcta aaccagcaaa ctcatctgta aatgtgacca 1080

ttcctttaag cagtgtgaat acaaacgtac ctgctttaga taaagagttc caagaagaag 1140

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cttggtttaa tgcggctaaa tacccaaaca ttactttcaa aagtacgaaa gtagaaacta 1200

aagataaaaa acattttaaa attactggtg atttgactgt taaaggtatc actaagccag 1260

ttgtacttga tgctgtctta aataagcaag gcgagcaccc aatggcaaaa gttccagcga 1320

ttggttttaa cgcgacaact tcgttcaatc gctctgactt tggtttaggt aactatgtac 1380

caaacgtggg tgataagatc actgtaaaca ttacaactga agcaactgcg gctagtgcag 1440

c

1441

<210> 11

<211> 1409

<212> DNA

<213> Acinetobacter baumannii AB307-0294

<220>

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<221> source

<222> 1..1409

<223> /organism="Acinetobacter baumannii AB307-0294"
/mol_type="unassigned DNA"

<400> 11

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gtttgcttta ttttcaatca gttcttatca gtatttatat aaattaacca atttatgtca 120

tgatttgttc atcaaactga gatcagttgt tcatcttctc tacttaagtt taagacactc 180

attgcttaaa acttaggtaa ttttatgtca gagaaaattt cacgccgaga attaattcaa 240

aaaagtctac tcggttttgg ggctttatct atacctgttg cttttacagg ttgtaatgat 300

ggctcagatg atgaaagccc agaaatacaa gcagattttc ttcatggtgt ggcaagcggg 360

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gacccactac aagataaagt tattttgtgg acacgagtaa caccgacaga ctctggggtg 420

cgcttaaaag ttgtatggga aatttcaacc gataatcagt ttaaacaaaa tttaaagacg 480

ggaatggttg aaacaagcaa gactgatgac tttacagtga aagttgatgc agctgggtta 540

caagcagata cggtgtacta ctaccgtttt aaatttggta ataaagtttc accggttggg 600

cagacgaaaa cattaccaac atccaccaat aaagtgagct ttgcagtatg ttcttgttct 660

aactatcctg cgggttactt ttatgtttat cgtgaaatgg caaaacagaa tgttgatgtc 720

attattcact tgggtgacta tatttatgaa tatggggcag atggctatgc gacagaagat 780

gcaaccaagt taggccgtaa tttacctgcc gataataata aagaaattat taaattagat 840

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gattaccgca aacgttatgc gctttatcgt caagataaag atttgcaagc agttcatcag 900

cgccatcctt ttattgtgat ttgggatgac catgagttgg caaatgatgc ttggcgtgag 960

ggggcggaaa accatcaaag taatgaaggg gccttttcgg accgtaaatt agctgcccta 1020

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tggttggttg ataaattaaa gcaatctaca gcaacatgga atgtagtagg acagcaagta 1320

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttaatgagta aaatgtggat tccagctgag ttgttggcgt ctttagggca aattacttca 1380

ggaggaactt cgcctgaagc gcttgccaa 1409

<210> 12

<211> 511

<212> DNA

<213> Acinetobacter baumannii MDR-TJ

<220>

<221> source

<222> 1..511

<223> /organism="Acinetobacter baumannii MDR-TJ"

/mol_type="unassigned DNA"

<400> 12

taaaagggcg agtgaatgct aatattccta ttaatgagaa gttaaatatt cctttgacgc 60

agactttaac accacgtgtc tatttcgata atatggtgcc gattagtacg gttattccag 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttaaagaaac tttaaaagtt gaccaaagtt tgccaattga cacgaaagtt caggtgagag 180

tacttggtaa agatattact ttgccattaa aaggtaatat tcctttacag ttggatgtac 240

ctattgatat acaagttcca ctcgatcaaa aagttcattt gaagtttgat gcgccagtaa 300

aaacggtctt aaaagaaaat cttcatattc cattaaatgc tcaattaaaa acaaatattc 360

caattcaggg aagtttgaat gtccctgtga aaacagcttt aaatgcgtcg gtagatgtaa 420

aaaatacctt gccagttaaa atcgagcatg gtgagttaaa aataccacta tcgagcatga 480

gcctgaatcg cgttaaatct ggcgaagatc a 511

<210> 13

<211> 704

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Acinetobacter baumannii ATCC 17978

<220>

<221> source

<222> 1..704

<223> /organism="Acinetobacter baumannii ATCC 17978"

/mol_type="unassigned DNA"

<400> 13

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gattgcttga taaattcact ttaacaagaa ttcatttaga atatcgtcat gcgattgttc 120

agatctttac tgatgcctta ttaatggccc agttccagac aaaacaattg gagcctaaac 180

tccattctgg agctaaaatg tttccacgtg ttttattaag tttaaatgta cttgatgaat 240

ttggttttag accaggaaca gacccggaca attattatct aggtaatccg gagtatgcgc 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

attatccttt atatgaagat ttattgaatg attatggttt gagtgagaag gaccgtagag 360

agtatcaacc ttcaaaaatt gcagatcagg taagaaattt tctagaatca tcttatgata 420

gttatattaa agtagttgct ttacttgcag tggcggaaga agaagtgatt ctttttagcc 480

caccacttcg tgaagcgact aaagccattg gcgtcgatgt tgaaggtggc ggctattacc 540

atgttcatgg ggtatctact gacgaaacct cagaagcagc agatgatgat catgaagatg 600

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<210> 14

<211> 600

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Acinetobacter baumannii ATCC 17978

<220>

<221> source

<222> 1..600

<223> /organism="Acinetobacter baumannii ATCC 17978"

/mol_type="unassigned DNA"

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acacaaagat tcatctggtg gaggtggatt tataagtgct ggtgatgtgc aatggatgac 120

cgcagcctct ggtgtgattc atcgggaatt gtttagtgaa gagtattctc gatctggtgg 180

tccttttgaa atgattcaac tttgggtcaa tttaccagca gcaaataaaa tgaactctcc 240

gcgctatcaa agtttaaaga aagctgaaat accgatggtg aaactggaaa atgaggctgg 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atttgtacgt attattgcag ggcagtttaa ccatgttata ggtcctgcac ttactcacac 360

tcctattacc gtattagatg tagagctcca tgcaggtcaa caagccgcct tccctgctca 420

atctggtgaa acagctttag tttatttacg ttcaggtcgg gcacaatttc aaaaagatga 480

agacgtttta gaggaacaag gcctagcagt catgtcaaac caaggagagc atttctctat 540

tactgccctg caaagttgta aattacttat tttgacagga caacccatca cagaaccgat 600

<210> 15

<211> 1468

<212> DNA

<213> Aspergillus fumigatus Af293

<220>

<221> source

<222> 1..1468

<223> /organism="Aspergillus fumigatus Af293"

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

/mol_type="unassigned DNA"

<400> 15

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ccagcacaat gcagatctct gtatgtcctt actcaagcaa ggcttgcttc ccactcgcaa 180

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ggtctctttg aggtttgaat tcattcacac tgaggatgag gcccatgggc tgactgccag 360

ctagttcagc atcggttttg gcaaaggtag gaccgctgat cgcttgatta caatctgcgg 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgagtgtcaa atggctgata ttgtttcaga ctatcctgct actccaccta ttgtccaaat 480

tacgacgacc aacgcaggac gatgccgttt cggtcctaat ctctatgctg gggggaaggt 540

ttgcttgtga gttacggatc atgcccatgc cgacatagat gtaatgttga cagtgttggc 600

actataggtc aatcttaggg taattagaac ctgctgaaaa tcggcttgcc aataatgctg 660

acatcttcgc cttgcagtac ctggggtgct cagcgcgggg aggaatggtc gtcggctcaa 720

ggactggagt ccattctgat ctccattcag agcctcatgt cgaacaatcc ctatgagaat 780

gagcctggat accaaggggc acatgcaacc gaggatcagg aaaacagcca ggcttatatt 840

gaaaaggtaa gtttgtccaa ggtaggatgg tcaactgtgc gctcacctcg ccttgagata 900

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cgccatgaaa ctcttcgcat tgcagttatc caacccttgg aatcgtcact gggcatccag 960

tcggacggaa cagtcaagcc atccgagagc aagaatatag gcgaggatga tgattgtgat 1020

gactcgttcg atgatgaaga cggcactttc gtggagccct ttgcagatct tcgcaagaga 1080

cgcttcttat ggtattttga ctcctacatg caggcaatca aagaagcaga acctcaggtt 1140

agacgccgcc agagattcga aaccatgcct tttgagaccg aagataattg catgaggggc 1200

cattttaatt atcccgaatt gagacgacgc ctcatttgtg tcaaggaagc catcctcaaa 1260

gagacgcaca attggccaat agaaggtctc gaggcaaaaa agcaggaggc tagccttgct 1320

gtgagcctgc aaagtcagta cgagcagatt gttgaggatt tcaagcatcg ccacaacttc 1380

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

acagcggatc tgcgccttgt ccaagaaaac ccgttcctct gggaagtgat ctactttggc 1440

cgccccatga cacaacttga cggtggtg 1468

<210> 16

<211> 1475

<212> DNA

<213> Aspergillus fumigatus Af293

<220>

<221> source

<222> 1..1475

<223> /organism="Aspergillus fumigatus Af293"

/mol_type="unassigned DNA"

<400> 16

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gctgtactgt ttcgcggatg gcattgcacc gcagtggatt tccatcaaac attcgggtca 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tattagaaag attgtcgtgt tgatggttcc cggtttagaa atggggatgt ttgacgggac 180

tgttccgttg aaaccgcaac ctgaagatga ggattcacga tcgtctcaag cttccaacgc 240

agagcagaaa gaccccgatg ctaacaagtc ggccgaagag gacgaggaca aggccaactt 300

ccttcgctgg aaacaaggcc ttccgctgga agatcgatcg caccgattca acccccgctc 360

tttaacgcga gacaatcttc cggaaccatt acagccatta gcggacatgt ttccacacat 420

ctggcccgtc aaagctcctg gggactcaaa gtataacaag gtccattctc ctcttcaagc 480

catcttactt tcttctttac cgaagaataa agaaagtggg ggcaagggcc ctaaaccgcc 540

taaggtagac aaaagctatg tccctaagcg tacgcctatc acggcattta ttagcagtgt 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgacaatctg cgcgaaaacg actatgttct tcatccggcc ctcttgtcaa ctgaaaagga 660

aaagttggcg ttggcggaaa atcgcaaaag agctggccag tcgacggagg atggttgggt 720

cgatacacat gtctcgagct gggaagcggg gcaagttcct gagcatgaga tccagcaagg 780

cagtgtaact gccggtcgcg atatactggc tctggattgt gagatgtgca ttacagaagg 840

tggtaaatca gaacttacac gtatcagctt ggtacggtgg gatggcgaag tggtgttgga 900

tgagcttgtg aagccacagt tgcccatcat tgactacctg acccgctttt ccggaatcac 960

aaaagagaaa ttggattctg tcacgaccac cctcgccgac attcaacaaa agttactcaa 1020

tattctcact ccgcgcacgg tgctggtggg ccactcgctc aattccgacc tgaacgcgct 1080

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

caagcttacc catcccttca tcgttgacac cgcaatcatc tatccccacc ctcgcggacc 1140

accactcaaa tgcagcttga agtggctcac tcagaaatat ctcggaaagg aaatccaaaa 1200

gggccaaact ggccatgact ccgtggaaga cgcccgtgcc gtgctggaac tggtaaagca 1260

aaaatgcgaa aagggtgagc gatggggcac aagcgacgcc tcaaacgaga gcatcttccg 1320

gcgtcttggc cgttccccgc gcccagggaa agcaaccacc tctggcgagg gccgtacagg 1380

agccgtcgtg gactggggca accccgagcg cggattcggg tcgcaggcga ccgtcgctat 1440

tgggtgtcag aacgacgaag aagtagtcca aggcg 1475

<210> 17

<211> 1508

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Aspergillus fumigatus Af293

<220>

<221> source

<222> 1..1508

<223> /organism="Aspergillus fumigatus Af293"

/mol_type="unassigned DNA"

<400> 17

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cgcgatgcca ctacgaagat gcacgaggag atcagtgcga caagtgcggc caccttctcg 180

atccttttga tctcatcaaa cctcgctgta agctcgatgg agctacgccc gtgcgccgct 240

ccacgaaaca tattcacctt cttcttgaca agctgcagcc tgagattgag aactgggttc 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttcccgccat ggagaaaggc aactggccca agaattctag ggacatcacc aaggcatggt 360

tgaaagaagg cttaaaggac cgtggcatca ccagagatct caaatggggt gttccagttc 420

ccctccctgg attcgagaat aaagttctct acgtgtggtt cgaagcctgc atcggctatc 480

cgtcgatcac ggccaactac actgcagact gggagaaatg gtggcgcaat ccagaggagg 540

ttgaattgta tcagttcctt ggcaaggata atgtgccctt tcacagtgtg attttccctg 600

gatgcgagct cggaaccaag gataagtgga ccatgctgca ccatctcagt accactgaat 660

atctgaacta cgagggaggc aagtttagca agtctagagg agtcggcgtc ttcggaaaca 720

acgccaggca gactggcgtg cccccggatg tgtggaggta ctacctattg aagaatcgtc 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cggagactgg cgacacccag ttcgaatggc gttcgttcgt cgaatgcaat aacagcgaat 840

tgttggccaa attgggtaac ctggttaacc gtgtcgtcaa gctgatcgca gcttcgtata 900

actccactat tcctgagttc accgttcccg agagttttca gccgaacttg gacgagatca 960

caagcctcct gcgacagtac attgaagaga tggaaggtgt gcatcttcgt ccaggtatta 1020

acaccgcgat gaggctcgcg gaggctggaa acggtttcat ccaggccaac cgacttgaca 1080

acgccctcat tgccaacgaa cctgaccggg ctgccgcagt tgttggtacc gtcatcaatc 1140

tgatccacct tctctccagt gtctttgctc cttaccttcc tgctacctcc aagtctattc 1200

tcgagcagct gaacgcgccc tttggagtca tcccatctct cgatgaactc aaagatggct 1260

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggaaaccagt ggccctgaag ggaggccaca agatcggtaa ggccaaatat ctcttctctc 1320

gcatcgaccc gaagaaggcc gatgaatggc gtgagctctt cggcggttct caggcagaca 1380

gacagaagaa ggaggatgaa gctgccaaag ctgctgccaa gaaggcagcc aacaaagcga 1440

gcaaattgaa gaagaaggag aagaaagcgg cacaggcagc tggaactagt gttgaggctt 1500

ccgctaag
1508

<210> 18
<211> 1464
<212> DNA
<213> Aspergillus fumigatus Af293

<220>
<221> source
<222> 1..1464
<223> /organism="Aspergillus fumigatus Af293"

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

/mol_type="unassigned DNA"

<400> 18

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gttcccgttc actaaccgcc gataggctcg ttgatgcaat gaatttcgaa accgacgagg 180

ccctcctgac tggcgagtcg ctgccggtgc agaaagaggt cgataccact tttgacccag 240

acacgggacc tggtgatcgg ttgaatattg cgtatagttc ctccacggtg acgagaggcc 300

gcgctcgggg cgttgttatc agcacgggga tgcaaaccga gattggagcc atcgccgctg 360

ctctccgcgc cagcgactcc aagaggcggc ccgtcaagcg cggtcccgag ggagaaacca 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agaagcgatg gtacgtgcag gcgtggaccc tgacttgcac ggatgccgtg ggacggttcc 480

tgggaatcaa cgttggcaca ccgctgcagc gcaaactctc gaaactggct ttggcccttt 540

tcgccattgc catcatcttc gccatcattg tcatgggcgt caatgggttc cgcaatgaca 600

aggaggtcat catctacgca gtcgcaacag gtcttgcaat gatcccggcc tgcctggtgg 660

tggtcctgac cattaccatg gcggttggaa ccaagcaaat ggttgaaaga catgtcattg 720

tccggaagct tgattccctt gaagccctgg gcgctgtgac taacatttgc tcagacaaaa 780

cgggaaccct cacccagggg cgcatggtcg ccaaacgggc gtggattccc tctgttggca 840

ccttctcggt ggggtcttct aataacccct tgaacccgga agagggcgac cttagcctgc 900

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgcctgaccc gccggtcaaa gttggccctg acgctcatgg agagccttcc cggccggagg 960

atctgctcaa ggacaatcct cttttggagc aatatctgaa cgtggccgcc atggcaaacc 1020

ttgcccatgt gcacaggtcc gagcacaatg aatggcaggc tcgtggtgaa ccgaccgaca 1080

ttgcgattca ggtgtttgcc tcgcgcttta actggggacg cgatcgctgg accaaaggcg 1140

agaagcctgt ttggcgccaa aaagctgaat atccatttga ttctactgtg aaaaagatgt 1200

ctgtcatctt taagaacacc aatgatgatc gggagatgat cttcaccaag ggcgcggtgg 1260

aacgtgtcat cgaggcttgc accaccgtca cctggacagc tggttccgac ccgatcgcct 1320

tggacgagaa cataaaggag gaaatcttgc agaacatgga agctctcgca aaggagggcc 1380

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgcgagttct ctgcctcgcc tgtcgggaga atcacaaccc cgtcaaaggg gaagttgtcc 1440

ctgcgcgtga ggaagtggag aaag 1464

<210> 19

<211> 1525

<212> DNA

<213> Aspergillus fumigatus Af293

<220>

<221> source

<222> 1..1525

<223> /organism="Aspergillus fumigatus Af293"

/mol_type="unassigned DNA"

<400> 19

cgattagaat ggctttggga tgttacccgc ttcgttcttc ccgaaaacag gactagtagt 60

gcacatggtt gtacaggctc cgccctgatt gattatcttc gaacagaatc ccaaacaggc 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tatcttgacc tcgaagaaat cgcgctgcac ctgatcactg tggccgaatc cgcgtggata 180

aggcagctat cgacgtggct actgtatgga aatctgccga tctttgggaa ggacgacttt 240

ttcattcaga aggataactc gagccaaatg gatgattcgt catccatcac gaattttgta 300

atgcagacaa gcctactccc aaagtttgtt tcattgcaca cggcgtcgtc aatcttattt 360

atcgggaaga ctttgaatca tatcacggcg aagcggaaag gtgccacaat gggatttgat 420

tctggggcac cgccagtaac tcttcaggga gagcatattg cgcacctcgc gtcgttggga 480

tccccaatat cagcctcaaa actatccaac gcggtagatt ctatccgctt gtccttgtca 540

caaagtgttc tttcgaagct actgccgtta cccaagatcc tcgagattct ttctgtgctg 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

catgattttc ttctactggg gcgcggagaa ttcgctactg cgcttgtgtc tcatgctgat 660

gccagattga gtgagcgaca tcgaataccg gagctcctcg ctggccgggt cagagcgcaa 720

acggagcttg aagggcttgt cgtcaaagat ggggatgttg tacatgctct ggcacacaca 780

tgggccgagc tttattcttt acaaaatgag gaagaccctg tggatgaatc tcttgatctt 840

gcccgagacc ttgttcgctt atccatcact gacagtaaga atagacatac agttgcaacg 900

cactcagacg agattggaag tgatttagta gcggagctct cggacgtctc atttgaggac 960

ctacttttc caacgcgaac ttccatctcg gttgaagtac gtgcgcccct tgacctgttt 1020

ctatcgacgt ccgatatcgc tgtgtactca aggattcatt catatctatt gggaattcga 1080

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cgtgcgcaaa tacgaataaa tgatctctgg aagcactctt ttcttcgaaa aagttatcct 1140

tctccatggg gcccaccacg aagcaacact ccctttggac agagtaagct taagctggga 1200

aggcagagag acaatatccg gcttagtcaa atgagaccag tatgggcaac gagtagtgct 1260

gcgctcttcg tcttatcaga aattggtagt tttttccagg gtgaagttgt caatggttgc 1320

tggcagcatt ttcgtgagtg gattcaaggt ggactggcca ctgccacgtc ctcgacgagc 1380

tctcgacctg aaacatctgc gtctttgaaa agcaggtata gcgacagtcc gattgagggc 1440

agagtgggta tcgatcagtc aagtcactct gcgccgcaac gactcgatcc cgaaactttg 1500

acagtcgccc atcatcgcta tctat 1525

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 20

<211> 1007

<212> DNA

<213> Aspergillus fumigatus Af293

<220>

<221> source

<222> 1..1007

<223> /organism="Aspergillus fumigatus Af293"

/mol_type="unassigned DNA"

<400> 20

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gataaaatca ttctgcacct tgagccttgt caggcgagcg atatcggcta tgaaccagtg 120

acactcatta aacttatgaa taatgaggtt tttgaaaagg atgagtttct ggacctcttc 180

ttcactttta ttcagcaaga gctgctcggt gagacggaag ggactggtct agagcaaatc 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttatcccaca ttgacagatt ttgtgtctgg tcagctgaag agacaaatgc attacgtgac 300

tgtcttgttg ttttcgccaa gtacttggtg gacaacttct taccattaaa agcgttggca 360

gtaaaaactc cccaacccac cccggctctt tcccattcta ggactccgga agccaccatt 420

ggcactcctc aacgtgtctc aaatttgcga caagcctgtc ttatacgtga ccgccaccga 480

tgtgccatta atcggaaatt cgaagcccaa gaaggccaga gacgatataa gcgggatggg 540

cctaatttga aggatgatga tggcaagtca ttgcttgagg aacgtgataa tatggcattt 600

ttggaagtcg cgcatattat acctcactct cttatgtcac ttaccagcga agaaggcgaa 660

ggggagactt attcaaagct gatggcttat aggatcttga ggatgttcaa ccccggcgct 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atccacctaa ttaatggggt tgatatcgat cggccgatga atgcgctgac cctgactcat 780

gaccttcaca agttatttga ccgcatgggt cggatggaaa ggctcccagt gactcgtaca 840

ctttatctta caccagatcg aagtatagat ccgccttctc ctcagcttct caaaattcac 900

gctgctattg gacgcatcct tcatctcagc gctgccggtg attgtattga tgatatcctt 960

cgggatatag aggaaatgga ggctggcgaa gtgatgccga atggatc 1007

<210> 21

<211> 1581

<212> DNA

<213> Candida albicans SC5314

<220>

<221> source

<222> 1..1581

<223> /organism="Candida albicans SC5314"

/mol_type="unassigned DNA"

<400> 21

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ttttccgtgc tgaccatttg gttgaagaag ttttggaatc tagattgaaa ggtgataaat 120

tggctcgagg tgttaaaatt gtcgaagaag aggatgaaga caaaaagaaa agaaagaaga 180

aagtcaagga aattaagaat gtcaaattag aagacgaagt tgttaaagaa tatgaatcaa 240

ttttggctca aattgatggg ttttcaggac ctcaattagg tgaattgatt gttaagtacg 300

acatcactaa cccttctact gggggtaaat tagaaccacc tgtggaattc aatttgatgt 360

ttgacactgc cattggacca tcgggaaatt tgaagggata cttaagacca gaaaccgctc 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aaggtcaatt cttaaatttt aacaaattat tggagtttaa taatgacaaa atgccatttg 480

cctctgcctc catcggtaaa tcattcagaa acgaaattgc accaagagct ggtttgttga 540

gggttcgtga attcttgatg gccgaaattg aacattatgt tgaccctgaa agtaaatcac 600

atccaaaatt cgaagatgtt aaggacatca aattgaaatt tttgccaaaa aatgtccaag 660

aatcgggatc aacagaatta atcgaggaat ctattggcaa agctgtatca tctggcatgg 720

ttgataacga gacattgggt tactttattg ccagaatcta tttgttttta gtcaagattg 780

gtgttgacac taatagattg agatttagac aacatatgtc taatgaaatg gcacactatg 840

cctctgactg ttgggatgct gaactagaaa cttcttacgg ttggattgaa tgtgtcggtt 900

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gtgctgatag atctgcttat gatttgtctg ttcattctgc cagaactggt gaaaaattgg 960

tggccagaca aactttagct gaacctcgta ctgttgaaaa ttttgaaatc gagattgcta 1020

aaaagaagtt tggacccaaa tttagaaaag atgctggtac cgtcgaaaaa tggttaacct 1080

ctagaaccca atgtgaatta gaagaattgg gtaaagaatt aagtgaaaag ggtaaaattg 1140

ttgtccaaat taaaggcgtg gaaggcgatg ttgaattaga tggtgattta attaagattg 1200

acaaagtaaa gagaactgaa cacgttagag aatttgtacc caacgtcatt gaaccttcat 1260

ttggtatcgg acgtatctta tattccatct ttgaacacca attttggtgt agaccagatg 1320

atgctgatag aggtgtattg tcacttccac caattgtggc ccctactaaa gttttgttag 1380

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttccgttatc taacaactca gaattgcaac caattgtgaa gaaagtttcc caagctttga 1440

gaaaggaaaa aattccattc aaggtcgacg actcttctgc ctccattggt aaaagatatg 1500

ccagaaacga tgaattgggt actccatttg gtattaccat tgattttgac tctgtcaaag 1560

atgactccgt tactttgcgt g 1581

<210> 22

<211> 1518

<212> DNA

<213> Candida albicans SC5314

<220>

<221> source

<222> 1..1518

<223> /organism="Candida albicans SC5314"
/mol_type="unassigned DNA"

<400> 22

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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agcatttaga tatgctgaag aattggctac tcaaaatcca tcaattttgg gcgaagacaa 120

acttgacgaa aaatacctca aggaattgtt ctaccaagct cgtggtgata ttcctggggt 180

tgttgcattt tatggtggat taattgccca agaagtttta aagaactgtt cttccaaatt 240

caccctatc aaacaatggt tatactttga ctccttggaa tcattgcctt cagaaacgga 300

atatccaaga aacgaagaga acaacaaacc aattggatct agatatgatg gacaaattgc 360

cgtttttggt aaagcattcc aagaaaaaat tgccaacttg aaagtatttt tagttggttc 420

tggtgccatt ggttgtgaaa tgttaaagaa ctgggcaatg atgggattag gatccggacc 480

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cgaaggtaaa attttcatta ctgacaacga ttccattgaa aagtcgaatt tgaaccgtca 540

atttttgttt agacctaagg atgttggtaa aaataaatca gatgttgccg ctttagctgt 600

tcaacagatg aaccctgatt tgaaaggtaa aattgattcc aaattagaca aagttggacc 660

agaaactgaa gatattttcg acgacaaatt ctggactcaa ttgaatattg tcgtcaatgc 720

tttggataac gttgaagcta gaacgtatgt tgatcgtcgt tgtgtctttt acaaaaaacc 780

attgttggag tctggtactt tgggtactaa aggtaacact caagttgtca ttccaaactt 840

gactgaatct tattcatcct cccaagatcc accagaaaag tccattccgt tgtgtacttt 900

aagatcattc ccaaacaaga tcgatcatac tatagcttgg gcaaaatcat tattccaagg 960

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttattttgcc gaatctccag aaagtgttaa tttatacttg agccaaccaa attacgtgga 1020

acaaacttta aaacaaaacc cagatattaa aggcacattg gaaaatatct ccaagtattt 1080

gaacaatcgt ccttacactt ttgaggattg tatcaaatgg gcaagacaag aatttgaaac 1140

caagttcaac cacgacattc aacagttgtt gtacaatttc ccaccagacg ccaagacttc 1200

tactggagct ccattttggt ctggtcccaa aagagcaccc aaaccattgg agtttgatat 1260

taacaataag gatcatttgg acttcattat tggtggagct aatttattgg catttatcta 1320

cggattgaaa gaacctaatg caactgttga tgatttcaag aaagttttag aacaggttat 1380

cattgaacca ttccaaccta aatctggggt tgaaattgct gccacggatg cagaagccga 1440

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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ttctttgcct gaaccaag 1518

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<211> 1005

<212> DNA

<213> Candida albicans SC5314

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<222> 1..1005

<223> /organism="Candida albicans SC5314"

/mol_type="unassigned DNA"

<400> 23

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgttgaaaac gccaaagatg gtgaaatctt tttgttggaa aacttgagat accacattga 180

agaagaaggt tcttccaaag acaaggatgg taagaaagtc aaggctgatc cagaagccgt 240

taagaaattc agacaagaat tgacttcatt ggctgatgtc tacattaacg atgcctttgg 300

tactgctcac agagcccact cctctatggt tggtctcgaa gttccacaaa gagctgctgg 360

tttcttaatg tccaaagaat tggaatactt tgctaaggct ttggaaaacc cagaaagacc 420

attcttggcc attttgggtg gtgctaaagt ttctgacaag attcaattga ttgacaactt 480

gttggacaag gttgatatgt tgattgttgg tggtggtatg gccttcactt tcaagaaaat 540

cttgaacaaa atgccaattg gtgattctct tttcgatgaa gccggtgcta aaaacgttga 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

acacttggtt gaaaaagcta agaaaaacaa tgttgaattg atcttgccag ttgattttgt 660

cactgctgat aaattcgaca aagatgccaa aacttcttct gctactgatg ctgaaggtat 720

tccagacaac tggatgggtt tggactgtgg tccaaaatct gtcgaattgt tccaacaagc 780

tgttgccaaa gctaagacca ttgtttggaa cggtccacca ggtgttttcg aatttgaaaa 840

attcgccaac ggtactaaat ccttattgga tgctgctgtc aaatctgctg aaaatggtaa 900

cattgttatc attggtggtg gtgatactgc tactgttgct aagaaatacg gtgtcgttga 960

aaaattatcg cacgtttcta ctggtggtgg tgcttcattg gaatt 1005

<210> 24

<211> 1187

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Candida albicans SC5314

<220>

<221> source

<222> 1..1187

<223> /organism="Candida albicans SC5314"

/mol_type="unassigned DNA"

<400> 24

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ggtataaaga tttagatata tttttatgtt ttgatcatta tacatttaaa ccatttttga 180

atattaaata tagtgccaaa ttgactgacg atccagaaat tattgatatc aaaaaaacca 240

ttgatgaatt cttacctaaa ctgacgattt tcaaagatga agtgaaatgg gtcgattcaa 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

taaaggaaga aaaagataat gggtataaaa tacctggaaa attaatcgat tcatttagtg 360

agaatgataa agaatacgat atttataaaa ttgacttgaa gtcagacaat ggatatgaat 420

tacatcaacg attgcaaatc ttagtcttat tgttcattga ggcagggtca tttattgatg 480

ccaaagatga attatggaac ttgtatgttt tgtatgaaaa agacaataaa tctacatcca 540

ataatgaacc ttctatagtt gggtttacca cggcttataa ttattggaaa tatcctggtg 600

ccaaaaaatt cgattcaact gaacaagaac tgagaatcaa gatatctcag tttataatat 660

taccaattta ccaaggtcaa ggcttaggac aattatttta ttcccattta tttgacaagt 720

ggttagcaca agatgatata attgaagtag tagttgaaga ccctaatgaa agttttgatg 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atttaaggga tagagccgat ttgaaaagat taaatactag tgagcaattt gatttcaaag 840

ctgttactcc gaaagtagac aaggagtggg ttgaaaaaac aagacgagca ttaaaattag 900

aaaagagaca gtttgcaaga ttgttagaaa ttatattgtt atacaagttg aaacatggct 960

atcctggtat caccaagaga gacgtgaggt tattcatcaa aaaaagatta tatgacaaga 1020

ataaggaagg attagccacc ttagatgata acaccaagaa agataaatta cagactgctt 1080

atcaagcttt ggaagatgat tattatagaa tattgggaga cttgaagttg aacattaagc 1140

gtgagaatga tgaagaggaa actgacaccg tttccaaaaa gcaaaaa 1187

<210> 25

<211> 1486

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Candida albicans SC5314

<220>

<221> source

<222> 1..1486

<223> /organism="Candida albicans SC5314"

/mol_type="unassigned DNA"

<400> 25

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atgaagatgt aggttttggt gaagtaacat accaagctgc ttcacccgat gaaattgcta 120

ttgtaaagtt ttgtgagctg gttgggttaa agttgtacaa acgtgatcga cactcaataa 180

cattgttaca tgtctacacc aataagtttt tggaattcga gatattgtac aattttccat 240

ttagctcaga aactaaaaga atgggtatta ttgttaaaga caaaaacagg gaagatatat 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggtttatgca gaaaggtgca gatactgtca tgtcaagtat agtcagctca aatgactggt 360

tggatgaaga gactggcaat atggctcgag agggtttgcg tacgttggtt attggtaaga 420

aaaagttagg ttccaaatta tttgaggact ttgtcgacaa ctacaaacaa gcgtcattgt 480

cgatgcacga cagagatagt gatatgcaaa aagttgtcag ttattatttg gagcaagatt 540

tggaattact tggtttgact ggtgttgaag ataggttgca acgtgatgtt aaaacttcta 600

ttgagttatt gagaaatgca ggaattaaga tttggatgct tactggtgat aaagtggaaa 660

cggcaaaatg tgtatctatt agtgctcggt taatttcccg aggacaatat gtgcatcaga 720

ttactaaact ttctcaccca gatatggcga tgaaccaact agaatattta cgtatcaaca 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ccaacgcatg cttgttgatt gatggagaat cattgggcac ttatatgaag cattttctg 840

atgaattttt caaagtagta attaatttac ctgcagtgat tgcatgtcgt tgttcaccac 900

aacaaaaagc cgatgtggct gttatgatac gaaaaattac agggaagaga gtttgttgta 960

ttggtgatgg tggtaatgat gtaagtatga ttcaatgtgc cgatgttggt gttggtattg 1020

ttggtaagga aggtaaacaa gcatctcttg ctgctgattt cagtattgat caattttgct 1080

atttgtcgaa attgttatta tggcacggaa gaaactcgta caagcgttct gccaaattgg 1140

gacagtttgt tattcatcgt ggtttgttga tatctgttgc tcaggctgtt tattccattt 1200

catccaagtt tgaacctttg gctttgtatc aaggatggtt gatggttggg tattctacaa 1260

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tatataccat ggcacctgtt ttttcactca ctttggattg tgatattgat gaacatttga 1320

caaagttgta tccagaatta tacaaagagt taacattggg caaatcttta tcatataaaa 1380

catttttat gtgggtattt atttccttat atcaaggatg tatgattcaa ttgctttctc 1440

aacgttttca aacattattg gacaagaggt ttactgccat ggttgc 1486

<210> 26

<211> 832

<212> DNA

<213> Candida albicans SC5314

<220>

<221> source

<222> 1..832

<223> /organism="Candida albicans SC5314"

/mol_type="unassigned DNA"

<400> 26

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

acaatgccca acaaaaggag gatgaggaag aacttgaaga tataaacaaa caaaataatg 60

atcatgatca cgatcaatat cttgaacaat atttgaatat tttagaaacg aaaaatttaa 120

atgaatttga ttatattaat tctaaaatgt atgaacgagg attagttgaa atgttaatgc 180

cggaaaagaa agacgatgat ggtaaagaat ttatagaaca agatgaaaca attgctgaat 240

attggatata tgaaaatcaa aacatcaagg gaggagaaga agaagaagaa gaagaagaag 300

gattaccaat agaatctgat tcagaggagg aagaaggaga agtgatagac gcagaagtag 360

aagcagaagc agaattgagt gagattcaag aacaggcaca agaacaagaa gaaactttaa 420

atgaaactaa ttatcaagat gaagaactat tatatatcga tccagaactt tttgattcag 480

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

attatatgaa taataataat aataataata ataagagtac cgacaatctt tcatcggatc 540

tagtggtcaa accatcatca actcaatcaa ttgacaaaga agttctacct aataaagata 600

ctaaaactaa agataaacat actctaataa cgataatagg aggtgaagat gaaattgaac 660

aaatgacaat atcacaattg aaaaaattat taccaattcc cagaaaatca aagagtagtg 720

atacaacttc aacttcaact tcaacttcta gtggtagtgg tggtattact aaaaaatatt 780

caaataaatc cattactaaa aaattaaata aattaaatca acaatttgcc ca 832

<210> 27

<211> 1088

<212> DNA

<213> Candida albicans SC5314

<220>

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<221> source

<222> 1..1088

<223> /organism="Candida albicans SC5314"

/mol_type="unassigned DNA"

<400> 27

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tagtaacaca agcaaagtgt cggacggctc ggcttctagt aatgataaag aagttgccaa 180

taaccctaca aaggtatcag atggtttggc ttctagtaat gacgaagaaa tttccaataa 240

tccagaaacc cttacaaagg tttcagaaga ctcatcttct agcagtgatg aggaagccag 300

cgactctgct gttatgttag atggcacatc ttctggtagt gacaccgaaa gttccactaa 360

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cccagaaaca cctcctaaat tgaatcagaa gcaaccaatt gcaaacgctg gtggtgataa 420

gaatgtttca aacaagtcag aaattatggt tgcaccgttg ccaatagcaa ctccacgtgt 480

gcaaggtttg gcgttgactc caactgcaag tacaagacgt gctaaaatgg ttttgagtaa 540

agaatttgtt ctggatagtg atgatatcac agatgaggga tcaaatgcaa atgatggtat 600

cgagaaggat aaagatgatg taaatttgaa atccattcct gtcaagaagg ctaatgatcc 660

aactgtgtct atgtctgaaa aagtgccaca accagatagt aaggatagtc tgagtgaatc 720

aagtgacgat tctgagtcca gtgaatctgg gtcaggatct gattctagtg agtcaagtga 780

cgattctgat tccagtgaat ctgggtcggg atctgattca gactcaagtg atgagtcaat 840

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggattcgtct gatgaagagt cgtctgagtc cagctctagt gatgaatctc cagcagtcaa 900

gaaacctgaa ttgaaaacaa ctggatctaa agagaagcct caaccagtga aagtccaaaa 960

aacaccaaaa cctatcgctt cttctattgg cgaacctaag aaagtacctg tacctgcacc 1020

agcaccaaaa acgactcaac ggttggcttc attaaaagat ttaaagcatc cacgtaccac 1080

cattgaga 1088

<210> 28

<211> 1012

<212> DNA

<213> Candida albicans SC5314

<220>

<221> source

<222> 1..1012

<223> /organism="Candida albicans SC5314"

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

/mol_type="unassigned DNA"

<400> 28

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ctttagttaa aatgaaaacg atttcaattc tagctttttt ggtattagct agattaattg 120

aagccaatga tttattccaa gttaaaacca ttatagatta tcaagatttg taccttcata 180

ttaatccaaa taattttcaa gttaaattaa gtcattcatc tactgatgtt ttcgaatttg 240

atgaaagttc caataaattg ttttgtgctg gtacaaatga tataattact tataataaag 300

agaattgtcc ttatcttatg aaatttgctg atgagtcact gtcctcagtt ttaggttggt 360

cattggatag acaaacactt agatttgatc atgatttgta cttttgtggt accaaaccgc 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cctattccct tttagctgat ccatcgggtt ctgcaaattg caggaaatta aacatcttta 480

ggacagtctt agaacccaaa gtagaaaaag aagaagagga agaagaatac gatggtgaag 540

aagatgacga cgatgaatct ttaacggaat ttgaatcctc gactgacttt ccaacaatga 600

ctgacgaatc aacggaagtt gagccctcaa ctacaactga gtctgcaatt tcaacaaccg 660

agacttcaaa agatgaagaa tcttcaacaa cagttgagtc tacaacaaca ccaaaaacta 720

caacaaccac gtcagttgac tctgtaacaa caacttctaa atcaaatgag tcattaacta 780

caactgaatc aaatgaatca tcaactacaa ctgaatcaaa ggactcctct acgacaactg 840

acgagtctac accagaatca tccactactg aaactgataa gacagaaaca acaattgaag 900

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aacaagagga agaaagtacc acatcttctc aatctgaaga aaccgaagga ccatcaggag 960

gaaatgtcga ttccacagtc gcaatggtca tatcagcaat gtttcaaggt ga 1012

<210> 29
<211> 1084
<212> DNA
<213> Candida albicans SC5314

<220>
<221> source
<222> 1..1084
<223> /organism="Candida albicans SC5314"
/mol_type="unassigned DNA"

<400> 29
gatgccactc aaggttggat tattaacgat gaaggtatat ttttggtaca agatggattt 60

tattctgata gtgttagttt tagtgcttgt ggtcatgatt cagggtatcg agtttatttg 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggtgaagaaa atggttgtga acctttaaat caatttagaa ttatgaatat tgaagaagat 180

gaaattgatg aaactgagac gacggaatct actaagacga cagaaactac taaaacgacc 240

ggtcctgctg agacaactga cccggctgaa tcgactgatg atctgaatga gtcgagtgca 300

ccaccaccaa ctgaagatcc tagtgatatt ccaagtgcta ctactactga tgaagccact 360

gttgatccat ctgatgaaca gtctattgct ccaactagcg agccaaatga tgaatcaact 420

gaatctgaag agcctaatga gtctgcaaca gtgactggtg ataccaccac agatactttt 480

gaacaaggat tgacaacatt cactacagag accaccgcta ctgttactga ttgtgaggat 540

ggtgatgatt catgtacacc aagaactacg attcgtagta ccgttatcac cacccattgt 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ccaatagtca ccaagactga agttgaaaca attgttactg atttaacaat cacccttact 660

acatgtattg atgagactat ttgtgaagct acaactttgg ttgtttcaac cactgtggtt 720

actactacct tgactaccca tctggtggtg acagaatatg ttctgagtgc tcatgaaggt 780

gatggttcct ctactattgc taatgaagat aaacataatg atgctattgt gacaccacaa 840

gaaaccgtag ctccagatac caatagtcct gatgcagatc aagaacaacc tgattcagtg 900

gaaccagata atgaagccac tgatgctcca ataaatgtcg aagatgatgc tactgctttg 960

atttccgatg aagatactac aacttcaaca atcacaactt tgatttatat cacccaatca 1020

ggagatcaac caattaaaac tcctgttcca atttttgata atgctgctaa tttggctggt 1080

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tcaa

1084

<210> 30

<211> 1562

<212> DNA

<213> Candida glabrata CBS 138

<220>

<221> source

<222> 1..1562

<223> /organism="Candida glabrata CBS 138"

/mol_type="unassigned DNA"

<400> 30

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agaaaagtat tccatcctgc tgatgatcct cttttccgct atgttcaaga agatgaaaag 120

actgttgagc ctgagtggta tcttccagtc gtaccaatgg tgctaattaa tggtgcagaa 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggtattggta ctggttggag taccagtatt cctccattta atcctctaga tgttgttaac 240

aatatcaggc atttattgaa tgatgaagaa atggatgata tgcacccatg gtttagaggt 300

tggactggta caatggaaaa aattgagtca cagagataca ggatgtatgg tagaattgaa 360

caagttggtc caaatacact tgaaattact gaacttcctg ctagaacttg gacttctacc 420

attaaggagc atctattgct aggtttaggt ggtagtgaaa aggttaagcc ttggatcaaa 480

gatatggagg aacagcacgc tgaaactatc aagtttataa ttaaattgac agatgaagaa 540

atgactaaaa ctagaaaact tggattttat gaaagattta aactgatatc gccaattagt 600

ctacaaaata tggtcgcctt tgactacaga ggtaagatca agaaatatga tcatgttcat 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gaaattttaa aagatttcta tgaggttaga ttagaatatt atcaaaagag aaaggattat 720

atgacaggta gattacaatg ggaggctgaa aaattgtctt tccaagttaa atttatcaag 780

atgatcattg ataaatctct aattgtcaca aataaaccaa agaagcaatt gatatccgaa 840

cttgaggaat taggtttccc tagaatcaat aaagaaggaa aaccacactt cggtaagatt 900

gatgaagaag ttgaagctat aattagtgaa gacgaagatg aggacttgga agagagtgaa 960

gaagctacta gaaagaagga caaggacgat gaaagtactg ttaatgggcc tgaagaactc 1020

tttggtactt atgaatacct gttaggttta aagatttggt ctttaacaaa agaacgttac 1080

gaaaaacttt tgaagcagaa gcaagaaaaa gaaactgagc tcgaaaatct gttgaaactt 1140

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tctgccaagg atctatggaa taatgacttg gatgactttt tgactgcgta tgaggacttc 1200

caaaaaatgg acttgttctt gcgtaacagt gctgttccaa aaacaaaagg tgggaaaagg 1260

aagagaaaag gtggtgatga cgatgactat gatccatcgg gtaagaagaa acctgcaaga 1320

agaattaaga aaattaagaa ggaagacgat ttcgatagaa ttttgatcaa acctcaggcg 1380

aagataaagg ctaagaggcc cgttaaagta aaggtcgaac caccatcttc agctgcatca 1440

acacccagcg taaaagaaga acttggggtt tcagatgtaa cgagtaacgc ttctacccca 1500

tcaactacta tatttgatca aaaggtcaaa caagagaata gtgacgagag tggaataagc 1560

gc 1562

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 31

<211> 1542

<212> DNA

<213> Candida glabrata CBS 138

<220>

<221> source

<222> 1..1542

<223> /organism="Candida glabrata CBS 138"

/mol_type="unassigned DNA"

<400> 31

caccgaatca agctcaatca aaaatcgatg agtctagtag aaaggaaaaa aataacaatg 60

atctaggcgt cgaaatgacc agcgttgatc ctgctttaac aggtgaggat atgaatgagg 120

ctcacactaa agagactgct gcagaacaaa atggtgaaaa aggcattttt aatggtatgg 180

tattctatct taaccgcgat tccaacgccc atgactcgat tataattgta gagcaattga 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aaaatttaat tttattaaat ggaggtgata ttgtgaataa actaccaaat aaggattctg 300

cagaagcaaa gcacattatc gtggtttctc catacaacaa tactgaatta aaaactgtca 360

catctacttt catccgggca tgcgtccaga gcaacaaatt actggacatg aaaaactatt 420

tagtaccata tgatagtttt aatgcgcttt tggatgatgc gatgtcccca ccatcaagac 480

aagaaccaac aatttctgaa tccagttctg taaacgaagg gcaacctaca gcttcgaaac 540

ctccacccca aaatattgca aacaaaagag atatcccaac aaaaaaggta tctgcaaata 600

ctggagttag caagacatca tttactgaag aagaagatga atttatttta gatgtcgtta 660

ggaagaatcc catgagacgt actacacaca cattatttga tgaaatttcc cactatgtac 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

caaatcatac aggtaactca attagacaca gatttagagt gcacctatct aagcgtctag 780

attttgtcta ccaggtcgac cagtatggta aacttgtcag ggatgagaat ggtaatctaa 840

taaaaacaaa agttttacct ccatcaataa agaagaagtt cacagccgat gaggactatg 900

agctcgcaat tgcaattaaa caacagtttt acaaggacat ttaccagtta gacccggtca 960

ctggtcagtc tttgatttca gacaatgatc caccagcgcg tgtagccaaa aggcaaatga 1020

tgatggatcc taacgtacaa cgaggatctg agcccccatt tagtaaatac agggtgggaa 1080

ctagaagagg accaattgct agggagttct ttaaacaatt tacagaaaac catccaactc 1140

atacggagag tgcatggaga gataggttta gaaaattttt gttagagtat ggagtcgaca 1200

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aatacattga atactatgaa acacagaagg ctaacaatga cgagcccgaa gccatgaaaa 1260

atttgacaat tagaactaag agagacaact ttccaactcc aggaaactat ggtaatgctg 1320

ccaagagaca gaaatatgaa gtttcctcaa atgtcgaaaa tacattgaag tctaaaggcc 1380

aagccggtga tattcctgat gctgaattac tagatgagga tacaatgaag tttatatctt 1440

ccttgaaaaa tgatctgtct aaaattgata acaactttgg ctttgactac acaaacgaga 1500

tagctgaagc tataaggaac gatttttctg aggaggaagc ca 1542

<210> 32

<211> 1034

<212> DNA

<213> Candida glabrata CBS 138

<220>

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<221> source

<222> 1..1034

<223> /organism="Candida glabrata CBS 138"

/mol_type="unassigned DNA"

<400> 32

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tccaacgaag cagatgtctg tccatagtgc taacaagatc aataagatac tagaattggg 120

actgttaaaa ttaacatcac tgtcctacca ttcagaaggc tctaataccg ctatagatac 180

atatcggtta tgtggttgga taccagatat atcaagtata aatgagttta actttctcaa 240

agtacacaag gctttcagta gaggcgaatg tctcatagct atgggaactg gtggatttgt 300

tcctaaagag aacatattcg gagttaaatt acgtaaatat cacgattacg ctgttctgga 360

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tatagatatg ataaatgagg tagttacatt gcgtgatcca ttgataagtg ataccttgtt 420

aactattaac tttgacagta tcagaaaata tttccttcaa gtttattgta actgggacag 480

ttctaagcta tttatgttca caaaggatac acagattttc tattctgata agaaatttaa 540

tccttaccaa actttggcag gaaagcctac tttctacctc aagaataatt ctgataggga 600

tgagtatgca tgggttctgc tagaattcca tctagacaaa aataataaca ccacagctta 660

tttacaggaa ataccagaca gaatttcaac agttagattg ggatataatg ataattcagc 720

ggaaacggga ttccaattaa taaagataag gttgaaaccc aagcaatgta tttggtattt 780

ttgttacagc tctacagata agatgttgac atttcataca tactctacca gtagtgatgt 840

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgtgtttgtg agatctaaga tgccgggctg tgattttgat gtcactgaat gtgccatact 900

accggaaaac atagtaccca tgcaataccc taatcattct gaaaccgata tctattacct 960

tgcatctatt gatttttcaa tagaaggaga acctggaatt acaataataa ctgatatggt 1020

cgtgtgcttg gaaa 1034

<210> 33
<211> 1025
<212> DNA
<213> Candida glabrata CBS 138

<220>
<221> source
<222> 1..1025
<223> /organism="Candida glabrata CBS 138"
/mol_type="unassigned DNA"

<400> 33

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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ctgataaacc ccaggaactc ttcattcttc actatatgta tgcttacgta cccatctttg 120

gctccacttt ttgatttggc tatggttgta caatgttttg gggtaggact aagctatcta 180

gtgctcgtgg gagacttttt ccctgattta tttggtggtg agaggaaata ctggatattg 240

ttatctgcta tacttgttgt tcctctatgc tgtttaaaga aactagacaa cttgaaatat 300

tctagtattg tgggagtgat agcacttcta tatttatcgc tattaattgg gttcaggtat 360

ctaacagatg ttgcattcgc acctgagatt agtttcgaaa gaggagaaat ctcatggttt 420

aaagtttatg attataaggg attattgtca acgttttcca ttattatctt cgcttatgtc 480

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggcgctatga acatattcac aatcgttaat gagctgcagg ataattccat gactaacgtc 540

agaaaggtag tggatagctc tattttaata tcaaccattt tatttttatt tgttggtttg 600

tttggttatc tgacttttgg tagtctaaca atgggaaata ttcttttgaa ttacgactcc 660

gattcattag ctatcggaat aggtaaattc tgtctagcta tgatgttgat tctcacattt 720

ccacttttat ttcatccatt gagaactgcg attaataaca tagttgtctg gtttatcatc 780

aaatttgaga agtcgagtct tacgcccgaa atttcagcaa gggattctga agcttctaat 840

tatgtcacag ctgaaacaca tacctccaga cccattaact taattattaa tgatgatgaa 900

gttaatgatt gtgaggaatt aaatgaagat ctcttggaca gtaataacgt tatatatcag 960

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gagcatggtc atgaggaaga accgcccaaa ggtgggctga atggcgttga gcatgacgtc 1020

ccttt 1025

<210> 34
<211> 1170
<212> DNA
<213> Candida glabrata CBS 138

<220>
<221> source
<222> 1..1170
<223> /organism="Candida glabrata CBS 138"
/mol_type="unassigned DNA"

<400> 34
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agatcggaag ggaaatctgt tgcatttgaa gtcggtgatg agagagagac tagtcaggac 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

acgattttgg gagatggcgg gatgactcag aacggggaca cgtcagggga gttcacagac 180

agggatgaca ctagccaaaa taggatgaat ggctcactac aaagtgaagg actagtcttt 240

gaaaagcgca aagtcattcc acaacggaga acccagtctc agcagagtat gctgtccagt 300

atttcactca ggtctatgat acaagagcaa cagcatgtaa ataatcaaca gcaacaacag 360

cagcaatcaa tgcatagaaa cagtatgggt tctaataaca ctaataatga tcagaattta 420

atcagccata gtttactaaa catgagtcag cagataagat caccggcaat gttctccatc 480

aaaagaacag ggtcgctgat gcattccgct agtaggacag ctagtaattt tggaaaacag 540

gaaacgatat atgattcaaa tagtctggat tcaaatgaaa taggtaaaaa actaccattc 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

acaaatgacg aaaggataca gataggaagt aagaaagaat ctccaacggt gccgagaata 660

agaaatgaaa tagtggataa tgctacacct actgctctac gtgagttacc ggaagttata 720

tcagatttga aaccagaaga cgaagatgaa atttctcaaa aagatttaac tacacaagca 780

ttaaggaagc tgtccaactt taaagggtca aatttgaatg aggcattcag tgagcatacg 840

acgagcaccg gtactccaac aacaaatgta tctgagaatg agaaaggaaa aattatgaga 900

gagtcgagta acttcttagt tgcagataaa agctctccat ctcctatgaa agcttcatcg 960

gaagcgccca agaaaactgt aaaactaaat gatcagagta gtactgatac tgatttgagc 1020

cgaacatcta gttccaatat actaaacttc acgacaaact cacactccat gatgaatatg 1080

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aaatttggtg atagaaacat aacagttgaa aataatccag aaatgacaac caacacacat 1140

gcccaaaact ttattgcaga tgccaagcag 1170

<210> 35

<211> 1035

<212> DNA

<213> Candida glabrata CBS 138

<220>

<221> source

<222> 1..1035

<223> /organism="Candida glabrata CBS 138"

/mol_type="unassigned DNA"

<400> 35

atctgcatca aacccctacg ggaacgcctc ttatggatcg acacctggtg tcaatgacag 60

accggcgggt tcaaatccat atgctgcgat tagtggtgac tcatacctaa acggtacacg 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atcaggaaat atctcaagat ctggtactaa tccatattta agaaggaatg ctagcaatag 180

cgtaccgcct caggctggat atatcacacc tgattcgaac aatgttgcac tagcggagga 240

agagaaccaa caaaatcagg atgaattgga cttaaacgat gctcccgaag atgctaatga 300

gtttgtcttt gaggacaaat acatgggtag agaatctaaa tatgcagaaa actctgctgc 360

gctggacgaa ctagatttga atgccactat aaatgaccgt ggggaagatc ttaatgccac 420

tggatacggt aacatgtatg aacaacaaca gcaaccgcaa tggcaaagag aagaagagga 480

atacggttat ggtacccaag atgatatgaa cagaggctat aagacttttg atgagataca 540

aagagaagaa gaagagcgtc aaaaagaaga agaagatcag gctgttgatg aaatcaaaga 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gcaaattaga tttacgaagc agagctctgt tgcttccact agaaatactc tgaaaatggc 660

acaagaagct gaaatggctg gtatgaatac actaggtatg cttggccacc aaagtgaaaa 720

actgaataat gttgagagaa atcttgattt gatcaagata cagaatacag ctgccgatga 780

aaaggtagct gaattgaaga agctgaacag aaatattttg gctgttcatg tctctaaccc 840

atttaactct aagagaagaa gacgtgagcg tgaagacatg attaagggtc gtaagatgga 900

agacaagatg agagcagagc acatgtcaca agaattacac caatctactc aaagaattga 960

gggagcccta ggtggcggta atgagactag tgctgtgaga gagaaatatc aaagagaaaa 1020

agtacttgcg gcagc 1035

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 36

<211> 1600

<212> DNA

<213> Candida parapsilosis strain CBS 6318

<220>

<221> source

<222> 1..1600

<223> /organism="Candida parapsilosis strain CBS 6318"
/mol_type="unassigned DNA"

<400> 36

ttgccatcat ggatggatta atgaggttaa actcattaca tgaatatcta agtacagagg 60

gcttagccaa cgagctaatc tctgaaggtt gtacgaaatg gggaaaaata caaactctca 120

gtgaagtatt tagtactcta gatatagctt tagtggtaat attaagttta atgagaatga 180

atccttatta taaaattggt tcagcgatac tagggtcttc tgagattaat agtagatcaa 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agagcttcat atatgaaaga aataaagatg aatgcattta tttcaaatcc atcatcagaa 300

gcaccaaaac agaggaggat ttaatattta tccaagacgg taatagtctg aaggcttact 360

taaccaaaca cgggaacctc ggaaagggta tattattgaa gtgaaataat gtcaaatttc 420

acatacttaa atcttgattt aaggttactg taatatatct gtatgtatat tcattattgg 480

gtatagttag attatataac ctatttatta taagtttcat acaaatcata aatagaatac 540

acgggggcaa gataagtgag gaagcaaaag ttctaagtaa cgttagaaat accataaaac 600

atcaatctag ggatagattg ggtttacaat ggccaagagt tgaacatatt ggacaaaagc 660

tgaattcacg atgccttagt atgaatgaac tttatatcca gaaacgtagc tattcaaaga 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctagggagga tataagcgaa tttcaattat atctgaagtc tgtagttaat ggagtgtttg 780

tatgaccaaa tagttttgtc ttagggcata ttaggaaagt tgtacatgaa caacaaatgg 840

aattagttca tttagctaat atacatggtg ctaaatctga attagtcatg aagagacaaa 900

tgatgttagt aaattcaata atatttagat tacatgctgt ggataaatta tctcattcta 960

gaggttctct aacatctgga gtggataatg tatgtattga aggagtagat aaggatagag 1020

ccttactcgt ggaaatagtc gaatgactag gaacaacagt aaaacatcct aagttatata 1080

agagtgatcc ggtaaaaaga gtttgaatac caaaaggaaa tgagaaactt agacctatag 1140

ggattcctac tcttaaagac agaggtttac aatatttaat taatttagta gttgaaccct 1200

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tagttgaaat gactagtgat cctcataact atgggtttag accttatcgt tctacgaaaa 1260

atgccattgc ttatttgaga tctcatttac atactattga tagttctaaa aagggaaatc 1320

attttacaac tgcatcaaac gttgagaata atttattaag attattacca gaaaataaat 1380

gaattctgga tgctgatatc aaaggtttct ttgataacat taatcatgat tgattactta 1440

ataacttaac ccttcatcct aaattattac tcattattaa agcttgatta aagagtggag 1500

taatagatgg taaaatattt caattaactg aaagtggtac tcctcaagga ggtgtcatat 1560

ctcctacttt agttaatttc actctgaacg gcttggagaa 1600

<210> 37

<211> 1000

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Candida parapsilosis

<220>

<221> source

<222> 1..1000

<223> /organism="Candida parapsilosis "

/mol_type="unassigned DNA"

<400> 37

gcacacagcg caactacact actactactc ccattatgag cattaagtta aattcaggac 60

acgaaatgcc aattgttggc tttggatgtt ggaaagtcac caacgagact gctgccgacc 120

aaatctacaa tgcaattaaa gttggctaca gattattcga tggtgctcaa gattacggca 180

atgaaaaaga agttggtgaa ggaatcaatc gtgctattga tgaaggactt gtttcacgtg 240

atgaattatt tgttgtatcc aaattatgga acaactacca tgatcctaaa aatgttgaaa 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctgcattaaa caagaccttg tctgatttga atttggagta tcttgattta ttcttgattc 360

atttccccat tgcattcaaa tttgtcccca ttgaagagaa atatccacct ggattttact 420

gtggtgatgg tgataaattt cattatgaaa atgttccttt gttggatact tggagagctt 480

tggaatcctt ggtgcaaaag ggaaaaatca gatccattgg tatttccaat ttcaatggtg 540

ggttgattta cgatttagta cgcggtgcca agattaaacc tgctgttttg caaattgaac 600

accatccata cttacaacaa ccaagattga ttgaatttgt tcaatctcaa ggaattgcca 660

tcactggtta ttcttcattt ggacctcaat cattttgga attggaaagt aaaaaggcat 720

tggatacacc aactttgttt gatcatgaaa ctatcaagtc cattgcttcc aaacataaga 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aatcactggc tcaagtgttg ttaagatggg ctactcaaag aggtattgcc gtgattccaa 840

aatcaaacaa tcctgatcgt ttggcgcaaa acttgaatgt tagtgatttc gagttgagta 900

aagaggattt ggaggcaatc aacaagttgg ataaagggtt gaggtttaat gacccttggg 960

attgggatca cattccaatc tttgtctaga ggaggagcct 1000

<210> 38
<211> 1020
<212> DNA
<213> Candida parapsilosis strain CDC317

<220>
<221> source
<222> 1..1020
<223> /organism="Candida parapsilosis strain CDC317"
/mol_type="unassigned DNA"

<400> 38

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgcacaaggt gcagctattc cagaggaggc tgctaaaaga gacgacaatc ctgggtttgt 60

tgccttggac tttgatgtgc ttaggaaacc attgaacttg accgaggcgc ttctccgtga 120

aaagagagac tccatttcgt tgtcgttgat caatgaaggt ccatcatatg catctaaagt 180

ttcagtcggt tcaaacaaac agcagcaaac cgtcattatt gatactggtt cgagtgactt 240

ttgggtagtg gattcaaatg cccaatgtgg aaaaggtgtt gattgcaaga gctcagggac 300

ctttacccca tcatcgtctt cttcatacaa gaatttagga gctgctttca ctattcgata 360

tggggatgga tctacatcgc aaggtacatg gggtaaagat accgtcacaa tcaatggagt 420

ctcaatcact ggacaacaaa ttgcagatgt cactcaaaca tcagttgatc aaggtatatt 480

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gggtattggc tacaccagca atgaagcagt ttacgacacg agtggtcgtc aaaccactcc 540

aaactacgac aacgttcccg tgactttgaa aaagcaagga aagatcagaa ccaatgctta 600

ctcattatat ttgaactctc cttcagctga gactggtaca atcatctttg gtggtgttga 660

taatgccaag tactctggca agttggttgc cgagcaagtt accctgtcac aagcgttgac 720

tatttcgctt gcttccgtca atttgaaagg ttcatcattt tcatttggag atggtgcttt 780

gttggactct ggaacgacac tcacttactt cccaagtgac tttgccgcac aacttgctga 840

taaagctggt gctcgtcttg ttcaagtggc tagagaccaa tacttgtact ttattgattg 900

taacaccgat acatctggca caacggtgtt taactttgga aatggggcaa agattaccgt 960

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tccaaacaca gagtacgttt atcaaaatgg tgatggtact tgtctttggg gtatccaacc 1020

<210> 39

<211> 1073

<212> DNA

<213> Candida parapsilosis strain CDC317

<220>

<221> source

<222> 1..1073

<223> /organism="Candida parapsilosis strain CDC317"
/mol_type="unassigned DNA"

<400> 39

cattttccat tttgcggagt agcgcgtttc acaaagggtg tccgacttgc atggtctgcg 60

catcggttta aaaaaaaaag ctcgtttttc ctaattaggt aaagttcttt tatctccagt 120

ggtaagattt ttcgaaagta cacattagtt tatgtgtaaa cgcatgaaat ctatttccta 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atatgtcaat tctatggggt tgcagtttgg aatgttccat tgttaaagaa ccaagtgtgg 240

tccacaaaac aacatgaatt cctcaaatgt ttgttaatcc tcgcaatcac tctcgcataa 300

tggcttcgat ttatgagctg agttctccac catatgaaaa gcggatttat ttctgctttc 360

acttccgcaa tggtataagt ataagtataa aggtgcagcc ttctcaaagt cggttcacag 420

aatatccaag gcatctcccg tcacttccct ccctaaacca tgcatttttg gttcctatcc 480

atattcctca ttcaaggagt tttcgcagcc gtcattgccc cagttaaacc atcacaagat 540

aacttttata ccccacctga tggttatgag aatctgaaag tgggcacaat acttaaattt 600

agaaataccc catttccatt atctggaata attaatactg tcaatgttca gaactcttgg 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cagctacttg tgagatctga ggatacattt ggtaacccca atgccatagt cacaaccgtt 720

attcaaccat tcaacgcaac ttctgacaag gtggtgtctt accaaacatg ggaagatgca 780

gcaaacttgg attgttcacc gtcatatgga attcaatatg gtgcagattt aaccacattg 840

atttccctgt ttgagatgta ttttatgtca gcattgttgg atcaaggtta ctatgttgtc 900

actcccgatt acgaaggtcc aaagagcaca tttaccgttg gattacaatc aggcaaagct 960

acattgaatt caataagagc tgcacttggt tcagggaact tgactggtat cgattccaac 1020

gctgaagtta tgatgtgggg ttattcaggt ggcactattg catcaggttg ggc 1073

<210> 40

<211> 1015

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Candida parapsilosis strain CDC317

<220>

<221> source

<222> 1..1015

<223> /organism="Candida parapsilosis strain CDC317"
/mol_type="unassigned DNA"

<400> 40

gctgaggatg aggctactgg tcacataact gaagtctttg tcggggcgcc ggctgctttg 60

acttggatca tcaataggtt taatggagtt gagcctgttc aaggttgtaa tcatacatca 120

agagcatcca attttgatta cccgggaata agtcaatcct atgtcgaata tttcacggct 180

gcgttaaacg ttgttcttgg tataaatatg gggccattga caaagagaga ggttaacagt 240

atacaagatt tgaacaactt agagtatgta aaagtgtaat tgcaaagtat agtgaaaaaa 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

acaatagttg catacgtgag atgagcattc gatgagtaac tttatcaata caattgaata 360

caccaagcga ctcagccccc atagtgctta taagcaattg agccatccct cgtgcagaaa 420

cgataatcat gcttttctgc atagcacttt atcgcaccta tgaccattca ccaagctatt 480

gggtagcgga ccattgcgca attaatggcc atgataagaa acacatctgt ctgcaaaaca 540

ggtttcttct aaatcaaact aataatacat tctgtacata atgatacaaa tttctaaacg 600

caatgtttta catcatctaa aaagcaaaac gttccaactt gagcaatccg cccaaagtaa 660

ccttatctct cttaacatct ggacccaaat caaagcccaa aattgcgtgc aatgcagctt 720

caaagtaatt cttgattgat tgtggagttc ctggatattc caagtttgaa gctctcacat 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tatgttgaca tccatcaact ggaggctgtc cattgaaacg attgataatc caagtcaaag 840

cagctggtgc acccacaatt gattcagtaa tgtgtccatt ggtcaaatct tcattatatt 900

caccagattt gagtccccaa tcacaccatt gttggaatgt ctttcttgag ttgacaatgg 960

ggacaattgc atccaaggta ccgtggtaga tgaataatgg aatttgtggg gtcaa 1015

<210> 41

<211> 1490

<212> DNA

<213> Candida tropicalis MYA-3404

<220>

<221> source

<222> 1..1490

<223> /organism="Candida tropicalis MYA-3404"
/mol_type="unassigned DNA"

<400> 41

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aatgcctcga gcactgctat gtctgctagt agttcaacca attctacaac ttcaaaaaaa 60

tcaaaaaata tcccactaga attgacagcg tttggtacaa ctccatcagg taaaccaaga 120

ttatttgttt gtcaagtttg taccagagca tttgccagat tggaacattt aagaaggcat 180

gaacgttctc atactaaaga gaagccattt agctgcggag tttgtcaacg taaatttagt 240

cgtcgagatt tattattaag acatgcacaa aaattacacg caggctgctc tgacgcaata 300

acaagattaa gaagaaaatc aatcaagcgt tcgcaaaatg gcgaggatga cgatgatgat 360

atgcaagatg aagaagagga attacaacaa gagtcaactt caggaaagtc taaaaaactg 420

aaactggacc ctcctccaga gtttaatttg aatttatttg atggaaaacc aaacactacc 480

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aaatcaaaag tatcaaaggg ttcaaacaaa aagagttctt caatctctac atccaaccca 540

actagaaaga attcattaca gaagcaagta tttgatcatc gtaaaaaggc tgctgattcc 600

caaattgtag gtaatactgg taccgtggga ctttctataa ctccaacaag acaaagaaga 660

ggtgcttcat tttctgcaca atcgggtgca aattatgcaa ttaatgttcc agaattcaat 720

gatgtatatc cgcaacctga taatgttgaa ttttcaactc cccaattcct tccttcttct 780

tttgaaaatg aaatgacatg gttaaactct cttcctggta ttccaggaat gtctgattct 840

actgttgctt caaaattact tcgtcaatca tcaatatcaa caaataatga tcatggtacc 900

ccaccaatga atgttagtca gcatggctca ttctctcatc cttctacatt aacagctaca 960

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

catatgggac aaagtggatc tgacagtctc aacagtctca acactccatt tgatggttca 1020

tatttgatgc cgacagctac gatcagcaat caagaaatac aaaacggtgt cgctgctcac 1080

caacacaagc atcatttgac aaatggatta agttcaacac gacaaccaga agttattcaa 1140

gaagaaactt atggatattc attttatgat attcctgaaa gtatgctcag tttccctggt 1200

gatcaatctg ttggacattc atccacttca ggaactggag caaattcacg tcctcatcat 1260

atgtttaaag cattgactcc tattaaacaa gaagttgatg acgatatcat ggaagatatt 1320

accaagaaca ccgacaataa taaccataat gagaatatga attttgattt gaattttctc 1380

aatgatattg atgatattgg acaagatacc atttctagat ttatgcccgg tgggtactca 1440

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttttatggag gtgataatac ttctattcct tcgtcggcaa atgattacaa 1490

<210> 42

<211> 1140

<212> DNA

<213> Candida tropicalis MYA-3404

<220>

<221> source

<222> 1..1140

<223> /organism="Candida tropicalis MYA-3404"

/mol_type="unassigned DNA"

<400> 42

cagcaaatac cagacgcaga tcaaccactc atttccatgc acaacaccaa cctagtttac 60

ctttgacaaa taagaatttg caatcgttgt tgagaaaatc ctcgtcaaat gacgaccctg 120

tttcccctac agccgtaact ttagatatgg accaatttgc caacgaacaa cgacaacttg 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctgccacaac cccctggcgc gacgatgccg acaatgaaag atactcgatt tccgaatttg 240

gcgagtccaa cccttcatca gaacactcca gcgattcaac ctcactagac gatgtgtgtt 300

tccctgattt tagagaagat ataaaaacca ccaacaactg gcccgatttg caagtattgg 360

aagagtacat caaagaggaa atggaagagt tccatgaaga acaggaagca gtggtgaatt 420

ttggtaaaga catcattcat gacgaagatc aaccagctac cgaaaacacc ccgttaatga 480

acaactacaa agtgaatgaa gtagaatcat tggatctggt caaccagtca ttcaagatcc 540

gtcccactcc aattcaacct tgggaacact ctagacagag tatccatcct gtatctaaac 600

atgacggcaa agaagtatgc agatttacat atttccgtga ggagttgcca aaaactattc 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atgcacctac aatactgggg ttggtggaag ataaatccaa gatccttgaa agtctccaag 720

aactattccc tgtctctgtt tcaaaaccac catcagtgca taccaaaata gattccattt 780

catcttccaa tttacctcat ttgacaaaat cacgtcccga aacgccgctt cctgctgatg 840

gtgttgatag aagagaaccc ttttggcttg acgtgcttga cccgacagaa gaagaaatga 900

aggttctttc caagacattt ggtatccatc cgttaaccac cgaggatatt ttcctcggcg 960

aggctagaga aaaagtcgaa ctattcaaat catactattt tgtttgtttt acttcgtttg 1020

atgttgtcta tgagaagaga agacaacgtg ctaaagaaca agaaaagaaa ctcaacaagt 1080

tgcaagaaat gtacgaaagt ggatctgacc atggaagtgt gcttgaatcc cactcaccat 1140

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 43

<211> 1142

<212> DNA

<213> Candida tropicalis MYA-3404

<220>

<221> source

<222> 1..1142

<223> /organism="Candida tropicalis MYA-3404"

/mol_type="unassigned DNA"

<400> 43

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acaccgagcc attatcgtta tcaaagacac acaaaccaca atcagttccc gtgcaccgcg 120

aatggattag tgattatcgt gttccccata gtgtattgaa atacaatcta tcaagagaag 180

ggcccggcaa tagaatcatc aataccgata tagatttcca gtatctgttc acccctgaaa 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tggatttaaa cgctattgat caacaaggtt tgggcacggc tgggtcgcac ccctcacaat 300

ttgataacac acaagaaacc accaatgagg ataatgatca caagattgat gaacacattg 360

gggcattttc aggttacttt gctgtaccaa cattgactgt taatttgccc aatagatgca 420

gagatgatgg tgaagaacca gaatttatga gagatgttcc caaaatttgt tatcagaacc 480

actttgaact ggacgattcc acatttatgt ttggaggtgt ttatgcttca gcatccatga 540

attttactca tttgggaatt cctgcagaag tggatgttag caaaatcaaa gtctactttc 600

cttatcaatt gccaccattt gtggatacaa agattctaac aaatccttat atgatacctc 660

atccccattt cttgcagtac aatgcaacga gagggtctgt cacatattta gatacttcag 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aaatggagga tttccctgga cgattttccg gtatggcatc cacaagaatc tcgccacagc 780

atttcttctt ctatggtgga tttgaactca aagacaagtc agttaaacac attgaaaaag 840

atgatttgtg gatagtagag aaagatatta tcatgaatga agatggattt atcatcgata 900

cttctacttt aagatttagg aaaattgagt tgaataccaa taacttggca ataaaaattg 960

gtagaattgg gatgggaatt tgttcgaatg tgtacgaatc aaaagaacca aatgataata 1020

ggccagagat aataaatgaa tattccttgt caaatgtcat gttagagtcg aaaaataatt 1080

ccactaaacc aaagtaccca gttgatatgg ctgatagtat tcgtgttgac gcagctactc 1140

ca
1142

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 44

<211> 1008

<212> DNA

<213> Candida tropicalis MYA-3404

<220>

<221> source

<222> 1..1008

<223> /organism="Candida tropicalis MYA-3404"

/mol_type="unassigned DNA"

<400> 44

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tttgaattgt ctaaaaggga attgcattg tgcttatttg aatttagata ataatgccag 120

aaatgccctt agaattgctc agtataacca aaatattcga caggaaaaat tggattccaa 180

tggtaagttt attgatgaac tgagaagtac tacaagtggg aatggtgcag gtgttaataa 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tataattcct caaccaggta tgatgagtgc acaacatgga caacctatag caatggctcc 300

aggaagtgct gcattaccgg cttatccatt gagtgctgca cctggtgcta gcgtattggc 360

ccccaatatg tctatgagtg ctgctgcagc cgctgcaagt tcagctaatt tatcaccatt 420

tattaattca gttattgctc caggaattca accaccgcaa aacaacactt cgtcatctcc 480

gcaaacaaat tctacgaatt caacagctgg cactgttcgt actccgcccc aacaacaaca 540

aactcagcca cctccaacac aaggccaaca acctccacag cagcaacagc aacaacaaca 600

acctgctaca atgacccata taccgccagg acatatacct tcaccacaga ttgttcaatc 660

tccatatggt ccattggttc ctgtattaac acaaactggt tcagttgttt atgcaccaac 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aagtaccctt tcagcccaac ctacaccaat gattacaact gctttagctc cacagccaat 780

aacaattcaa caacaacaac aacaaggtca tccaggacaa ccagcaattc aaactttacc 840

acctccaatt cctcaacaag gtaatgcaca aagtacaatt ctcactccac agcctcaagt 900

accgtcttca caaccattga gtaatccatc aagtgttcct catttgtcac ctattttgtc 960

tcaacaacct tcagtagttc caattacatc aaatgctgga agtgttgc 1008

<210> 45

<211> 1065

<212> DNA

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<223> /organism="Candida tropicalis MYA-3404"

/mol_type="unassigned DNA"

<400> 45

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aatgttggac ttttttttatt atttttttctt attggtggaa taattatatt tagtggatta 180

cttatatatt tagaatttgc attgaattta ccatttaaaa acggtggaga attaaattat 240

ttgataagag tcatcccaaa tcctcgagga ttaattggat gtgtatattc attttcaatt 300

gtattattgg gtttcagttc tggaaatagt tttgccttcg ggaaatatgt cttgtatgct 360

ataacaggat ctgaatctgt cgatgataat cttgtaaaac taattggagt cggatgtatc 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agtttttgtt gtttcttgca catgaaatat ccaaagcaag gttctaattt gttcaatttt 480

cttggaatat tcaaaatatt aattcttgtg ttaatcataa ttattggggc tcttgcattt 540

tctggatttt tagaattact gcccacagac aatttcaaag atatctggtc cttccatgaa 600

ggaaataaac ctagtatcta ttccatatcc gttgctttat tggaagttat atattcattc 660

aagggttggg aaaatgtaaa ttatgtgttg aatgaagttg atgatccgta tcatatactt 720

accgtagctg caccattggc agttttatta acaacagttt tgtattttat ggtaatttta 780

gcatacttgg ttgtggttcc taaagatgaa atgttatcaa gcggagtgtt gatagcaggt 840

atatttttta acaaggtatt tggagcaagc ataacagcaa gaatgttacc aattttgatt 900

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tctttttcta acttgggaaa tgtgttggta gtatcatatg ctcatagtgt ggtgaatcaa 960

gaactcgcct ataataacta tatcccattt agtagtattt ttcaaaattt caactactcg 1020

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<210> 46

<211> 1547

<212> DNA

<213> Enterobacter aerogenes KCTC 2190

<220>

<221> source

<222> 1..1547

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/mol_type="unassigned DNA"

<400> 46

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gcctgtcagc gcaggcctat gagcaggaca aaacctataa aatcaccatc ctgcacacta 180

acgaccacca cggtcatttc tggcgcaacg actatggcga atatggcctt gcggcacaga 240

agacgctggt ggacggtatc cgcaaagagg tggcggccga aggcggtagc atcctgctgc 300

tgtccggcgg cgatatcaat accggggtgc cggaatctga tttacaggat gcagaacctg 360

attttcgcgg catgaacctg attggctacg atgccatggc ggttggcaac catgagtttg 420

ataacccgct cagcgtgctg cgccagcagg agaagtggtc gaagttccct ttcctgtcgg 480

ccaatatcta tcagaaaagc accggcgaac gcctgtttaa accctgggcg ctgtttaagc 540

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gcggcgggct taaaattgcg gtgattggct taacgaccga cgatacggcg aaaatcggca 600

acccggaata tttcaccgat atcgaattcc gtaatccggc ggcagaagcc aagctggtga 660

ttcaggaact gcagcaaaat gaaaagccgg acgtgattct ggcgaccacc catatgggcc 720

actatgacaa cggtaatcac ggctctaacg cgcctggcga cgttgaaatg gcgcggagtt 780

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agaatggcat ctggatcgtg caggctcacg agtggggtaa atatgtcgga cgcgccgatt 960

ttgaattccg caacggggag atgaagctgg tgcactatca gctgatcccg gtcaacctga 1020

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agaagaaagt cacctgggat aacggtcaga gcgagcgcgt attgtatacg ccgcaaattg 1080

ctgaaaaccc gcagatgctc tcgctgttaa cgccgttcca gaataaaggt aaggcgcagt 1140

tacaggtgaa aataggcagc gtcaacggcc atcttgaagg cgatcgcagc aaagttcgct 1200

tcgttcaaac caatatgggg cgtctgctgc tggcggcgca gatggcgcgc agcaatgctg 1260

atttcgcggt gatgagcggc ggcggtattc gcgactctat cgaagcgggt gatattacct 1320

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gtaaagaggt gactgagtac ctgaccgccg tcgcgcagat gaagccggat tccggcgctt 1440

atccgcagtt cgccaacgtc agtttcgttg ccaaagatgg caagcttaac gatctgaaaa 1500

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tcaaaggcga accggtggat ccggcgaaaa cttaccgtat ggcgacg 1547

<210> 47

<211> 1238

<212> DNA

<213> Enterobacter aerogenes KCTC 2190

<220>

<221> source

<222> 1..1238

<223> /organism="Enterobacter aerogenes KCTC 2190"

/mol_type="unassigned DNA"

<400> 47

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ttttcaacag aaacgactat gagcgcaatg acccttgatt tacctcgccg ctttccgtgg 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ccaacgctgc tgtccgtggc tatccacggt gccgttgtgg cggggttgct ttatacctcg 240

gtacatcagg ttattgaaaa gccttcgcct tcacagccaa tcgaaatcac gatggtggcg 300

ccggcggatt tagagcctcc gcaggcggcg cagccggtcg ttgaacccgt tgttgaaccg 360

gagccggaac cggagcctga agtggtgcct gagccgccaa aagaggtgcc agtggttatc 420

cacaaaccgg agccgaagcc caaacccaag ccgaaaccaa agcctaagcc ggagaaaaaa 480

gtcgagccga aacgcgaggt gaagcccgct gagccgcgcc cggtctcgcc gtttgagaat 540

aacaatacgg cgcctgcgcg tactgccccg agtaccacgg cggcaacggc aaaaccgatg 600

accaccgcgc cgagcgtccc taaagcgttg aaacgcggcg acccgtctta cccgcaacgt 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gcgcaggcgc tgcgtattga aggtgacgtg cgcgtgaaat ttgatgtcac cgccgatggt 720

cgggtggaga atatccagat actctctgcg aagccggcca atatgtttga gcgtgatgtc 780

aaaaccgcga tgcgcaaatg gcgctacgag gcaggcaggc cgggaacggg tttgacgatg 840

aacatcaaat tccgcttaaa cggcgtaaaa atggattaag ctcgctgatg aaaaaggccc 900

ttttgagggc ctttttttac gcctattgca gggcttcatc gagcgctttt tgcgcggtga 960

ccaggtgctg gccgccgaac agaattgccc gattaagtaa agtgtatagc tggtaaatcg 1020

gttgccgttc aaggaaacca gcgggcagcg gcgagaccga ctgatagcca tcgtaaatct 1080

gcggcggttg ttccggatgc agaggcagca ttgccagatc gcattcgcga tcgccccaat 1140

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aacatgccgg atcgaaaata tacggcccat tgggccctag cgcgcagttc ccggaccaca 1200

agtcgccatg taataaagaa ggctgcggct gatggctg 1238

<210> 48
<211> 1037
<212> DNA
<213> Enterobacter aerogenes strain CF379

<220>
<221> source
<222> 1..1037
<223> /organism="Enterobacter aerogenes strain CF379"
/mol_type="unassigned DNA"

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cgggcatggc ggtggcggtg atctatcgcg gcaaacccta ctatttcacc tggggccagg 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ccgatgttgc cgggcagcgt ccggtgacgc gacagacgtt gtttgagctg ggctctgtta 180

gtaagacttt caccggcgtg ctgggcggcg atgcggtggc gcgcggtgaa attaagctca 240

gcgatccggc gcagaagtac tggccgcagc tcaccggcca gcagtggcag gggatctcgc 300

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cggatgaagc ggcattactg cgttactatc agaactggca accgcagtgg gcgccgggta 420

gtaaacggct gtacgccaat gccagcattg gcctgttcgg cgcgctggcg gtgaaacctt 480

ccggcatgag ctttgaacag gcgatgagcc agcgggtttt gcagccgtta aaactgagcc 540

acacctggat taacgtaccg cccgcccaga gcaaggacta cgcctggggt tatcgtgacg 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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gcattgagga tatggcgcac tgggtgctgg cgaatatgaa cagcgaagcg gtgcaggata 720

aaaatctgcg gcaggggatc cagctggcgc agtcgcgcta ttggcgggct ggggagatgt 780

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<210> 49

<211> 1086

<212> DNA

<213> Enterobacter aerogenes strain B

<220>

<221> source

<222> 1..1086

<223> /organism="Enterobacter aerogenes strain B"

/mol_type="unassigned DNA"

<400> 49

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aattagacct gtacggtaaa atcgacggtc tgcactactt ctcttccgac gacagcgtcg 120

acggcgacca gacctacatg cgtatcggcg tgaaaggcga aacccagatc aacgaccagc 180

tgaccggtta cggccagtgg gaatacaacg ttcaggcgaa caacactgaa agctccagcg 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

accaggcatg gactcgtctg gccttcgcgg gtctgaaatt cggcgacgcg ggttctttcg 300

actacggtcg taactacggc gttgtttacg acgtaacttc ctggaccgac gttctgccgg 360

aattcggtgg cgacacctac ggttccgaca acttcctgca gtcccgtgct aacggtgttg 420

ccacctaccg taactctgac ttcttcggtc tggttgacgg cctgaacttt gctctgcagt 480

accagggtaa aaacggcagc gtaagcggcg aagatcagac caacaacggt cgcggctacc 540

agaaacagaa cggcgaaggc ttcggcacct ccgtgactta tgatatctgg gacggcatca 600

gcgctggttt cgcgtactcc agctctaaac gtaccgatga gcagaacagc gttaacactc 660

gttatactga ctccaacggt gtttcccgtc gcgtactggg tgaaggcgat cacgctgaaa 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cctacaccgg tggtctgaaa tacgacgcca acaacatcta cctggcgact cagtacaccc 780

agacctacaa cgcaacccgc accggtatca tcggttttgc taacaaagcg cagaacttcg 840

aagtagttgc tcagtaccag ttcgacttcg gtctgcgtcc gtccgtggct tacctgcagt 900

ctaaaggtaa agacatgggc cgttacggcg accaggacat cctgaaatat gttgacctgg 960

gtgcgactta ctacttcaac aaaaacgtgt ccacgtacgt tgattacaaa atcaacctgc 1020

tggacgacaa ctgtttcact aaagatgcaa gcatctctac tgacaacgtt gtggctctgg 1080

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1086

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<211> 851

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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<220>

<221> source

<222> 1..851

<223> /organism="Enterobacter aerogenes KCTC 2190"

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ataccgacca gcgggtttat gatatctgcc tgaaatacgg ctttgattcg cagcagacct 180

ttacccgtat ctttacccgt accttcaatc agccgccggg cgcgtatcgc aaagagaacc 240

acagccgcgc gcactgagcg ccggccgcat accagtccgc ctctatcggc gggctttttt 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgctctcttg cggcttaatc tgccagcgag aaccagcggc gccataccca gcgcaatacc 360

agatactcaa cgactcccag cgctaagaac cacaggcaga agatcagggt atagagctgg 420

ttgagatcca tcaggtggaa ggatgtgacc aatttttgcg ccagcgtcag gccgagcgag 480

ggcgccggca gcaacagaca cgaaatcagg gctaacagca aaatgccggc ggcggataac 540

agcgtttcca gcgggtgttt cattatgatg ttaatcgtca gttaaaaaac atattgtccg 600

gtaaaaaggc cgttaacgca atatgcttta tccgcttatt aatttacgtt attcatatta 660

tttctaatac tattaattaa acccccctctg ttaatttatt gagtaatatt tgtgattaag 720

ttaattgcac cgcgatgtaa attaacgtca tttattatcc cagcattttt acaaaagtat 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aggtactata tcccactatt gtggcgataa taattgccag tgcgacatac agcactagac 840

ggcgtccacg g 851

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<211> 1199

<212> DNA

<213> Enterobacter aerogenes strain KNUC5012

<220>

<221> source

<222> 1..1199

<223> /organism="Enterobacter aerogenes strain KNUC5012"

/mol_type="unassigned DNA"

<400> 51

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ggataactac tggaaacggt agctaatacc gcataacgtc gcaagaccaa agaggggac 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cttcgggcct cttgccatca gatgtgccca gatgggatta gctagtaggt ggggtaacgg 180

ctcacctagg cgacgatccc tagctggtct gagaggatga ccagccacac tggaactgag 240

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ggaactgcat tcgaaactgg caggctagag tcttgtagag gggggtagaa ttccaggtgt 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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agactgacgc tcaggtgcga aagcgtgggg agcaaacagg attagatacc ctggtagtcc 720

acgccgtaaa cgatgtcgac ttggaggttg ttcccttgag gagtggcttc cggagctaac 780

gcgttaagtc gaccgcctgg ggagtacggc cgcaaggtta aaactcaaat gaattgacgg 840

gggcccgcac aagcggtgga gcatgtggtt taattcgatg caacgcgaag aaccttacct 900

actcttgaca tccagagaac ttagcagaga tgctttggtg ccttcgggaa ctctgagaca 960

ggtgctgcat ggctgtcgtc agctcgtgtt gtgaaatgtt gggttaagtc ccgcaacgag 1020

cgcaaccctt atcctttgtt gccagcggtt cggccgggaa ctcaaaggag actgccagtg 1080

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ataaactgga ggaaggtggg gatgacgtca agtcatcatg gcccttacga gtagggctac 1140

acacgtgcta caatggcata tacaaagaga agcgacctcg cgagagcaag cggacctca 1199

<210> 52

<211> 1116

<212> DNA

<213> Enterobacter aerogenes KCTC 2190

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<221> source

<222> 1..1116

<223> /organism="Enterobacter aerogenes KCTC 2190"

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tcaaagctat cctgtgaatt tttgtcattc attaactcaa ctttataatc tgaataaggt 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggcaaaggaa tgaaattatt actaccgcta agtcgatagt gtcggccgtt aacctgagcg 180

gcaagaactg catcatcaga aacttcggta ttaataatca caccagattt ttcctggata 240

ccgctagctg caatattcct actgctataa gcgactgaac cacgcgctgt tacattacca 300

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aacgcagtat aaccggatat cgaataatcg ctctcaccat ttttcttatc cttaagtaac 420

ttagagagat tcaaccctgc tgagctaaag gccgaatctt caaaattttt ggtcgccgtt 480

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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gttgtatact cgaaattatt tgaattacta cgaacacgtt tatcaaccgt atggcttaca 720

gtaacctgtc cagcatgatc tataatttga ttaaaattaa gcgtgccacc aaaagaatag 780

ttatttgttt cataaattgg cagtttatca ttaatgtggc ttttttcacg attaacccaa 840

accgatccaa atccttctgg cagctgcatt gttgcgttaa taatattcct gtgcacgcct 900

ccctgggata tcaaaccctg ccaaccaatg ctaccatact ttagaatcgt tagattcaaa 960

gatgattcat taatatagtt actgtcgaaa ctataagtgg atgtttgcag agttagtcct 1020

gataaaacag gataactaac ggatgttgaa aaccctgcaa gccaagtctg atatgaatca 1080

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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<210> 53

<211> 1185

<212> DNA

<213> Enterobacter aerogenes KCTC 2190

<220>

<221> source

<222> 1..1185

<223> /organism="Enterobacter aerogenes KCTC 2190"
/mol_type="unassigned DNA"

<400> 53

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accattcatt aagacagtcc ctgatatcgg ttcagacaag ccgcacagta ctttgagcag 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cgtggttttc cccgaacctg agggcccggt aatggccaca ctctcgccgg ctcggatcct 240

gaaactaagg ccgctaaaga cgggtgctga ctggctgtcg taacggaagc ttagcgcttt 300

aatctccaga ctagccggag acatggttgc ctttaatcct aaatccggtt ttctttcttc 360

cttttcattc aaagcgatat ccgaaatcct ttcgttgtgc aggctcatca tacgcagctg 420

taataagaag ttgaccagcg atcctacccg gtcagaaaac tgcgcgcgga atgcgccaaa 480

tgccacaaac atgccgatag tcatttggtt ctccataacc agactgatgc ccagccacag 540

aatagtcacc tgatcgcacg tcgccacaaa cgtgttaatg ccgccgaaga acatatcaag 600

tcggctgagt ctgataccgg tattgatggc atcaatcttc aggttcagcc agtggctccc 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

acgccgttct gccattccct gcattttaac cgtagctatt ccgtagagtg tttccataaa 720

atatgaacca gcacgggctc cggcgattaa cgcttcttcc gacagctggc ggtaccggct 780

ataggtcaat atacgaatga agacatatac cgctgtaaag cccagtacaa aaaccgtcaa 840

ttttccaccg tacaggataa gcatcaacaa gagaccggca accatgatgc tgtccatcat 900

tgccccccacc acacaggttg taaacgtggc gcgaagcgca tccaacgagc tgaagcggga 960

gtgaatatcg cccatctttc gtcgctcaaa ataggtcaac ggcaactgaa gcagatgacg 1020

gaatagcccc gactgccatt gcacatttat caatgactcc atcgcaaggg atgaccatgc 1080

gcggatcacg ctaaccaaag tacgccccaa aataaaaaac atcaggactc cacagataag 1140

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

catgagcagt ccccggtcat tcgcaggaat agcatgatcc atcac 1185

<210> 54

<211> 1099

<212> DNA

<213> Enterobacter aerogenes KCTC 2190

<220>

<221> source

<222> 1..1099

<223> /organism="Enterobacter aerogenes KCTC 2190"

/mol_type="unassigned DNA"

<400> 54

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aaacgtataa ctgccgctcc gcaccgcgga tttaagcgtc atgcactggt tatcttttgc 120

caacggcgcg ctatccgctt tgattcccaa ctgatgtaat aatgccgatg acaggcaggt 180

atcatccgga ttactggcga ctacgattgg atatttacca cgccattgtt tattgacgta 240

aatatccaat tcatattccc caggcagtgg ttgattatcc gcaaagcgaa agcttgatga 300

tttttcacct ttcattccgc cgatcatgaa attggtatca aaagtctctt cagcggcctg 360

cagctgaccg gataataaaa ccaacagtat cattgaggaa agcggcgtca tccttaacat 420

ggccaactcc attatttatt attttacatt gagcctgtcg ctaataaagt ttccattatc 480

atcaatcatc gttagcgaat actggcgggc gagattattt tttaaaaaga catcctgact 540

tgataacggc gcaagcataa cgctgcgctc attgacttta acgttactga gtttaatttc 600

agtaatcgtc aaccaatttg ccgaaccatt ggcaatatgc agagcgtttt tgcgcgaaga 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

caacgaaata cttttaaatg tatctttatt taccgctgcg ataccttag
ggcgataaaa 720

aagcttaatg cggttttgca tggcaaaccg cagcgtattc gccccctcac
ttcctggtgt 780

attcggagga atatcgagta cgttgagata aaacagcgac tctttgttcg
ccggaagttt 840

gttggctaac tttttaattc gcagctgctg accggagtta cccgttatgc
gcgccaccgg 900

cggcgacagc aggaaaggca cgttgatttt ttccggcggc aatgaagtat
tgccatcgtc 960

aatccacgac tgcaccagtg aagagcgggt gccatgattc atcaactgta
cgaccacttc 1020

ttgtttctca gccggataaa ccacccgggt accgaaaatc accactccgg
catgcgcggg 1080

ctgcatagcg ataaataaa
1099

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 55

<211> 1209

<212> DNA

<213> Enterobacter aerogenes KCTC 2190

<220>

<221> source

<222> 1..1209

<223> /organism="Enterobacter aerogenes KCTC 2190"

/mol_type="unassigned DNA"

<400> 55

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gtgggcgaac gcagcataac cctggtcgat cttcctggcg ttggtgagac tcctgagttc 180

gatgctgagt atatggcgct ctatcatcgt ttgtttgttg aactggacct agttatttgg 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gtattacggg ctgatgatcg cgcccgggca atagatatta caacacaccg attgctactt 300

tctaatggcg cagatccatc acgtttctta tttgtgataa ctcaggctga atgtattcct 360

ccgttaccaa ctaactctga atgccaggat cggccttctc caacacagtg cctttcgttg 420

gccaccatca gcgcccaaat tgcgggtcag tttccatctt cttatccggt aatagcagtt 480

tctgctcata ctggctacaa cttgacggtc cttgtagagc ttatggtgca tgcattaccg 540

atacaggcta gcagcgcctt ttatcggcaa ttgaaaccag agcacctgac taaagagagc 600

aacgatgctg tacgccagcg gtttggtgag atggcaggaa atgcatttga tacggtgata 660

aacccggact ctttcccgtc aggctggacc agctttttga gaaaactgcg ccaaaaatta 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gtgcagcttg ccaccgtgtt atgggacaga ttttttggct aacaccacat ccgtcaggtt 780

gtgtcgctat gatgaatgtt tatcagacaa aacctttctt aacaaggcgt tatcgtgccg 840

cactattttt cagatttcat tattttacct atctttgccg acataacgtg tccggcctgt 900

gctgcataat aactgcatga aatagaacca tatttgttgc cctgagaggc catatgtccg 960

tcaacgagca agactcacgt tacgaccgac tggcgatcag attatcggtc attattagcc 1020

gcctgcttgc gggagaaaca ctctcactca aatctctggt ggatgaattt ggtgtctctg 1080

aacgcactct acaacgtgac ttcaatcaga ggctaatcca tctggatatt ctggatgaaa 1140

atggacgata ccgtttgaat gattgccaac cacccgatca ttcatcgggc gcattctcgt 1200

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttatacgta

1209

<210> 56

<211> 1192

<212> DNA

<213> Enterobacter aerogenes KCTC 2190

<220>

<221> source

<222> 1..1192

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/mol_type="unassigned DNA"

<400> 56

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tttctggcag ctaacatttc taaaaaaatc ttgttaaaag cttaattata gttttgataa 120

atgtaaaaca atttctttaa atagttttat ttaaaaaata catgcatgtt tctttagtga 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttttataccc atttcagtat ggatgaagca ttctgatgat ggaaacgtat cacctgtttt 240

atgggagtga agtggaagcc tggtatcgaa aatccctgac atcggttgag tagaagcacc 300

agggagtact gcctgggtaa ttttttacat ccgtcgacat gatatgagtt gcataaccgt 360

ttacctcccg gtggaaatgt agcacgttaa atcacctggt tattctggga tttggctcga 420

cttctgattg agattagctt tatggtttgc gctagtgagc agtctggcta acttgcgatt 480

atctgttctt catttatgct gaagttaagt gcaattgcag aacagataat tactataggt 540

agtattaaat tttatgcctg atgtgagttg ctaacttgag agtaatttaa tccttctttt 600

ttgtcaaaaa accgctacta tgatgtctgt taaaatactg ctgataacct gattagggtc 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggtaatagta atatatattg gtttgtgtta tatattgatg tctattagta tcacatttaa 720

tcaatgagta tcattggtaa gaacactgta cctaactatg aaatgatgta catcactacc 780

agttattaat agtgaggaca cttaatgttc atttgagatt gttattaggt attccagtta 840

ttgtttgtct tttagtgtgc attaatgcaa ggtttaacgt taaatggcaa cgcaacatgt 900

ttgagcaata gcgtaaccag aatctacccc gcgtattaac gcattgcttc atccagttct 960

gactcctgat gttaattatc ctgcaatctg atcagtaaca ccatttcgct gcaataaaat 1020

ccatctgcaa ctgattggca agtcagtcat agctcaattg agtatttatt atcaatgccc 1080

gtaagagatt actttatgtt tgattcagaa ttacttgatc atcgccatgg ttcattaaac 1140

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gccaattatc ttaagaaaat agaaaatgtt ctccagtacg ctctcaatga ac 1192

<210> 57

<211> 1004

<212> DNA

<213> Enterobacter aerogenes KCTC 2190

<220>

<221> source

<222> 1..1004

<223> /organism="Enterobacter aerogenes KCTC 2190"
/mol_type="unassigned DNA"

<400> 57

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agccgcattg tgttgcttga gtccggtatc ttctcaattt gccgcagtga tcgaggcttg 120

aacgtgctat cggttttcgc cccgtcaatt gctggactga tagatagcta cggtgtgaca 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tacgatgttc ccacccgccc ggagcatttt ttgattgctg aaacagaatg ccgtggtcgt 240

gcagtctcgt tagcggactt tattaaggtg acggatgagt gcaatctttg gcacgacgta 300

gctcgttttc tcgcttatcg tctgatggtg atgaacgttc gtgaccggga gctggttggc 360

gttgactctt atcttaaggt tcgtgcgtta ttaatcgaaa ttgccgccta caacgacgaa 420

tatcgccaga gcattaatgt tctgaacttt attcaacgtc gtaccggaat atcgcggagt 480

cgtaccatga agcttctttc tgaattgcga aagggcggat atatcaatat tgatggtgga 540

cgtctgttag ggattaaaaa actgccactg gcttactagt tgctgtatct aaataacagc 600

tataacgatt tatttactgt aaaaacagtc agttaatggt ggtcctataa aaacagtttt 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgtcgattgc aactctctgg ccaatttata ataattaaat aacggcagaa attaattatc 720

tatcggcgct tataaataag cgctggtttg ctattcattg aatatagtat ttctgtacgc 780

tacaaacttt aacgtttttg cgcccggtac cagcaagaga tctctgtgaa gagggctcgg 840

tactaaaatt cgttattaat tctattttcg acttgtgtat ttaaaaggtt atttatgaaa 900

aaacatcttt tagtgatggt catgactgcc atgacggcgg gcggtatgag ctgcgcggcg 960

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<210> 58

<211> 1024

<212> DNA

<213> Enterobacter aerogenes KCTC 2190

<220>

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<221> source

<222> 1..1024

<223> /organism="Enterobacter aerogenes KCTC 2190"

/mol_type="unassigned DNA"

<400> 58

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acccttcagg ttttctggat tgtgactgtt agtctgttgt tgaaactttt agggtgggaa 180

atatattttt atgcatattt tattttatgt atgatacctg cgataggata cttttacttg 240

catgtctatt ggaagtggca tgaagattac atgactgcct gtgatatgta tctcagatgt 300

ggtgaaaata ataaaaatta gaaattgaaa ggaaaataag gccagtcaga atgctgactg 360

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gccttattct atttagcttt gcagggcatc aacaacgccg ccccaatcag tcgcagcatt 420

ataaacaaaa ttagaccaaa ccccagattc ggcatacagc agggagttga tatggtcggt 480

cagaatgctt cccaggctgg atggcgaacc accaagaata ttggaaacca ggtcaatcgt 540

ggtttccaga gcggaggagg ccagaatcat accagcatta atacccgcag caaccagacc 600

cagtgcagat tgaatcgtga aatcaaccaa agcacaaggc aggtcgataa tacctgcacc 660

agagatatat tccatttcgt ttgcggttaa ttctttcatt ttaaattcca tcctagatta 720

atgaattgtt aatgatgtac ctttgcacac cgggcaatat actaatcaga gggtttttta 780

tataatagtg aatatttaaa tgatctatta attttaatgt gaattaaact tcacaaacga 840

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cgcttagata agcgatgggt attatttcgc aacttcatat ttgaaaacag aagatactcg 900

agagtatctt ctgtatgagc aattgttcga cttattgttt agaggtcaga aattcaggtc 960

tattatgaag ttgcaatgat ggtctgttca acctcggagc ggttggtcac tttgctgtca 1020

attt 1024

<210> 59

<211> 1081

<212> DNA

<213> Enterobacter aerogenes KCTC 2190

<220>

<221> source

<222> 1..1081

<223> /organism="Enterobacter aerogenes KCTC 2190"
/mol_type="unassigned DNA"

<400> 59

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gtcaattaca ggagagcagg ccaaattcac tcttctttag cagaatattg ttacgaacta 60

agataattag aatttgaact attttaagat tattctaatt gccatcttga ttttatttat 120

tttttcatca aaattcacag tttcaccttc tgttccccat caaaaacgac cgtaaaggga 180

ttactgtgaa cacgatatac ataccattag acagtggaga gtctgcggtc ctcaaggatc 240

cagatacctt acttcctcgt aaaatttacg aacagcttgc ccagttcatt gaaaaggctg 300

ttaaggatgt tgatgaagta ccgaaaaatt cagaatcgtt taacgaaacg cgcagtcata 360

aggcaatatc gattgacggt gaaagaggta cgggtaaaac atcggtacta gtgaatttaa 420

gagattacct ggaaagtaat cataaagagt ttgctggaga tattcatatt ctcgatccca 480

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tcgacccgac tctgcttgaa gatggtgaat cgctgttttt acatatcatt gttgctgcag 540

tacttcagga taaaaaaatt aaagaggcgc aaagtaaaga ccttgataaa tcgagactct 600

ttatccaaaa acttgaaaat ttagccaatg gccttgaatc cattgacctg caacacagtc 660

agcgagggat ggataaaatc cgttccctct atggcagcaa gcatctggca aattgcgttg 720

aagcattttt aaaatccacg ctagatttaa ttgggagaaa attattaata ctgccgattg 780

atgatgtgga cacttcgctt aaccgggcgt ttgaaaatct ggaaatattg cgtcgttatc 840

ttacatctcc ttacgtattg ccgattgtga gtggcgatcg tcgcctgtat gacgaagtat 900

gctggcgaga ttttcatgga cggttgaata aagactcatc ttatgaacgt aagaagtctt 960

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atgatatagc caaggaattg gcaattgagt accaacgtaa aatattacca ctgccgcgta 1020

gattaagtat gcccgccgtg agtgattatt ggcagcaaga cggtatggat gttaccttgg 1080

a 1081

<210> 60

<211> 1332

<212> DNA

<213> Enterobacter cloacae strain 344

<220>

<221> source

<222> 1..1332

<223> /organism="Enterobacter cloacae strain 344"
/mol_type="unassigned DNA"

<400> 60

tgcttcgctg acgagtggcg gacgggtgag taatgtctgg gaaactgcct gatggagggg 60

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gataactact ggaaacggta gctaataccg cataacgtcg caagaccaaa gaggggacc 120

ttcgggcctc ttgccatcgg atgtgcccag atgggattag ctagtaggtg gggtaacggc 180

tcacctaggc gacgatccct agctggtctg agaggatgac cagccacact ggaactgaga 240

cacggtccag actcctacgg gaggcagcag tggggaatat tgcacaatgg gcgcaagcct 300

gatgcagcca tgccgcgtgt atgaagaagg ccttcgggtt gtaaagtact ttcagcgggg 360

aggaaggcga taaggttaat aaccttgtcg attgacgtta cccgcagaag aagcaccggc 420

taactccgtg ccagcagccg cggtaatacg gagggtgcaa gcgttaatcg gaattactgg 480

gcgtaaagcg cacgcaggcg gtctgtcaag tcggatgtga aatccccggg ctcaacctgg 540

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gaactgcatt cgaaactggc aggctagagt cttgtagagg ggggtagaat tccaggtgta 600

gcggtgaaat gcgtagagat ctggaggaat accggtggcg aaggcggccc cctggacaaa 660

gactgacgct caggtgcgaa agcgtgggga gcaaacagga ttagataccc tggtagtcca 720

cgccgtaaac gatgtcgact tggaggttgt gcccttgagg cgtggcttcc ggagctaacg 780

cgttaagtcg accgcctggg gagtaccgcc gcaaggttaa aactcaaatg aattgacggg 840

ggcccgcaca agcggtggag catgtggttt aattcgatgc aacgcgaaga accttaccta 900

ctcttgacat ccagagaact ttccagagat ggattggtgc cttcgggaac tctgagacag 960

gtgctgcatg gctgtcgtca gctcgtgttg tgaaatgttg ggttaagtcc cgcaacgagc 1020

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gcaacccctta tcctttgttg ccagcggtcc ggccgggaac tcaaaggaga ctgccagtga 1080

taaactggag gaaggtgggg atgacgtcaa gtcatcatgg cccttacgag tagggctaca 1140

cacgtgctac aatggcgcat acaaagagaa gcgacctcgc gagagcaagc ggacctcata 1200

aagtgcgtcg tagtccggat tggagtctgc aactcgactc catgaagtcg gaatcgctag 1260

taatcgtgga tcagaatgcc acggtgaata cgttcccggg ccttgtacac accgcccgtc 1320

acaccatggg ag 1332

<210> 61

<211> 1454

<212> DNA

<213> Enterobacter cloacae subsp. cloacae ATCC 13047

<220>

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<221> source

<222> 1..1454

<223> /organism="Enterobacter cloacae subsp. cloacae ATCC 13047"

/mol_type="unassigned DNA"

<400> 61

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ggggctgccg gcgaataccc cggtcaaaaa gcagatcgat gagtttattc gccgctggga 180

taaattcccg gtcgcaccgg agcgccgggc caaccccgca tgggcgcaga atacggtgga 240

cggtgaggag attaacctgt tcgacatcct gccgctgttt cgcctgaacg acggggacgg 300

cggtttttat ctcgacaaag cgtgcgttgt ctcgcgcgat ccgctcgacc cggaccattt 360

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cggcaagcag aacgtcggta tttaccgcat ggaagtgaag ggcaaacgta agctcggcct 420

gcagccggtg ccgatgcatg atatcgccct gcatctgcat aaagccgaag agcgtggtga 480

agacctgccg attgcgatta cgttgggcaa cgatccgatc atcaccctga tgggcgcaac 540

gccgctgaaa tacgatcagt ccgagtatga aatggccggg gcgctgcgtg aaagcccgta 600

cccgattgcg accgcgccgt tgaccggctt cgatgtgccg tgggggtctg aagtgatcct 660

ggaaggggtg attgaaggcc gtaaacgtga aattgaaggg ccgttcggtg agtttaccgg 720

gcactattcg ggcggacgca atatgacggt ggtccgtatt gataaagtct cgtaccgcac 780

caaaccgatt ttcgaatccc tctatctcgg gatgccctgg accgagatcg actacctgat 840

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggggccagcc acctgtgtgc cgctttacca gcaactgaaa gcggagttcc ctgaagtgca 900

ggcggtgaac gcgatgtata cccacggtct gctggcgatc atctccacca aaaaacgcta 960

cggtggtttt gcccgcgcgg tcggtttacg cgccatgacc acgccgcatg gcctgggcta 1020

tgtgaagatg gtgattatgg tggatgaaga tgtcgatccg ttcaacctgc cgcaggtgat 1080

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tgccaccacg cctgttgcgc cggataaccg cggtcactac agccagccgg tgcaggattt 1260

acctgaaacc aaagcctggg ctgaaaagct gactgcgatg ctggcagcac gccaataagg 1320

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aggaaaagat gatttgtcca cgttgtgccg atgagcaaat tgaggtgatg gccacatcac 1380

cggtgaaagg gatctggacg gtttatcagt gccagcattg cctgtatacc tggcgcgata 1440

ctgagccgct gcgt 1454

<210> 62

<211> 914

<212> DNA

<213> Enterobacter cloacae subsp. cloacae ATCC 13047

<220>

<221> source

<222> 1..914

<223> /organism="Enterobacter cloacae subsp. cloacae ATCC 13047"

/mol_type="unassigned DNA"

<400> 62

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gccacactat tttactttcg gtaaagcaga cgtcgcggcg aataagcccg tcacgccgca 120

aaccttattt gaactgggct ccgtcagtaa aaccttcact ggcgtgctgg gtggcgatgc 180

cattgcccgc aaagagattt cgctggccga cccggtcacg aaatattggc ctgaattgac 240

gggcaagcag tggcaaggca ttcgcctgct cgacctggca acctatacgg caggcggatt 300

gccgttgcag gtaccggatg atgttaccga taacgcctct ctgctgcgtt tctaccagtc 360

ctggcagcca aagtgggccc cgggtaccac gcgtctgtac gccaacacca gcatcggcct 420

gtttggctca ctggccgtta aaccgtccgg catgcgcttc gagcaggcca tggcggagcg 480

ggtctttaag cccctgaaac tcaaccatac gtggataaac gttccacacg ctgaagagcc 540

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gcactacgca tggggttatc gtgagggaaa agcggtccac gtttcgcctg gtatgctgga 600

tgcagaagcc tatggtgtga aatctaacgt caaagatatg gcgagctggg tgatggccaa 660

tatggcacct gagacactcc cgcagtccac tctgcagcag ggtattgcgc tggcgcagtc 720

tcgctactgg cgcgtgggtg ccatgtatca agggttaggc tgggagatgc tcaactggcc 780

ggtcgatgcc aaaaccgtgg tggatggcag cgacaataag gtcgcactgg cgccgttgcc 840

ggtcgcagaa gtgaatcctc cggctccgcc agtaaaagcc tcctgggtgc ataaaacggg 900

ctctacgggt gggt 914

<210> 63

<211> 1190

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Enterobacter cloacae subsp. cloacae ATCC 13047

<220>

<221> source

<222> 1..1190

<223> /organism="Enterobacter cloacae subsp. cloacae ATCC 13047"

/mol_type="unassigned DNA"

<400> 63

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ttgatgcgct tgaagcggtc gagatcgctg acgataaccg aaaccggacg gctggcttta 180

caggcaccga gtgcctggtt tagcgagtcg taaaaatagc tgcgattgta gaggcgggtc 240

aaaggatcgc gaatcgagtt ttgatacgac tgttgatatt tcaaatgcga gtcgcgatag 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agtctaaaga catcataaag cagaacaaaa ataatcaata acgtcgcaca gtttcaaata 360

agcgcgctcg ataccaggaa atatcctccg cgtgtccgcc tgctaatagc atcgcgagcg 420

tcacgatata acagacacat aaaaaattac cgcccaccca aaaaatattg cgtacgcggg 480

taataaccat tagcgttgct aatgtcacca cccaaagaat aatcaagacg atatttattg 540

catggctcca gagaaccata aattgatggg tttcattatc caccaggtct aacgacatta 600

atgatgagtg gctggagcta agccaggcca acagcaccat gcccaccata aacagaaatg 660

taccggcaac aatggtgata tgcgccgcac gtgaaagcgg attatccctg acgatataca 720

gcagggccga cgcaatcatc agcaccgcca ttaacagatg gcggtacata aagaagatca 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tcgtatcgtt atagtccacg acgttgagct ggtagagatc aagccaggcc gggaaactgg 840

taagcgtacc caccatcagt atggccgaac cggcaaaggc aaaagcgata gcaatcaggt 900

acaaccgtct tctgtcacac cagtatttca tggccataaa gcaggcaata aacagatgga 960

ataccagtaa aaaaatggtg agtgtaggga ataaaagcgg tgagaaagag ggaacccatt 1020

cgaccagttt taaaaataaa atttgtaata ttccaatgac gacaatgcac cctaaacaga 1080

atggaatata gggctttttc acgtaccggg agatcgcaag cataagtatg tttcaacgaa 1140

aataataaat aaaaagttaa ttgagattag cctaatgcaa aagagaggag 1190

<210> 64

<211> 1191

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Enterobacter cloacae subsp. cloacae ATCC 13047

<220>

<221> source

<222> 1..1191

<223> /organism="Enterobacter cloacae subsp. cloacae ATCC 13047"

/mol_type="unassigned DNA"

<400> 64

atgtttttga taacttcggg cgaaaaattt catcaacatc tgaaattaat atgatgtcat 60

tatcttttgc atttttaac ccgcgcatga ttgcattacg ggtagctgct tcatttttcc 120

aggcgtcgta ctcacccgca ataccatttt tcaattttgg gagatcgtta tatatcacat 180

aaattatttt atctttaaat ttttcaaatt tagaaatatc gaaatttaat tttttaggtt 240

tgccagtgaa tgtgtgtgtg gattctacaa taacgaagta atcaacaaca tcatttagag 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tattaagacg aatatctagc aacatatctt catcgtaata taaaaaacaa tcataaatca 360

tcatatacat ccttaataat tacgcttact tggcgcattt cgtacgtttc aaccagcaat 420

tcgtaacgga atgctaaccg agcagcctcg ctgtatgcaa tagcagactg ccctgtagag 480

ttaaaattgg atccaactat cctggacttg tcatgctatg gcgatcattt tctctatctt 540

accggaggtg aatttttctg cgttatcaca tggcattact gcaaagccgg aacggatcac 600

atgtgccagg catgaatttg ggttcataac tacttcgcca gtcataagag ggtgcaggcc 660

acagggagat ctttttttaat tggtgatgtt tgcgtaatgt agtcgatcat cagtctgctg 720

catctgagtt gatggcttca taacctcttt gccgaaggtg tctaatacgt acctacagaa 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttcttttgca ttcggcgttc cgacaaacat ggcgataaaa tgtgcactac agagggagaa 840

agatcgcact gtttattata gttcacagag acggtcaaat tgaccttctc agtgattcgg 900

gcagaaaact ctttgtggtt gtggttatag attctggcaa ttgagtcgtc tgatctattg 960

cagaggactt gggtaagctc tgaagatgtg agccagattt ggttgttatc ggtaaagaca 1020

ctgaactgaa cgctatttaa aattagttga gtattcatgt ggtgttcctt gactgaggag 1080

gtttgcacca ctgcgacgcc aatcattgag ttggtgagat gtacagggtt ggcaaaagca 1140

agacgcaggg ttaaaagcgg gcgttaatgg ccgttttaat ttcatcaagc a 1191

<210> 65

<211> 1183

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Enterobacter cloacae subsp. cloacae ATCC 13047

<220>

<221> source

<222> 1..1183

<223> /organism="Enterobacter cloacae subsp. cloacae ATCC 13047"

/mol_type="unassigned DNA"

<400> 65

aattttgtca tctactgccc gcaggttctg acaactgaca atctgctcaa ccccatgaag 60

ctattgatgc gagagcacaa ttatgaaata gagcttcatg acatgctgct gtccgcggat 120

tccgcagaag acctgcttgc ctaccgtaaa gcagacttaa ttttctccat tgcgcctatc 180

aacaatcgct caatggtatg cgttccctat gttaattacc gaatgattct ggtgtgcagc 240

caggatcacc cccgtctgca ggagaccgct accctggaag agctgcagaa agagaagttt 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

acgatcttcc tgagcgatga agcgggtgtg aaacactatc agtcaaagac tgaggaagtg 360

catgccgaca ggacaatcgg ttttcgctgc gactctctct tttcaatcat ggccatgatc 420

agcgcatcgc atttagtggg atatatcccg gaagtcctgt atgaaaaata ccgtgacgta 480

ttgcgactga aaaaagttga cgcacccttt acgctgcctc aaatggaagt cttcatggtt 540

tataaccgct cagcgcttaa cagctcggtt ttctcgaagt ttgttgagca gattacgcaa 600

aaataaatcc gaatggctgt aatatttaca gccatttctc tcatcaaaat ataatcctca 660

tttatagata ataaaaaatc tgccttttt gatttacctg cctttatttt cactactatt 720

attctctctc ctgcattgac atgaacgtcc ggtatttatt tccaggagga gttgcctttg 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tcaatttata agcatccact taatcaaaat gtccttgacg ctgccacaga gcgcataaca 840

tggacgcttg agaatctgcc aagggtctgt gtttcatttt ctggcggaaa agattccacc 900

attatgttcc atttaacggc ccgacaagcc cgaaaaatgg gaaagaaaat ctgtctgtta 960

tttatcgact gggaagcaca gttcacctgt accattcagc atgtgaataa catgatcgca 1020

caatacgccg atgtgattga aaaatgctgg tgggtagcgc tcccgttgac ctcgcaaaat 1080

tcactttcac aattccagcc cgaatggcag tgctgggagc cgggtaaaaa ctgggtacgc 1140

acgcccccgg aagaggcggt aaccgatcca gattacttct cgt 1183

<210> 66

<211> 1101

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Enterobacter cloacae subsp. cloacae ATCC 13047

<220>

<221> source

<222> 1..1101

<223> /organism="Enterobacter cloacae subsp. cloacae ATCC 13047"

/mol_type="unassigned DNA"

<400> 66

attctatgtc accttctgcg taatattcgc cctgttgatt atttcactgg ccctgtcgac 60

gacgattcgg cagccgcagc gcgaagtgtt taatgaagca catgcttaac ctaaattaaa 120

gaggccttaa cggcctcttt aacctttatt tgatatgctt ccagacttgt tattttgtaa 180

aaatttgcac cgatcacatt ctccgctgcc acttttctct cccgctgtgg tctacttacg 240

gcgcttgtag acgtttctga taacgctttc ttacgcattt acttactctg tccgctttct 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cactgagatt cggcgggttt ttatacccct tcccccaggg ttgtttgcat gaaatacatt 360

aggtctatta cccagcaaag attgtgtctg atgctggctg tctatatcgg attatttctg 420

aatggcgcgg tgctgttcag acgagtggaa ggttatttcg aagacctcac cgtaagaaat 480

ggaatttttg ccgctattga agtgttcggc tccgtcctcg cgacattttt cttgttacgc 540

ctgttatctc tcttcggccg tcgcacgtgg caaattctgg cctcgctggt ggtgataatt 600

tccgccgccg ccagctatta catgaccttt atgaacgtcg tcattggcta cggtatcgtt 660

gcgtcggtaa tgaccactga cattgatctc tcgaaagagg ttgtgggtaa aggctttatc 720

gtctggacaa ttttaacctg tctgctccca ctcttcttta tctggagtaa tacctgccgc 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tatacgttgt tacgccagtt gcgcactcgt ggacagcgga tccgcactgt cgccgtggtc 840

ctgctggccg gtttgctggt atgggcgcct attcgcctga tggaaaaaca gcaaaaacgc 900

atcgaaaagg caacgggtgt cgatatgcca agctatggcg gcgttgtggc caactcgtat 960

ctgccgtcaa actggctttc agcgttaggt ctctatgcct gggcgcaggc ggatgaatcc 1020

agcgatgtga aatcgctgat gaatccgacc aaaaaattcc actacgaggc acccgctgac 1080

gggctcgatg atacttacgt c 1101

<210> 67

<211> 1175

<212> DNA

<213> Enterobacter cloacae subsp. cloacae ATCC 13047

<220>

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<221> source

<222> 1..1175

<223> /organism="Enterobacter cloacae subsp. cloacae ATCC 13047"

/mol_type="unassigned DNA"

<400> 67

cattaatttc gcctaaatcc cacttgtttg ttgacgtgta tcacgccgat ttgtaccgaa 60

aaaaatgaaa caaataatta cgatcttgct cactaaaata gcatttatta aaaaataaac 120

tgccatttca taaaaatgaa acgttatttt aattgagggt ttttgtcatg tttaacaaat 180

ctctggttgt agcttctctt attggtactt ctttcgccgc gcaggcggtg accgtcgatc 240

tgcgtcatga atacatcgac agcggcgcaa atgcagatcg tgtttcagtc tcgcatcgct 300

ttgcgaatgg cgtcggtttt tctgtagaag cgaaatggaa atcgggtggc gataaggccg 360

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

accagccgtt tgcggatgtg gtgggtaacg gtcatgaaga tcaaattagt tggcgctgga 420

aagcgacaga gaatattgcg ctgactcccg cgttcacgct tgagagtaac gacagccgta 480

ccatttataa accgaacctg cacctgcaat acagtttcga taatggcttt tacgtggccg 540

cgcgttaccg ttatgaatat acccgttatc cgtcgagctc taataaagac gatgacaaag 600

ttaaccgtgg tgatgcctgg gtcggctggg ttatgggaga ctggcgtacc gaactgaatt 660

atgtttatgc aaaaagtacg gaagggatgg tccgtaataa taataaagat tattccaccg 720

aatataacgc gaagctggcg tataaatggg ataaaaactg ggcgccatat gttgaggtgg 780

gtaacgtggg tgtgaaagag agcgatgaac gtcagacccg cttccgttta ggcgtggcgt 840

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

attccttctg atatttccct ccaggcccgg tgagcgcagc gtcaccgggc aaaacgttca 900

gagcaaaaaa agccctccgt aaggagggca aggccagtta cagaaacaca tttttaaatc 960

atgcagacaa catatccggt tgcgcgggaa gtttcgcaat atagagggca ggtttgccgt 1020

ctttatcgga actgaacagt accgctttct cgtccggtgt aaaggaggga tgcggatggg 1080

tgacctggcg gctattttct accgtcgccc aggaggtgtc atgacgggcg atgcgatagt 1140

agcgcttttt ggccacgtca aaggcgtaga gatag 1175

<210> 68

<211> 1027

<212> DNA

<213> Enterobacter cloacae subsp. cloacae ATCC 13047

<220>

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<221> source

<222> 1..1027

<223> /organism="Enterobacter cloacae subsp. cloacae ATCC 13047"

/mol_type="unassigned DNA"

<400> 68

tactgttcca ggtgataccc gcacgcgttt gatcggtaag cgccattaat aaccccagac 60

ggtagctcat tacccagtca ttatctttct cttttacgtc gttatcgtcg acattacgcg 120

ttagcgaaag gaatccataa tttacgttaa cggatccccc cacggaaaca cggtcgctga 180

gcttataagc cagggacggg cttaatgtca ttgcaaccat tgtacttttt ttaataaggc 240

gatcgccggc ccagttacca aaatcaattc ccagaccata attgccatat aaacctacac 300

cggcatatag tctgtcattg acttttgcg aataaaaggc gcttgcatta gggaataaat 360

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tcatcacatt accgggactt ttgtgaccag acgcattatc caggtcatag gaaatatcac 420

catccatggc ctgtaaaccc ccggtaaaca tatgatcggg aagccgcgtc atgcccgccg 480

ggttggtcac gattgtggac gcgtcctgag cacgtgcagc ctggcccgca ccggcaagcg 540

cggcatcttc ggttccaatc tcatagaaat agagtgcgct ggcctgcgtt gcgggtgaaa 600

gaaacgttat caaataaaac aacgccgttt ttctcatatg ctattttcct gttatcgaat 660

gataatttta cttccgcgtt ctttttgcc atcaccctgc taccgtcagg ctgtattacc 720

ctttttaacg acgtggtata tacattaaat acacagcaac gttccgcact ctcattattt 780

ttcaggcaga cgcaatcctg ttgagcatag accagccttc ccgttccgca atgtcgcata 840

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

acgttaccct gcctggagaa aaaaagaaaa cccgatcgtt gcgtaaattt attattaaac 900

aactcttaag gttacatttt tgaaaagtta actattctta aatggcattt gacatgtatc 960

agtgccagac gaggatgtgc ttaagcgttt caaaggcata tgccgctggt ttcttctgct 1020

cactcaa 1027

<210> 69

<211> 1021

<212> DNA

<213> Enterobacter cloacae subsp. cloacae ATCC 13047

<220>

<221> source

<222> 1..1021

<223> /organism="Enterobacter cloacae subsp. cloacae ATCC 13047"

/mol_type="unassigned DNA"

<400> 69

aataagaagc tgataagcgg tgattatttc agtgaaaccg ggtgggtggg tttatattgc 60

tttacgttcc gggatgccgg acaatgacat ttttaactga cgattaacat tacgatgaaa 120

cacccgttag aatcgctgct cactgcgggc ggcattttat tgctggccct gctttcgtgc 180

ctgctgctac cggcaccctc tctcgggctg gtgctggcgc agaagctggt tcagaccttc 240

cacatggtcg accttaacca gctctacacc attctgttct gcgtgtggtt cttactgctc 300

ggcgccatcg aattctttgt gctgcgtttc gtctggcgcc gctggttttc tctggcgtcg 360

taagcgtgat gcaggcccgg tcaggcgaaa ccgccaccgg gtaaaacagc tcagtgtgcc 420

ctgctgtggt tctctttacg atacgcccca ggcggctggt tgaacgtgcg ggtgaagatg 480

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cgagtgaagg tctgctgcga gtcaaacccg taacgcaggc agatgtcgta tacccgggcg 540

tctgattcgc gcagatcccg cgccgccagc agcagcttgc gttcacggat atagcgcccc 600

agactctccc ctttgtattg cataaacagc cgctgcaggt gccatttcga gtaacccgca 660

tggcgggcaa tctcttcgat acgtaatggc tggtgcaggt tatcgtcgat ccactcgacg 720

atagtgtcga tgacttgagc ggaaatggtc atactgctct ccccttcagc ttcctgattg 780

atcattattc ccaccactca cgaaatgttt gcgtgggatc actcacccgg acaggctcgc 840

ccagcgcggg tgtcaacagc cgataatttt tgtccttgct ggcttttgcc agttggatca 900

gcggatcgtt ccaggtatgt ttcgccagca cgaagcgccc gttatgtccc ggcaccacgg 960

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctttcgcgtt cagatccacc gaggcctgcg ccgtctcttc cggcagcata tggatgtact 1020

t 1021

<210> 70
<211> 756
<212> DNA
<213> Enterobacter cloacae subsp. cloacae ATCC 13047

<220>
<221> source
<222> 1..756
<223> /organism="Enterobacter cloacae subsp. cloacae ATCC 13047"
/mol_type="unassigned DNA"

<400> 70
catgaaaacc tgctgctgaa gctgcgccag gaggcttccg ggtacagccc cacgcaaaaa 60

aaactgggag agtttgttct caacgatccg gcccgggtgc tctacctgac gatcaccgaa 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctggcacggg agagccacac cagtgaagcc agcgtgacgc gtctttgccg gacgctcggc 180

tgcaaaggct ataacgaatt caagatggca ctggcgctgg atattcagca gggtcagccc 240

gcacgcgtgg ccggggacga aattgataac gtcgtcgatg agtctgttca ggcgctgcag 300

gataccgcca gactgctcga cagagcactg ctggaaaagg ccgctcaggc gctgcatcag 360

gcgcaagccg tacaaatata tggggtggcc gccagcgcga tcctcggtga gtatttacat 420

tacaaactgt tgcgactcgg caaacctgca cagcttttta gcgatatgca tcgtgcggcc 480

atgaatgcag caacgctttc agaagggacg ctggtggtgg ccatttccag ttccggttca 540

acgcgggatt tgctccatgt cgtaaaactt gcacgcaaac gcggcgttaa ggtgttatcc 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cttagcaata cgccccgcag cccgctggct tcgcttagcg atatgcagct ggtcgccgca 660

aaaccggaag ggccactcag cgcaggcgcg ctcaatgcta aagtgggcgt aatgttactg 720

gttgagttac ttacaacttc cctgattgcg attgat 756

<210> 71

<211> 1525

<212> DNA

<213> Enterococcus faecalis OG1RF

<220>

<221> source

<222> 1..1525

<223> /organism="Enterococcus faecalis OG1RF"

/mol_type="unassigned DNA"

<400> 71

caagtggtca cgaagtcgaa ttagttaaag aagaatccta tttcttccgc atgagtaaat 60

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atgcggatcg cttggtacaa tattacgaag aacatccaga atttattcaa ccagaatctc 120

gtaaaaatga gatgctaaat aactttatca aaccaggatt agaagattta gccgtttcaa 180

gaacgacttt ctcttgggga attccattaa aaaatgatcc aaaacatgtg gtttacgtat 240

ggattgatgc gttatcaaac tatattacag cactaggtta tggttcagaa gatgattcat 300

tattccaaaa atattggcct gcgaacgtgc aaatggttgg gaaagaaatc gtgcgtttcc 360

atacgattta ttggccaatt atgttaatgg ccttggattt accattaccg aaaaaagtct 420

ttggacatgg ttggttattg atgaaagacg gaaaaatgtc taaatctaaa ggaaatgttg 480

tttaccctga aatgttagta gaacgctacg gtctagatgc gttacgttat tatttattac 540

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gagcaattcc atttggtagt gacggcgtct ttacaccaga agatttcgtt tctcgcttaa 600

attatgattt agctaatgac ttaggaaact tgttgaatcg aacaattgcg atgattaata 660

aatattgtga tggcaaagta ccagcctatg cttcaaaagt taccccattt gatagtgaac 720

tatcgacaac tgcggctaat gttattggaa aatatcatga agcaatggaa aaaatggaat 780

ttaatacggc cattgcagaa atttggacgc tagtttctcg tgccaataaa tatattgatg 840

aaacagcgcc ttgggtattg gctaaagaag aagagaaacg caatgaatta gaaagtgtca 900

tgatccattt agcggaaagc ttacgaattg tggcaatctt attgcaacca gtcatgacag 960

aaacaccagg gaaaattttc gaacaattag gcttagatcc agaaacaatg aacatggaaa 1020

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atattcattt tggtgagttc ccaacagacg taacagtaac aagtaaagga acacctattt 1080

tcccacgttt agaaattgaa acagaagtaa cgtatattca aaagaaaatg tcccaaagcg 1140

aaagtgctac agaagaggat attaaatgga atccagaaga aacaacgttg gtttcaacga 1200

aagaaaaaca aattaagtac gatgatttcg ataaagtgga attaaaagtt gccgaagtta 1260

ttgactgtaa aaaagtcaaa ggagcagata aattattgca attccgttta gatgctggag 1320

atgaaaacca tcgtcaaatt ctttcaggta ttgctgaatt ttatccagat ccagctgcgc 1380

taattggcaa aaaagtagtc attgtggcta acttaaaacc aagaaaaatg cgtggtcaaa 1440

ttagccaagg aatgattctt tcagctgaat caccagaagg gaaacttcaa attgttgaag 1500

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

caccaaaaga aatgccaaat ggtgc
1525

<210> 72

<211> 937

<212> DNA

<213> Enterococcus faecalis OG1RF

<220>

<221> source

<222> 1..937

<223> /organism="Enterococcus faecalis OG1RF"

/mol_type="unassigned DNA"

<400> 72

gcgaatcaat tagccacacc gtatactttg gatgcagaag ctatggaaaa
attgatccaa 60

aaagttgaag atgctggtat cagcgtggtc gatgaaaatg gagacccaag
tgaacatagc 120

ttgaaaaaag atgaaaaaga agcggaaaag gcccaagcag aagacttatc
tgcgccaaca 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggtgttaaaa ttaatgatcc cgtgcgtatg tacctaaaag aaattgggcg cgttcaatta 240

ttaactgccg cagaagaagt tgaattggca cttaaaattg aagaaggcga tcaagaagca 300

aaacaacgtt tagcagaagc taacttacgt ttggttgttt caattgccaa acgatatgta 360

ggtcgtggta tgcaattctt ggatttaatt caagaaggta atatgggctt aatgaaagct 420

gttgaaaaat ttgactaccg taaaggattc aaattctcta cgtatgctac ttggtggatt 480

cgtcaagcga ttacgcgggc aattgcggat caagctagaa cgattcgaat tcctgttcac 540

atggttgaaa caatcaataa attgattcgg attcaacgcc aactattgca agatttaggt 600

agagaaccaa cgccagaaga aattggtgcg gaaatggatt taccaacaga aaaagttcgt 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gaaatcctaa aaatcgcaca agagccagtc tctttagaaa caccaattgg tgaagaagat 720

gattcacatt taggtgattt cattgaagac caagatgcta ccagtcctgc tgaacatgca 780

gcttacgaat tgttaaaaga acaactagaa gatgttctgg atactttaac agaccgtgaa 840

gaaaatgttt tacgtttacg ttttggttta gatgatggtc ggacacgtac gctagaagaa 900

gtcggaaaag ttttcggtgt cactcgcgaa cgtattc 937

<210> 73

<211> 1014

<212> DNA

<213> Enterococcus faecalis V583

<220>

<221> source

<222> 1..1014

<223> /organism="Enterococcus faecalis V583"

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

/mol_type="unassigned DNA"

<400> 73

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aatctcgaat cgttgcgtat tttactactt ctcttttagc tggtggagca tccatgatta 120

tggtcttacc tgctgtctta gatttacgaa ccaatggtga aactctttct gaaattacaa 180

cctttaaaac agaagcgact gccttttag atattattat gaaaaatatg attggcgttt 240

acgatacaac caaatatggg tccattcctt ttatttacat tgggttgttg cctttgattt 300

tttgtctctt ctatttcgtt acgaaagaag ttccattgaa aaacaaacta ctttttggca 360

gtttgtttgt cctattgatt gctagctttt acatcacgcc cttaaattta ttctggcacg 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gtatgcatgc gccgaacatg tttcttttcc gctatagttt cctcttttca ttcttagtta 480

ttttgcttgc aggttatggt tgggagaaat ttgaaaagga tgatctcggt gtcttaagcg 540

gcttgatttt gattctttta gcaatttttg ctcttgcaat gggcacaaaa ggtgctacta 600

gttatacgta tgtgacttta acctctttcg tattaacggc aacttttta ctattatact 660

ttttcgggat tgctttttat caattgaaaa aagcgcctat gcaatactta gtgattttgt 720

tattgctgct cgtttctggt gaagcaatca ttaacacacg ggcgatggtc actggtattt 780

tagatgattg gaactacgca tcacgcagct tgtattctga gccttatcct gacttaaaaa 840

atctagtcga tcaaacaaaa aaagaaaatg ataccttta ccgcttggaa aatttaaatg 900

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gtgtttcggc caatgacggc attaactatg gctacagtgg cattagcatg ttttcttccg 960

tacggaaccg acattcttca acatacctaa acgccttagg tttccgctca cgag 1014

<210> 74

<211> 1184

<212> DNA

<213> Enterococcus faecalis V583

<220>

<221> source

<222> 1..1184

<223> /organism="Enterococcus faecalis V583"

/mol_type="unassigned DNA"

<400> 74

aaaacagtga gtccgcaggt agtcaaagcg ccgctaaaag attagaagcc attcaaatta 60

aattagtgaa gaagggcgaa gcggcacctg aaggaaatgg aaaagccttt ttaattggaa 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atgaagcaaa acgtccagat gaaatcaaac caactgtcaa ttatcaaaca cacgtgcaaa 180

atattggttg gcaaggggtt gtcaagaatg gcgaaatagc tggtacaagt gggaaaaatt 240

tacaactgga agcaatcaaa atcaacctga gtgatgctgc tctagctgga aacatagaat 300

actctacgca catccaaaat atcggatggc aagattataa agccaatggg gcattatctg 360

gcacaactgg aaaaaattta caattagaag ccattaaaat taaactgtcc ggtgatgttt 420

caagatatta tgatgtctat taccgtgtcc atatccaaga taaaggttgg ttaaattggg 480

cagctaatgg cgccccagct ggaagtcaag ctgcatctaa acatttagaa gccatccaaa 540

tcaaagtagt tagaaagggc gaaactgctc ctaaaggaaa tggaaaatcc tttttagttg 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gaaatgaagc aaaacgtcca gatgaaatca aaccaaatgt caactatcaa acacacgtgc 660

aaaatattgg ttggcaaggg gttgtcaaga atggtgaaat agctggtaca agtgggaaaa 720

atttacaact ggaagcaatc aaaatcaacc tgagtgatgc tgctctagct ggaaatatag 780

aatactctac gcacatccaa aatatcggat ggcaagctta taaagctaat ggggcattgt 840

ctggcacaac tggaaaaaat ttacaattag aagccattaa aattaaactg gccggtgatg 900

tttcaagata ttatgatgtc tattaccgtg tccatatcca agataaaggt tggttgaatt 960

gggcagctaa tggtgcctca gctggaagtc aagctgcctc taaacatttg gaagctattc 1020

aaatcaaaat agttagaaaa ggtgaaactg ctcctaaagg atctggaaaa gccttttag 1080

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttggcgatga agctcgcaca ccagcagaga tagcaaacag attacgtgca gaaagattaa 1140

agaaaaaacc ttattattat tctcaacgtg acccacaatg gatt 1184

<210> 75

<211> 1039

<212> DNA

<213> Enterococcus faecalis V583

<220>

<221> source

<222> 1..1039

<223> /organism="Enterococcus faecalis V583"

/mol_type="unassigned DNA"

<400> 75

gcggtgtttg ccttgtttat ttgttggttt ggacaagtaa aaacaattga tggtaaaacg 60

caaaatgggg caatttttt gattagttcg gttagtgaga tgacaaaaca agtacaaggc 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aagtttactt ctaatgtaaa ctttggaggg gatacaagcc aagaagtaga cgatggaaag 180

aaaaaagtgt atcaaagccc aatgtttgac gcaacggttt tacagacgtt taactatgtc 240

aatagtggct cgattgatgg caaaatggca aatgggaaga agcttgatta tgataaacta 300

ttagaaaagc ctaacctgaa tgataaagag aaaaaggatt ttagagaaaa aagaaatgct 360

tatattgaac agcaggagaa agacaatcct tatttttcgc aagatacctt aaaaactatg 420

gaaaaaagtt ttgcggtatg gacgggtgca acaaatttat ttattctagc aattcctgtg 480

ttatatatta atttaatgtt gtcgttgata cagctgttag ttgtcttttt aattcttata 540

tttccagttg ttttgttggc ttccttttt ccacggtgtc aaatgttact attcaagttc 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tttcaaggtt taattggtgc gttattcacg ccaattattt atggtatttt tttatcggtg 660

ctgttttgga ttaacaaact gattgatggg gcatttttag gtgtcgcaaa aaaagtcagt 720

ggcagcttgc ttgaattgat ttcaggtagt acggtttata tgatcgtttt atttgtagca 780

gtggtagtga agattgtagt tttacgaaaa gtttggaaaa ataaatatgc cattcttgct 840

tacttttcaa atgggcaagt gtcacagcct gtgtttgaac aaaaagtgga acagttgtct 900

gaacgaacga aagaagtagc aactggtgga gcgcaagttg ccctaggtgc ttatacaggc 960

aatctgggca tggtcgcaaa cggtgcaggt aatattctac cgaatcaaga taaagccatt 1020

gaaatgggcc aagaacatt 1039

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 76

<211> 1000

<212> DNA

<213> Enterococcus faecalis V583

<220>

<221> source

<222> 1..1000

<223> /organism="Enterococcus faecalis V583"

/mol_type="unassigned DNA"

<400> 76

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ggcaccatgt caacagaaat tggaaacaat acacaatttc aagcaacaac gccacaagaa 120

aaagtagcgc tagaggtatc caattttgtt accaaaaatg gtggatcgtt acaatttgcc 180

tctgcatggc taggaaatat ggaacatgag agcggattaa atcctgctag aatacaaagt 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gatttaacgt ttaattcagc gtgggcgttt aatccttcga ccaatggtta tgcgttaggt 300

ttagcaatga tggacggtga gcgccgtgta aacttgttaa attttgccaa agaacaaaag 360

aaagattggc aggctgtccc agtacaactc gagtatatgt ggaatcatga cggctcagac 420

agtgccttgc tgaaacgtat gtcgaaaagc tctgatgtga atcaattagc tgtagatatt 480

ttggtacatt gggaacgtgc aggcactaaa aatgatccca acgaacaaat caaacgaaaa 540

acaagtgcga ataattggta taagagactg tctacaggtt ctatgggggc aggttcagcc 600

aatattggtg gtggcaaaat tgatgtgtta gaacaaatgt tagggcaaac agtcaatgga 660

ggtcagtgtt atgggggggac ttcttattat gttgaaaaga tgggctttca atctttaatg 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aatacagggc atatgtttgc cagtgaaatt ggcaatgatt atgcgtggga acaatctggc 780

tggcaggtaa tcaaaaatcc aaactattct gatgtcaaag caggtgatgt gattaatttc 840

gcaatgggcg gttatgcgac cagcgtttac ggtcatactg gaattgtagc tagtgttgaa 900

ggtaatggaa agcttgtttt atatgaacag aacgctgaaa aaggacaaat aattgctaaa 960

tattttcgac aatggggagc agaatatcct aacgtgacaa 1000

<210> 77

<211> 1014

<212> DNA

<213> Enterococcus faecalis OG1RF

<220>

<221> source

<222> 1..1014

<223> /organism="Enterococcus faecalis OG1RF"

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

/mol_type="unassigned DNA"

<400> 77

gttcccgact tgcaacaaat ttatattaac ggtgtcatcc aaccggaaca aatggaagcc 60

tttgcgcgtg atcaaaaaat aacaaaggat ccagagatta aggtgaaaaa cggcgatgtc 120

gtagatgcag gcacagaatt atttacttat gaagatgagg cggtcacaaa agaaattgag 180

gcacaacaaa atagcttagc caaattagaa acgaagcggg cgaatatcta taataagtgg 240

aatcgggcca ttgataaatt taataaaact aaagaagaag accgcacgat gtctggtgat 300

gatttaaatg aacaatatca aacagaagtc gatgcagtag atgaagagat taccttcacc 360

aatgaaacct tagcggattt aggagcgaag caatatattt ccacaaaggc taatttcaaa 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggtcgtgtat caattccaga agtaaaagat gccaattcac cgattttacg gttaacttca 480

gaagatcttt atttagctgg aaaagtgaat gaaaaggact tgactaaaat tagtgttggg 540

caaaaagcta aactaacttc tgtttccaac aatgtggttg tggatggctc aatttcttac 600

atcgatgata atcctcctga aggcaacagc gatgccgcga gtggcaatcc agagggcggc 660

acaacgatgt ctagttatag cgtcaaaatt gcgttggcca atttagacaa agtcaaaaat 720

ggctaccata tgcaagcaac cattgattta ggcgatttag gggcgattga gttaccgaaa 780

aaagcgattc aaaaagaggg tgaacaggcc tacgttttag tgaatgattt tggaaccatc 840

attcgtcgtg atgtccaagt cgggcaagaa aatggcgaca aaatggcgat tgaatctggc 900

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttagaatcag ccgaccgagt ggttatttct tcaaaaaaac cagtaaaagt cggtgatatt 960

gttgaatcag atgcagcgat tgcttctgat gaatcagcaa ccaacgaatc aatg 1014

<210> 78
<211> 1590
<212> DNA
<213> Enterococcus faecium FAIR-E 345

<220>
<221> source
<222> 1..1590
<223> /organism="Enterococcus faecium FAIR-E 345 "
/mol_type="unassigned DNA"

<400> 78
tgcagtctga cgactcaaaa atgagtcgta taaatcaatt atagtaataa gtcattgatt 60

tctttaaatt ctttatcaag ttctttttca tcatattttt catatttatc agcttcatga 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agaacttttt taatttcatg aatagccttt cgttcaacta accatttttt taggttatgt 180

tttttttctg gattttcaga taacgtatca agttcgtcta actctttatc cagtttattg 240

acaacagaaa caattttgtt tacaactttt tcttctttgt tttctaaatt tgacatttat 300

cttcacgtcc tttttatttg ataatttaag tatagaactt tgatatagtt tatacaaata 360

aaaacgcttc tttgtgtatt ctgtgctttt cttttggaat gaggaaaact ttggagtaat 420

atgaacgtgg acagaaaaat atttaggagg aataaactat gtgtacgtct attacttatg 480

taacaagtga tcattatttt ggaaggaatt ttgattatga aatatcttac aatgaagtag 540

tcactattac tccaagaaat tataagttga attttcgaaa ggtaaatgat ttggatactc 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

attatgcaat gattggtatt gccgctggta tagctgacta ccctctttat tacgatgcga 660

caaatgaaaa aggattgagt atggctggac taaatttttc tgggtatgct gattataaag 720

aaatacaaga agggaaagac aatgtatctc cttttgaatt tattccttgg attttaggac 780

aatgctcaac agtaggagaa gctaaaaaat tgttaaaaaa tatcaattta gcaaatataa 840

attatagtga cgaacttcct ttatcccctt tacattggct attagctgat aaagaaaaat 900

caattgtcat tgaaagtatg aaagatggac ttcatatata tgataaccct gtgggcgttc 960

ttaccaataa tccttcattt gactatcaat tatttaattt aaacaattat cgtgtcttat 1020

cgagtgaaac tcctaaaaat aatttttcaa atcaaataag tttgaatgcc tatagccgcg 1080

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gtatgggagg gataggcttg cctggagatt tatcctcagt atctcgtttt gttaaagcga 1140

cttttacgaa gctgaattct gtatctggag attcagagtc agaaagtatt agtcaatttt 1200

tccatatctt aggttcagta gaacaacaaa aaggtttgtg tgatgttggt gatggaaaat 1260

atgaatatac aatttattct tcttgttgca atgttgataa aggaatctat tattatcgaa 1320

catatgaaga cagtcaaatt actgcaattg atatgaataa agaagactta gatagtcata 1380

agttaattag ttatccaatt atagaaaaac aacaaattaa atatataaat tagttagtgt 1440

gttgtgattg attatttaat atagatataa tacaaaaagg caaagatatt ttcaaaacat 1500

tttttcttga tgtgatatcc ttgtcttttt tgtaatgttt ttaacttatt gcttttgcaa 1560

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aatttattta cctgttttct ggatcaacga 1590

<210> 79

<211> 1571

<212> DNA

<213> Enterococcus faecium Aus0004

<220>

<221> source

<222> 1..1571

<223> /organism="Enterococcus faecium Aus0004"

/mol_type="unassigned DNA"

<400> 79

gaaatattcg cggtgaagga ttccaaaaag aaatcccatt aatgattgaa aataaaaatg 60

ttggaacttt aacggtcaga aaagattctg cgcaggttgt gtttaatgaa aatattaaaa 120

acctagactc agtagaaggt tgggggcaat ttgagataca ggccagaaac gtaaccgata 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ccggtgaaga aaatacggga ccattcaccg tgacgagcgg tgataaaaca gctactgtaa 240

atgtgacaaa gccagcttct ggttcttctt ctagcgtttt ttattataaa acaggagaca 300

tgctacctga agatactaag cacattcgat ggtttttgaa tattaacaat aacggcactt 360

atgttgaaca accagttaaa atcagtgatg aaatccaaag tggacaaaga ttagatccaa 420

gtacgtttga aattaatcaa atacacttag gtgaacagaa ggtttataga ggagaagagg 480

gaatccaaca atttttacaa gatttcccca gcgctacatt taatttttca gtaactgata 540

attacattga aataactata ccaaaaaact ttgtcaatct taggaaaata atggtgagtt 600

ataagacgat catagaaaac ccagaacaaa taaattttga gaatcattcg gaagcttggt 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttaaagaatt taataaacct gctgttgatg gagaaagttt caatcataca gttaaaaata 720

tttcagcttc tggtggagtc aacggtacag ttagaggcga attgaagatt ttcaaatata 780

tcaatgacac agagattggt atcccaaatg tgactttcga attaagacga gcagatgaac 840

agcctattca aggacagtct agtatcctgt tgacttcgaa tgaacaggga gaagctagta 900

tcaaaggcct gcaagtagga gactatgttg taaaagaaaa agaagcaccc aattggattg 960

attttgatcc actaagttca aatgaactca aattctccat aaacgaaaat gatacagagg 1020

gagtcagttt acctatttat aacaagaaaa aggttacgaa catcacagca actaaaattt 1080

ggaacggtgg aaccactcca agaccgagta tttattttaa attattcaga gcaagtacaa 1140

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

acaattggga accagttcct gatgcagaaa caaaacgatt agacaatgga ataacttcag 1200

tgacttggga agatatccaa cagtatgatg atagtggaaa cgaatatacg tttaaagtgc 1260

aagaagtaga tcaaaacgga aatgattatg tcccttcagg ttatcaaaaa attgaaaacg 1320

ggctagtcgt tacaaatgag aataaagaag tcatttcagt ctcaggacaa aaaacatggg 1380

aagacaatga gaaccaagac ggcaaacgac cgacgacgat cacagtaaat ctattagccg 1440

acggtcaacc gatccaacac aaagaagtaa gtgaaaaaga tgattggcgc tatcgtttca 1500

caaatctgcc aaaatacaga gacgggcaag aaatcatcta tactgtaacg gaagacaacg 1560

tgcccgaata c 1571

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 80

<211> 1477

<212> DNA

<213> Enterococcus faecium DO plasmid 3

<220>

<221> source

<222> 1..1477

<223> /organism="Enterococcus faecium DO plasmid 3"

/mol_type="unassigned DNA"

<400> 80

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gaaacatacg atttatgtat aacacacctt tataaccagc atttgaaaaa tgacggattt 120

tatttaaagg ttactaatga caatcaactt acgattgaat cagcaaacct tcgagggttt 180

caatatgcta tggaagcctt attagagagt ttttttcgg taggagatca attattatta 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ccggaattga ttctgaaaca tgaaccatca gtgaaaattc gaggaatcat tgaagggttt 300

tatggtatcc cctggacaca tgaaatgcgc ctctctcttt tttcatatat gaaagataac 360

caattgaata cttttatgta tgcccctaaa gatgatgaat tattacgtaa aaaatggcgt 420

gaactctacg atgcgcaaga attagacaaa tttaaggagc ttttatctgc tgctgaggct 480

agcaatatcg atttttggta cttaattagt cctggaaatg atattgatat tacgtgtgaa 540

gaagacattc aagttcttct gaaaaagtta gaacaactga ttgagcttgg cgtatttcaa 600

tttggtctat taatggatga tattgactat caattaaaag gtgctgctaa acgccgtttt 660

cgagagccag cattcgctca tgcctattta gtgaatcgag tagaggaata tcttagcact 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cggttgtcca atcatgaatt agtcatttgt cctacagaat atgataatcg tcatggttct 780

cgctatttag caacgttaag tcaagaaata ccagaacaat taccgttctt ttggactggc 840

ccaagcacgt tagcggcgtc aatttctaca gaagagctgc aggaaatggc ttctgtctat 900

caacggccga tgctgatttg ggataatatt ccggtaaatg attatttaga ggataaagaa 960

ctattgttca tgagtccata tgagaatcga acaccgaatc tttctaagga gagataccag 1020

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agtatggcta attacttatg gaactgtgag cgttttgatc ctttggaaac ttggacgtca 1140

gtcgttgaaa aagtagttgg aagtaaacta caaccagctt atcttacctt aaccaatgct 1200

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tttccaaatc attacacaag cagtctgctt tcagatgaag aattactgct agccaaagac 1260

ccagaatggg tcacaaaaga aatggctgct ttagtccaag cagtaaaatg gatccagcaa 1320

gaacaacata catctagatt gagaacagaa ttggagcctt ggttacaagc aatcacagaa 1380

agttggactt tctggcaaga atggcaatta aaaaaagatc caaaagaagc agaagaatgg 1440

ttggctaaga aaaaaacaca ccgcatagga cgtgatt 1477

<210> 81

<211> 1061

<212> DNA

<213> Enterococcus faecium DO

<220>

<221> source

<222> 1..1061

<223> /organism="Enterococcus faecium DO"

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

/mol_type="unassigned DNA"

<400> 81

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attagattac gcagcaacaa aagcttcaat cgctaacttt acgatcggtt tagcaaaaca 120

gcttgcacct aaaggaatcc gtgtaaatgg tgtagcacct ggtccaatct ggacaccatt 180

acaactagac gaaggacaac cttctgattc gatccctgaa tttggtcagc aaagtttact 240

agaacgtgca ggtcagccag gagaattagc accagtttat gttttcttag catcgaataa 300

agcaagttat gttacagccc aaatttacgg agtaactggt ggagaagcga tcaacttata 360

agaagttgat cgtttcaccc ctatgaggag gtgcgaaaat gaataaaggt gtaaaaacga 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tcggagtgat cggaacatta cttttgctat ctgtgctttt gtttgcgata ctattaagtg 480

caacctatcc attgcctttt cagctagaga agtttcgatt cttttccatc actaattcat 540

acgtgcaaca atatgtattt tggcttgccg ttgcatttgc tattttgaca attatcacgt 600

tacttgtttt cctgttttat ccaaaaacaa tcggaaactt tctactgaaa catggtgatg 660

gggagttgac gttggataaa aaagcaattg aaggaatggt tcgttctcac ttgcatgaag 720

atgaattcat ccattcacca aaagtaaatg tcaaagcaac gaaaaacaag atcgccgtca 780

atgtaaaagg ggagttgaaa cgaacttcag cactcattgg taaaacagga acattgatga 840

aagaaatcga aaatgaagta caacacatat tgggaacaaa agagccagtg aaagtatcgg 900

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgaaatacac aggctttgaa gaaccagcta aacgaagcaa tgaccgcaaa cgagtagaat 960

aggggggggac caaaaatgaa agaactattt tcgacataca agctccctat catctttggg 1020

gtacttggat tgatattagc cgttttatgg atcaccgtgg g 1061

<210> 82

<211> 1024

<212> DNA

<213> Enterococcus faecium DO

<220>

<221> source

<222> 1..1024

<223> /organism="Enterococcus faecium DO"

/mol_type="unassigned DNA"

<400> 82

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tccagtagtc cctaacgttc aacaaggagt agaagagaag aaacatgatg cagaaaagca 120

tgcacctcat catccaggaa ctccagaatc taaagttcca gaacaacatg atgcaatcga 180

tccttctaaa cctgtggaag agcaaaaaca tccttctgac catgcgaaag cacaagaaaa 240

acttagttct gaccacacaa acggacaagg aaaacttggt tctgatcata caaataacca 300

aggaaagcat gattctgaac aggaagattc aatgcgcggt gaattgaatt atgaagataa 360

agttgtgcaa aaaatcatcg gttatgcatt gaaagatgta gatggtctat tgacattaga 420

tggcggattt ttctcaaata tggctgaaaa attagtcaac acagataatg taacagcagg 480

tatcgaaaca gaagtcggta aaaaacaagt agcagttgat atggatgtca ttgtggaata 540

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tggcaaagat atcgaaaaaa tctttgaaga aatgcaagaa gtaatcggca aagaagtaaa 600

aaatatgaca catttagaag tgatcgaagt caacgctaac gtagtggaca tcaaaacaaa 660

agaagaattt gaaaaagatc aagaaacggt gcaagacaaa gtaactgacg cagcgaaaaa 720

aaccggtgaa tttgcttcga atcaaacaga taaagtaaaa tcagcagctg gaagcggcgc 780

acaaaaagta aaagaaaata cagaaccacg ggttcagtaa taaggaagta aaacattagg 840

aggaacgaaa catgggattt atttggtcac ttatcgtcgg aggaattatc ggagcaattg 900

caggagcaat cacgaataaa ggttcttcga tggggattat tgcaaatgtc gtagcaggtt 960

tagttggatc agcacttggt caagcattat taggttcttg gggaccaagt attgcaggaa 1020

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tggc

1024

<210> 83

<211> 1120

<212> DNA

<213> Enterococcus faecium Aus0004

<220>

<221> source

<222> 1..1120

<223> /organism="Enterococcus faecium Aus0004"

/mol_type="unassigned DNA"

<400> 83

tctttggagc cactgctttt gggatgctaa cagcagcagt gattggtttc gtgactcagc 60

ggagccgatt gaaaaatgat acagcgattg gaattgtctt tagctccttt tttgcattag 120

ggattatctt gatttcatat gcccagagtg cgacagattt gtatcatatt ttatttggga 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atgtcttagc tgttagggaa agcgatttgt tgctgacagc actcgttagt ggaatcgtct 240

tgatatttgt ctttttcttt tataaagaat tgaagatcac atcattcgat ccgacaatgg 300

caaaagctta tgggctgaac acatcgctga tccattatct tttgatgttc tttttgacat 360

tagtggctgt agtcagttta cagacagtag gaacaatctt ggtgattgcc atgttgatca 420

caccagccgc cacggcttac ttgctaacga accatttact gaaaatgatc attacagctg 480

caggaatcgg tatgctaagt gcagttgtcg gtgtgttttt cagttatagt tacaattggc 540

catcaggagc tacgatcgtg ttagcatgta ccgcattttt tatccttgct tttttatttt 600

ctccaacaaa aggaatttta tttcagaaag gaagcagata gatgaaaaca aaaaaatcac 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tcttttttaat cttggcagtt agtttcttgg tattagccgg ttgcggaaag caggcttctg 720

accaagcgga tgaaggaagt aaagaaaagt tgtcagtcgt ggctaccaat tcgatcttgg 780

cggacatggc aaaagaggtc ggaacagatc aaatagatat ccacagtatc gtaccagtcg 840

gaacagatcc gcatgaatat gaagtactac cagaagacat caaaaaggca agcgatgcag 900

atgttatttt atacaacggt ttgaatcttg aaacaggtaa cagctggttc gataacttga 960

tggaaacggc taaaaaagaa gaaggaaaag attattttgc agttagcaaa aatgtagaac 1020

ctctttattt aactagcggt gaagaacata caaaagcaga tccccatgct tggctagacc 1080

tatctaacgg aataaaatat gtggaggaaa tcgcacgtat 1120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 84

<211> 1082

<212> DNA

<213> Enterococcus faecium Aus0004

<220>

<221> source

<222> 1..1082

<223> /organism="Enterococcus faecium Aus0004"

/mol_type="unassigned DNA"

<400> 84

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ttgcttggtt agaaaatcct ttggttggat ctgctttttc gttcaaatgc atatagtaaa 120

cgaatttcaa tgtaccgcca ggagttaatg aaggaatata attcggatca actgaaaccg 180

tgaatccgtc tgtttgctca gtgacagaat aatttactgg gtcgatttct ttatttccat 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

catataaggc ataagcatac gttcctgaag aatcattatc aaatgttaaa gcagcgtcat 300

gagtatcgat aagtttgaat gttgtgtact tgttttgcgt tccttcttta tcagcgatac 360

ctaatgggat attgacagaa atctcatatt gaatttttc accgattgcg acatcttttc 420

cattcaattg aggtgttgtt ttatcaactt tagacgtatc atttttgatg gtcttttcta 480

ctggtgtttg gctatttgcc aggatctcaa aaggcgtgat tgtttgcttt tcaatcattt 540

ccgcattatc aggagctttt acttcttcta aattatattt tccaacttct aaatgattaa 600

cgatcaactg gccttttca atagatgcct cggcaaagtc attgttgccg atgtcataag 660

aatgaccagt aatgaaatgt ttggctttgg tttgatcagt tgtccaagtg tacaatccat 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctgtgacact ttggatgtat tttttgacgc ttggtgttcc ttcttcttta gaaataataa 780

attctgctcc atttagtgct tcgttttcgg cagtaccgat ttttgtaact ttcaacgttc 840

catcattacc gactgtattt ttagggtaga gatggatagt atctagttct tctgtcccgt 900

atttataaga gccatctgct tgtttgatca tctcatatac agggaaagct aaaaccatgt 960

ttgcggcagc tgacactccg tcttttggtt cttctttgat cgtgtagact gcatctttcc 1020

cattttgttt tttaggtaaa gataaagtga catttccatc agcatctgtc gttcctgaag 1080

ca
1082

<210> 85
<211> 1145
<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Enterococcus faecium DO plasmid 3

<220>

<221> source

<222> 1..1145

<223> /organism="Enterococcus faecium DO plasmid 3"

/mol_type="unassigned DNA"

<400> 85

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caaacgtcaa ctgtgtgtag gcagtgaaag aaaaaagagc ggctgcacaa acaaatagcc 120

attttctatt tctcatgttg gttaccctcc tttatttttt ctttttataa acaaatagcg 180

aaccaatgat catgactgaa agaaaaacag tacttcctaa aagccatttc caagataatt 240

tttgtttctt attttcttca tcttttaatt ctgattttgt aaaggttact cgcttcccat 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

acactagaaa acggtgtgtg ttgatcccct taggcgtaca tgtcattagc gttactcgat 360

cttcattggg atttgattct aagtaagtga caaagtttct ttgtagttcg tctttttgca 420

cttcctcaat ccgatcgatt tgataagcgt gctgctcacc atcaactttg atataaaact 480

tttctccctt ttttactgaa ggtaaatcat caaaaagatt atctttataa agtccactat 540

gacctgcgat taaaggattt ttaccgtttc ctcctgtaat atcaccagtt ccttccgtaa 600

tacctacacc attttctaaa attttgtcgg acgttccgtc ataaattggt agttttaaag 660

aaatacttag aattgtaaga ataccaacag gatcgcctaa ctcaatctta gcaacatcca 720

aagaagaatc cgtttctgct gccgttcctg ttcgatcgat tgcggcaatc tgctgatttt 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gttggtattt cgccacactc gcttcagcag gcatcaaaag taagacacct acagctgaaa 840

gtaaccagaa agcaatgatc catttaccca tgattcgctt tttcttaggc ttcctgataa 900

tcattggttt tgatccttct aggctttctt cttaaagtaa acaactgcag aaagtgcccc 960

tgctcctagc aacaagcaag agattaatac atacgtttga aaaccgttgc taccggtcat 1020

tggtacggaa gctttttgat tgtttttgat cgtgattcgg ttttcttctt tgtatgaatc 1080

tttgtctact ttgaaagaga tctctttcgt taatttttga tagttttcag gcgcttttgt 1140

ttctt
1145

<210> 86
<211> 1090
<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Enterococcus faecium Aus0004 plasmid AUS0004_p1

<220>

<221> source

<222> 1..1090

<223> /organism="Enterococcus faecium Aus0004 plasmid AUS0004_p1"

/mol_type="unassigned DNA"

<400> 86

aacgatttcg tccactttcg cgttggttag atcagaatct tcagtcggta atacttgatc 60

cgtaatattt cctaacgtaa actcaacatc accataatct gccttgttgt atttcgttac 120

acctgtagga tattgatcgt gcgtataacc atcatttttg attccgtcaa tatcaacgtt 180

caattgcgta ctttgatcgt acattaattt atgaaccgtg atattgaccc tttctggtgg 240

cgttttttgc gtgacatctt ctgcataagc tcgatacccc tgaaagcagc ctgcaatgat 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tcctaacatt ccaacaatca ttccagcttt ttttacatac cgatttattg ccatttttta 360

ctctcctcat ttcatatttc aacgactcgc gttgattaaa ttcttgttat tgtagctctc 420

cctgtaccac gtatctttct tttccttgtg acgtataaac acaagtaaac aacgttaata 480

agggtttctc tcctttcttt ggtaaagaca agaaagagtt ctcttcagga acgccatcga 540

ttaatttaaa gtactcaggt acgataaatt tacgcgttac cttgtaacga tagacgccat 600

cgttactaac taagtccatc acctccccta atgacaactt ttgaatatca gaaaataaaa 660

cacctggcat ttccatgtta tgacctgcta ggacatagtt tcctttaccc atttcggcat 720

cttcataaaa ataagtagcc gctccaagac tcaaagtgta ttgatttgcc cctttaaaaa 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttggcaatgc taaaccaagt gcaggaatct gaatttgtgc aaatacttgt ttattgacgc 840

ccatttcgat tgcttctttt tgtatggaca acatttgccc caaagacata tcattattga 900

cgttcgttgc atcctcctta taactctttg cgtgtgcatt gatttgatct acgggcatct 960

ttttttctat attttgctta aacacctctc cttcatgttt ttggtagcta acatagccaa 1020

acacactgca aacgacgatt aaagcgactc ctaaaaaacc aaataaccat tttttcatcc 1080

atctgcctcc 1090

<210> 87

<211> 865

<212> DNA

<213> Enterococcus faecium plasmid pZB18

<220>

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<221> source

<222> 1..865

<223> /organism="Enterococcus faecium plasmid pZB18"
/mol_type="unassigned DNA"

<400> 87

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aaatacgagc cgttatacat tggaattacg aaatctggtg tatggaaaat gtgcgaaaaa 120

ccttgcgcgg aatgggaaaa cgacaattgc tattcagctg tactctcgcc ggataaaaaa 180

atgcacggat tacttgttaa aaagaaccat gaatatgaaa tcaaccatgt tgatgtagca 240

ttttcagctt tgcatggcaa gtcaggtgaa gatggatcca tacaaggtct gtttgaattg 300

tccggtatcc cttttgtagg ctgcgatatt caaagctcag caatttgtat ggacaaatcg 360

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttgacataca tcgttgcgaa aaatgctggg atagctactc ccgcctttg ggttattaat 420

aaagatgata ggccggtggc agctacgttt acctatcctg tttttgttaa gccggcgcgt 480

tcaggctcat ccttcggtgt gaaaaaagtc aatagcgcgg acgaattgga ctacgcaatt 540

gaatcggcaa gacaatatga cagcaaaatc ttaattgagc aggctgtttc gggctgtgag 600

gtcggttgtg cggtattggg aaacagtgcc gcgttagttg ttggcgaggt ggaccaaatc 660

aggctgcagt acggaatctt tcgtattcat caggaagtcg agccggaaaa aggctctgaa 720

aacgcagtta taaccgttcc cgcagacctt tcagcagagg agcgaggacg gatacaggaa 780

acggcaaaaa aaatatataa agcgctcggc tgtagaggtc tagcccgtgt ggatatgttt 840

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttacaagata acggccgcat tgtac
865

<210> 88

<211> 535

<212> DNA

<213> Enterococcus faecium plasmid transposon Tn1546

<220>

<221> source

<222> 1..535

<223> /organism="Enterococcus faecium plasmid transposon Tn1546"

/mol_type="unassigned DNA"

<400> 88

tggcaagtca ggtgaagatg gatccataca aggtctgttt gaattgtccg gtatcccttt 60

tgtaggctgc gatattcaaa gctcagcaat ttgtatggac aaatcgttga catacatcgt 120

tgcgaaaaat gctgggatag ctactcccgc cttttgggtt attaataaag atgataggcc 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggtggcagct acgtttacct atcctgtttt tgttaagccg gcgcgttcag gctcatcctt 240

cggtgtgaaa aaagtcaata gcgcggacga attggactac gcaattgaat cggcaagaca 300

atatgacagc aaaatcttaa ttgagcaggc tgtttcgggc tgtgaggtcg gttgtgcggt 360

attgggaaac agtgccgcgt tagttgttgg cgaggtggac caaatcaggc tgcagtacgg 420

aatctttcgt attcatcagg aagtcgagcc ggaaaaaggc tctgaaaacg cagttataac 480

cgttcccgca gacctttcag cagaggagcg aggacggata caggaaacgg caaaa 535

<210> 89

<211> 502

<212> DNA

<213> Enterococcus faecium Aus0004

<220>

<221> source

<222> 1..502

<223> /organism="Enterococcus faecium Aus0004"

/mol_type="unassigned DNA"

<400> 89

tgaaagaaag cgaatacgaa acacggcgta ttgatgtggc tttcccggtt ttgcatggca 60

aatgcgggga ggatggtgcg atacaggggc tgtttgtatt gtctggtatc ccctatgtgg 120

gctgtgatat tcaaagctcc gcagcttgca tggacaaatc actggcctac attcttacaa 180

aaaatgcggg catcgccgtt cccgaatttc aaattattga taaaggtgac aagccggagg 240

cgggtgcgct tacctaccct gtctttgtga agccggcacg gtcaggttcg tcctttggcg 300

taaccaaagt aaacggtacg gaagaactta acgctgcgat agaagcggca ggacaatatg 360

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atggaaaaat cttaattgag caagcgattt cgggctgtga ggtcgggtgt gcggtcatgg 420

ggaacgagga tgatttgatt gtcggcgaag tggatcaaat ccggctgagc cacggtatct 480

tccgcatcca tcaggaaaac ga 502

<210> 90

<211> 1450

<212> DNA

<213> Escherichia coli Xuzhou21

<220>

<221> source

<222> 1..1450

<223> /organism="Escherichia coli Xuzhou21"

/mol_type="unassigned DNA"

<400> 90

tgcaagtcga acggtaacag gaagaagctt gcttctttgc tgacgagtgg cggacgggtg 60

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agtaatgtct gggaaactgc ctgatggaga gggataacta ctggaaacgg tagctaatac 120

cgcataacgt cgcaagacca aagaggggga ccttcgggcc tcttgccatc ggatgtgccc 180

agatgggatt agctagtagg tggggtaacg gctcacctag gcgacgatcc ctagctggtc 240

tgagaggatg accagccaca ctggaactga gacacggtcc agactcctac gggaggcagc 300

agtggggaat attgcacaat gggcgcaagc ctgatgcagc catgccgcgt gtatgaagaa 360

ggccttcggg ttgtaaagta ctttcagcgg ggaggaaggg agtaaagtta ataccttttgc 420

tcattgacgt tacccgcaga agaagcaccg gctaactccg tgccagcagc cgcggtaata 480

cggagggtgc aagcgttaat cggaattact gggcgtaaag cgcacgcagg cggtttgtta 540

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agtcagatgt gaaatccccg ggctcaacct gggaactgca tctgatactg gcaagcttga 600

gtctcgtaga gggggggtaga attccaggtg tagcggtgaa atgcgtagag atctggagga 660

ataccggtgg cgaaggcggc cccctggacg aagactgacg ctcaggtgcg aaagcgtggg 720

gagcaaacag gattagatac cctggtagtc cacgccgtaa acgatgtcga cttggaggtt 780

gtgcccttga ggcgtggctt ccggagctaa cgcgttaagt cgaccgcctg gggagtacgg 840

ccgcaaggtt aaaactcaaa tgaattgacg gggcccgca caagcggtgg agcatgtggt 900

ttaattcgat gcaacgcgaa gaaccttacc tggtcttgac atccacagaa ctttccagag 960

atggattggt gccttcggga actgtgagac aggtgctgca tggctgtcgt cagctcgtgt 1020

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgtgaaatgt tgggttaagt cccgcaacga gcgcaaccct tatcctttgt tgccagcggt 1080

ccggccggga actcaaagga gactgccagt gataaactgg aggaaggtgg ggatgacgtc 1140

aagtcatcat ggcccttacg accagggcta cacacgtgct acaatggcgc atacaaagag 1200

aagcgacctc gcgagagcaa gcggacctca taaagtgcgt cgtagtccgg attggagtct 1260

gcaactcgac tccatgaagt cggaatcgct agtaatcgtg gatcagaatg ccacggtgaa 1320

tacgttcccg ggccttgtac acaccgcccg tcacaccatg ggagtgggtt gcaaaagaag 1380

taggtagctt aaccttcggg agggcgctta ccactttgtg attcatgact ggggtgaagt 1440

cgtaacaagg 1450

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 91

<211> 1492

<212> DNA

<213> Escherichia coli W

<220>

<221> source

<222> 1..1492

<223> /organism="Escherichia coli W"

/mol_type="unassigned DNA"

<400> 91

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caggaagggg gttcggttag tcctttatta acatccgctg gcataaatgc tggccagttg 120

cgcacagata tcaatcaggc attaaatcgt ttaccgcagg ttgaaggtac tggtggtgat 180

gtccagccat cacaggatct ggtgcgcgtt cttaatcttt gcgacaagct ggcgcaaaaa 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cgtggtgata actttatctc gtcagaactg ttcgttctgg cggcacttga gtctcgcggc 300

acgctggccg acatcctgaa agcagcaggg gcgaccaccg ccaacattac tcaagcgatt 360

gaacaaatgc gtggaggtga aagcgtgaac gatcaaggtg ctgaagacca acgtcaggct 420

ttgaaaaaat ataccatcga ccttaccgaa cgagccgaac agggcaaact cgatccggtg 480

attggtcgtg atgaagaaat tcgccgtacc attcaggtgc tgcaacgtcg tactaaaaat 540

aacccggtac tgattggtga acccggcgtc ggtaaaactg ccatcgttga aggtctggcg 600

cagcgtatta tcaacggcga agtgccggaa ggattgaaag gccgccgcgt actggcgctg 660

gatatgggcg cgctggtggc tggggcgaaa tatcgcggtg agtttgaaga acgtttaaaa 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggcgtgctta acgatcttgc caaacaggaa ggcaacgtca tcctgtttat cgacgaatta 780

cataccatgg tcggcgcggg taaagccgat ggcgcaatgg acgccggaaa catgctgaaa 840

ccggcgctgg cgcgtggtga attgcactgc gtaggtgcca cgacgcttga cgaatatcgc 900

cagtacatcg aaaaagatgc tgcgctggaa cgtcgtttcc agaaagtgtt tgttgccgag 960

ccttctgttg aagataccat tgcgattctg cgtggcctga aagaacgtta cgaattgcac 1020

caccatgtgc aaattactga cccggcaatt gttgcagcgg cgacgttgtc tcatcgctac 1080

attgctgacc gtcagctgcc ggataaagcc atcgacctga tcgatgaagc agcatccagc 1140

attcgtatgc agattgactc aaaaccagaa gaactcgacc gactcgatcg tcgtatcatc 1200

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cagctcaaac tggaacaaca ggcgttaatg aaagagtctg atgaagccag taaaaaacgc 1260

ctggatatgc tcaacgaaga actgagcgac aaagaacgtc agtactccga gttagaagaa 1320

gagtggaaag cagagaaggc atcgctttct ggtacgcaga ccattaaagc ggaactggaa 1380

caggcgaaaa tcgctattga acaggctcgc cgtgtggggg acctggcgcg gatgtctgaa 1440

ctgcaatacg gcaaaatccc ggaactggaa aagcaactgg aagccgcaac gc 1492

<210> 92

<211> 1454

<212> DNA

<213> Escherichia coli Xuzhou21

<220>

<221> source

<222> 1..1454

<223> /organism="Escherichia coli Xuzhou21"

/mol_type="unassigned DNA"

<400> 92

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gaaggttatc cggtttatac ccgcaaggta tataccgacg tttcttatct cgcctgtgcg 120

aaaaagctgc tggcggtgcc gaatctaatc tacccgcagt tcgcaacgca caacgcccac 180

acgctggcgg cgatttatca actggcaggt cagaactact atccgggtca gtacgagttc 240

cagtgcctgc atggtatggg cgagccgctg tatgagcagg tcaccgggaa agttgccgac 300

ggcaaactta accgtccgtg tcgtatttat gccccggtcg gcacacatga aacgctgctg 360

gcgtatctgg tgcgccgcct gctggaaaac ggtgctaaca cctcgtttgt taaccgtatt 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gccgatacct ctttgccact ggatgaactg gtcgccgatc cggtcactgc tgtagaaaaa 480

ctggcacaac aggaagggca aactggatta ccgcatccga aaattcccct gccgcgcgat 540

ctttacggtc acgggcgcga caactcggca gggctggatc tcgctaacga acaccgtctg 600

gcatccctct cttctgccct gctcaatagt gcactgcaaa aatggcaggc cttgccaatg 660

ctggaacaac cggtagcggc aggtgagatg tcgcccgtta ttaacccggc ggaaccgaaa 720

gatattgtgg gctatgtacg tgaagccacg ccgcgtgaag tagagcaggc gctggaaagt 780

gcggttaata acgcgccaat ctggtttgcc actcctccgg ctgaacgcgc ggcgattttg 840

catcgcgctg ccgtgctgat ggaaagccag atgcagcaac tgattggtat tctggtgcgt 900

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gaagccggaa aaaccttcag taacgccatt gccgaagtgc gtgaagcggt cgattttctc 960

cactactacg ccggacaggt gcgggatgat ttcgctaacg aaacccatcg tccattaggg 1020

cctgtggtat gtatcagccc gtggaacttc ccgctggcga ttttcaccgg gcagatcgct 1080

gccgcactgg cggcaggtaa cagcgtactg gcaaaaccgg cagaacaaac gccactgatt 1140

gccgcgcaag ggatcgccat tttgctggaa gcgggcgtac cgccaggcgt ggtgcaattg 1200

ctgccaggtc ggggtgaaac cgtgggcgcg caactgacgg gtgatgatcg cgtacgcggg 1260

gtgatgttta ccggttcaac cgaagtcgct acgttactgc agcgcaatat cgccagccgc 1320

ctcgacgctc agggtcgccc tattccgctc atcgctgaaa ccggcggcat gaacgcgatg 1380

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(Iscrizione Albo nr. 1099/B)

attgtcgatt cttcagcact gaccgaacaa gtcgtaatag atgtgctggc ctcggcgttc 1440

gacagtgcgg gtca 1454

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<211> 1192
<212> DNA
<213> Escherichia coli W

<220>
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<222> 1..1192
<223> /organism="Escherichia coli W"
/mol_type="unassigned DNA"

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cgatcagggg attgcgctat ggttccctgg cccgaactcg ttcaccggcg aagatgtgct 180

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cattcccggc ctgcggattg ctcgcccagg tgagttttcc gaacgtgctt ttcttaacga 300

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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ccacattgac ggaatgccgc tgcatatcat cgataccgct gggctacgtg aagccagtga 780

cgaagtggaa cgtattggta tcgagcgcgc gtggcaggaa attgaacagg ccgaccgcgt 840

gctgtttatg gtcgatggca ccacaacaga cgccgtggat ccggcagaga tctggccgga 900

atttatcgcc cgtctgccag cgaaactgcc gatcaccgtg gtgcgcaata aagccgatat 960

caccggcgaa acgctgggaa tgagtgaagt gaacggtcac gcgttaattc gtctctcggc 1020

aaggacaggt gaaggcgtgg aggtgctgcg taaccatctc aaacagagca tgggctttga 1080

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

caccaacatg gaaggcggct tcctggcgcg tcgtcgccac ctacaggcgc tggaacaggc 1140

agcggaacat ctacaacagg gcaaagcgca actgttggga gcctgggcag gt 1192

<210> 94

<211> 1588

<212> DNA

<213> Escherichia coli Xuzhou21

<220>

<221> source

<222> 1..1588

<223> /organism="Escherichia coli Xuzhou21"

/mol_type="unassigned DNA"

<400> 94

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aaattaccga attaatgatg tcggcagata tcgttcgtgt agacctgctc catggtgata 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agcaggttta taccctggcc agaaatggta gttatcgtcc ggttggcacc agcgatctgt 180

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ccgcacagga cgtgaaaacc ggcctcaata accgactctt tttcgataat cagttagcaa 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cgttactgga agatcaggag aaagtaggta cccacgggat cgtgatgatg attcgtctgc 660

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agcaaatgct cagtcgcggc ggcccgcgcc tttatcaaaa accggcggtt actcgcgaag 1140

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ccgtcaacca ggctggtttg acgctggtaa gcaccagttg gatcaaagaa cttaatgttg 1560

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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<210> 95

<211> 1434

<212> DNA

<213> Escherichia coli Xuzhou21

<220>

<221> source

<222> 1..1434

<223> /organism="Escherichia coli Xuzhou21"

/mol_type="unassigned DNA"

<400> 95

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gatgtggcag ttgaccagcc agataaggta tttacggcag gaaacacgcg aaatgttaac 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctcgttggct agctcgtcgg ttgaaaactc atagtcctga tgcgcgtcaa tccactggca 240

cagtgtgcgt aacgtctgcg gcgttaagcc ttttggcaag cgacgaggat cctgctcgtt 300

ggagctgctg ccgtggatta gctgatcaag ctcggcctgg tcataatact gatgtttttc 360

cagcgccatt ttcttttgcc gccagccggt gagcgcctct tcaaagcggg aagcctggaa 420

gggtttgatc aggtaatcca cgacaccgta atgcagcgaa tctttaatgg ttgccgcatc 480

ggctgcggag gagatgacaa tcacatcact tttgcaacgc gcgttatgca ggacaggcag 540

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atcgctattg aagataatct ctttggcttt ctccagcgtc gaggctgttc cacagcattg 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aaagcctggg atttgtgcta cgtatcggcg attcagctcc gcgaccattg cgtcgtcatc 720

gataattaat acattgatca tctgttcgac ctctccccgt cccagggtat ctggacaaaa 780

aattgtgtga aaatcccggg ttccgattcc acggcgatgc tgccgccgag attttctacc 840

tgttgtttga caagtgctaa accgacgcct cgctcgcttc cttttgtcga gacacctttg 900

tcaaaaatgt gatcgatttt gtcgggtgcg atccccggtc catcatcgtt aacttcgcag 960

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aatgcttcca gcgcgttttc tatcagattt cccaatgtgg taatcagcgt cgcgacctgg 1080

tcctcactgc cgctgtctgg cagctggctt tcactgttta aaatcagcgt atggcctaaa 1140

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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cccagcagag agccaatctc ttcctgatag ttattggctg ttttgagaat gtaatcttcc 1260

aactgcttat aactcttcag atgcaataat ccgagaatca catgcaattt attcataaat 1320

tcgtgggatc gttcacgaag tgcatcagca tagttgacca gaccgtcgag tcgctgcatc 1380

agtttacgaa cttcagtttt gtccctgaag gttgaaatgg caccgatgat aacg 1434

<210> 96

<211> 1406

<212> DNA

<213> Escherichia coli Xuzhou21

<220>

<221> source

<222> 1..1406

<223> /organism="Escherichia coli Xuzhou21"

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(Iscrizione Albo nr. 1099/B)

/mol_type="unassigned DNA"

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gtattcaggc tgatttttcg accaacgacg gtgtgatggc gtttgccgat gaagtactaa 240

aaagcaccca tggtctgcgt gctattttgc ataacgccag tgcgtggatg gcggaaaaac 300

cgggtgcgcc actggccgac gtactggctt gcatgatgca gatccacgtt aataccccat 360

acctgctcaa ccatgcgctg gaaagattac tgcgtgggca cggacacgcc gccagcgata 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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tgaaagtgaa ttctattgcg ccatcgctga tcctgtttaa tgaacatgat gatgccgaat 600

atcgacaaca ggcgctgaat aaatcattga tgaaaaccgc gcctggcgag aaagaagtga 660

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ttatccccca acacgcaaca gaaccaacaa aagcggcggg caagcgcatc attccggtga 840

aataccacag cgacaccagg taaacaaaat agggaataat cgaccacata ctaaaaatga 900

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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caaaggtcgg gaaaagtgga atcagcccgg cgatataata atttttcgtt tttgctaaaa 1020

caccaatcaa cagcactacc agcgcaccga gcgcggcttt gattaccagc cccatctttt 1080

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cgattgatag taagtaaaaa cagcgcggtg tattgtgacg tttttatatc taccgtgaat 1200

gttatgaaca ctatcgtatt tgtggaagat gatgcggaag tcggttcact gattgccgcg 1260

tacctggcaa aacatgatat acaggttacc gtagagccgc gcggcgacca ggccgaagaa 1320

accattttgc gagaaaatcc ggatttggtg ttactcgaca tcatgctacc aggcaaggac 1380

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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1406

<210> 97

<211> 1407

<212> DNA

<213> Escherichia coli Xuzhou21

<220>

<221> source

<222> 1..1407

<223> /organism="Escherichia coli Xuzhou21"

/mol_type="unassigned DNA"

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gttggtcacc 120

acgcagtaag acggtttttg cccggctttg tctttagtca gcgggctttc
actgattttc 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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ttgcggcttg gcaccatgta gaccggtttc gcgcctgtca gcatcaaacc ttgttcgatg 300

gatttatggc agttacggtc aacgaccacg acatcgttat cggtcatgca agcctgcatg 360

atggtgcggt tagagccgga agtaccgacg actaccgacc aggagcgatc ggcaccaaat 420

acgcgtgcgg catatttttc gctttcgcca aatgcgccag tatggtcaag caaagaaccg 480

agggaagttc gttcgatgcc catgtcggtg cggaacagat tttcaccgta gtagtcatgg 540

tagaaacgtc cggcgggtgt tttggtaaaa ccaacgccgc cctggtggcc tggcgctgcc 600

caggaatatt catggatgtc gctatatttc atcagcgcgc tgaacagtgg cggcaacagc 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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tatcgtcttt agccgggaaa cgtctggcgg cgctgttggc taagtttgcg gtattgttgc 1320

ggcgacatgc cgacatattt gccgaacgtg ctgtaaaaac gactacttga acgaaagcct 1380

gccgtcaggg caatatcgag aatactt 1407

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<211> 1555

<212> DNA

<213> Human adenovirus 19

<220>

<221> source

<222> 1..1555

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<400> 98

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aggaaagggt actccacagc cttgattttt ccagcccagg gcgcactaca gccggggttg 180

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catccatgtt ggaggaagaa atgaggcagg ccatggacga gaacccgagg agcggcctgg 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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caaggtgctg acatccatgg ccaggggagt gaagagggag aggagcgatg ggggtaatac 540

cgggatgatg accgagctga cggccagcct gatgaatcgg aagcgcccag agcgccttac 600

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tctggagcag ataaaaaccc attggttgaa cccagatgag gattgggagg aggctattaa 720

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ccatatgcac ctgggagcca gaaggggcac cttccagccg taccagtgca actttagcca 1440

gaccaagctg ctgttggaga acgatgcctt ctccagggtg aacctaaacg gcatctttga 1500

catggatgtc tcggtgtaca agatcctgag atacgatgag accaagtcca gggtg 1555

<210> 99

<211> 1597

<212> DNA

<213> Human adenovirus 14 strain HAdV14-BJ430/CHN2010

<220>

<221> source

<222> 1..1597

<223> /organism="Human adenovirus 14 strain HAdV14-BJ430/CHN2010"

/mol_type="unassigned DNA"

<400> 99

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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gcggcaggcg tgcaagatat ctaacgtgga actcaccaac ctggtttcct acatgggtat 480

tctgcatgag aatcgtctag gacaaagcgt gctgcacagc acccttaagg gggaagcccg 540

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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agccgccgcc cccagaagat atggaggaag attgggacag tcaggcagag gaagcggagg 1500

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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aggaggtgga agaagtaacc gccgacaaac agttatc 1597

<210> 100

<211> 1574

<212> DNA

<213> Human adenovirus B strain ColoAd1

<220>

<221> source

<222> 1..1574

<223> /organism="Human adenovirus B strain ColoAd1"

/mol_type="unassigned DNA"

<400> 100

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gatcctgatg tacgtgttat tgaaaatcat ggtgtggaag atgaacttcc caactactgt 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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gacccctact ttgtctattc tggttctatt ccctacctgg atggtacctt ctacctgaac 1020

cacactttta agaaggtttc catcatgttt gactcttcag tgagctggcc tggaaatgac 1080

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aggttactat ctcctaacga atttgaaata aagcgcactg tggatggcga aggctacaac 1140

gtagcccaat gcaacatgac caaagactgg ttcttggtac agatgctcgc caactacaac 1200

atcggctatc agggcttcta cattccagaa ggatacaaag atcgcatgta ttcatttttc 1260

agaaacttcc agcccatgag caggcaggtg gttgatgagg tcaattacaa agacttcaag 1320

gccgtcgcca taccctacca acacaacaac tctggctttg tgggttacat ggctccgacc 1380

atgcgccaag gtcaacccta tcccgctaac tatccctatc cactcattgg aacaactgcc 1440

gtaaatagtg ttacgcagaa aaagttcttg tgtgacagaa ccatgtggcg cataccgttc 1500

tcgagcaact tcatgtctat gggggccctt acagacttgg gacagaatat gctctatgcc 1560

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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1574

<210> 101

<211> 1466

<212> DNA

<213> Human adenovirus type 2

<220>

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<222> 1..1466

<223> /organism="Human adenovirus type 2"

/mol_type="unassigned DNA"

<400> 101

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tctgaccgtg gtttgcaact gtcctaaccc tggattacat caagatcttt gttgtcatct 120

ctgtgctgag tataataaat acagaaatta gaatctactg gggctcctgt cgccatcctg 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgaacgccac cgtttttacc cacccaaagc agaccaaagc aaacctcacc tccggtttgc 240

acaagcgggc caataagtac cttacctggt actttaacgg ctcttcattt gtaatttaca 300

acagtttcca gcgagacgaa gtaagtttgc cacacaacct tctcggcttc aactacaccg 360

tcaagaaaaa caccaccacc accaccctcc tcacctgccg ggaacgtacg agtgcgtcac 420

cggttgctgc gcccacacct acagcctgag cgtaaccaga cattactccc atttttccaa 480

aacaggaggt gagctcaact cccggaactc aggtcaaaaa agcattttgc ggggtgctgg 540

gatttttaa ttaagtatat gagcaattca agtaactcta caagcttgtc taatttttct 600

ggaattgggg tcggggttat ccttactctt gtaattctgt ttattcttat actagcactt 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctgtgcctta gggttgccgc ctgctgcacg cacgtttgta cctattgtca gctttttaaa 720

cgctgggggc aacatccaag atgaggtaca tgattttagg cttgctcgcc cttgcggcag 780

tctgcagcgc tgccaaaaag gttgagttta aggaaccagc ttgcaatgtt acatttaaat 840

cagaagctaa tgaatgcact actcttataa aatgcaccac agaacatgaa aagcttatta 900

ttcgccacaa agacaaaatt ggcaagtatg ctgtatatgc tatttggcag ccaggtgaca 960

ctaacgacta taatgtcaca gtcttccaag gtgaaaatcg taaaactttt atgtataaat 1020

ttccatttta tgaaatgtgc gatattacca tgtacatgag caaacagtac aagttgtggc 1080

ccccacaaaa gtgtttagag aacactggca ccttttgttc caccgctctg cttattacag 1140

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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atgaaaagaa aatgccttga ttttccgctt gcttgtattc ccctggacaa tttactctat 1260

gtgggatatg ctccaggcgg gcaagattat acccacaacc ttcaaatcaa actttcctgg 1320

acgttagcgc ctgatttctg ccagcgcctg cactgcaaat ttgatcaaac ccagcttcag 1380

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<210> 102

<211> 1460

<212> DNA

<213> Klebsiella pneumoniae strain HUB-IV-033

<220>

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<221> source

<222> 1..1460

<223> /organism="Klebsiella pneumoniae strain HUB-IV-033"

/mol_type="unassigned DNA"

<400> 102

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gatggagggg gataactact ggaaacggta gctaataccg cataacgtcg caagaccaaa 180

gtgggggacc ttcgggcctc atgccatcag atgtgcccag atgggattag ctggtaggtg 240

gggtaacggc tcacctaggc gacgatccct agctggtctg agaggatgac cagccacact 300

ggaactgaga cacggtccag actcctacgg gaggcagcag tggggaatat tgcacaatgg 360

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gcgcaagcct gatgcagcca tgccgcgtgt gtgaagaagg ccttcgggtt gtaaagcact 420

ttcagcgggg aggaaggcga tgaggttaat aacctcatcg attgacgtta cccgcagaag 480

aagcaccggc taactccgtg ccagcagccg cggtaatacg gagggtgcaa gcgttaatcg 540

gaattactgg gcgtaaagcg cacgcaggcg gtctgtcaag tcggatgtga aatccccggg 600

ctcaacctgg gaactgcatt cgaaactggc aggctagagt cttgtagagg ggggtagaat 660

tccaggtgta gcggtgaaat gcgtagagat ctggaggaat accggtggcg aaggcggccc 720

cctggacaaa gactgacgct caggtgcgaa agcgtgggga gcaaacagga ttagataccc 780

tggtagtcca cgctgtaaac gatgtcgatt tggaggttgt gctcttgagg cgtggcttcc 840

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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aattgacggg ggcccgcaca agcggtggag catgtggttt aattcgatgc aacgcgaaga 960

accttacctg gtcttgacat ccacagaact ttccagagat ggattggtgc cttcgggaac 1020

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cagggctaca cacgtgctac aatggcatat acaaagagaa gcgacctcgc gagagcaagc 1260

ggacctcata aagtatgtcg tagtccggat tggagtctgc agctcgactc catgaagtcg 1320

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gaatcgctag taatcgtaga tcagaatgct acggtgaata cgttcccggg ccttgtacac 1380

accgcccgtc acaccatggg agtgggttgc aaaagaagta ggtagcttaa ccttcgggag 1440

ggcgcttacc actttgtgat 1460

<210> 103

<211> 1202

<212> DNA

<213> Klebsiella pneumoniae KCTC 2242

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<221> source

<222> 1..1202

<223> /organism="Klebsiella pneumoniae KCTC 2242"

/mol_type="unassigned DNA"

<400> 103

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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tttcaggaga cgccgcttcc ggcgcctcct gttcttcacc tcgcggctac tcctcgtacg 240

ccgcgtgatg gaaatcaatt tcccactgca gcacctcgcc gtaaagcgcc gataacgcct 300

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cctgctgata aaattcgtcc tccgcgtgca tttccaccca gcgtcgtaaa tcagcatcgc 420

tctgataatg ttcgctcgcc cgtcggcacc agaaatagta catccattcc gcaccgaaca 480

tcagggtcac gatctgctca tagctgccct cgcgggcggt ccgcagcata ccgtcgcgaa 540

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agcgccgtac cccgggcaaa tcatccgggt actcagcggg atcgatctgc cgcgctgaca 600

acacctgttc aaaccacgcg atctgtatat caaccagggc attcagcacg ccaatcagcc 660

agcgctgctg ttgaataccc ggcgctttgc tgaccccgag ggcaaaaatc gcgattgccg 720

tcgcgacaaa gttgccctca aacaccagat agcggttgaa gacgactgtc ggcagacgat 780

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cgacataaaa tgtttcaccc gggccagctc aacatcgttc caccagacgc catcgacctt 960

cattgtactg gccacaatga ccccctgagt ccgcccgagg atctgcttca cgttagccgg 1020

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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cgccatcgtg gcgctatcgc ccgtacgctg gccggtggcg atcaccgcgt cagcctcgaa 1140

gaaatcgaca tcgcgcgtca gttcctgaat cgaacgatcg gcgacaatgg catggctacc 1200

gt 1202

<210> 104
<211> 1223
<212> DNA
<213> Klebsiella pneumoniae subsp. pneumoniae HS11286

<220>
<221> source
<222> 1..1223
<223> /organism="Klebsiella pneumoniae subsp. pneumoniae HS11286"
/mol_type="unassigned DNA"

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<400> 104

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aggatgtaac tgttggtcat aaagtgatgc tgcacggctg cactatcggc aaccgcgtac 300

tggttggcat gggttcgatc ttattagatg gtgtcgtcgt tggcgacgac gtcatgatag 360

gtgcgggaag tctggtaccg cagaacaaac agctggaaag cggctacctt tactttggca 420

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

caaataacta tgtgaaatgg aaaaatgagt acctggatca ggataaccag atccagccct 540

gagcatcttc ctgaccatcg cggatcaatg cttctgcctc ttcctctaga tcccaacgat 600

gttcctggaa ggcggccagc cactgcgctg gcccctctgc accgaaacgc tgctgcagga 660

tttgccctga aattgcgcag gttaattgca tcccattcac cagcgcggga aaaaccacgc 720

cctgccgttc ggcatcccat gattcccggt caggaaactg aatcgcctga ttcatgcatt 780

cagttcctgc tgcagcgttt caatgaccgg agcgatagcc ggcagaacgc cgtgccatag 840

cagaacagca tgggcggctt gcgccaccag cattcccagc ccatcggcac agtgaactgc 900

gccatattgc tggcaccagt gaagaaacgg tgtcggccct ttctggtaaa acatgtcata 960

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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tgcgctaacg ctcccggtat gggcgaagag agtggctaac tcacgggcac gagaataggt 1140

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tgccccacca gcaccaacaa gca 1223

<210> 105

<211> 1568

<212> DNA

<213> Proteus mirabilis strain HI4320

<220>

<221> source

<222> 1..1568

<223> /organism="Proteus mirabilis strain HI4320"

/mol_type="unassigned DNA"

<400> 105

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agaagccatg attgaagaga tgagcaaaga gcatcaacag gattttgccg gttttaatat 180

cagctacgat aattatcact ccacacacag tgaagaaaat cgtcaattat cgacgaaaat 240

ttatctagcc ctgaaaaaaa atggtcatat taaaagtaaa acgatttctc aactttatga 300

tgaagaaaaa ggcatgttct tgcctgatcg ttttgttaaa gggacttgcc ctaagtgtaa 360

agcgcccgat caatatggtg ataactgtga agtatgtggg tcaacttata gcccgacaga 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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ctatttcttt gatctcccag cctttagcaa tatgttgcaa gagtggatcc gctccggtgc 540

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ccattttatc ggtaaagata tcgtttattt ccacagctta ttctggccgg cagtgttaga 840

aggtagtgaa taccgtaaac caaccaacct atttgtgcat ggctatgtca ccgtcaatgg 900

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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taacctcgcg tcccgtactg cgggttttat cagtaaacgc tttgatggca aattagcggc 1140

aaaccttgat gatgcgaagt tatatcaaca tttcgtcgat atgcaagaaa gcatcgcaca 1200

atgttttgaa aaccgtgaat ttggtaaagc cattcgtgaa attatggcat tagcagacga 1260

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ggctgagttg caagctattt gtactatggg aattaactta ttccgtgtac tgatgactta 1380

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tttaaaacca attctacctt ctttaacaga acgttcagaa gccttcttac aaactgaatt 1440

aacttggaat gctctgtcgc aaccgctgtt aaaccatgaa attactaaat ttaaagcatt 1500

gtttaatcgt attgaaatgg ataaagccaa tgcaatggta gaagcttcaa aaagtaccat 1560

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1568

<210> 106
<211> 1536
<212> DNA
<213> Proteus mirabilis strain HI4320

<220>
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<222> 1..1536
<223> /organism="Proteus mirabilis strain HI4320"
/mol_type="unassigned DNA"

<400> 106

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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caactcgatt caaaaagacg ttcagtggtt aggtttccaa tgggatggta acgttcatta 180

ctcctctgac tattttgatc aactgtatca atatgcgatt gagctgatta acaaaggctt 240

ggcttatgtt gatgagttga gtgctgaaga aattcgtgaa tatcgtggca cactcaaaga 300

gccaggaaaa aatagccctt atcgctctcg tagtgtagaa gaaaacttag cgctatttga 360

aaaaatgcgt gcgggtggct ttgaagaggg gaaagcgtgc ctacgtgcga aaattgacat 420

ggcatcacca tttattgtca tgcgtgatcc tgttctttac cggatcaaat tcgctgaaca 480

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ccatcaaaca ggtaacaaat ggtgcattta tccaatgtat gattttaccc attgtatttc 540

tgatgcattg gaaaatatca cacattcttt atgtactttg gaattccaag ataaccgtcg 600

tttatatgat tgggtgttgg ataatatcac tattccttgc caccctcgtc aatatgagtt 660

ctcacgtctt aatcttgaat ataccgtcat gtctaagcgc aagctaaatc agcttgtgac 720

agaaaatatt gttgatggtt gggatgatcc gcgtatgccg acaatttctg gcttacgtcg 780

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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ccgtcaaggt tttgtggaag caagcttaaa agatgcggct attgaaaaag cgtatcaatt 1440

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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ccgtactgtt ggtttacgtg atacttgggc gaagat 1536

<210> 107

<211> 1514

<212> DNA

<213> Proteus mirabilis strain HI4320

<220>

<221> source

<222> 1..1514

<223> /organism="Proteus mirabilis strain HI4320"

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<400> 107

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agccgctgct caggtacttt ctagtgtaga atctgaaatt ggccgtacaa ccgatcctgt 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gcgtatgtat atgcgcgaaa tgggaaccgt tgaactgctc acccgggaag gtgaaattga 180

tatcgcaaaa cgtattgaag atggtattaa ccaagttcaa tgctcagttg ctgaatatcc 240

tgaagcaatc acttatcttc ttgaacaata tgatcgtgtt gaagccggtg aagcgcgtct 300

ttctgattta attactgcct ttattgaccc taatgccgaa gaagtggcag aaagtgatga 360

tgtcaattta ggcaaagacg acgatgaaat cgacaacagc gccgatgacg aagatgaaga 420

cgaagatgaa gatagcgaca cagacagcga tagcgatgat gataacagca tcgatcctga 480

acttgctcgc caaaaattca ccgagcttcg tgaacagtac gaaaaaacgc gtcaatctat 540

taaggccaaa ggtcgtaatc ataaagatac cgaactggaa attttacagt tatcagaaat 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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cgaacaggtt aaagatatta accgtcgtat gtctatcggt gaagcaaaag cacgccgtgc 960

gaaaaaagag atggtcgaag cgaacttacg tttagttatc tctatcgcga aaaaatatac 1020

caaccgtggc ttacagttcc ttgacctgat ccaggaaggg aatattggtc taatgaaagc 1080

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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tatgattgaa acgattaata agctaaaccg tatctcgcgc caaatgttgc aagagatggg 1260

acgtgagcct tcaccagaag agcttgcaga acgtatgctg atgcctgaag ataaaatccg 1320

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aacatcagaa agcttacgtt cagcgacaca cgaagtatta ggtggtttaa cactgcgtga 1500

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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<211> 1518

<212> DNA

<213> Proteus mirabilis strain HI4320

<220>

<221> source

<222> 1..1518

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<400> 108

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cacacttatc aacacgatga cgaatgttat tttaggcccc gatgaagtta aagaaaaata 180

tggggtgcca ccggagttga ttatcgactt tctcgccctg atgggtgact catcagataa 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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gaaaacactt ggcgctaaaa tggttgaaca tgagaaagtt gccaaacttt cttatcaatt 420

agcgacaatt aaaacagatg tagcgcttga taaaaccttt gatgacttag tggttaatga 480

acctaattta gataagttac ttgaaatgtt tacgcgttat gaatttaaac gctggataag 540

tgacttacaa aatggtggtt ggttagctca acgcagtagc cgtaaagcgc cagtccccta 600

tagtgcagaa gtcgcaacac ccaaagagca gccagctgca gacaatttcc cagttatctc 660

tcaagagaac tatgagtcta tattgactca tgaaagctta atgcgctggg ttgaggtact 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gaaaaaagcg cccgcctttg cttttgatac tgaaacagat agcttgaata atattgatgc 780

acgtttaatc ggtctgtcat ttgcggtaga gcctggcaag gccgcttata ttccattgcg 840

tcatgattat ctagatgcac cagagcaatt acctgttgat gaggtactaa ctgctttaaa 900

accgatttta gaagataaaa ccatcttaaa aattgggcaa aacctgaaat tcgaccgcgg 960

cattatggaa aatgaaggca tcgaattaaa cggtatttat tttgatacca tgttggagtc 1020

ttatgtctta aatagtgtga gtagccgcca tgatatggat accttagcgg aaaagcattt 1080

aaatcataaa acgacgacat ttgaagagat tgctggtaaa ggtaaggggc aacttacctt 1140

taatcagatt gaggttgaac aagcgacctt atatgcagcg gaagatgctg atattacctt 1200

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gttactgcat caagcgcttt atcctcaaat agaggcgatt gcaccgctaa aacacgttta 1260

tcacgatatt gagatgccat tagtccctgt gctttcacgc atggagcgta agggcgtatt 1320

gattgacgca caagtgcttg ccatgcaatc ccaagaaatc actcaacgtt tagctgagat 1380

tgaaaaagag acattcgcgt tagcagggca agaatttaat ctctcttcac ctaagcaatt 1440

acaagagatt ttatttgaaa aactcaatct tcctattatc aagaaaacgc caaaaggtgc 1500

cccttcaaca aatgaaga 1518

<210> 109

<211> 1010

<212> DNA

<213> Proteus mirabilis strain HI4320

<220>

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<221> source

<222> 1..1010

<223> /organism="Proteus mirabilis strain HI4320"

/mol_type="unassigned DNA"

<400> 109

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aacaaaacaa tttttacaag cgacacaagc tcgccctaat caacttgata ccctatttaa 120

tcgctatagt gtttggcata gtttatcgtt atggaaacaa actgcagata agctcatgcg 180

ccgacctttc ttattacaag cgcctcgtat ttctgatgaa gggaaactag ctactattgg 240

cgatagcttt gcgcaaaatc aaaccgattt tcttgatgtc acagattatc atcaactaca 300

aacagaatta ggtattcata actggcaaga tttacccaat tattttacgg atcaaccaga 360

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aggatttctt tcccctctgg ttttacatat caaaagctat aatcccttaa tttggcatga 420

agtagagcag tgtgttattt gggaagtggt agataataat ggaaattcgg ccttttttgcg 480

cctttattgg gaaggcgaaa cgcaaaataa tttagaagaa ttacgttttc tcactaaacg 540

agaattagaa atcgttgcga tcaccgtgca acctgttcga cgtgatttca atatcgattt 600

attacccacc accatttgga tcaaaacaga gcaaggcatt gaaatgtttt atctcgattt 660

tgaccaattt ccacgtaaga aaaaacagtc tggttttatt agtcatattc aagaatatat 720

ggctaaacgt aagcgacaaa cggcaatgca tcacagcgaa cctacccttg cacaaaaatt 780

ttgtcgcccc attttatccg tattggaagc ccaagcatgt acagggcgag aacaactttc 840

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgcaatgcaa aaagagcaat tagagagaag caaacaaatt gctgacgatt taggtatgac 900

attaatagct aaccaattaa ctcgttatct cgctttaact gctcgtgact ctcaagcttt 960

attacagtta atttggctat gtgataatct gcaacaatta caaagcccgt 1010

<210> 110

<211> 1028

<212> DNA

<213> Proteus mirabilis strain HI4320

<220>

<221> source

<222> 1..1028

<223> /organism="Proteus mirabilis strain HI4320"
/mol_type="unassigned DNA"

<400> 110

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

taacgaaaaa gtctctgtta ctgatgcaaa tacagggcaa tttagcagtg atgggcaaaa 120

agtcgtttta catgaagcag gcattcagca agccagttgt gattgttccg cagcaggttg 180

ttgcaaacat attttagccg ctattttatg gttacaagcc aacaacaatt cgactgatga 240

tattaatact gataatccca ttgaaacatc agcagaaaaa attatagcgc ctgttgaaac 300

accgccttta ttaccctctt tatttacgct tgatcccgag ttactcatca aaaaagcagg 360

taaacccgcc tgtcggactg cgattaactt aattgaacaa tgggaagata aaactttagt 420

tctagaagac acaggaaccc agctaaaaat ccaactccct gatgttgatg aaccggtcat 480

tttcttacaa gcaagtggtt acgatggcat gttatcccct ttttctagct ctcagaaaaa 540

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agcttttcat cttgcgattg tcgcgaaaat atttaagcaa aatacacagc cttggacgtg 600

gcctgaagat ttaattccct taaaatcttc acaacgccca ctgaatgatg aagaaattgc 660

ccttattaat actattgaac aatttattga tgatctatta cgtcaagggc tatcacacat 720

tagtttaagt agcgcaacgc aattacattt acttaatatg tctgctcgtg ccgagggttt 780

acctcgttta gcctcttatt tacgaacatt aagtactcaa gtcaagcggt tagctgaaag 840

acatttcact atggatgaaa gcaatgtctt acgtctatta gctcatatct cagcctatct 900

tttccagcta tcttatgcga cacctgaaca attaaaaaca ttacgagggc aacttcgccg 960

tcaatatgat gataaaaaaa ccagtctcgc gcttattcct attgatgcac attggtggac 1020

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agcacaaa

1028

<210> 111

<211> 1176

<212> DNA

<213> Proteus mirabilis strain HI4320

<220>

<221> source

<222> 1..1176

<223> /organism="Proteus mirabilis strain HI4320"

/mol_type="unassigned DNA"

<400> 111

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gcacatatgc tcactcatat aaaaaccatc aaacagtacg agcctaatgc caaaatatta 120

atcgtcacag ggggagccca cacccttgcg ctaatcgaag gcttagcttc ttcacaaccc 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aactctttcg ctatttctag ctcagaacaa aagcacttta ctaaaatgca aaaaatgggc 240

gaaaaagagc aagcttggct tattcgctat agctttgaca gattagatgc acttaatggc 300

tatgcatctg gtatgccatc tccggctttt taccaacaag cttggcaaag cttaatgcaa 360

caacatcatg ataaattaga aaacaatgag gcggcaaaac agccaacgca agtttatcgc 420

aataaaatgg gcatcgcctt tttaagctca gtggctcaga ctatcagaga acaacaattt 480

gataatccac ccagttattt aaccgtaaaa ctagcagccg agcagagttt acgcctcgct 540

ttactaagag agcacactgg tatggggcgt tatgatttgc ttgatgggtt acaaagcgcc 600

tttattaaag gcagtttaga tgacagtcaa aacgaattat gggacgaaat caaaacctgt 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttttcaggtt atctattagg acaaattcca ttaggtacag caacgccccc tttagtcaat 720

gaaacctatg aacgcgccaa agcatttcgc tttaaacttg atgatacatt agcaaaaact 780

acaaaatgtg atgtttatcg caacccccaa catcgcttaa gaagtcgttt tttacattta 840

ttggcatttt tagaaatcca ttttgcccac cgtgtcaatg gacctgattt tctttctggt 900

caccagttag atctattatt tgaagaatgg caatatgcat ggacccccaa tgttgaaggt 960

gaactgatct cattatcaga aaaaggctct caacttgaaa ctatcgcctt aaataaactg 1020

ttagcaatgg aaaaacagct tgcagaacaa ggacaaagcc gttcaagcca aagtgcggtc 1080

actttgttaa ttcaagcggc attaattggg ctccaccagc gtatccctac gctatttaaa 1140

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctgctagata gctatattca gcaagatttt cgcctt 1176

<210> 112

<211> 1060

<212> DNA

<213> Pseudomonas aeruginosa strain R13

<220>

<221> source

<222> 1..1060

<223> /organism="Pseudomonas aeruginosa strain R13"
/mol_type="unassigned DNA"

<400> 112

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cgctaatacc gcatacgtcc tgagggagaa agtgggggat cttcggacct cacgctatca 120

gatgagccta ggtcggatta gctagttggt ggggtaaagg cctaccaagg cgacgatccg 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

taactggtct gagaggatga tcagtcacac tggaactgag acacggtcca gactcctacg 240

ggaggcagca gtggggaata ttggacaatg ggcgaaagcc tgatccagcc atgccgcgtg 300

tgtgaagaag gtcttccgat tgtaaagcac tttaagttgg gaggaagggc agtaagttaa 360

taccttgctg ttttgacgtt accaacagaa taagcaccgg ctaacttcgt gccagcagcc 420

gcggtaatac gaagggtgca agcgttaatc ggaattactg ggcgtaaagc gcgcgtaggt 480

ggttcagcaa gttggatgtg aaatccccgg gctcaacctg ggaactgcat ccaaaactac 540

tgagctagag tacggtagag ggtggtggaa tttcctgtgt agcggtgaaa tgcgtagata 600

taggaaggaa caccagtggc gaaggcgacc acctggactg atactgacac tgaggtgcga 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aagcgtgggg agcaaacagg attagatacc ctggtagtcc acgccgtaaa cgatgtcgac 720

tagccgttgg gatccttgag atcttagtgg cgcagctaac gcgataagtc gaccgcctgg 780

ggagtacggc cgcaaggtta aaactcaaat gaattgacgg gggcccgcac aagcggtgga 840

gcatgtggtt taattcgaag caacgcgaag aaccttacct ggccttgaca tgctgagaac 900

tttccagaga tggattggtg ccttcgggaa ctcagacaca ggtgctgcat ggctgtcgtc 960

agctcgtgtc gtgagatgtt gggttaagtc ccgtaacgag cgcaaccctt gtccttagtt 1020

accagcacct cgggtgggca ctctaaggag actgccggtg 1060

<210> 113

<211> 385

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Pseudomonas aeruginosa UCBPP-PA14

<220>

<221> source

<222> 1..385

<223> /organism="Pseudomonas aeruginosa UCBPP-PA14"

/mol_type="unassigned DNA"

<400> 113

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cacactttca ccttggccta ccagaaggtc catggcgatc agccgtttga ttatatcggc 120

ttcggcgaga acggttccgg cggcggcggt gactcgattt tcctcgccaa ctccgtgcag 180

tactccgact tcaacggccc cggcgagaaa tcctggcagg cccgctacga cctgaacctc 240

gcctcctatg gcgttcccgg cctgactttc atggtccgct atatcaatgg caaggacatc 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gatggcacca agatgtctga caacaacgtc ggctataaga actacggcta cggcgaggac 360

ggcaagcacc acgagaccaa cctcg 385

<210> 114

<211> 420

<212> DNA

<213> Pseudomonas aeruginosa PAO1

<220>

<221> source

<222> 1..420

<223> /organism="Pseudomonas aeruginosa PAO1"

/mol_type="unassigned DNA"

<400> 114

ccacccttgc caatgcggga atcacgctgg gaggaacccg ggtcgttctg caggcgcctg 60

ccaaggaggc tgcaatcctg gtcaggaacc aggcttccaa tgacgtgatg attcaatcct 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gggtagaggc tgataatggg gcagataaac gtgaggttcc gtttgtcatc acgcctgccc 180

tcagtcgttt gggaggcaat aagcagcaaa ccctgcgtat cctgtttcaa ggggaaggct 240

tgccgagcga cagggaatcc gtattccgcc tgaacgtcca ggaaattcca caaaaatctg 300

cgtcggctaa tacgttgcag atagctttgc gccagcgtat caaggtcttc taccgccctg 360

ataacttatc gggaacttcc gccgaagcgc ctggaaagtt gaactggcgt cttgtccggc 420

<210> 115

<211> 378

<212> DNA

<213> Pseudomonas aeruginosa PAO1

<220>

<221> source

<222> 1..378

<223> /organism="Pseudomonas aeruginosa PAO1"

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

/mol_type="unassigned DNA"

<400> 115

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ctcgcgtgaa aacacctgaa acgttttagc tcgatggccg gttatccacc cggcgccatg 120

gcccatattc agaacctgaa acaaggttga taaggtcaac taaaataagc aaaatagttg 180

actggatcaa ccacatttac attaggttta ctcggccaaa ccaatgaact accccgtgaa 240

tcccgacctg atgcccgcgc tgatggcggt cttccagcat gtgcggacgc gcatccagag 300

cgagctcgat tgccagcgac tcgacctgac cccgcccgac gtccatgtat tgaagcttat 360

cgacgaacaa cgcgggct 378

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 116

<211> 1513

<212> DNA

<213> Serratia marcescens strain MG1

<220>

<221> source

<222> 1..1513

<223> /organism="Serratia marcescens strain MG1"

/mol_type="unassigned DNA"

<400> 116

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gttaatttac aaaaagattt tactgttgaa gagcagggca aagatacggg gatgcttacc 120

ctggctatga caggggacga ccctcaatta atcgggaaga tattagaaag cattagtcgg 180

aattatttgc agcaaaatat tgatcgccag gcagctcaag actcaaaaag tcttgatttc 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctagatcaga aaatccctaa ggtacgttct gagctctatt tagctgagga caaactaaat 300

tcttatcgac gtcagaaaga ttctgttgat ttaaatttgg aagctcagtc tgtattaaat 360

cgcatagtca atgtagataa ccagttaaat gaactgacat ttaaagaagc agagatctct 420

caactttata caaaggatca cccgacatat aatgcactaa tgcagaaaag ggaaacgtta 480

cagcaagaga agtccaagct taacaagcaa atctctgcaa tgcctgcaac tcaacaagaa 540

gtattgagac tcagtagaga tgttgagtct ggaagagctg tctatatgca actcttgaac 600

aggcagcaag agttgaatat tgctaagtcg agtgctattg gtaatgttcg aatcattgat 660

aatgcgatca ctgaacctaa accggtaaag ccaaagaaag cattgatagt tattatcggt 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atttcttgg gtggttttat ttctatcggt gttgtgctga ttaacgtctt cttgcgcaga 780

ggcattgagt ctccagaaca actggaagag caaggaatta atgtttatgc cagcattccg 840

gtttcagaat ggctgcaaaa gaacacattg agcaaggcaa aaagcaaacg gctgacggtt 900

agtcagagaa gaataaatga atcaggtgca ttcctcgccg ttgagaatcc agcagactta 960

gctattgaag ctattcgtgg tcttcggaca agtttacatt ttgcaatgat ggaatcacca 1020

aataatgcag ttatgatttc aggtgcgagt ccaagtgcag gtaaaacttt tgtcagtacg 1080

aacttagctt cggtgattgc tcaaagtcat cagaaagtat tgctaatcga tgccgatatg 1140

agaaaggggt atgtacacaa attattcaat gtaaataacg ataacggttt atctgactat 1200

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cttgtaggga aagctaagtt agaagatgct atcaagcctg taacaagtgc tggcttcgat 1260

ttcatttcaa gaggacaggt accgccaaat ccagctgaac tattaatgca tgatcgcttt 1320

aaagagttgc tggagtgggc tacaaaaaca tatgatttgg tcatgatcga tacgccaact 1380

attttggccg taacagatgc cgctattata ggtcgatatg caggaaccac cttgcttgtt 1440

gcacgctttg aaaataatac agtcaaggaa attgatgtca gtataaagcg ttttgagcaa 1500

agcggcgtcc cag 1513

<210> 117

<211> 1000

<212> DNA

<213> Serratia marcescens subsp. marcescens

<220>

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<221> source

<222> 1..1000

<223> /organism="Serratia marcescens subsp. marcescens"

/mol_type="unassigned DNA"

<400> 117

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aataaaacaa gccgacaaga agggttattt ccaattgcgt tattagtctc tcattttgtc 120

ggtgaaatac gctcaactta caacattatt tcagtcagga gtgacttatg aacaaaactt 180

cccgtaccct gctctctctg ggcctgctga gcgcggccat gttcggcgtt tcgcaacagg 240

cgaatgctca cggttatgtc gagtcgccag ccagccgcgc ctaccagtgc aaactgcagc 300

tcaacacgca gtgcggcagc gtgcagtacg aaccgcagag cgtcgaaggc ctgaaaggct 360

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tcccacaggc cggcccggct gacggccaca tcgccagcgc cgacaagtcc accttcttcg 420

aactggatca gcaaacgccg acgcgctgga acaagctcaa cctgaaaacc ggcccgaact 480

cctttacctg gaagctgacc gcccgtcaca gcaccaccag ctggcgctat ttcatcacca 540

agccgaactg ggacgcttcg cagccgctga cccgcgcttc ctttgacctg acgccgttct 600

gccagttcaa cgacggcggc gccatccctg ccgcacaggt cacccaccag tgcaacatac 660

cggcagatcg cagcggttcg cacgtgatcc ttgccgtgtg ggacatagcc gacaccgcca 720

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gttaagggtt cagcctggcg ctgaaccctt ttttttgcag gtgccgctat tgcgacatgt 840

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgaggatagt gcgcacattg agcgcgctgg tggcgataat gtcgatggcg ccggtgcgca 900

aagcgcccaa aatcgccaac gccttggtat tctcggaagc aatggcgatc acgcaaggga 960

ttttgcgcag ctcatcaatg ctcagcccga tcactctgtc 1000

<210> 118

<211> 1063

<212> DNA

<213> Staphylococcus aureus subsp. aureus Mu50

<220>

<221> source

<222> 1..1063

<223> /organism="Staphylococcus aureus subsp. aureus Mu50 "

/mol_type="unassigned DNA"

<400> 118

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Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctacttatga tataccaagg tttgataaat caccttatga tggttttgca attcgcagtg 120

ttgattcaca aggggcaagt ggtcagaatc gcattgagtt taaagtgatt gatcatattg 180

gtgcaggttc agtttctgat aaattagttg gggatcacga agcggtgcgt attatgactg 240

gagcacaaat accaaatggc gcagatgctg ttgttatgtt tgaacaaacg attgaactag 300

aagatacatt tacaattcgt aaaccatttt caaaaaatga aaatatatct ttaaaaggtg 360

aagaaacaaa gacaggcgat gttgttctaa aaaaaggaca agtaattaac ccaggggcta 420

tcgcggtcct tgcaacatat ggctatgcag aggttaaagt tattaagcaa ccgagtgtcg 480

ctgttattgc aacaggaagc gaattattag atgttaatga tgtattagaa gatggaaaaa 540

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttcgtaactc taatggccca atgattcgtg ccttagcaga aaaattaggt cttgaagttg 600

gtatttacaa aacacaaaaa gatgatttag atagtggcat ccaagtcgtt aaagaagcta 660

tggaaaaaca cgatatcgtt attacaacgg gtggagtttc tgttggagac tttgactatt 720

tacctgagat ttataaggct gtaaaggcgg aagtgttatt taataaagta gcaatgcgtc 780

ctggtagcgt aacaacggtt gcatttgcag atggaaagta tttgtttgga ttatctggaa 840

atccatcagc ttgttttaca ggatttgaac tatttgtgaa accagctgtt aaacatatgt 900

gtggcgcact agaagtcttc ccgcaaataa ttaaagcaac attaatggaa gattttacca 960

aggcaaaccc attcacacga tttatacgtg ctaaagcaac gttaacaagt gctggagcta 1020

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctgtagtacc ttcaggattc aataaatcag gtgcggttgt agc 1063

<210> 119

<211> 1146

<212> DNA

<213> Staphylococcus aureus subsp. aureus Mu50

<220>

<221> source

<222> 1..1146

<223> /organism="Staphylococcus aureus subsp. aureus Mu50 "

/mol_type="unassigned DNA"

<400> 119

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gtttttcgct aaccatttat taaaggcaaa tcatttttta cagtttttca ttattttgta 120

tacatatcgt atgattatta cgctttgttt gctatttttt gatgatttga tatttattac 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggttaaggaa gttcttgcat ctacagttaa atatgcattt gtagtcattt atttctattt 240

agggatgatc atctttaagt taggtaatag caaaaaagtg atcgttacct cttatattat 300

aagcagtgtg actataggtc tattttgtat tatagctggt ttgaacaagt ccccttttact 360

aatgaaattg ttatattttg atgaaatacg ttcaaaagga ttaatgaatg accctaacta 420

tttcgcgatg acacagatta ttacattggt acttgcttac aagtatattc ataattacat 480

attcaaggtc cttgcatgtg gtattttgct atggtcttta actacaacgg ggtctaagac 540

tgcgtttatc atattaatcg tcttagccat ttatttcttt attaaaaagt tatttagtag 600

aaatgcggta agtgttgtga gtatgttagt gattatgctg atattacttt gttttacctt 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttataatatc aactactatt tattccaatt aagcgacctt gatgccgtac cgtcattaga 720

tcgaatggcg tctatttttg aagagggctt tgcatcatta aatgatagtg ggtctgagcg 780

aagtgttgta tggataaatg ccattttagt aattaaatat acactaggtt ttggtgtcgg 840

attagtggat tatgtacata ttggctcgca aattaatggt attttacttg ttgcccataa 900

tacatatttg cagatctttg cggaatgggg cattttattc ggtgcattat ttatcatatt 960

tatgctttat ttactgtttg aattatttag atttaacatt tctgggaaaa atgtaacagc 1020

aattgttgta atgttgacga tgctgattta ctttttaaca gtatcattta ataactcaag 1080

atatgtcgct tttattttag gaattatcgt ctttattgtt caatatgaaa agatggaaag 1140

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggatcg

1146

<210> 120

<211> 1000

<212> DNA

<213> Staphylococcus aureus subsp. aureus Mu50

<220>

<221> source

<222> 1..1000

<223> /organism="Staphylococcus aureus subsp. aureus Mu50 "

/mol_type="unassigned DNA"

<400> 120

atcgcacgta ttactcccat ttatgtttgg tcctattatc gcatcaatca tttgtgtgaa 60

agttttcaaa cttgatatta aatggccatt cttacttagt gaattaggga ttgtactatt 120

aggggtgcaa atcggatcaa cgtttacgaa aaatgtcgtt atggatatta aaaacaattg 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gctttcgatt attgttgtat ctatttcgat attattaatt gcaatagtaa tggcatttat 240

ttttaaaaaa attgcacgta ttaatacaga aacagctatt ttaagtgtta taccaggagc 300

actaacacaa atgctggtca tggctgaaca agacaaacgt gctaatttgt tagttgttag 360

cttaacgcaa acatcacgaa ttatatttgt tgttgtttta gtaccgttca tttcatattt 420

ttttcatgat ggtaacatgc atgcgaatgg aaagttaaca aaagtcttgc ctttatcaca 480

agtattaaac atagggcaaa tagttatttt agcgatagct atctttatag tttatctaat 540

tatgtctaaa ataaagtttc caacatttca attattagca ccactcattg tattaattgt 600

ttggaatttt tctacaggtt taacatttac actagatcat tggttgttga acatggcaca 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

actaatatat atgattagaa ttggagttca aattgcgcat ttattgtcag atttaaaagg 720

tagactagca atcgcaatta caattcaaaa tattatgttg ataattggtg cgctaatcat 780

ggtttatatc atacatttct ttgataataa tcctattaat gaattgtttc ttggtgcagc 840

accaggaggg gttaatcaga tagttttagt tgcattagct actggtgccg atgttgctat 900

gattacgagt tatcatattt tccgaatctt tttcatccta tttattattg caccaggaat 960

taattacttt ttaaaatatc gttcgaataa gcgtgaagat 1000

<210> 121

<211> 911

<212> DNA

<213> Staphylococcus aureus subsp. aureus Mu50

<220>

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<221> source

<222> 1..911

<223> /organism="Staphylococcus aureus subsp. aureus Mu50 "

/mol_type="unassigned DNA"

<400> 121

ccgaattata tatctggaca aagcattgcg gaatcactta atatttcacg cactgcagta 60

aaaaaggtga ttgaccaatt aaagttagag ggatgtaaaa ttgattcagt aaatcataaa 120

gggcatttat tacaacaact cccagatatt tggtatcagg gtataataga ccaatataca 180

aaaagttctg ctttgtttga ttttagtgaa gtatacgatt caatagattc tacacaactt 240

gctgcgaaaa agtcacttgt tggaaatcaa tcttcatttt ttatcttgag tgatgaacaa 300

acgaaaggtc gtgggcgatt taatagacat tggagttctt caaaagggca aggactttgg 360

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atgtctgtcg tgttaagacc taacgttgca ttctcaatga tatctaaatt taatttattt 420

attgcattag ggataagaga tgcgattcaa cattttagtc aagatgaagt caaagtgaaa 480

tggccgaatg atatatatat tgataatggt aaagtgtgtg gtttcttaac tgaaatggtt 540

gctaataatg atggtataga agcaataata tgtggtatag gtattaattt gacgcaacaa 600

ctagaaaact ttgatgaaag tattagacat agagcaacaa gtatacaatt acatgataaa 660

aataaattag atagatatca atttttagag agattacttc aagaaattga aaaaagatat 720

aatcaatttt taacgttacc tttttctgaa attcgtgaag aatatattgc agcttctaat 780

atttggaata gaacgttgct atttacagaa aatgataaac agtttaaagg acaagcaatt 840

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gatttagatt acgatggcta tctaattgtt agagatgaag cgggtgaatc acaccgttta 900

attagtgcag a 911

<210> 122

<211> 1059

<212> DNA

<213> Staphylococcus aureus subsp. aureus Mu50

<220>

<221> source

<222> 1..1059

<223> /organism="Staphylococcus aureus subsp. aureus Mu50 "

/mol_type="unassigned DNA"

<400> 122

tcggtcgctt aaatcggtag ggtatataga tagacagtat attgaagtag aaaataagag 60

atgtacgaac tatacatcta atgattattt aggattaggt caaatagcgt ttgataagga 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgatttcgaa agatttatgc ggaagtatag ttatcactta tcaagttcaa gattaattag 180

tggaagttcg acagcttatg aagaaattga aacaatgtta gcaggttggc tcggatatag 240

tgcatgtact atcttaaata gtggttatga tgctaatttg gcgttgttta atattttcaa 300

aaatacaaat tgtgtcgtgt tttcagatca agaaaatcat gcgagtatta ttgacggtat 360

taagttaagt ggtttagaaa aagtgatata taagcattta gatattgctg atttagaaaa 420

aaggttagag aaataccta atcaaaatat accaaaaata atcatatctg atagtgtatt 480

ttcaacgaat ggcgacgttg tggatattgg tcaattagtc tcattaaagc ataaatataa 540

cgcaacactg atactcgatg tttcacatag ttttggaata gagaattact cgaattatca 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aggtgtagat atactcactt ctagtttatc taaagcatgt ggtgcatacg ggggtgtgat 660

tttaagttca aatgatgtga aggatatgtt aattaatcac ggtagaccac tcatctactc 720

aagtagtttg ccaatttata atttgtattt tataaaaaga aacattgaaa agttaataaa 780

tgctgatgat agacgcacta aattaaatag tttgagtaaa tattttaacc aaaagttaaa 840

agcactcaat gttaattata atagttcaaa ctcgccgatt aagtttattg agtttgatga 900

catagaagcg gctgagaaca ttcatcaaac attattaaag catcatgtgt ttacaagtta 960

tttaaggtat ccaactgtga ctaagccaat gttaagaata tcattgtcgt attttcatac 1020

tgaacaagat atagataggt tgtttgaaat tttgcatca 1059

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 123

<211> 1352

<212> DNA

<213> Staphylococcus aureus subsp. aureus Mu50

<220>

<221> source

<222> 1..1352

<223> /organism="Staphylococcus aureus subsp. aureus Mu50 "

/mol_type="unassigned DNA"

<400> 123

acgcgctgaa attgcaacaa gcaatcaaga ccaagaaact aattcatcga aacgcgttca 60

cttaaaacgt tggcaattca tatcaatatt aattggcaca accctaataa cagctgtcat 120

cacagttgtt gcatatattt ttataaatca aaaaataagt ggtttaaaca aaactgatca 180

agcaaactta ataaaattg aaaatgtgta taaaatctta aatagtgatt attacaaaaa 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

acaggactct gacaagttaa gtaaagctgc aattgatggt atggtcaaag aattaaaaga 300

tccttattct gaatatttaa caaaagaaca aacgaaatcc tttaatgaag gtgtttcagg 360

tgattttgta ggtattggtg cagaaatgca aaagaaaaat gatcaaatta tggttactag 420

ccctatgaag ggttctccag cagaacgtgc tggcatccgt cctaaagatg tcattactaa 480

agtaaatgga aaatcaatta aaggaaaagc attagacgaa gttgtcaaag acgttcgtgg 540

taaagaaaac actgaagtaa ctttaactgt tcaacgaggc agtgaagaaa aagacgttaa 600

gattaaacgt gaaaaaattc atgttaaaag tgttgattat aagaaaaaag gtaaggttgg 660

agttattact attaataaat tccagaatga tacatcaggt gaattgaaag atgcagttct 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

taaagctcac aaagatggtt tgaaaaagat tgttttagat ttaagaaata atcctggtgg 780

actactagat gaagctgtta aaatggcaaa tatttttatc gataaaggaa aaactgttgt 840

taaactagaa aaaggtaaag atactgaagc aattcaaact tctaatgact cgttaaaaga 900

agcgaaagac atggatatat ccatcttagt gaatgaaggt tcagctagtg cttctgaagt 960

gtttactggt gcgctaaagg actataataa agctaaagtt tatgggtcaa aaacattcgg 1020

caaaggtgtc gtacaaacta caagagagtt taaggatggt tcattgttaa aatatactga 1080

aatgaaatgg ttaacgccag atggtcatta tattcacggt aagggcatta aaccagacgt 1140

tactattgac acacctaaat atcaatcttt aaatgtcatt cctaatacga aaacatttaa 1200

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agttggagac gatgataaaa atattaaaac tattaaaatt ggtttatcag ctttaggtta 1260

taaagttgat aatgaatcaa cgcaatttga tcaagcttta gaaaatcaag ttaaagcttt 1320

ccaacaagcg aataaactcg aggtaactgg tg 1352

<210> 124

<211> 1474

<212> DNA

<213> Staphylococcus aureus subsp. aureus Mu50

<220>

<221> source

<222> 1..1474

<223> /organism="Staphylococcus aureus subsp. aureus Mu50 "

/mol_type="unassigned DNA"

<400> 124

gcaatggtgg aaagaagcag tagcatatca agtatatcca agaagtttta atgatagtaa 60

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tcacgatggt attggggatt tacctggaat gattgataaa ttggactact taaaagattt 120

aggtatcgat gtcatttggc tcagtccaat gtttaaatca cctaatgatg acaatggtta 180

tgatattagt gactatcaag aaattatgga tgaatttgga acgatggaag actttgattg 240

tttattaaaa ggtattcatg atagaggcat gaagcttatt ttagatttag ttgtaaatca 300

tacatctgat gaacatcctt ggtttataga atctaaatct agtaaagaca atcccaaacg 360

tgattggtat atttggcaag atccaaagca agatggctct gaacctaaca actgggaaag 420

tatctttaat ggatctacat gggaatatga tgctaatact gagcaatatt atttccattt 480

attcagtaaa aaacaacctg atttgaattg gggtaatcca gaagttagag atgctgtatt 540

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgaaatgatg aactggtggt ttgataaagg cattgatgga tttagagtag atgcaattac 600

gcatattaag aagacgtttg aagcgggtga cttacctgta cctgagggta aaacatatgc 660

cccagcattt gatgtagata tgaatcagcc aggtatacaa acttggttac aagagatgaa 720

agatcgctca ttaagtaagt atgacattat gactgtcggt gaagcgaatg gtgtaagccc 780

tgatgatgct gatgactggg tcggggaaga aaatggtaaa tttaatatga tattccaatt 840

tgaacatttg ggactgtgga atagtggtga ttctcacttt gatgtaaatt cgtataaatc 900

tgtattaaat agatggcaaa aacaacttga aaataaaggt tggaatgcgt tgtttattga 960

aaatcacgac caaccacgac gtgtatcgac gtggggtgac gatgacaagt attggtatga 1020

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atcagcaaca agtcatgcag ctgtttattt cttgcaacaa ggtacgccat tcatttatca 1080

aggtcaagaa attggtatga cgaattatcc atttgaaagt attgaaacgt ttaacgatgt 1140

tgctgtaaaa aatgactatc aaatagtgaa agctcaaggt ggagatgtag acgctttact 1200

tgcgaaatat aaagatgaga accgagataa ttctcgcaca ccaatgcaat gggatgatac 1260

gttaaatgga ggatttacaa atggtgaacc gtggttccca gtgaatctga attataaaac 1320

tatcaatgtt gcacaacaat tagaagatga gcattcagta ttacaatttt ataaagattt 1380

aattcaatta agaaagtcta atgatgtata cgtatatggt caatttgatt tagtagatgc 1440

tgaaaattca caagtttttg cgtacacgag aaca 1474

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 125

<211> 1468

<212> DNA

<213> Staphylococcus aureus subsp. aureus Mu50

<220>

<221> source

<222> 1..1468

<223> /organism="Staphylococcus aureus subsp. aureus Mu50 "

/mol_type="unassigned DNA"

<400> 125

gtgcgcgtcg tggtgagcta gtgtcatgtt tcttattaga agtggatgac agcttaaatt 60

caattaactt tattgattca actgcaaaac aattaagtaa aattgggggc ggcgttgcaa 120

ttaacttatc taaattgcgt gcacgtggtg aagcaattaa aggaattaaa ggcgtagcga 180

aaggcgtttt acctattgct aagtcacttg aaggtggctt tagctatgca gatcaacttg 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gtcaacgccc tggtgctggt gctgtgtact taaatatctt ccattatgat gtagaagaat 300

ttttagatac taaaaaagta aatgcggatg aagatttacg tttatctaca atatcaactg 360

gtttaattgt tccatctaaa ttcttcgatt tagctaaaga aggtaaggac ttttatatgt 420

ttgcacctca tacagttaaa gaagaatatg gtgtgacatt agacgatatc gatttagaaa 480

aatattatga tgacatggtt gcaaacccaa atgttgagaa aaagaaaaag aatgcgcgtg 540

aaatgttgaa tttaattgcg caaacacaat tacaatcagg ttatccatat ttaatgttta 600

aagataatgc taacagagtg catccgaatt caaacattgg acaaattaaa atgagtaact 660

tatgtacgga aattttccaa ctacaagaaa cttcaattat taatgactat ggtattgaag 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

acgaaattaa acgtgatatt tcttgtaact tgggctcatt aaatattgtt aatgtaatgg 780

aaagcggaaa attcagagat tcagttcact ctggtatgga cgcattaact gttgtgagtg 840

atgtagcaaa tattcaaaat gcaccaggag ttagaaaagc taacagtgaa ttacattcag 900

ttggtcttgg tgtgatgaat ttacacggtt acctagcaaa aaataaaatt ggttatgagt 960

cagaagaagc aaaagatttt gcaaatatct tctttatgat gatgaatttc tactcaatcg 1020

aacgttcaat ggaaatcgct aaagagcgtg gtatcaaata tcaagacttt gaaaagtctg 1080

attatgctaa tggcaaatat ttcgagttct atacaactca agaatttgaa cctcaattcg 1140

aaaaagtacg tgaattattc gatggtatgg ctattcctac ttctgaggat tggaagaaac 1200

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tacaacaaga tgttgaacaa tatggtttat atcatgcata tagattagca attgctccaa 1260

cacaaagtat ttcttatgtt caaaatgcaa caagttctgt aatgccaatc gttgaccaaa 1320

ttgaacgtcg tacttatggt aatgcggaaa cattttaccc tatgccattc ttatcaccac 1380

aaacaatgtg gtactacaaa tcagcattca atactgatca gatgaaatta atcgatttaa 1440

ttgcgacaat tcaaacgcat attgacca 1468

<210> 126

<211> 1080

<212> DNA

<213> Staphylococcus aureus subsp. aureus Mu50

<220>

<221> source

<222> 1..1080

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<223> /organism="Staphylococcus aureus subsp. aureus Mu50 "

/mol_type="unassigned DNA"

<400> 126

gtcgaagctt atgctactga aattggcata actttgaaaa gtatcaaaaa tgcccgtaag 60

gaacttaaaa actggactaa aacaaaaaat gtagacacac ctttatattt atttccaaca 120

aaaagctata tcaaaaaaga accttatgga acagttttga tcattgcacc atttaactat 180

ccttttcaac tagtattcga acctttaatc ggtgctattg cagcaggtaa tacagcaatt 240

attaaaccat ctgagttgac accaaatgtt gcacgagtga ttaaacgatt aatcaatgaa 300

acatttgatg caaattacat tgaagttatt gagggaggaa ttgaagaaac gcaaacgtta 360

attcacttac cttttgacta tgtcttcttt acaggaagtg aaaatgtagg caaaatcgtt 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tatcaagctg ccagcgaaaa tttagttcct gtgacattag aaatgggtgg taaatctcca 480

gtcatcgttg atgaaacagc gaatattaaa gttgctagtg agcgcatttg ttttgggaaa 540

ttcactaatg ccggccaaac atgtgttgca ccagattaca ttttagtaca cgaatctgta 600

aaagatgatt taatcacagc cctatcaaaa acgttgcgtg aattttatgg tcaaaatata 660

caacaaagtc cagattatgg ccgcattgta aaccttaaac attatcatcg tctgacttca 720

ttacttaaca gtgcacaaat gaatattgta tttggtggtc atagtgatga ggatgaacgt 780

tatatagaac caacattgtt agatcacgtt acaagtgatt cagcaattat gcaagaagaa 840

atttttggtc ctatcttacc gattttaacg tatcagtcat tggatgaagc aatagccttt 900

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

attcaccaaa gaccaaaacc tttgagttta tatttattta gcgaagatga aaatgctaca 960

caacgtgtaa taaacgagtt atcatttggc ggcggcgcta ttaatgatac attgatgcac 1020

ctagcgaatc ctaaattacc atttggtggt gttggcgcct caggtatggg acgctatcat 1080

<210> 127

<211> 1498

<212> DNA

<213> Staphylococcus aureus subsp. aureus Mu50

<220>

<221> source

<222> 1..1498

<223> /organism="Staphylococcus aureus subsp. aureus Mu50 "

/mol_type="unassigned DNA"

<400> 127

tgcaatttct gatggtgcat tacctgccaa tgaaggtaga ggatatgtat tacgtcgatt 60

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gttacgtcgt gccgttcgtt ttagtcaaac gttaggaatc aatgagccat ttatgtacaa 120

acttgttgat attgttgcag acattatgga accatattat ccaaatgtta aggaaaaagc 180

agatttcatt aagcgtgtta taaagtctga agaagaacga ttccatgaaa cattagaaga 240

tggtttagcg attttaaatg aattaattaa aaaagctaaa gcgacaacaa atgaaattaa 300

tgggaaagat gcatttaaat tgtatgatac gtacgggttc ccaattgaat taactgaaga 360

aatagcagtg caagcaggat tgaaagttga tatgacaaca tttgagtcag aaatgcaaca 420

acaacgtgat cgtgcacgtc aagcacgtca aaattctcaa tcaatgcaag ttcaaagtga 480

agtattgaaa aatattacat ctgcaagtac ttttgttggt tatgatactg cgacagctca 540

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aacaacacta acacacttga tatataatgg tgaagaagtt tcacaagttg aagcgggtga 600

aacagtatac ttcatgttaa cggaaacacc attttatgca gtcagtggtg gacaagttgc 660

ggatacaggt attgtttata atgacaattt tgaaattgct gttagtgaag taaccaaagc 720

accaaatggt caaaacttgc ataaaggagt agtacaattt ggccaagtaa atgttggcgc 780

tacagtgtct gctgaagtga accaaaatga tcgacgtgac attcaaaaga accatagtgc 840

aacacattta ttacatgcag cgttgaaatc agtactgggt gatcatgtta accaagctgg 900

ttcactagta gaagcagatc gtttacgttt tgatttctct cattttggtc caatgactaa 960

tgatgaaatt gatcaagttg aacgcttagt aaatgaagaa atttggaaag gtattgacgt 1020

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

taacattcaa gaaatggata ttgcttcagc taaagaaatg ggcgcaatgg cattattcgg 1080

tgaaaaatat ggtgatgttg tgcgtgtagt aaatatggca ccattttcaa ttgaattatg 1140

tggtggtatt catgtccgca atacttctga aattggctta ttcaaaatag taagtgagtc 1200

aggtacagga gctggtgtgc gtcgtattga agcattaaca ggtaaagcag ctttcttata 1260

tttagaagat attcaagaga aatttaatac gatgaaatca cagatgaaag tgaaatctga 1320

tgatcaagta gtcgaaaagt taacacaatt acaagatgaa gaaaaagcat tattaaaaca 1380

attagagcaa cgtgacaaag aaatcacatc acttaaaatg ggtaatattg aagatcaagt 1440

tgaagaaatc aatggctata aagtattggt tactgaagtg gatgtaccaa atgcgaaa 1498

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 128

<211> 1572

<212> DNA

<213> Staphylococcus aureus subsp. aureus HO 5096 0412

<220>

<221> source

<222> 1..1572

<223> /organism="Staphylococcus aureus subsp. aureus HO 5096 0412"

/mol_type="unassigned DNA"

<400> 128

accgcatgtt ctactccacc gatatataaa tcaacaggta accaatgttt taatttttca 60

ggatctgcta acatattttc atttttagga tcgatgtaac gtaaataata ccaacaacta 120

cctgcccatt gtggcattgt atttgtttca cgacgtcctt tcatacctgt tttttcatct 180

acaacattta caaatgaatc aatattagct agtggagact caccagtccc tgatggcttg 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atttcatctg tttcaggtaa caacaatggt agctcttctt caggaacagt tgtcattgtt 300

ccatcttccc aatgaatgac aggaattggt tcgccccaat aacgctgacg actgaataac 360

caatctctta atttgtaatt aactttcttt tcgccagcac ctttttgctc taataattga 420

atagctttag taattgccgc ttcattttct aaaccatcaa gttcaccaga attaatatgt 480

ttaccttcac cagtgtatgc tgcttcttca acatttccac cttcgatgac ttcaatgatt 540

ggcaaatcaa acttttagc aaattcataa tctctgtcat catgcgctgg tactgccata 600

attgctccag taccatatgt tgataataca taatcagcaa tccaaatttg tacttttca 660

ccagataaag gattaattgc atatgcacca gtaaacacac ctgatttatc ttttgctaaa 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tctgtacgtt ctaaatctga ctttttagaa gcttctgttt gataagcttt tacttttttct 780

ttatattcat cagtagtaat tgaattaact aatgcatgtt caggacttaa gactaagaat 840

gatgcaccat agattgtatc tggtctagtc gtaaatactt ctacttttcc ttccgtatta 900

tctacatcaa atgaaacttt ggccccttca gaacgtccaa tccaattgcg ctgcatatct 960

tttaaagact caggccaatc taaatcatct aaatctgcta ataattgatc tgcatattct 1020

gtgattttaa gtacccattg tttcatcggc ttacgataaa ctggatgtcc accacgttca 1080

gagacaccat caatcacttc ttcgttagat aaaacagtgc ctaatgctgg acaccagtta 1140

actgcaactt catcaacgta tgctaaacct ttgttatata actgtatgaa aatccactgt 1200

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gtccatttat agtattctgg atctgttgta ttaacttcac gatcccaatc ataactgaac 1260

cctaattctt taatttgtcg tttaaaagtt tggatatttt tctttgtaaa ttcacgtggg 1320

tcgttgccag tgtctaaagc atattgctct gctggtaatc cgaatgcatc ccaccccatc 1380

ggatgtaata cattatatcc ttgcattctt ttatatcttg aaatgatatc tgttgctgta 1440

tagccctcag gatgtccaac atgtaaacca gcacctgatg gatatggaaa catgtctaaa 1500

gcataaaatt tcttttgacc taagttatca tttgttttaa atgttttatt ttcgtcccaa 1560

tagtcttgcc at 1572

<210> 129

<211> 1453

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Staphylococcus aureus 13101

<220>

<221> source

<222> 1..1453

<223> /organism="Staphylococcus aureus 13101"

/note="mecR1 and mecA"

/mol_type="unassigned DNA"

<400> 129

tccaggaatg cagaaagacc aaagcataca tattgaaaaa ttaaaatcaa aacgtggtaa 60

aattttagac cgaaacaatg tggaattggc caatacagga acagcatatg agataggcat 120

cgttccaaag aatgtatcta aaaaagatta taaagcaatc gctaaagaac taagtatttc 180

tgaagactat atcaaacaac aaatggatca aaagtgggta caagatgata ccttcgttcc 240

acttaaaacc gttaaaaaaa tggatgaata tttaagtgat ttcgcaaaaa aatttcatct 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tacaactaat gaaacagaaa gtcgtaacta tcctctagaa aaagcgactt cacatctatt 360

aggttatgtt ggtcccatta actctgaaga attaaaacaa aaagaatata aaggctataa 420

agatgatgca gttattggta aaaagggact cgaaaaactt tacgataaaa agctccaaca 480

tgaagatggc tatcgtgtca caatcgttga cgataatagc aatacaatcg cacatacatt 540

aatagagaaa aagaaaaaag atggcaaaga tattcaacta actattgatg ctaaagttca 600

aaagagtatt tataacaaca tgaaaaatga ttatggctca ggtactgcta tcaaccctca 660

aacaggtgaa ttattagcac ttgtaagcac accttcatat gacgtctatc catttatgta 720

tggcatgagt aacgaagaat ataataaatt aaccgaagat aaaaaagaac ctctgctcaa 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

caagttccag attacaactt caccaggttc aactcaaaaa atattaacag caatgattgg 840

gttaaataac aaaacattag acgataaaac aagttataaa atcgatggta aaggttggca 900

aaaagataaa tcttggggtg gttacaacgt tacaagatat gaagtggtaa atggtaatat 960

cgacttaaaa caagcaatag aatcatcaga taacattttc tttgctagag tagcactcga 1020

attaggcagt aagaaatttg aaaaaggcat gaaaaaacta ggtgttggtg aagatatacc 1080

aagtgattat ccattttata atgctcaaat ttcaaacaaa aatttagata atgaaatatt 1140

attagctgat tcaggttacg gacaaggtga aatactgatt aacccagtac agatcctttc 1200

aatctatagc gcattagaaa ataatggcaa tattaacgca cctcacttat taaaagacac 1260

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gaaaaacaaa gtttggaaga aaaatattat ttccaaagaa aatatcaatc tattaactga 1320

tggtatgcaa caagtcgtaa ataaaacaca taaagaagat atttatagat cttatgcaaa 1380

cttaattggc aaatccggta ctgcagaact caaaatgaaa caaggagaaa ctggcagaca 1440

aattgggtgg ttt 1453

<210> 130

<211> 740

<212> DNA

<213> Staphylococcus aureus 13101

<220>

<221> source

<222> 1..740

<223> /organism="Staphylococcus aureus 13101"

/note="mecR1 and mecA"

/mol_type="unassigned DNA"

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<400> 130

tctgacacga cttcttcggt tagtcatatg ttagatggtc aacaatcatc tgttacgaaa 60

gacttagcaa ttaatgttaa tcagtttgag acctcaaata taacgtatat gattcttttg 120

atatgggtat ttggtagttt gttgtgctta ttttatatga ttaaggcatt ccgacaaatt 180

gatgttatta aaagttcgtc attggaatcg tcatatctta atgaacgact taaagtatgt 240

caaagtaaga tgcagttcta caaaaagcat ataacaatta gttatagttc aaacattgat 300

aatccgatgg tatttggttt agtgaaatcc caaattgtac taccaactgt cgtagtcgaa 360

accatgaatg acaaagaaat tgaatatatt attctacatg aactatcaca tgtgaaaagt 420

catgacttaa tattcaacca gctttatgtt gtttttaaaa tgatattctg gtttaatcct 480

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gcactatata taagtaaaac aatgatggac aatgactgtg aaaaagtatg tgatagaaac 540

gttttaaaaa ttttgaatcg ccatgaacat atacgttatg gtgaatcgat attaaaatgc 600

tctattttaa aatctcagca cataaataat gtggcagcac aatatttact aggttttaat 660

tcaaatatta aagaacgtgt taagtatatt gcactttatg attcaatgcc taaacctaat 720

cgaaacaagc gtattgttgc 740

<210> 131

<211> 1102

<212> DNA

<213> Staphylococcus aureus subsp. aureus 71193

<220>

<221> source

<222> 1..1102

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<223> /organism="Staphylococcus aureus subsp. aureus 71193"
/mol_type="unassigned DNA"

<400> 131
gttatacatg cgtgcgtgct tttgttcatc attatctcta taggattagt ttttcatcga 60

ttacaaacga aaacgaactc tatagaacct atacataagg aaacaaaatt atcggataat 120

gcaaaatatt tggttgatcg taataaaggc aagggtgagc catcgaaatt aaaggaagta 180

tataatagta aagatcctaa gtataagaag attgacaagt atttacaaaa ttcattattt 240

aatggttcag tagcggtata tgaaaatggc aaattgaaaa tgagtaaggg ctatggttat 300

caagattttg aaaaaggaat taaaaataca ccaaatacga tgtttctaat tggttcagct 360

caaaaatttt caacaggatt actgttaaaa cagttagaag aagaacataa aattaatatt 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aatgattcag taagcaaata tattccatgg tttaaaacat ctaagcctat tcctttaaaa 480

gacttgatgc tgcatcaaag tggattatat aaatataaat cttcaaaaga ctataagaac 540

ttagatcaag cagtgagagc aattcaaaaa cgtggcattg atcctaagaa atacaaaaag 600

catatgtata atgatggaaa ttatttagtg ctagctaaag ttatcgaaga agttaccggc 660

aaatcatatg ccgagaatta ctatactaaa ataggtgatc cattaaaact tcagcattcg 720

gcattttatg atgaaaaatc atttagaaaa tattttgcaa aaggttattc ttataatagt 780

acaggacttt ctttcttgaa gccaaatgtt ttagaacaat attatggtgc aggtaatata 840

tacatgacac caacagatat gggtaaatta attactcaga tacaacaata taaattattt 900

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agtcctaaaa taaccaatcc attattacat gagtttggta cgaaacagta tccagatgaa 960

tatcgatatg gtttctatgt taagccaaca ttgaatagac ttaacggggg attctttgga 1020

caagtcttta ctgtttacta taatgataag tatgtagttg tacttgcatt aaatgtaaaa 1080

ggaaacaatg aagttcgaat ca 1102

<210> 132
<211> 1504
<212> DNA
<213> Staphylococcus epidermidis RP62A

<220>
<221> source
<222> 1..1504
<223> /organism="Staphylococcus epidermidis RP62A"
/mol_type="unassigned DNA"

<400> 132

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggcgtacaaa agagtttgcc ttataccaac tgataggttt aacacgtgga aatattctaa 60

gaatgctcaa tatagaacaa ctagtatttt ttattgtaac aggaatttta ggcactttaa 120

ttggtatttt tggttcaaaa cttttacttg ttatcgcttc taaattaatg aagttaaaca 180

cacatatctc tattggcttt gaaccccaag ctatacttat tactatcgta atgttagctg 240

tcgctttttt attgataatg atacaaaatt acattttctt aaaaaaacac agcattttag 300

ctttgatgaa agacaattat accccggaag ctacccaaaa acggataact acgtttgaag 360

caatcggcgg cattttagga attataatga tagtatttgg atattatatg tctactgaaa 420

tgtttggtgt ttttaaagcc ttaacaactg ctttgattac acctttagc atacttttt 480

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

taactattgt tggtgctttc ttattcttta gaagttctgt atcacttatt tttaaaacac 540

taaaacatat taaacatggt cgtgtaaata tcacagacgt tgtctttaca tcatctatca 600

tgcacagaat gaagaaaaat gcgatgtctc tcacagttat tgctatcatt tcagctttca 660

cggttagtat tctttgcttc gcggcaatta cacaatctaa tactaataca actttagaaa 720

tgacctctcc agatgatttt aatataagcc agaataaaat agctgcgcaa tttaaacata 780

aactagatca aggaaattta aaatatcatc agcggactta tgaagtaatc aatccaaaaa 840

cattaagcga ccacgtcatg aagagtaaaa atggttctga tatgtctact aatacaacat 900

cactaatgat gaactcacat ctcaaaggtc atgaagctaa aataacgaat atacaatcat 960

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

caacaggatt aatagatatt catttaaatc ataagattac agttaaagga aaatctaaac 1020

aatctattat cgttaaagac aaagataact ctaaaatata tccatcccaa ttatcatttg 1080

gagctcctat agttgaggtg agtccggagg tatataacac attaaaaact gacaatattg 1140

ttaataagat gtacggtttt aatttcaaca ctcacaaaga tgtgaaaaaa gcagaaaaaa 1200

ttgcctcaaa agttaatcgt aatattgtat cgcacgatga atataagaaa tttataaacc 1260

aaagcaatgg catacttatc tttgtaacat cattcttagg aatagcattt ttaatggctg 1320

ctggttgtat tatttacatt aaacaaatgg atgaaactga ggatgaactt gataacttta 1380

agatattacg tcgtatagga tttacctaca ctgatatgtc taaaggttta ctattaaaaa 1440

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttgcatttaa ttttggatta ccgcttctta ttgctttatt acatgcatta tttgcagcac 1500

ttgc 1504

<210> 133

<211> 1376

<212> DNA

<213> Streptococcus agalactiae 2603V/R

<220>

<221> source

<222> 1..1376

<223> /organism="Streptococcus agalactiae 2603V/R"
/mol_type="unassigned DNA"

<400> 133

aattcgccga ttgaaagttg gagctgcatc tgtaatgatt gctagtggaa gcattgttgc 60

tttagggcaa tctcatattg tttcagcaga tgagatgtcc caacctaaaa caaccattac 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agctccaaca gctaacactt ctacaaatgt agaaagtagt actgataagg cattatcaaa 180

agttactacg atggagacaa gttcagaaat gcctaaaatg caaaatatgg caaaagttga 240

aaaaacgagt gacaaaccta tgatggtggc tacctctgtt agaaaaatga tggcaacgcc 300

gacacctgta gcgatgacca aaacgactag tgtagatgag gtaaagaaat caactgatac 360

tgcttttaaa cagacagtag acgttccggc tcattatgtt aatgcagcaa aagggaatgg 420

cccatttcta gcaggtgtaa atcaaacgat tccatatgaa gcgtttggtg gagatggcat 480

gttaacgcgt ttaatcctta aatcttctga aggagcaaaa tggtcagata atggtgttga 540

taaaaatagt ccattattac cattgaaagg cttaactaaa ggtaaatatt tctatcaagt 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttctttaaat ggtaatacga caggtaaaga gggacaagct ctcttagatc aaattaaagc 660

taatgataaa catagctacc aagccacaat tagagtttat ggtgctaaag atggtaaagt 720

tgatttaaaa aacatgatta gcccaaaaat ggtaaccatt aacattcctc acattacaac 780

tgatatggaa gtaaaaaatt ctctaaagat ggcctttaaa gaaaaagtag acgtcccagc 840

aaaatatgtt agtgctgcaa aagctaaagg tccattttta gcaggtgtta acgaaacgat 900

tccatatgaa gcgtttggtg gggatggcat gttaacgcgt ttaatcctta aagcttcaga 960

gggagcaaaa tggtcagaca atggtgttga taaaaatagt ccattattac cgttaaaaga 1020

tttaactaag ggtaaatact tctaccaagt ctctcttaat ggcaatacag ccggtaaaaa 1080

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aggccaagct ctcttagatc aaattaaggc aaatggaagc catacttatc aagcaactat 1140

cactatttat ggtacgaaag atggcaaagt tgatatgaat actattttag gacaaaagac 1200

agtgatgatt catattaatg tcgctaaaaa agatatgaat agcacatcaa tgatgatgaa 1260

aaaagataag atgacaatgc ctatgaagaa agaaatgact tcatctaaaa taaataccgg 1320

tatgatgatg tctaacaaca agatgtcagc taatatgcaa atgtcatcac aagcca 1376

<210> 134

<211> 1455

<212> DNA

<213> Streptococcus agalactiae 2603V/R

<220>

<221> source

<222> 1..1455

<223> /organism="Streptococcus agalactiae 2603V/R"

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

/mol_type="unassigned DNA"

<400> 134

gctctgggtg aggagacaag tcaggaagat tttgaggttg actttactga agtggagcaa 60

ttaaaaacag aaatgttctc cgataatgat ttttattact ttgagatgtt gggtgataac 120

taccatgtag aagatttaat tgggatagct tggggaaata gcgatacaat ctacgctact 180

agtaatgtat cgttattgca agaagcttta tttaaaaaag ctttatcaaa acctatcaaa 240

acttatgatt ttaaaagaag taaggtcctt ttaaatcgtt ttaatattga tttaccagag 300

ccagcctttg atactagatt ggccaagtac cttttgtcta ctactgagga taatctagta 360

tcaacaattg ctaggttata tacaaatctg ccactggata ctgatgatgc tgtttatggg 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aaaggtgcta aacgcgctat accagaaaaa acacgatttc ttgagcatct agctaaaaaa 480

gtaaaagttt tagtggattc tgaggctaat attatgcaac agcttaaagc taatgagcaa 540

gaagaattgc tgtttgaaat ggagcaacct ttagcgaatg ttttagctaa aatggaaatt 600

cgaggtatta aggttaagaa aaataccttg aatgaaatgg ccattgaaaa tcaaaaagtc 660

atcgaaacat taacacaaga aatctatgaa ttggctgggc aagagtttaa tattaattct 720

ccaaaacagt taggaaagtt gttgtttgaa acgttaggtc ttcctgtaga aatgactaaa 780

aaaacaaaaa caggttattc aactgcagta gatgtattag agcgcttagc tccgatttct 840

cctcttgtaa ctaaaatttt agagtaccgt caaatcacta aattgcaatc aacctatatt 900

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

attggtttac aagattatat tttagaagat ggtaaaattc atacacgtta tgttcaagat 960

ttgactcaga caggtcgtct ttcaagttct gacccaaacc ttcaaaatat accagttaga 1020

ctagagcaag gacggcttat ccgaaaagct tttgttccat cagaagacaa tgctgtttta 1080

ttgagttcag attattctca aatagaattg cgcgtgttag cacatatttc aaaagacgaa 1140

catttgatcg ctgcctttaa agagggagct gatattcata cttcaacagc tatgcgtgtt 1200

tttggtatcg aaaaacctga gaatgtcact cccaatgatc gtcgaaatgc taaggctgtt 1260

aattttggaa ttgtttatgg tatttcagat tttggtctat cgcataattt aggaatacct 1320

cgtaaactag cgaagcaata tattgacacc tattttgagc gttatcctgg aataaaaaac 1380

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tatatggaaa cagttgttcg tgaagcaaaa gataagggtt acgttgaaac actttttccat 1440

cgtcgtcgtt catta 1455

<210> 135
<211> 1495
<212> DNA
<213> Streptococcus agalactiae A909

<220>
<221> source
<222> 1..1495
<223> /organism="Streptococcus agalactiae A909"
/mol_type="unassigned DNA"

<400> 135
ttgaaagagc gaggactggt gcgttttaca tatccgcctc tagtaacact gacgtatgtg 60

tcctcttcga taattaaact tgcagtatcg atttcaatag tttcagctaa ttcttgaagt 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tcagaacgtc tagtattggc aaatttcttt ttgacctcac gtaactcacg tttcattacg 180

ttatacatcg tacgttcatc actaataatt gccttaagca ttgtgatttg ttgacgaagt 240

tcttcttctt cttctctcaa cgtcacaata tcagtatttg tgagacgata taattgcaat 300

gtgacgatag cctctgcttg ggcttctgaa aactcatagc tgaccttcaa attctctttc 360

gcatcagctt tattctcaga agcacgaatt aatgcaatca cttcatccaa aatagaaaga 420

accctaatca gtccctcaac aatatggaga cgtttttcgg ctttttcttt atcaaatttt 480

gaacgagcaa taataatttc tcttcggtga gcgatatagc tagttaatat tcttgataga 540

cccacctgct taggggtgta gtcatcaata gcaaccatat tgaaattata attcacttgt 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aggtctgtat atttaaaaag ataatttaag acaattgttt catcggcttc tttttgagc 660

tcaatagcga tacgaagacc atctctatca gactcatcac gcacctctgc tattcctgga 720

actttattat taacacgaac atcatcgatt cgttttacta aaactgactt attaacttca 780

taaggaattt cagtaacaat aatttgtttc ttaccacctt ttaaggtttc aatagcagtt 840

cgcgagcgaa ccgctactct ccccttacca gtctcatatg ccttacgaat ttcatctttt 900

ccttgaatga tagcgccagt tggaaaatct ggaccaggta gaaattccat taatttatct 960

aatttagctt tagggtgatc aatcatgtac acgacagcat caatgacttc tgctaaatta 1020

tgtggtggaa tatctgttgc atagcctgca gatattcctg ttgctccgtt gactaaaaga 1080

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttgggaaagg cagctggtaa aacagttggt tctttctctg tatcatcgaa attccaggca 1140

aagggtacgg tattcttatc aatatcttga agaagataac cagcaatttc tgatagacgg 1200

gcttccgtat aacgcatagc cgccgcagga tctccatcca tagaaccatt atttccgtgc 1260

atttcaatca atgtctcacg atttttccaa tcttgagaca tacgaaccat cgcgtcatag 1320

atagaggaat ccccatgagg atggaaattc cccataacat taccgactga ttttgcagat 1380

ttgcgaaatc ccttttcaaa agtattacca tctttattca ttgaataaag gattcgacgt 1440

tgaacaggtt ttaagccatc acgaatatcc ggcaacgccc gttcttgaat gatat 1495

<210> 136

<211> 1004

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Streptococcus agalactiae A909

<220>

<221> source

<222> 1..1004

<223> /organism="Streptococcus agalactiae A909"

/mol_type="unassigned DNA"

<400> 136

gggcaatttg gtgaggacta tagtttttta cttaattttg cttacaatat tccattttca 60

tcggattttt ataatgagtt atttttagaa cacattatag agggtgatat agatattcga 120

ttggttatct cgttgattgt tgatggttct gttgatgata ttgctaaaga gtggtacttt 180

gagaaggaag acctaaatca acttatttct ttagagtccg atattagtgg tagccttgca 240

gttaaacttt ttgctaaggg aaagggtatc attaagttag gtccattgca ccgtcgtaat 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggtagaggag gattgggcac atttctacta ggaggagaac gtcacataga tgctataggt 360

catgaattta tgacttattt tgatccagta gatttcaaac cacctctaac tgtttatttt 420

tcgggatttc gttcagctga aggctttgag ggattctgga tgatgaagag tatgaagact 480

ccattcatgt taatttgtga tccacgatta caaggtggtg ccttttatat aggaagcaaa 540

gaatatgaac aaaaaatagt tgatgctatt caagaaaaac tggccttttt aaattttagt 600

tctgatcagt taattttatc cggactttca atggggactt atggtgctac ttaccatggt 660

gctaagctaa atcctcatgc tattattatt ggtaaaccaa tatttaattt aggaacagtt 720

gctcaacgtg aaagattaga gagaccagat ggatttgcta cttcattaga tattcaacta 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctcaatcaag gtgacttgac cagttcctct tctgagaagt taaataacca ttttttggaaa 840

tctatagaag aaggagattt ttcaaatacg acttttgcct tagcctatat gaaaaacgat 900

gactatgatg cgactgcctt ttctgattta ttgcaatatt ttagaggaaa gaagcataag 960

atattaggca gaggttggga tggccgacat ggtgattgtt ctgc 1004

<210> 137

<211> 1024

<212> DNA

<213> Streptococcus agalactiae 2603V/R

<220>

<221> source

<222> 1..1024

<223> /organism="Streptococcus agalactiae 2603V/R"
/mol_type="unassigned DNA"

<400> 137

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gccgactaat gtcggttttg atgatactat caaccaaatg aagatgtttg attatgctgg 60

aaaagagagt agattagttg tcttaaacta tatgcccaat ttacgttatt atttacatcg 120

ctatgacttg ttagaatcag gttattattc agtttttgat gatattcaag aaattgggaa 180

tgtaagacag caaatgattg acttccgaca actcaattgg cctgaagggg tggactttac 240

ctatactccg tttatagttt tggtaaaaaa gtcaggagat ttaattgcta aggttcaatt 300

tggtgaagaa ggaaatttaa cgcatattga ttattttgca aatgaacaaa tagctaagaa 360

atacctcttt gatgatagag gatttctatc tagtattctc tattatgata atggtggtga 420

agcctatcaa gattatttag caccatcagg ggaaaggatc atgagagaat acctaagaga 480

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aggtgaccac catgttgaaa ttaatcctaa gaaagctatt catttttaa agttatctta 540

ctccgatatt gaagagttga ttagagagaa atatctgacc tatctccata aagaagttag 600

taaatcagat actatcattg ttagctttaa tcaagttcat aacgcattta ttgttgggaa 660

cactagtaaa ggaaatttaa tattatctgt tttctcggag aggaataatg ctcacaatgt 720

attggaggat tactcttcct tatctcgagc agacgctatt atttgtgata gactagatat 780

tgctgcacaa ttgaaagaaa aaatagataa accagttgtt catgtttctc cctttgatac 840

gcgtttagct ttgggaaaaa gtaatcaagt tagagattta gaaatatatt ttgtcgtaga 900

tagactttcc cataaagaat tgcaaaagtc tttaacatcc ttatataagg ttatgctcaa 960

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aaataatgat ataaaagtaa catttgtcag ctacgaacga gaatttgaaa gtcggcaatt 1020

gaca 1024

<210> 138
<211> 1019
<212> DNA
<213> Streptococcus agalactiae 2603V/R

<220>
<221> source
<222> 1..1019
<223> /organism="Streptococcus agalactiae 2603V/R"
/mol_type="unassigned DNA"

<400> 138
gtctccagaa cgtgcgattt ctgttgtaga aaacatccgt aataaatttg tcaaagctta 60

tccaaaagat gcagcttcat ttaacaaaaa tgcagatgct tacattgcaa aattaaaaga 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gcttgacaaa gaatacaaaa atggtttgtc aaatgctaaa caaaagagtt ttgtgactca 180

acacgcagcg tttggttaca tggcgcttga ttacggttta aatcaagttc caattgctgg 240

tcttactcca gatgcagaac cttcatcaaa acgtttaggc gaattagcta aatacatcaa 300

gaaatataac atcaactaca tttattttga agaaaatgct tcaaataaag ttgctaaaac 360

tttagcagat gaagttggcg tgaaaacagc tgtgcttagt ccacttgaag gactttctaa 420

aaaagaaatg gcagctggcg aagattactt ctcagttatg agacgtaatt tgaaagttct 480

taaaaagaca acagatgttg caggtaaaga agtagctcct gaagaagata aaactaaaac 540

agttgaaaca ggttacttta aaactaaaga tgttaaagac cgtaaattga cagattactc 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tggtaattgg caatcagtat atcctcttct tcaagatggg acacttgatc cagtttggga 660

ttacaaagct aaatctaaaa aagatatgac tgctgcagag tacaaaaaat attatacagc 720

aggttacaag actgacgtag aatcaatcaa gattgatggt aaaaaacatc aaatgacctt 780

tgtacgtaat ggtaaatcac aaacatttac atacaaatat gcaggttaca aaatcttaac 840

ttataaaaaa ggtaatcgtg gagtacgtta tctctttgaa gctaaagaaa aagatgctgg 900

tcaattcaaa tatatccaat ttagtgacca tggtattaaa ccgaataaag ctgaacactt 960

ccatatcttc tggggttcag aaagccaaga aaaattattt gaggaaatgg aaaactggc 1019

<210> 139

<211> 831

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Streptococcus agalactiae 2603V/R

<220>

<221> source

<222> 1..831

<223> /organism="Streptococcus agalactiae 2603V/R"

/mol_type="unassigned DNA"

<400> 139

tgggatgatt tttcaaggtt ttcttataat tttggaacaa aattacaatt tttaggaaaa 60

tcagtatgct ttgaaaatcc attagctcct tctagcacaa acttgtatac atggagctcc 120

cagactaatt atcagtcaaa aagaatttct cctaacttac ctttactaag aaagggaact 180

cgttatagct tgtcattaaa tgcagaactc gatttagtta gctctctttt tgttcgcatt 240

gaattttaca atcgctttaa tgagtctgtt ggttttgaac tgttaaaaaa agatagtatt 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

attttatct atcctaaaga ggcttatacc tataccatta gtttgattaa tgcaggttgt 360

agcgatttta cttttcatta tttgaaactt gaggaagtta cagatagcgt tattcaggag 420

aaaaatctat cgacagagtt tactattgaa gaacatcaag acgttttaaa tcttcttttg 480

gtcgagaaaa aagatagtgt atatattaat aaaatagaaa gcatttctca attgcaacag 540

aaagtcgagt tggtcagcaa tccctcatta aattctgata gtttgatatt acctgagttg 600

gaaaaggggt tagaagatgc attaaaagtt tttcctaaca ttaagattaa tgtcattgcg 660

tatggaacac aaggtaattt tgctgcttta tattatgcta aaaaatttcc cagaataact 720

gcctatatta atgattgttt tgctcctttc ggaattttac ttaaatcctt accacacttg 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

actgccaaac aacaaatatt tcttagagaa gtctgggata cgagagagac g 831

<210> 140

<211> 862

<212> DNA

<213> Streptococcus agalactiae 2603V/R

<220>

<221> source

<222> 1..862

<223> /organism="Streptococcus agalactiae 2603V/R"
/mol_type="unassigned DNA"

<400> 140

ccgggaaagg gacagtattt ttgtccaact tgttgttcag ctgtaaggtt aaaggcaggt 60

cgaatcatga gaagacactt tgcacatatt agtctaaaaa attgtcagtt ttatcatgaa 120

aatgagtcta atgagcactt gcaattaaaa gcaaagttat atatgagttt aagtagagag 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aatgaaacta tgctcgagca tcatttgcca gaaattaatc agattgcaga tttatttgtg 240

aatgagacat tggctttaga agttcagtgt agccgactat cagagcagcg actcagggag 300

cgaacaaaag catatctaca ggcagacttt caagtgagat ggttactagg ggaaaaactc 360

tggttaaagc atcgtttaac aaatctacat aaacaatttt tacaattttc tcaaagtatc 420

ggatttcata tttgggagtt agatttgagg ttagaagtac tgagactaaa atatttgatt 480

tacgaagatt tacgcggaca tgtctattac ttaagtaaaa cttgccctct tagtggagac 540

gttctagcat ttttgaagtg gccataccaa tcaaaaaatc taaatttta taaggttaaa 600

caagacagaa atatcagaga ttatgtgcgt cagcagttac gctatggcaa tcaattttgg 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttacgaaaac aagaaaaggc ctacctttct ggtcagaatc tattgaccca agagctaatg 720

atgttttttc ctcaaataca gccaccacgt gtagatactg atttttgtca aataacaaat 780

tctctaacat cgttttatca gaattttaca aattattatc aaaaaaataa gaataactta 840

gaccaaacac tttatccccc tg 862

<210> 141

<211> 822

<212> DNA

<213> Streptococcus agalactiae 2603V/R

<220>

<221> source

<222> 1..822

<223> /organism="Streptococcus agalactiae 2603V/R"
/mol_type="unassigned DNA"

<400> 141

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tggaggacag ggtaatgttc agtcaaaaca cctttgtcaa ctagttaaaa ctccaaaagg 60

tgaaattctt ttttcaaagt tacaagcaac tgatttagaa tcatatcagt taatgatgga 120

tgtcattaac cacaaggtaa gtttagacaa tgttcatgcg tctatgttag caaatttttt 180

atataatgat tggctaacaa acgatgaaaa aatagtatct gggataggat tttcagctca 240

tagcgccggt attttcaatg tgttatatgc tagtggtagt actagttttg aaaacattat 300

tcactttatt aaacgtcgtg cccaacttat agaaaattgt catgtgtctg aagagctttg 360

gcttttgatg gttgaaaaca ttgatatgtt tagtaaggat gttttaaaag aacagtctga 420

gaaagtaaaa ttagctatta ttactgatga tagagctggt gtaattgcta tggatcaagt 480

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

caaccgttct ttctttgatg acgtgatgac taacaaaggt tatttttata aattaaagca 540

gttaggcgta aaagcaccat atcatactga ttttttaaat gaatctaaag agcagtataa 600

acaattgatt gaaagcctag atatttcgca aaatgatgac tatgactata ttttttcattg 660

tgatcaattg gtagatgaaa ttttatatca gtggaccaat ctctttaact ggcgtgcgat 720

taaggaaact atcatagaaa aggatgcgga gattattgat atttctccta ataggtttat 780

ttctagtcag ttgcaaaaaa tgaaaaagag ggggaggaaa ca 822

<210> 142

<211> 665

<212> DNA

<213> Streptococcus agalactiae 2603V/R

<220>

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<221> source

<222> 1..665

<223> /organism="Streptococcus agalactiae 2603V/R"

/mol_type="unassigned DNA"

<400> 142

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tacttggcag ggcgtcctgt gacgattgtc ggtattcaaa aaggtaagaa ccttcaagat 120

aatttagacc gtcattttgg tcaaccacat cctgaaggtt atcgtaaggc tttacgttta 180

atgaaacaag ctgagaagtt tggaagacct gttataacct tcatcaatac tgctggagca 240

tatcctgggg taggtgctga ggagcgaggt cagggtgaag caattgctag aaacctctta 300

gaaatgagtg atttaaaagt ccctattata gctattatta ttggtgaagg gggttctgga 360

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggagcattag ctttagctgt tgccgataag gtttggatgt tggaacatac tgtttattct 420

attttaagtc ctgagggctt tgcctctatt ttatggaaag atggtacaag aacaacagaa 480

gcagcacaat taatgaagat gactgctgga gaactttacc atatggaagt tgtagacaaa 540

gtaatccctg aacatggtta tttttcaagt gagattgtcg atatgattaa gacaagttta 600

atttcagagt tagaagtgct ctcacaatta tctcttgagg atttattgga acaacgttac 660

caacg
665

<210> 143
<211> 1582
<212> DNA
<213> Streptococcus bovis fba gene for class-II aldolase

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<220>

<221> source

<222> 1..1582

<223> /organism="Streptococcus bovis fba gene for class-II aldolase "

/mol_type="unassigned DNA"

<400> 143

attcttcgtg gctgctcaat atcacccaga acttcaaagc cgtccaaacc gtccagaaga 60

gctttacaca gcatttgtga ctgcggcaat tgaaaataaa aacagtaaat aatagtagaa 120

atacgtgaaa aaaagcacct ttttaagcct ttctagggtt tagaaggtgt ttttttatgt 180

aatggtattg ttacatagga agtcttcaca ttttgataaa aaatagtata atagtgagca 240

tgataaaaat gataataagg aaacgtagta ttttgttatg gatgattgct ctagtgttta 300

tagcaagtgt cggggcaagt ttttatttct ttcatgttgc ccaggttcgt gaagataaat 360

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cgtttattaa caataaacca cgtcccaaag atagtagttt atatgcctat gaacaaagtt 420

ttgatcagtt aagtaaagaa acacgttgga tgactaatca aggccttaag caggacgctt 480

ggtatgttcc tgcagcggct gaaacaaata aaacagctat cgttgttcac ggttttacaa 540

gtgaaaaaga agacatgaag ccttatgctt ggatgttcca tgaacttgga tataatgttc 600

tgatgccaga taacatgtct catggtgata gtcagggaca aattattggt tatggttgga 660

atgatcgcct aaacatcgta aaatgggctc aactattagc agaagaaaat tcggattgtc 720

aaatcacctt atttggtgtt tcgatgggtg gagctactgt catgatggct tcatgtgaag 780

agacactacc aaaacaagtg gttaatatta ttgaagattg tggttatagc agcgtttggg 840

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atgaattaaa atatcaagcc aaagctatgt ataacttacc agctttcccg attctttatg 900

aagtgtctgc agtatcaaaa gttcgagcag gtttctctta cggacaagcc agctgtgtga 960

aacaattaaa aaacaatacg cgcccaattc tttttatcca tggtagcgaa gataagttcg 1020

ttccaacaag tatggtttat aaaaattatc gtgcaaccaa tagtgagaaa gacctttata 1080

tagccaaagg tgcagcgcat gccaaatctt ttgaaagtga tccttaaaac atacattgaa 1140

aaaatttcag ctttttgca aaaaaattga aaaatagtgt tgacagaaat gtgaatggct 1200

gatataatta tttatgttgt taaggaacag cggaaatggc ggaattggca gacgcgcagg 1260

actaaggatc ctgtgatcgc tttagatcgt gagggttcaa gtccctcttt ccgcagagtg 1320

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

acaagccaga gagtgcttgt ctttttttgt gctcagagga cattgagtga aaacagaaat 1380

gaaagcagtg agaaagtttg aaaagacttt cttatttaca ctgctttttt cacagaaaat 1440

taatcaaatt gtaagtaacg ctagcaatct tatttatttt gtgatagaat gtacatataa 1500

aaagggtata tcccaaaaaa taaataggag gcctatataa tggcaatcgt ttcagcggaa 1560

aaatttatca aagctgcccg tg 1582

<210> 144

<211> 1044

<212> DNA

<213> Streptococcus bovis

<220>

<221> source

<222> 1..1044

<223> /organism="Streptococcus bovis"

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

/mol_type="unassigned DNA"

<400> 144

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gacttttcaa cattttcaaa tcaaaaaata attttagttt taaaattttt accacattcc 120

cgattaaatt atcaaaaaat tgtcattatt tgtttgcgtt ttcataaaaa tgtgttatac 180

ttttattgaa tatgcaaccg attgcaaaat aaaaagagtg tttaggagga cagcttatac 240

gttaatcata atagcagtgt tattttagaa ttagcagaat agtatgtgat tgattgggca 300

ggtttcgcac atcgttctgg cttatttttt tacagttcaa cgaaaacggt tgcgtatttt 360

aatttatctt tttaggagat tatccatgac atttcagaat aaagtaaatt tgaaaaagaa 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gatgaaaaaa agtctaggtt cattgcttat tttaacagct attggtgctg gcggattagt 480

tcaagttaaa gtcgttaatg cagatgaaca agtgtcaatg aaagatggta cgatacttca 540

tgcgtggtgc tggtctttca ataccattaa agataatatg caagccatta aagacgcagg 600

ttacacaagt gttcaaacgt ccccaatcaa cactgttgta gctggcgaag gcggaaataa 660

gagtttaaaa aattggtact atcaatatca accaactatt tataaaatcg gtaactatca 720

attaggtact gaagaagagt ttaaagaaat gaatcgtgtg gctgatcaat acggtattaa 780

aattattgtg gatgccgtct taaaccacac aacttcagat tacaatcaaa tcagtcaaga 840

aatcaaaaac atccctaact ggacacacgg aaacactctc atttctgatt ggcataatcg 900

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctacgatgtt actcaaaatg cacttcttac actttatgat tggaatactc aaaatgaata 960

tgtccaacaa tatttgttga gttatttgaa acaagcagta gctgatggtg cggacggttt 1020

ccgctatgat gccgcaaaac acat 1044

<210> 145

<211> 1036

<212> DNA

<213> Streptococcus bovis

<220>

<221> source

<222> 1..1036

<223> /organism="Streptococcus bovis "

/mol_type="unassigned DNA"

<400> 145

cgttgttctt ctcacgtcca gtcggtggtg gtaatggcac acgattccca ggtcaatcac 60

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aaattggtga tgcaggtagc aatctttaca aagacgcgac agtgactgct gttaataaat 120

tccataatgc catggttgga gaatcagaat accttcgtaa tcctggtggt gatgaacaag 180

ttgcaatgat tgaacgtggc acaaaaggtg ctgttattgt gaaccttgtt gacggcgaca 240

aacaaattaa ttctgaaact aatttggctg atggtacata cactgacaag gtttctggtc 300

gacaatttaa tgtttcaaat ggtcgtatta caggtagcgt tccatcacgc tcagccgttg 360

ttttgtatga tgaccaagct agccaagcag ctcaagtttc agttgatggt tacaaagaag 420

gcgacaatag catttctaaa gccacagaag taacattgaa agctaaaaat gctgactctg 480

cgacttacaa acttggtaat ggtcaagagg tagcttataa agacggtgat aaagtcactg 540

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttggtgaagg gcttgaagct ggtcaatcaa ctactctaac attgactgca acaggagctg 600

acggtcaatc aacaacgaag acatacactt tcacaatgaa agacccaagt gctgagacta 660

acatttactt ccaaaaccca gataattggt cagaagtgta tgcttacatg tattcagcaa 720

aagataataa acttcttggc gcatggcctg gaactaagat gactaaagaa gcatcaggtc 780

gttattcaat cacagttcct gcttcatatg ctgaagaagg tgtgaaagta atcttcacaa 840

ataatcaagg ctcacaatat ccacaaaatg aaggatttga tttcaaagca gaaggcttgt 900

actcaaaagc tggtttgatg cctgatgtgc cagcaggaaa aactcgtgta acctttgata 960

accctggcgg ttgggatagt gcgaatgctt acctctacta cggaaatcct gttcaatacc 1020

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctctaggtgt gtggcc

1036

<210> 146

<211> 1133

<212> DNA

<213> Streptococcus bovis adhE

<220>

<221> source

<222> 1..1133

<223> /organism="Streptococcus bovis adhE"

/mol_type="unassigned DNA"

<400> 146

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gattgtaaaa acacgttttt caaagaaaaa ttaatttgtg ttaaagtctt gttaaattaa 120

gggaaaacct ttgacaaaac tagatttaat ctgctacaat aaggactgtc gtaagacaag 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

taacttcttc ttggtcgtag gatccgccaa aaacctacca ctcggatgaa gcaatataaa 240

ggagaaaaat tatggcaatc tcaaaagaga aaaaaaatga aatcatcgct caatacgcac 300

gtcacgaagg tgacacaggt tcagttgaag ttcaagtagc tgttcttact tgggaaatca 360

accaccttaa cgaacacatc aaacaacaca aaaaagacca cgcaacttac cgtggtttga 420

tgaaaaaaat cggtcaccgt cgtaacttgt tggcatacct tcgccgcaca gacgttaacc 480

gttaccgcga attgatcgca tcacttggtc ttcgtcgtta atctgacgca aaaccaaaga 540

aaaacttctt ggaatttcca agaagttttt ttgttttctt tgaaaatatt tttaatgaaa 600

atgagctttt gaataatgtg aaaatataaa agtgataaaa acattagttt aaaaggaaaa 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cgaccgcttt tacttgtatc cccttacatt gcttttgtaa caaaaatgaa aaagcttaca 720

aaaaatactt gacttttttt gaaaaaggtt taatatagtt ggtgaagaat atcacaatga 780

tatgatgatt aaagaattta acttttgatt ttgtgtagtt tatgtaagga agaagacctc 840

aaataatgac gttgagtttt ggaatttcag actatacagt cgtgttttta tttaagtatc 900

aatcattaat atagttcttc ttaaaaaatg aggcacttat ttaagggtac ttataaggag 960

gttttcttaa tggctaaagc aacaaatgca gatgtaaaga ataacgagtt gagcgcagaa 1020

gaattggctc aacagtacac aggagctctt gtcgaaaaag ctcttgaagc tgaacgtgtt 1080

tatgcaactt attcacaaga acaagttgat aacattgtcg cagctatggc tct 1133

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 147

<211> 1171

<212> DNA

<213> Streptococcus bovis

<220>

<221> source

<222> 1..1171

<223> /organism="Streptococcus bovis "

/mol_type="unassigned DNA"

<400> 147

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gtatatctta atattccact ttcaccattc aatatcgttt tgccacttgt ctttttgggg 120

ctttatgctt atgtgtacaa caaagcagcg cagctattag acaaagaaga cgatgagact 180

gattctgaaa gtgttaatca ataactttta agaaatcaaa taccgtctca gaacttgagc 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

taagacggta ttttaatttt taaaagagat ttaacggacg aatattatct tctaatcccg 300

tgatagtaac ccccagaaga cgcacaccag attttgattc ttctaagctg tcaaatatcg 360

catgagcagc ttggtcaatc acctcaaaat cattggtgac atcatctagt gttttacgct 420

tggttaaagt cgaaaaatcc gcgtatcgaa ccttcaaaac gacaatgcga ccaactttat 480

tatttcgcat taagctgtcc acaactcgac gtgtattttt tgaaatctct gacttaatat 540

cagcatcctc gtacagtaat ttactgtagg tacgttcact cccaatagat tttcgaatac 600

gattgggtct gacttgtgaa tttgaaatac ctcgcgcttt acggtacaaa tcataaccaa 660

agcgcccgaa atgatcaatc aaggtcatct ctggtatttc taataaatcc gctcccgtaa 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aaacacccat ttgatgtagt ttttcaactg atttttacc aacaccatga aatttttcaa 780

ttggtaattt tttcaaaaaa tcctgcgcat cttctggcaa tactaaggtt aaacctttcg 840

gtttatcata atccgaagct agtttagcta gaaattgtgt tataagagac accggctgaa 900

caagtcaagt gaacttcttg ccaaatatca tattgaatca ttttagcgat tttaatcgct 960

gacttgatgc cgcgtttatt ttcagtcnca tnnnagtaag cctcatcaat cgacatgggc 1020

tcaacaagat cggtgtaacg tctgaaaatc tcacgaattt gcattccaat ttctcggtat 1080

ttctgataat ttccagaaat aaaaatagcc tgtggacaac gttcgtaagc ttcttttgaa 1140

gacatggccg aatgaacgcc aaattttctg g 1171

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 148

<211> 1508

<212> DNA

<213> Streptococcus pneumoniae ST556

<220>

<221> source

<222> 1..1508

<223> /organism="Streptococcus pneumoniae ST556"

/mol_type="unassigned DNA"

<400> 148

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atggaatggc ggttggagtt aaagaactct ggcaattact agatatctca tacgataaat 180

ttatccgtac aactgatgac taccatgaaa aagttgttgc acaggtcttt gaacgcttac 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ttgctcaaga tgatatctac ttgggtgaat actctggttg gtattcagta tcagacgaag 300

aattctttac agaaagccag ctggcagaag ttttccgtga tgaagctgga aatgtgactg 360

gtggtattgc tccatcaggt catgaggttg aatgggtttc tgaagaatca tacttccttc 420

gccttagcaa ataccaagac cgtttggtcg aatttttcaa agctcatcct gaatttatca 480

cgccagatgg tcgccttaat gaaatgctac gcaacttcat cgagccaggt ttggaagatt 540

tggcggtatc tcgtacaacc tttacatggg gagtgcctgt cccatcaaat ccaaaacacg 600

ttgtctacgt ttggattgat gcccttctta actatgcgac agctcttggc tacgctcaag 660

acgaacatgg taactttgac aagttctgga atggaacagt cttccatatg gtaggaaaag 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atatccttcg cttccactct atctactggc caatccttct tatgatgttg gatgttaaat 780

tacctgatcg tttgattgcc catggttggt ttgtcatgaa agacggaaaa atgtctaagt 840

caaaagggaa tgtcgtttac cctgaaatgt tggtagagcg ttatggacta gatccacttc 900

gttactacct catgcgtaac cttccagttg gttcagacgg aacctttact cctgaagact 960

atgtcggccg tatcaactat gaattggcta atgaccttgg gaacctcctt aaccgtacgg 1020

tttccatgat taataagtac tttgatggac aaatccctgc ctatgtagaa ggtgtgactg 1080

aatttgatca tgttcttgct gaggttgcag aacaatcaat cgcagacttc catacacaca 1140

tggaagcagt tgactatcca cgtgcgcttg aagcagtctg gactctgatc tctcgtacca 1200

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ataaatacat cgatgagact gcaccatggg tcttggacaa ggatgaagct cttcgtgacc 1260

aattggcaag tgtcatgagc cacttggcag ccagcattcg tgtagttgct cacttgattg 1320

aaccatttat gatggaaact agtcgtgcag ttttgactca acttggtttg gaagaagttt 1380

ctagtcttga aaacttgagt ttggctgact tcccagcaga tgtgactgta gttgccaaag 1440

gaacacctat ctttccacgt ctaaatatgg aagaagaaat cgcctatatc aaggaacaaa 1500

tggaaggc
1508

<210> 149

<211> 1580

<212> DNA

<213> Streptococcus pneumoniae ST556

<220>

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<221> source

<222> 1..1580

<223> /organism="Streptococcus pneumoniae ST556"

/mol_type="unassigned DNA"

<400> 149

cctgatgagt ttcgtgagca atttcctttc attcgtgagt tgctggatca tatggggatt 60

cgtcactatg agctggctca gtatgaggcg gatgacatca ttgggacgct ggataagcta 120

gcagagcagg atggttttga tattaccatt gtcagtgggg acaaggattt gattcagctg 180

acggatgagc atacggtggt tgaaatttcc aagaaaggtg tggctgagtt tgaggccttt 240

acgccagatt acctcatgga agaaatgggc ctcacaccag ctcagtttat cgatctcaag 300

gcgctcatgg gtgataagtc ggataatatc cctggggtga ccaaagtcgg tgaaaagacg 360

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggtattaagc tcttgctgga gcatggttcg cttgagggga tttatgaaaa tattgatgga 420

atgaagactt ctaagatgaa ggaaaatctc atcaatgaca aggaacaggc ctttttatct 480

aaaacactag cgaccattga taccaaggca ccgattgcga ttggtttaga ggacttggtc 540

tatagtggtc cagatgttga aaatcttggg aaattctacg atgagatggg cttcaaacag 600

ctaaagcagg ctttaaatgt gtcgtcagct gatgtgtctg agagtttgga ttttactatt 660

gttgaccaaa tcagtcaaga tatgctgagt gaagagtcta tcttccactt tgagcttttt 720

ggtgagaatt accatacgga taatttggtt ggatttgcct ggtcttgtgg ggataagctc 780

tatgccacag acaagcttga gctgttgcaa gacccgattt tcaaggattt cttagaaaaa 840

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

acatctctga gagtttatga ctttaagaag gttaaagttc ttttgcaacg ttttggtgtg 900

gatttgcagg cgcctgcttt tgacatccgt ttggctaaat acctcctttc gactgtggag 960

gacaatgaaa ttgcgaccat cgctagtctt tatggtcaga cttacttggt tgatgatgaa 1020

actttctacg gtaagggtgt taaaaaggcc attcctgaac gtgagaaatt cttggaacac 1080

ttagcttgta aacttgctgt tttggtagaa acagagccta ttttacttga aaaactcagc 1140

gaaaatgggc aattagagct tctttatgat atggagcaac ctctggcttt tgtccttgcc 1200

aagatggaaa ttgctgggat tatggtcaag aaagagacct tgcttgagat gcaggctgaa 1260

aatgagcttg tcattgaaaa actgactcaa gagatttacg agctggctgg tgaggagttt 1320

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aatgtcaact cgcctaagca gttgggcgtg cttctctttg agaaattggg acttcctcta 1380

gaatacacta agaaaaccaa gacaggttat tcgacagcag tggatgtgtt ggagcgtctc 1440

gctcctattg ctccgattgt taagaaaatc ctggattacc gtcaaattgc taagattcaa 1500

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tatgtgcagg atttgaccca 1580

<210> 150

<211> 1000

<212> DNA

<213> Streptococcus pneumoniae ST556

<220>

<221> source

<222> 1..1000

<223> /organism="Streptococcus pneumoniae ST556"

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

/mol_type="unassigned DNA"

<400> 150

aaaattattg gaatggtgct agctttactt tctgtaactg tagtaggagt aggtgttttt 60

gcttatacta tttatcaaca agggacagaa accttagcta aaacctataa aaaaatcggc 120

gaagaaacca aggttattga agcgactgaa cctctaacca ttctgttaat gggagtggac 180

accggaaatg ctgaacgaac tgaaacttgg gtcggtagaa gtgatagcat gatcttgatg 240

acagtgaatc ctaaaacgaa aaaaacaaca atgatgagtt tagagcggga tattctgacg 300

cgcattgaat cagggaatgg tcaggctcat gaagcgaaac tgaactcagc atatgcagat 360

ggtggagcag agcttgctat agaaaccatt caaaaaatga tgaatatcca tattgatcgc 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tatgtgatgg tcaatatgag agggttgcaa aaactagtgg atgcagtagg aggtattaca 480

gtcaataata tcctaggttt cccaatttct atcagtgacc aagaagaatt taatactatt 540

tctatcggtg ttggggagca acatattggg ggagaagaag ccctagtcta tgcacgaatg 600

cgttaccaag atcctgaggg ggattatggt cgtcaaaaac gtcaacgtga agttattcaa 660

aaagtcatgg aaaaagctct cagtttaaat agcgttggtc attatcaaga gattctaaaa 720

gctttgagtg acaatatgca gaccaatatt gatttgtctg caaaaagtat ccctaacttg 780

ctaggctata aagattcatt taaaaccatt gaaactcagc agttgcaggg tgaaggagag 840

atacttcaag gtgtttctta ccagattgtt tcgagagcac gtatgttgga aatgcaaaat 900

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atactccgac gttctttggg acaagaagaa gttactcagc ttgaaaccaa tgcggtttta 960

tttgaagatt tatttggcag agcacctgtt ggtgatgaag 1000

<210> 151

<211> 1098

<212> DNA

<213> Streptococcus pneumoniae ST556

<220>

<221> source

<222> 1..1098

<223> /organism="Streptococcus pneumoniae ST556"

/mol_type="unassigned DNA"

<400> 151

gagacaggtg agcctgatcc aaaaggtatt gctttctaca atgccatcat tgaagaagct 60

aaaaagaacc agatggatct tgtgatgaat ttacatcatt ttgatttacc agtggaactt 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cttcaaaaat acggtggttg ggaaagcaaa catgtagtgg agttattcgt gaagtttgcc 180

aagactgctt tcacatgctt tggagataag gttcattact ggacaacttt caatgagcca 240

atggtcattc cagaagcagg atacttatat gctttccatt atccaaatct aaaaggaaag 300

ggaaaagagg ccgtacaagt catctataat ctaaaccttg ctagtgcaaa agtgattcaa 360

ctatatcgct cattagaact tgatggaaag attgggatta ttttaaactt gacacctgct 420

tatccaagaa gtaattctcc agaagactta gaagcaagtc gatttacaga tgacttcttt 480

aacaaagtct tcttgaatcc agctgttaaa ggaactttcc cagaaagatt ggtaaaacag 540

ctagagagag atggcgtgtt atggagtcat accgaaaaag agcttcaact gatgaaatca 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aatacggttg attttcttgg agtaaactac taccatccaa aacgtgttca agcacaagca 660

aatcctgagg aatatcagac gccctggatg ccagaccaat acttcaaaga gtatgaatgg 720

ccggagcgtc gcatgaatcc atatcgtggt tgggaaattt ttccgaaatc catttatgat 780

attgctatga ttgtgaagga agaatatggt aatatcccat ggtttatcag tgaaaacgga 840

atgggtgttg aaaacgaagc acggtttatc gatgaaaatg gagttatcga tgacgtgtat 900

cgtattgaat tttatgaaga acatttaaga tggctacata aagccattga agagggaagt 960

cactgttttg gataccacgc ttggaccgca tttgattgct ggtcttggaa taatgcatat 1020

aagaatcgtt acggatttat ctccgttgat ttagaaacgc aaaagagaac catcaagagc 1080

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tcaggaagat ggtatcgc

1098

<210> 152

<211> 1034

<212> DNA

<213> Streptococcus pneumoniae 670-6B

<220>

<221> source

<222> 1..1034

<223> /organism="Streptococcus pneumoniae 670-6B"

/mol_type="unassigned DNA"

<400> 152

tgggatatgg agccttgttc aaaaatccat caaaaccagc cgatggtatg ggatcaagta 60

tttgaagatg atccagaatg ggcttatatg ctcaatcgac aagaatatct cttgcagttt 120

atgatagggt atgtggtaga aggagataag gactatattc aaaagtgcaa gttctttcta 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tttgattgga ttgagcaggt gagagaattt tctcctcaat ccttgatgac tagaaccttg 240

gatacgggta ttcgttcctt tacttggttg aaactactct tgcttctctt gaaatttgac 300

ttgctagagg agaaagaact agagaaaatt ttggtcagtc tagaaaagca gattgacttt 360

atgaaaagct actatcgcgc caagtacacc cttagtaact gggggatttt acaaacaatt 420

ccgatgcttg ctatctatca tttcttttca gataagatgg acctagaaga agcttaccat 480

tttgcttcag aggagttgaa acagcaaatt gagacacaga ttttaggaga tggaagccag 540

tttgaacagt cgattctcta tcatgtagag gtttataaag ccttgctgga tttgtgtctc 600

ttgcttccag acttgcaaga tagttaccaa gagttgctgg aaaagatggc gacctatatt 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

caaatgatga caggcttaga tggacggact ttggcttttg gtgatagcga ttctacagaa 720

acgacagaaa tgttgagcct gtctgctgtg gttttgaaca aggaagacct tcttaacggt 780

ctggatgtta aagttgattt gcttagcctc ttgttcctgg ggcgagaaaa ggtcaagcga 840

ctgcaggaat ttgaaaggag agcttggcag cctaagtcca tgatctttga agactctgga 900

catgtctgca ttaaggatga acatcgttat ctatttttca aaaatggtcc gctaggaagt 960

gcccatagcc atagtgacga gaatagtttt tgcttacagt atcaaggcca acctattttc 1020

atagatgctg ggcg 1034

<210> 153

<211> 1004

<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Streptococcus pneumoniae AP200

<220>

<221> source

<222> 1..1004

<223> /organism="Streptococcus pneumoniae AP200"

/mol_type="unassigned DNA"

<400> 153

tgttgaaagt cttctcgtat ccattgtaat cagtgcatac aatgaagaaa aatatctgcc 60

tggtctaatt gaagacttaa aaaatcaaac ttatcctaaa gagaatattg aaattctatt 120

tataaatgct atgtccacag atgggaccac agctatcatt cagcaattta taaaggaaga 180

tacagagttt aactcaatta gattgtataa caatcctaag aaaaatcaag ctagtggttt 240

taacctggga gttaaacatt ctgtagggga ccttatttta aaaattgatg ctcattcaaa 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agttactgag agttttgtaa tgaacaatgt ggctattatt caacaaggtg aatttgtctg 360

tgggggggcct agaccgacga ttgtcgaagg aaaaggaaaa tgggcagaga ccttgcatct 420

tgttgaggaa aatatgtttg gcagtagtat tgccaattat cgaaatagtt ccgaggatag 480

atatgtttct tctatttttc atgggatgta taaacgagag gttttccaga aggttggttt 540

agtaaatgag caacttggcc gaactgaaga taatgatatt cattatagaa ttcgagaaca 600

tggttataaa atccgctata gcccaagtat tctatcttat cagtatattc gaccaacatt 660

caagaaaatg ctgcatcaaa agtattcaaa tggtttgtgg attggcttga caagtcatgt 720

tcagtttaag tgtttatcat tatttcacta tgttccttgt ttatttgttt tgagtcttgt 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gtttagtcta gcattgttac cgatcacatt cgtattcata actttactat taggtgccta 840

ttttctactt ttgtcactac tcactttgct gactttatta aaacataaaa atggatttct 900

aattgtgatg ccctttcttt tattttccat tcactttgct tatggccttg ggacgattgt 960

aggtttaatt agaggattta aatggaagaa ggagtacaag ggaa 1004

<210> 154

<211> 1527

<212> DNA

<213> Streptococcus pneumoniae 670-6B

<220>

<221> source

<222> 1..1527

<223> /organism="Streptococcus pneumoniae 670-6B"
/mol_type="unassigned DNA"

<400> 154

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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ataaaaatca actcattgct gacttgggtt ctgaacgccg cgtcaatgcc caagctaatg 120

atattcccac agatttggtt aaggcaatcg tttctatcga agaccatcgc ttcttcgacc 180

acaggggat tgattccatc cgtatcctgg gagctttctt gcgcaatctg caaagtaatt 240

ccctccaagg tggatcaact ctcacccaac agttgattaa gttgacttac ttttcaacct 300

cgacttccga ccagactatt tctcgtaagg ctcaggaagc ttggttagcg attcagttag 360

aacaaaaagc aaccaaacag gaaatcttga cctactatat aaataaggtc tacatgtcta 420

atggcaacta tggaatgcag acagcagctc aaaactacta tggtaaagac ctcaataatt 480

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

taagtttacc tcagttagcc ttgctggctg gaatgcctca ggcaccaaac caatatgacc 540

cctattcaca tccagaagca gcccaagacc gccgaaactt ggtcttatct gaaatgaaaa 600

atcaaggtta catctctgct gaacagtatg agaaagcagt caatacacca attactgatg 660

gactacaaag tctcaaatca gcaagtaatt accctgctta catggataat tacctcaagg 720

aggtcatcaa tcaagtagaa caagaaactg gctataacct tctaactact gggatggatg 780

tttacacaaa tgtagaccaa gaagctcaaa aacatctgtg ggatatctac aactccgatc 840

aatacgtctc ttaccctgac gatgatttgc aagtcgcatc tacggtcgta gatgtttcaa 900

atggtaaagt catcgcccaa cttggagctc gtcaccaagc aagtaacgtt tcatttggta 960

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ccaaccaagc tgtggaaacc aatcgtgact ggggttctgc tatgaaacca atcaccgatt 1020

atgcacctgc catagaatac ggtgtttatg attccactgc aactatggtt aatgatattc 1080

cttataacta tccgggaaca agcacacctg tctacaactg ggatagagca tatttcggta 1140

atattactct gcaatatgct cttcaacaat cacgaaatgt cacagccgtt gagactttga 1200

ataaggtcgg tctagataga gctaaaacct tccttaatgg tcttggtatc gactatccaa 1260

gcatgcatta tgcaaacgcc atttcaagta atacaacaga atctaataaa caatacggag 1320

caagtagtga aaaaatggct gctgcttatg ctgcctttgc caacggtgga atttaccaca 1380

aacccatgta tatcaataag gtcgtcttca gtgacggtag taaaaaagaa ttttcagatg 1440

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

taggtacacg agctatgaaa gaaacaactg cttacatgat gaccgaaatg atgaaaactg 1500

tcttggcata cggaactggt cgtggag 1527

<210> 155

<211> 1523

<212> DNA

<213> Streptococcus pneumoniae 670-6B

<220>

<221> source

<222> 1..1523

<223> /organism="Streptococcus pneumoniae 670-6B"
/mol_type="unassigned DNA"

<400> 155

gcaccaaacc aatatgaccc ctattcacat ccagaagcag cccaagaccg ccgaaacttg 60

gtcttatctg aaatgaaaaa tcaaggttac atctctgctg aacagtatga gaaagcagtc 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aatacaccaa ttactgatgg actacaaagt ctcaaatcag caagtaatta ccctgcttac 180

atggataatt acctcaagga ggtcatcaat caagtagaac aagaaactgg ctataacctt 240

ctaactactg ggatggatgt ttacacaaat gtagaccaag aagctcaaaa acatctgtgg 300

gatatctaca actccgatca atacgtctct taccctgacg atgatttgca agtcgcatct 360

acggtcgtag atgtttcaaa tggtaaagtc atcgcccaac ttggagctcg tcaccaagca 420

agtaacgttt catttggtac caaccaagct gtggaaacca atcgtgactg gggttctgct 480

atgaaaccaa tcaccgatta tgcacctgcc atagaatacg gtgtttatga ttccactgca 540

actatggtta atgatattcc ttataactat ccgggaacaa gcacacctgt ctacaactgg 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gatagagcat atttcggtaa tattactctg caatatgctc ttcaacaatc acgaaatgtc 660

acagccgttg agactttgaa taaggtcggt ctagatagag ctaaaacctt ccttaatggt 720

cttggtatcg actatccaag catgcattat gcaaacgcca tttcaagtaa tacaacagaa 780

tctaataaac aatacggagc aagtagtgaa aaaatggctg ctgcttatgc tgcctttgcc 840

aacggtggaa tttaccacaa acccatgtat atcaataagg tcgtcttcag tgacggtagt 900

aaaaaagaat tttcagatgt aggtacacga gctatgaaag aaacaactgc ttacatgatg 960

accgaaatga tgaaaactgt cttggcatac ggaactggtc gtggagccta tctcccatgg 1020

ttagcgcaag ctggtaagac aggtacttct aactacacag atgatgaaat tgaaaaacac 1080

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atcaagaaca ctggctatgt agctccagat gaaatgtttg ttggttatac tcgtaagtat 1140

tctatggctg tatggacagg ttattcgaat cgtttaactc ctatcgttgg agatggtttc 1200

ctagttgcag ctaaagttta tcgctcaatg ataacgtatc tatcagaaga tactcatcca 1260

gaagactgga cgatgccaga cggacttttc agaaacgggg aatttgtatt caaaaatgga 1320

gctcgttcta cgtggaactc acctgctcca caacaacccc catcaactga aagttcaagc 1380

tcatcatcag atagttcaac ttcacagtct agctcaacca ctccaagcac aaataatagt 1440

acgactaccg atcctaacaa taatacgcaa caatcaaata caacccctga tcaacaaaat 1500

cagaatcctc aaccagcaca acc 1523

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 156

<211> 1555

<212> DNA

<213> Streptococcus pneumoniae 670-6B

<220>

<221> source

<222> 1..1555

<223> /organism="Streptococcus pneumoniae 670-6B"

/mol_type="unassigned DNA"

<400> 156

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ttatgaccat tattggtcgt ttgttgtata tgcaggtttt gaacaaggat ttttacgaaa 120

aaaagctagc ctcagctagt cagaccaaga ttacaagcag ttcagcccgt ggggaaattt 180

atgatgctag tggaaaacct ttggtagaaa atacgttaaa gcaggttgtt tcctttacgc 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gtagcaataa aatgacggct acagacttaa aagaaacagc taaaaagtta ctgacttatg 300

tgagcatcag ttctccaaat ttgacagaac gccagctggc ggattactat ttggctgatc 360

ctgaaatcta taaaaaaaca gtggaagctc tcccaagtga gaaacgcttg gattcagatg 420

gcaatcgtct atccgaatca gaactgtata acaatgcggt cgatagtgtc caaacaagtc 480

aactaaacta tacagaggat gaaaagaaag aaatctatct ttttagtcag ttaaatgctg 540

ttggaaactt tgcgacagga accattgcta cagatcctct aaatgattct caggtggctg 600

ttattgcctc tatttcaaag gagatgcctg gcattagtat ttctacttct tgggatagaa 660

aggttttgga aacttccctt tcttctatag ttgggagtgt atccagtgaa aaagctggtc 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tcccagcgga agaagcagaa gcctatctta aaaaaggcta ttctctaaat gatcgtgtag 780

gaacctccta tttggaaaag caatatgaag agaccttaca aggaaaacgc tcggtaaaag 840

aaatccatct ggataaatat ggcaatatgg aaagcgtgga tacaattgag gaaggtagta 900

agggaaacaa tatcaaactg accattgatt tggctttcca agatagcgtg gatgctttac 960

tgaaaagtta tttcaattcc gagctagaaa atggtggagc caagtattct gaaggtgtct 1020

atgcagtcgc ccttaaccca aaaacaggtg ctgttttgtc tatgtcaggg attaaacatg 1080

acttgaaaac gggagattta acacctgatt ccttgggaac agtaaccaat gtctttgtcc 1140

cgggttctgt tgtcaaggcg gcgaccatca gctctggttg ggagaatgga gtcttatcag 1200

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

gaaatcagac cttgacagac caaccgattg tcttccaagg ttcagctccg attaattctt 1260

ggtacactca ggcttacgat tcatttccga ttacagcggt ggaagccttg gagtattctt 1320

ctaatgccta tatggtccaa acagctctag gtcttatggg gcagacctac caacccaata 1380

tgtttgtcgg caccagcaat ctagagtctg ctatggggaa attgcgttca acctttggtg 1440

aatatggctt gggctctgcg actgggattg acctaccaga tgaatctact ggatttgttc 1500

ccaaagagta tagctttgct aattacatta ctaatgcctt tgggcagttt gataa 1555

<210> 157

<211> 1585

<212> DNA

<213> Streptococcus pneumoniae 670-6B

<220>

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<221> source

<222> 1..1585

<223> /organism="Streptococcus pneumoniae 670-6B"
/mol_type="unassigned DNA"

<400> 157

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ttacaagcag ttcagcccgt ggggaaattt atgatgctag tggaaaacct ttggtagaaa 120

atacgttaaa gcaggttgtt tcctttacgc gtagcaataa aatgacggct acagacttaa 180

aagaaacagc taaaaagtta ctgacttatg tgagcatcag ttctccaaat ttgacagaac 240

gccagctggc ggattactat ttggctgatc ctgaaatcta taaaaaaaca gtggaagctc 300

tcccaagtga gaaacgcttg gattcagatg gcaatcgtct atccgaatca gaactgtata 360

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

acaatgcggt cgatagtgtc caaacaagtc aactaaacta tacagaggat gaaaagaaag 420

aaatctatct ttttagtcag ttaaatgctg ttggaaactt tgcgacagga accattgcta 480

cagatcctct aaatgattct caggtggctg ttattgcctc tatttcaaag gagatgcctg 540

gcattagtat ttctacttct tgggatagaa aggttttgga aacttccctt tcttctatag 600

ttgggagtgt atccagtgaa aaagctggtc tcccagcgga agaagcagaa gcctatctta 660

aaaaaggcta ttctctaaat gatcgtgtag gaacctccta tttggaaaag caatatgaag 720

agaccttaca aggaaaacgc tcggtaaaag aaatccatct ggataaatat ggcaatatgg 780

aaagcgtgga tacaattgag gaaggtagta agggaaacaa tatcaaactg accattgatt 840

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tggctttcca agatagcgtg gatgctttac tgaaaagtta tttcaattcc gagctagaaa 900

atggtggagc caagtattct gaaggtgtct atgcagtcgc ccttaaccca aaaacaggtg 960

ctgttttgtc tatgtcaggg attaaacatg acttgaaaac gggagattta acacctgatt 1020

ccttgggaac agtaaccaat gtctttgtcc cgggttctgt tgtcaaggcg gcgaccatca 1080

gctctggttg ggagaatgga gtcttatcag gaaatcagac cttgacagac caaccgattg 1140

tcttccaagg ttcagctccg attaattctt ggtacactca ggcttacgat tcatttccga 1200

ttacagcggt ggaagccttg gagtattctt ctaatgccta tatggtccaa acagctctag 1260

gtcttatggg gcagacctac caacccaata tgtttgtcgg caccagcaat ctagagtctg 1320

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctatggggaa attgcgttca acctttggtg aatatggctt gggctctgcg actgggattg 1380

acctaccaga tgaatctact ggatttgttc ccaaagagta tagctttgct aattacatta 1440

ctaatgcctt tgggcagttt gataactata cgccgatgca gttggctcag tatgtagcaa 1500

ctattgcaaa tgatggtgtt cgtgtggctc ctcgtattgt ggaaggcatt tatggcaata 1560

atgataaggg aggactgggt gactt 1585

<210> 158

<211> 500

<212> DNA

<213> Streptococcus pneumoniae strain K13-108

<220>

<221> source

<222> 1..500

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<223> /organism="Streptococcus pneumoniae strain K13-108 "

/mol_type="unassigned DNA"

<400> 158

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attgctgagg atgcaacctc ctataatgtc tatgcggtca ttgatgagaa ctataagtca 180

gcaacgggta agattcttta cgtagaaaaa acacaattta acaaggttgc agaggtcttt 240

cataagtatc tggacatgga agaatcctat gtaagagagc aactctcgca acctaatctc 300

aagcaagttt cctttggttc gaagggcaat gggattacct atgccaatat gatgtctatc 360

aaaaaagaat tggaaactgc agaggtcaag gggattgatt ttacaaccag tcccaatcgt 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

agttatccaa acggacaatt tgcttctagt tttatcggac tagctcagct ccatgaaaat 480

gaagatggca gcaagagctt 500

<210> 159

<211> 506

<212> DNA

<213> Streptococcus pneumoniae strain Kor74

<220>

<221> source

<222> 1..506

<223> /organism="Streptococcus pneumoniae strain Kor74"

/mol_type="unassigned DNA"

<400> 159

ccgttatgcg accaaaaatc ggaaatcgcc ggctgaaaac agacgcagag ttggaaaaag 60

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tctgagttta ttatctgtct ttgtttttgc catttttta gtcaattttg cggtcattat 120

tgggacaggc actcgctttg gaacagattt agcgaaggaa gctaagaagg ttcatcaaac 180

cacccgtaca gttcctgcca aacgtgggac tatttatgac cgaaatggag tcccgattgc 240

tgaggatgca acctcctata atgtctatgc ggtcattgat gagaactata agtcagcaac 300

gggtaagatt ctttacgtag aaaaaacaca atttaacaag gttgcagagg tctttcataa 360

gtatctggac atggaagaat cctatgtaag agagcaactc tcgcaaccta atctcaagca 420

agtttccttt ggagcaaagg gcaatgggat tacctatgcc aatatgatgt ctatcaaaaa 480

agagttggaa actgcagagg tcaagg 506

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 160

<211> 1484

<212> DNA

<213> Streptococcus pyogenes Alab49

<220>

<221> source

<222> 1..1484

<223> /organism="Streptococcus pyogenes Alab49"

/mol_type="unassigned DNA"

<400> 160

gagcaaccaa agccagaaag tagtgagcta actactgaaa aagcaggtca gaaaacggat 60

gatatgctta actctaacga tatgattaag cttgctccca aagaaatgcc actagaatct 120

gcagaaaaag aagaaaaaaa gtcagaagac aaaaaaaaga gcgaagaaga tcacactgaa 180

gaaatcaatg acaagattta ttcactaaat tataatgagc ttgaagtact tgctaaaaat 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggtgaaacca ttgaaaattt tgttcctaaa gaaggcgtta agaaagctga taaatttatt 300

gtcattgaaa gaaagaaaaa aaatatcaac actacaccag tcgatatttc cattattgac 360

tctgtcactg ataggaccta tccagcagcc cttcagctgg ctaataaagg ttttaccgaa 420

aacaaaccag acgcggtagt caccaagcga aacccacaaa aaatccatat tgatttacca 480

ggtatgggag acaaagcaac ggttgaggtc aatgacccta cctatgccaa tgtttcaaca 540

gctattgata atcttgttaa ccaatggcat gataattatt ctggtggtaa tacgcttcct 600

gccagaacac aatatactga atcaatggta tattctaaat cacagattga agcagctcta 660

aatgttaata gcaaaatctt agatggtact ttaggcattg atttcaagtc gatttcaaaa 720

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ggtgaaaaga aggtgatgat tgcagcatac aagcaaattt tttacaccgt atcagcaaac 780

cttcctaata atcctgcgga tgtgtttgat aaatcagtga cctttaaaga gttgcaacga 840

aaaggtgtca gcaatgaagc tccgccactc tttgtgagta acgtagctta tggtagaact 900

gtttttgtca aactagaaac aagttctaaa agtaatgatg ttgaagcggc ctttagtgca 960

gctctaaaag gaacagatgt taaaacgaat ggaaaatact ctgatatctt agaaaatagc 1020

tcatttacag ctgtcgtttt aggaggagat gctgcagagc acaataaggt agtcacaaaa 1080

gactttgatg ttattagaaa cgttatcaag gacaatgcta ccttcagtag aaaaaaccca 1140

gcttatccta tttcatacac cagtgttttc cttaaaaata ataaaattgc gggtgtcaat 1200

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aacagaactg aatacgttga aacaacatct accgagtaca ctagtggaaa aattaacctg 1260

tctcaccaag gcgcgtatgt tgctcaatat gaaatcctct gggatgaaat caattatgat 1320

gacaaaggaa aagaagtgat tacaaaacga cgctgggaca acaactggta tagtaagaca 1380

tcaccattta gcacagttat cccactagga gctaattcac gaaatatccg tatcatggct 1440

agagagtgca ccggcttagc ttgggaatgg tggcgaaaag tgat 1484

<210> 161

<211> 1458

<212> DNA

<213> Streptococcus pyogenes MGAS1882

<220>

<221> source

<222> 1..1458

<223> /organism="Streptococcus pyogenes MGAS1882"

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

/mol_type="unassigned DNA"

<400> 161

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tgatgggaga taaatcggat aacattcctg gagtgacaaa aattggagaa aaaacaggcc 120

ttaagctcct tcatgaattt ggtagtttgg aaggcattta cgagcatatt gatggattca 180

aggcctcaaa aatgaaagaa aacttgatca atgaccgtga ccaagctttc ctatctaaaa 240

cgctcgccac tatcaataca gcatctccta tcacaattgg cttagatgat attgtctaca 300

atggtccaga tgttgctagc ctctctcaat tttacgatga gatggatttt gtgcaactca 360

agaaaggtct tgctagccag atgcctcaag agccagtagc tgccatttcc tatcaagaag 420

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tgaccaatgt gtctgctgat ttgtttagcg cagaagacat cttctacttt gaaacgcttc 480

gggataatta ccatcgtgag gccatcattg gttttgcttg gggacatggt gagcagattt 540

acgtatccac tgaccttagc ctattagcga cggatagttt taagcaggtc tttcaaaaac 600

ccattgccac ttatgatttt aaacgtagca aggtcttgtt gagccactta ggaattgagt 660

tggtagcacc tagctatgat gctagattag ctaattacct tctgtcaact gtagaagaca 720

atgagcttag caccattgcc cgcattttta ctgacatctc tttggaagaa gacgatacag 780

tctatggtaa aggtgctaaa cgggctgttc ctgataaaga cgttttacta gaacacttag 840

ctcgtaaggt caaagtatta ttagatagca agtctcaaat gctagacaag ctcactgccc 900

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atgagcaact agacctctat cagaatattg aattgccttt ggctaatgtc cttgctaaaa 960

tggaaattga agggatcaag gttaataggg cgactttgca agatatggca gagcaaaaca 1020

aggtcattat tgaagcgctc acccaagaga tttacgatat ggctggtcaa gaatttaaca 1080

ttaattcgcc taaacagctg ggcagtatct tgtttgagaa gatgcagtta cctcttgaga 1140

tgactaagaa gaccaaaaca ggttattcta cagcagtgga tgttttggaa cgtttggcac 1200

cgattgctcc aattgtggct aaaattttgg attaccgcca gattactaaa ttgcaatcca 1260

cttatgtgat tggtttacag gattatattc tggctgatgg caagattcat acccgctatg 1320

tgcaggattt cacccagaca gggcgtttgt ctagtgtgga ccctaatctt caaaacattc 1380

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctattcgttt ggaacagggg cgtttgattc gtaaggcctt taccccatct catgaagatg 1440

ccgtcttgtt gagttcag 1458

<210> 162

<211> 1477

<212> DNA

<213> Streptococcus pyogenes MGAS1882

<220>

<221> source

<222> 1..1477

<223> /organism="Streptococcus pyogenes MGAS1882"

/mol_type="unassigned DNA"

<400> 162

gcgtcaatga ttttcacggc gctcttgata ataccggaac agcttacaca ccaagtggta 60

aaataccaaa tgctgggacg gctgctcaat taggtgctta tatggatgac gctgagatag 120

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

acttcaagca agcaaatcaa gacagaacaa gtatacgtgt tcaagctgga gatatggtcg 180

gagccagtcc tgctaactct gcacttttac aagatgagcc tactgtaaag gtctttaaca 240

aaatgaaatt tgaatatggc actcttggta atcatgaatt tgacgaagga ctagatgaat 300

ttaaccgtat catgacaggt caagcgcctg atcctgaatc aacaattaat gatatcacca 360

aacaatatga gcacgaagct tcgcatcaaa ccatcgtcat tgctaatgtt attgataaaa 420

aaaccaatga tatcccctat ggttggaaac cttatgctat aaaagacata gccattaatg 480

acaaaatcgt taagattggc ttcattggtg ttgtgactac agagattcca aatctcgttt 540

taaagcaaaa ctatgaacac tatcaatttt tagatgtagc tgaaaccatt gccaaatatg 600

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctaaagaact acaagaacaa catgttcatg ctattgtggt tttagctcat gttcctgcaa 660

caagtaaaga tggtgttgtt gatcatgaaa tggctacggt tatggaaaaa gtgaaccaaa 720

tctatcccga acatagcatt gatattattt ttgcaggaca taatcatcaa tacactaatg 780

gaactatcgg taaaacacgt atcgttcaag ccctctctca aggaaaagct tatgcagatg 840

tccgtggaac gctagatact gataccaatg attttatgac aactccatca gcaaatgttg 900

ttactgtagc accaggtatc aaaacaaaaa attcagatat caaagctata ataaatcatg 960

ctaatgatat tgttaaaaca gttactgaac gaaaaatcgg aactgcaact aattcttcaa 1020

ctatttctaa aacagaaaat attgataaag aatctcctgt cggtaactta gtaacaacag 1080

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctcagcttac tattgctaag aaaacttttc caactgttga ctttgctatg accaataatg 1140

gtggtattcg aagtgaccta gttgtcaaaa atgaccggac catcacctgg ggagctgcac 1200

aggctgtaca accatttggt aatatccttc aagtcattca aatgactggt caacacattt 1260

acgatgtcct aaatcagcaa tacgatgaaa accagaccta ttttcttcaa atgtcaggtt 1320

taacttacac ttatacagat aatgatccta agaactctga tacccccttc aagatagtta 1380

aggtttataa agacaatggt gaagaaatta acttaacaac tacttacacc gttgttgtca 1440

acgactttct ttatggtggt ggtgatggct tttcagc 1477

<210> 163

<211> 1147

<212> DNA

<213> Streptococcus pyogenes MGAS1882

<220>

<221> source

<222> 1..1147

<223> /organism="Streptococcus pyogenes MGAS1882"

/mol_type="unassigned DNA"

<400> 163

accgtgaccc ttatttggaa cgggtttatc tgactggtca agtgtccaat tttcgaaaac 60

gaccaactca tcaatatttt tccttaaaag atgaaagtgc tgtgattcaa gccaccatgt 120

gggcaggagt ctataaaaaa ctaggattcg acctagaaga aggcatgaaa attaatgtaa 180

ttgggcgagt ccaactttat gaacctagtg gctcttactc tatcgtgatt gaaaaggcag 240

agccagatgg tataggtgcc ttggctttgc agtttgaaca attaaagaaa aaattaacgg 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

cagaaggtta ttttgagcaa aaacacaagc agcccttgcc acagtttgta tcaaaaattg 360

gggtcattac aagtcctagt ggtgctgtga ttcgagatat tatcacaacc gtttcacggc 420

gttttccagg ggttgagatt ttattattcc caactaaagt acaaggtgat ggagccgccc 480

aagaagtagt ggctaatatt cgaagagcca atcaaagaga ggatttggac ttgctcattg 540

tcggccgtgg aggtggctcg atagaagacc tttgggcctt caacgaggaa atagtggttc 600

aggctatctt tgaatcgcaa cttccagtga tttcgagtgt gggtcatgaa acagacacga 660

ctttagcgga ttttgtggca gatcgcagag cagccacacc aacagcagca gcagagttag 720

caacgcctat tacaaaaaca gatcttatgt cttggatagt agagcggcaa aatcgttcct 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

atcaggcctg cttgaggcgg attaagcaac ggcaagagtg ggtggataaa ctctcgcaat 840

ctgttatttt taggcaacca gaacgattat atgatgccta cctgcaaaaa attgatcgcc 900

ttagcatgac cctgatgaat acgatgaaag atcgtctgag ttccgccaaa gaaaacaagg 960

ttcagttgga ccattccttg gccaatagtc aattacagac aaaaatcgag cgataccaag 1020

accgtgttgc taccgctaag cgtttactga tggctaatat ggctagtcaa tatgatagtc 1080

agctggctcg ctttgaaaaa gcacaggatg ctttgctatc actggatgcc agccgaatta 1140

tcgcccg
1147

<210> 164
<211> 1002
<212> DNA

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<213> Streptococcus pyogenes MGAS1882

<220>

<221> source

<222> 1..1002

<223> /organism="Streptococcus pyogenes MGAS1882"

/mol_type="unassigned DNA"

<400> 164

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ttgtcgccat tgctaattga tcctctatta tttttagttg ttttaaggca agaaaccaag 120

caattatttt ctttgaaagc tctttttttg gctgttgcac ctagtgtttt ggtggatttg 180

ctatctcgat ttatgggtac aatcgttatc ccctatcttt ttttgtcgag tggtatttat 240

ctgggtcata ttatctttga cttgcttgct tatctgctga tttttccaag ttttgctatt 300

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

attaattata tgattggaaa agattacaag atgatatgcc aatccggata ttcgaaacga 360

tcgcataatt tttatcaaac attgctgatt tttgttttgg tttattatgt ggacattttt 420

gtcattttag gatttacgga ccccttttta cattttcatc attctctttt tgttcccaca 480

ccttataagt tattgttttt gatgtttata cttcttttag tttatcttct atcttatttt 540

aatcatagtt ctaaagaata ccttaaaaat gagttgagaa gagaacaaca agcttatatg 600

actaacttag agacttatgg gaaacatctt gagaaactct atcgagatgt aagagctttt 660

caaagtgatt acctgagccg tatagagcgt ttaggtcaag ccattaagag tgaatccatt 720

actcagattc aagatattta tgcccaaacg gttcatgaag ctaacgacta ctgggatgat 780

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aaacactata atatctcgaa gcttaggaaa attaatatct catcgattaa gagcttattg 840

tcagctaaaa ttatcagtgc ggaaaaatca ggtattaatt tgaatgtgga agtgccagat 900

aatataaaag agacttacat tcctgagttg gacttactat tgttgatgtc tatttttgt 960

gataacgcca ttgaggcagc tcttgaagca cagcaacctc at 1002

<210> 165

<211> 1010

<212> DNA

<213> Streptococcus pyogenes MGAS1882

<220>

<221> source

<222> 1..1010

<223> /organism="Streptococcus pyogenes MGAS1882"
/mol_type="unassigned DNA"

<400> 165

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

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tatgctttag ctcatcaagc aaagggcaaa catctcatca caactactat tgagcaccac 180

tctgtgcttc ataccatggc ctatctcgaa gagcgatttg gttttgaggt cacttatttg 240

ccttgtcaaa atggacaaat aaatttatct gacttaaaac aagccttgag agatgacacc 300

attttggtaa gcataatgta tgccaataac gaaacaggtg acctgttacc tattaaggac 360

attgggaatc tgctcaaaga ccatcaagct gcttttcatg ttgatgccgt tcaagctgtt 420

ggcaaactca agattattcc tagcgaactt gggattgact ttttatctgc ttctgctcac 480

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

aaatttcatg gtcctaaagg atgcggcttt ttatacagta acggacaacc aatcgaccct 540

cttcttcacg ggggtgatca agaaggaaag cgacgcgcaa gtactgaaaa tatgttaggt 600

attattggta tggcacaagc tttgactgat gctatgactt gtcttgacca atcaactgat 660

cacattatta gtttacgtca tcacttgatt agcctcctag aaggactacc ctactatatt 720

aatcaaggta ctcattatct tcctcatgtt ctcaatattg gatttttagg ctaccaaaat 780

actattttac taacacaact tgacttagca ggcattgcag tatcaactgg ttctgcttgt 840

actgctggag ctgttaatcc aagtcatgtt ttagctgcgt actatgggga tgactcttct 900

cgtttaaaag aatcaattcg tatcagtttt tcagatcaaa atagcattga agatgttaat 960

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

caattagctc aaacattaaa aaatatttta ggaggaacag atggcttttg 1010

<210> 166

<211> 1085

<212> DNA

<213> Streptococcus pyogenes MGAS1882

<220>

<221> source

<222> 1..1085

<223> /organism="Streptococcus pyogenes MGAS1882"
/mol_type="unassigned DNA"

<400> 166

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ttatcaagca acagatatta atgaaaaata ttcctttagt cagtacttag tggcaagact 120

gatgacttgt ttattaatgt tagccataac agtaatttat ttaacgttaa ctaagacaga 180

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tagctacaag agtacaattg tctttctagt ctgtttctat agatcgacag atgctttttc 240

ggatttatat cagggaatgt tccaacaaca tgaacggctg gatattgcag gtaaatcgct 300

agcctacaga aatactctta tttttatggt gtacacagca ataatattat attccaaaaa 360

tcttacttta gcattagtag ctgtctgtat agtttcatta gtttttataa tgtattatga 420

cattggttat tcgaaaaaat ttcaaaagtt gatgtttagt gaattattaa gtaatatttc 480

atttcaaaac agtttaaagt tattaaaaga aagttttcca ctttttctaa acggtttttt 540

gattatctat atttatactc aaccaaaata cgctattgaa ctaatgacga ctttaggtga 600

aattgctttg ggctctcaaa caatttttaa tattttattt atgccagcct ttgttatgaa 660

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

tttgctaatt ttatttttta gaccttatat tacacagatg gctattgctt taatcagagg 720

tcaaataaaa gagtttaata agatacaagt tcaattgttt gcttatttag gagtttttc 780

actgatagcg ttagttggaa gtggtttgtt tggtattccc tttttatcaa tgctatatgg 840

tactaacctt acggattatt gggtagactt tatgttgatt atgctaggag gctcgattgg 900

tagttttgcg acagttatcg ataatatctt aaccgctatg agaaaacagc aacttcttct 960

tattccatat acaggaggat ttttgatttc gttattaatt accaatcttt ttgttatgaa 1020

atatcacatt ttaggagctg ctttgagctt tttaataaca atgttggttt ggttgggatt 1080

atcca
1085

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

<210> 167

<211> 861

<212> DNA

<213> Streptococcus pyogenes MGAS1882

<220>

<221> source

<222> 1..861

<223> /organism="Streptococcus pyogenes MGAS1882"

/mol_type="unassigned DNA"

<400> 167

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gatgaaagga gacaccatca ctgtcagtga cttctacaat gagaccaaaa acacagaact 120

cgcacaaaaa gccatgttaa gcttggtgat tagccgcgtt tttgagacac aatatgccaa 180

caaagtctct gacaaagagg ttgaaaaagc ctataaacaa accgcagacc aatacggtac 240

Francesco FIUSSELLO
(Iscrizione Albo nr. 1099/B)

ctcctttaag acagtcctag cacaatcagg cttaacgcca gaaacctata aaaaacaaat 300

tcgcctcaca aaattagtcg aatatgccgt caaagaacaa gccaaaaacg aaaccatctc 360

aaaaaaagac taccgtcagg cctatgacgc ttatacccca accatgaccg cagaaatcat 420

gcagtttgaa aaagaagagg atgccaaagc agcccttgaa gccgtcaaag ctgaaggggc 480

agactttgca gctattgcca aagaaaaaac cattgcagcc gataaaaaaa caacctacac 540

gtttgactca ggcgaaacaa ccctaccagc agaagtagtt agagctgcat caggcctcaa 600

agaagggaac agatcagaaa tcatcacagc gcttgatcca gccacctcaa aacgcaccta 660

ccatatcatc aaagtcacca aaaaagcaac taaaaaagca gactggaaag cgtaccaaaa 720

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acgcttgaaa gacatcattg tgactggcaa attaaaagac cctgacttcc aaaacaaagt 780

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<211> 802

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<213> Streptococcus pyogenes MGAS2096

<220>

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<222> 1..802

<223> /organism="Streptococcus pyogenes MGAS2096"
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taactgctaa gcatgcgatt gccgttgacc ttgaaagtgg caaagtttta tacgaaaaag 120

atgctaaaga ggttgtccca gtcgcctcag tcagtaagct cttgacaacc tatctggttt 180

acaaagaagt ttctaagggc aagctaaatt gggatagtcc tgtaactatt tctaactacc 240

cttatgaact cactacaaac tatactatta gtaacgttcc tcttgataag agaaaatata 300

ccgttaaaga acttttaagt gcgttagttg ttaataacgc caatagcccc gctattgctt 360

tagctgaaaa aataggcgga accgaaccca aatttgttga caaaatgaaa aaacaattaa 420

gacaatgggg catttccgat gcaaaggtcg tcaattcaac tggcttaact aaccattttt 480

taggagctaa tacttatcct aatacagaac cagatgatga aaattgtttt tgcgccactg 540

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atttagctat tattgccagg catctcttat tagaatttcc agaagtactg aaattatcta 600

gcaaatcctc cactattttt gctggacaaa ccatttacag ttataattac atgcttaaag 660

gcatgccttg ttatcgagaa ggcgtggatg gtctttttgt tggttattct aaaaaagccg 720

gtgcttcttt tgtagctact agtgtcgaaa atcaaatgag ggttattaca gtagttttaa 780

atgctgatca aagcacgagg at 802

<210> 169

<211> 1197

<212> DNA

<213> Streptococcus pyogenes MGAS1882

<220>

<221> source

<222> 1..1197

<223> /organism="Streptococcus pyogenes MGAS1882"

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/mol_type="unassigned DNA"

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caatattgtc tgcaagttta atgttctggt acttttgtca aagtagttgg cagttagcct 180

tattagcttt ggcaacctat gcttgtttag ccattgttat acccatttat tttgctaata 240

ttttacaggt tttactaaaa agccaaaatg aaggtcgaaa agattacctg tcttattttt 300

tagagagttt acgatcagtc aaagatcttt tgcaatttca ggtattagac gagcaatttg 360

aacgattaat aaaaaaaagt aatcatgtaa atgctcttga tcgtaacgta gcgcaagctc 420

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aatttttgca aatggcattg actttttttct ggcttggctt aatgatctta gcattttctt 480

atatggtttt tgatgggata tgccatgaca gcttatcatt tgataaaggc ttattaactt 540

ttattgcttt cactgcttcg ttttctcctt ttttagaact aggacgtttg ccattaggct 600

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tagacgaagg cacaaaacag atagatcgtt taaggagtgt ttcttttgag gacctcagtt 720

ttgcttatcc aaagcgccaa gagctggttt ttaaggattt atcagttacc tttcaagaaa 780

aggggattat tggcattaaa ggcgaatcag gatctggtaa atcaactttg gtgaaattaa 840

ttatgaaatg gtataattgg aagacaggag atatttttct taatgatagg aatagttgct 900

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tactaaatgc tgctaaatta caagatacta ttgcttatgt gccacaaaca gcgcagcttt 960

tccaacagtc tatccgtgaa aatcttacct ttggccgtca agatatttca gatgagtcca 1020

tttggaattt agctgaggct tgtggtatga aagacagact gttagcttgt aaggaaggtt 1080

tggatacgat tatcaagagt ccttctgact tttcagctgg agaaggtcaa cgtttagagt 1140

tgatgcgagc tttattgaaa gatgcgagtt gctatatttt tgatgaaccc acgtcaa 1197

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RIVENDICAZIONI

1. Metodo per disegnare una pluralità di sequenze nucleotidiche sonda specifiche per una corrispondente pluralità di specie microbiche comprendente le fasi di:

(a) fornire una pluralità di sequenze genomiche appartenenti a diversi ceppi della pluralità di specie microbiche;

(b) per ciascuna specie microbica, allineare la pluralità di sequenze genomiche;

(c) per ciascuna specie microbica, identificare porzioni conservate di sequenza genomica in base all'allineamento di fase (b);

(d) per ciascuna specie microbica, selezionare almeno cinque diverse sequenze nucleotidiche sonda appartenenti a porzioni conservate di sequenza genomica e aventi una lunghezza da 300 a 2000 nucleotidi;

(e) per ciascuna sequenza nucleotidica sonda selezionata in fase (d), disegnare una coppia di primer per amplificare detta sequenza nucleotidica sonda mediante PCR, in cui ciascun primer:

- abbia temperatura di melting (Tm) da 55°C a 65°C;
- abbia una lunghezza da 15 a 30 nucleotidi;

(f) selezionare le sequenze nucleotidiche sonda con una percentuale di identità inferiore al 40% con ciascuna altra sequenza nucleotidica sonda;

(g) selezionare le sequenze nucleotidiche sonda con

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una percentuale di identità inferiore al 10% con il DNA genomico umano.

2. Metodo secondo la rivendicazione 1, in cui ciascuna sequenza nucleotidica sonda non contiene sequenze di più di tre G consecutive.

3. Metodo secondo la rivendicazione 1 o 2, in cui ciascuna sequenza nucleotidica sonda contiene una percentuale di basi G e/o C dal 10% al 50%.

4. Metodo secondo una qualsiasi delle rivendicazioni da 1 a 3, in cui in fase (f) le sequenze nucleotidiche sonda sono selezionate con una percentuale di identità inferiore al 20% con ciascuna altra sequenza nucleotidica sonda.

5. Metodo secondo una qualsiasi delle rivendicazioni da 1 a 4, in cui in fase (g) le sequenze nucleotidiche sonda sono selezionate con una percentuale di identità inferiore all'1% con il DNA genomico umano.

6. Microarray per la rivelazione di una pluralità di specie microbiche comprendente almeno una sequenza nucleotidica sonda per almeno quattro diverse specie microbiche selezionate dal gruppo costituito da Acinetobacter baumannii, Enterobacter aerogenes, Enterobacter cloacae, Enterococcus faecalis, Enterococcus faecium, Escherichia coli, Klebsiella pneumoniae, Proteus mirabilis, Pseudomonas aeruginosa, Serratia marcescens, Staphylococcus aureus, Staphylococcus epidermidis,

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Streptococcus agalactiae, Streptococcus bovis, Streptococcus pneumoniae e Streptococcus piogenes,

in cui ciascuna sequenza nucleotidica sonda ha una lunghezza da 300 a 2000 nucleotidi e ha una percentuale di identità inferiore al 20% con ciascuna altra sequenza nucleotidica sonda.

7. Microarray secondo la rivendicazione 6, comprendente inoltre almeno una sequenza nucleotidica sonda per almeno una specie microbica selezionata dal gruppo costituito da Aspergillus fumigatus, Candida albicans, Candida glabrata, Candida parapsilosis e Candida tropicalis, in cui detta almeno una sequenza nucleotidica sonda ha una lunghezza da 300 a 2000 nucleotidi e ha una percentuale di identità inferiore al 20% con ciascuna altra sequenza nucleotidica sonda.

8. Microarray secondo la rivendicazione 6 o 7, comprendente inoltre almeno una sequenza nucleotidica sonda per almeno un adenovirus umano, in cui detta almeno una sequenza nucleotidica sonda ha una lunghezza da 300 a 2000 nucleotidi e ha una percentuale di identità inferiore al 20% con ciascuna altra sequenza nucleotidica sonda.

9. Microarray secondo la rivendicazione 8, in cui l'adenovirus umano è human adenovirus D, human adenovirus B oppure human adenovirus C.

10. Microarray secondo una qualsiasi delle rivendicazioni da 6 a 9, in cui l'almeno una sequenza

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nucleotidica sonda per Acinetobacter baumannii è SEQ ID NO:1-14, e/o l'almeno una sequenza nucleotidica sonda per Enterobacter aerogenes è SEQ ID NO:46-59, e/o l'almeno una sequenza nucleotidica sonda per Enterobacter cloacae è SEQ ID NO:60-70, e/o l'almeno una sequenza nucleotidica sonda per Enterococcus faecalis è SEQ ID NO:71-77, e/o l'almeno una sequenza nucleotidica sonda per Enterococcus faecium è SEQ ID NO:78-89, e/o l'almeno una sequenza nucleotidica sonda per Escherichia coli è SEQ ID NO:90-97, e/o l'almeno una sequenza nucleotidica sonda per Klebsiella pneumoniae è SEQ ID NO:102-104, e/o l'almeno una sequenza nucleotidica sonda per Proteus mirabilis è SEQ ID NO:105-111, e/o l'almeno una sequenza nucleotidica sonda per Pseudomonas aeruginosa è SEQ ID NO:112-115, e/o l'almeno una sequenza nucleotidica sonda per Serratia marcescens è SEQ ID NO:116-117, e/o l'almeno una sequenza nucleotidica sonda per Staphylococcus aureus è SEQ ID NO:118-131, e/o l'almeno una sequenza nucleotidica sonda per Staphylococcus epidermidis è SEQ ID NO:132, e/o l'almeno una sequenza nucleotidica sonda per Streptococcus agalactiae è SEQ ID NO:133-142, e/o l'almeno una sequenza nucleotidica sonda per Streptococcus bovis è SEQ ID NO:143-147, e/o l'almeno una sequenza nucleotidica sonda per Streptococcus pneumoniae è SEQ ID NO:148-159, e/o l'almeno una sequenza nucleotidica sonda per Streptococcus piogenes è SEQ ID NO:161-169.

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(Iscrizione Albo nr. 1099/B)

11. Microarray secondo una qualsiasi delle rivendicazioni da 7 a 10, in cui l'almeno una sequenza nucleotidica sonda per Aspergillus fumigatus è SEQ ID NO:14-20, e/o l'almeno una sequenza nucleotidica sonda per Candida albicans è SEQ ID NO:21-29, e/o l'almeno una sequenza nucleotidica sonda per Candida glabrata è SEQ ID NO:30-35, e/o l'almeno una sequenza nucleotidica sonda per Candida parapsilosis è SEQ ID NO: 36-40 e/o l'almeno una sequenza nucleotidica sonda per Candida tropicalis è SEQ ID NO: 41-45.

12. Microarray secondo una qualsiasi delle rivendicazioni 8 a 11, in cui l'almeno una sequenza nucleotidica sonda per human adenovirus D è SEQ ID NO:98, e/o l'almeno una sequenza nucleotidica sonda per human adenovirus B è SEQ ID NO:99-100 e/o l'almeno una sequenza nucleotidica sonda per human adenovirus C è SEQ ID NO:101.

13. Microarray secondo una qualsiasi delle rivendicazioni da 6 a 12 per uso nella diagnosi di batteriemia e/o sepsi.

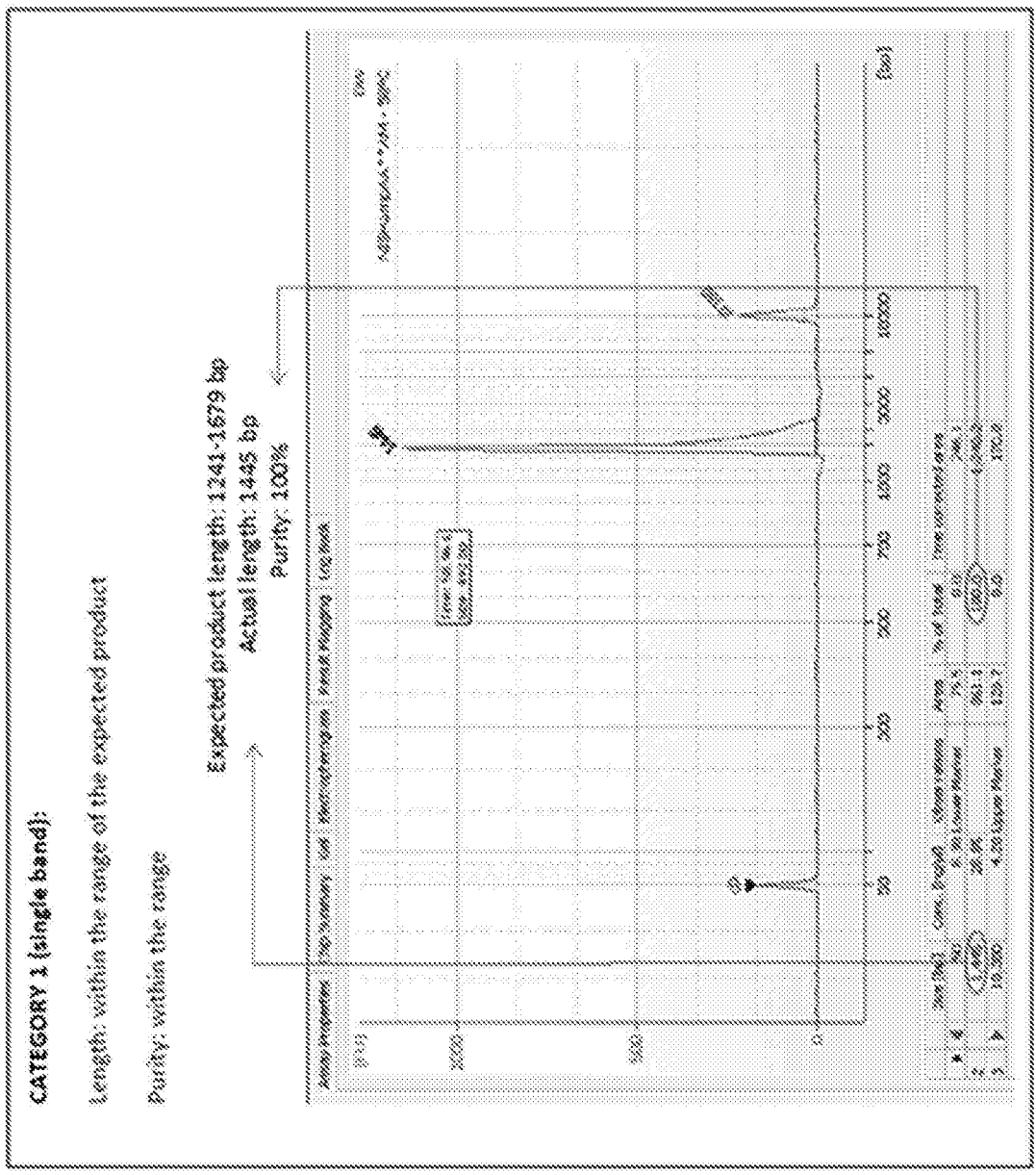
14. Microarray secondo una qualsiasi delle rivendicazioni da 6 a 12 per uso secondo la rivendicazione 13 in cui il tempo necessario per l'ibridizzazione tra il DNA di un campione da analizzare e le sequenze nucleotidiche sonda comprese nel microarray è minore di 2 ore.

p.i.: MOLECULAR STAMPING S.R.L.

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FIG. 1



p.i.: MOLECULAR STAMPING S.R.L.

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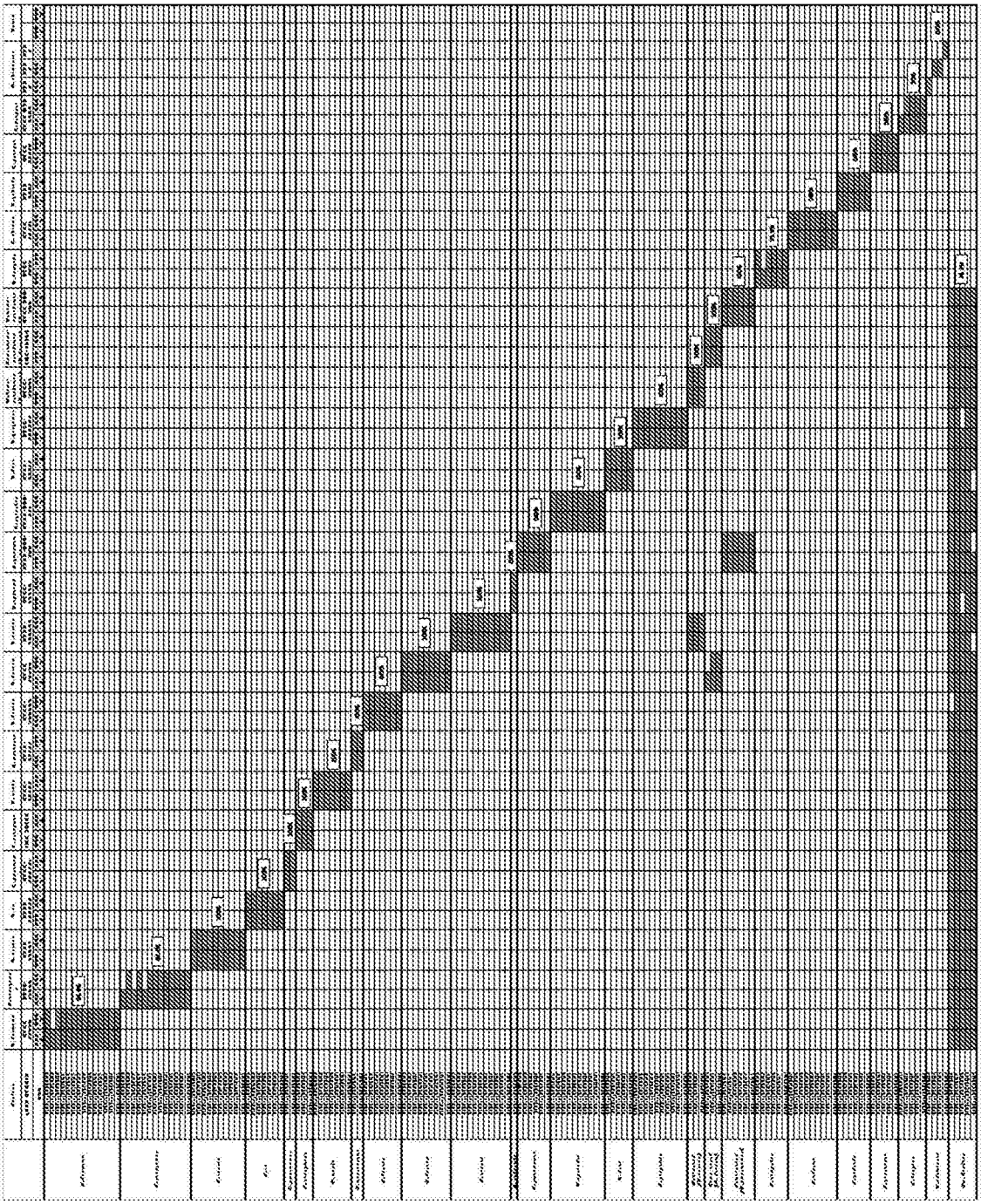
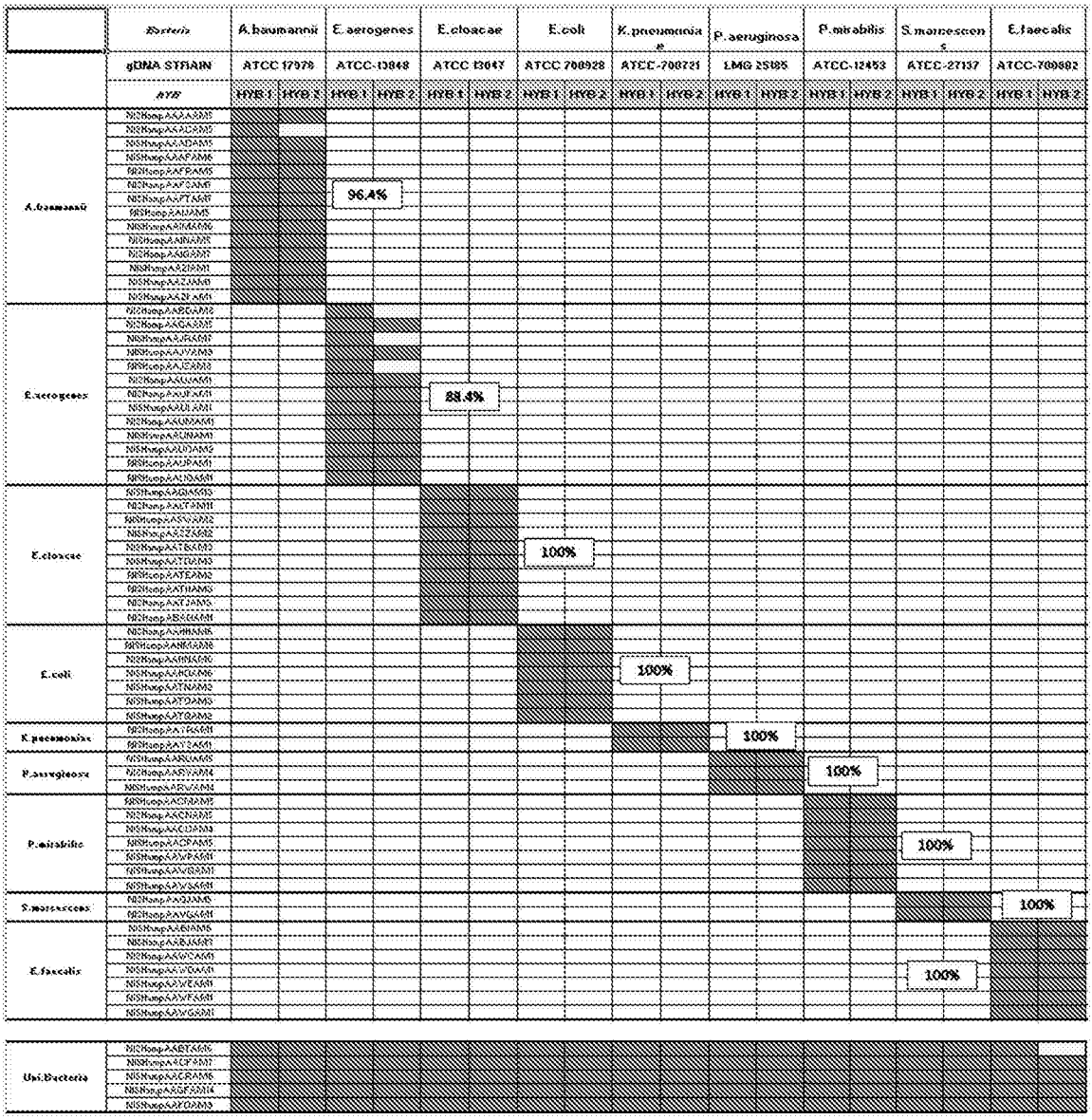


FIG. 2

p.i.: MOLECULAR STAMPING S.R.L.

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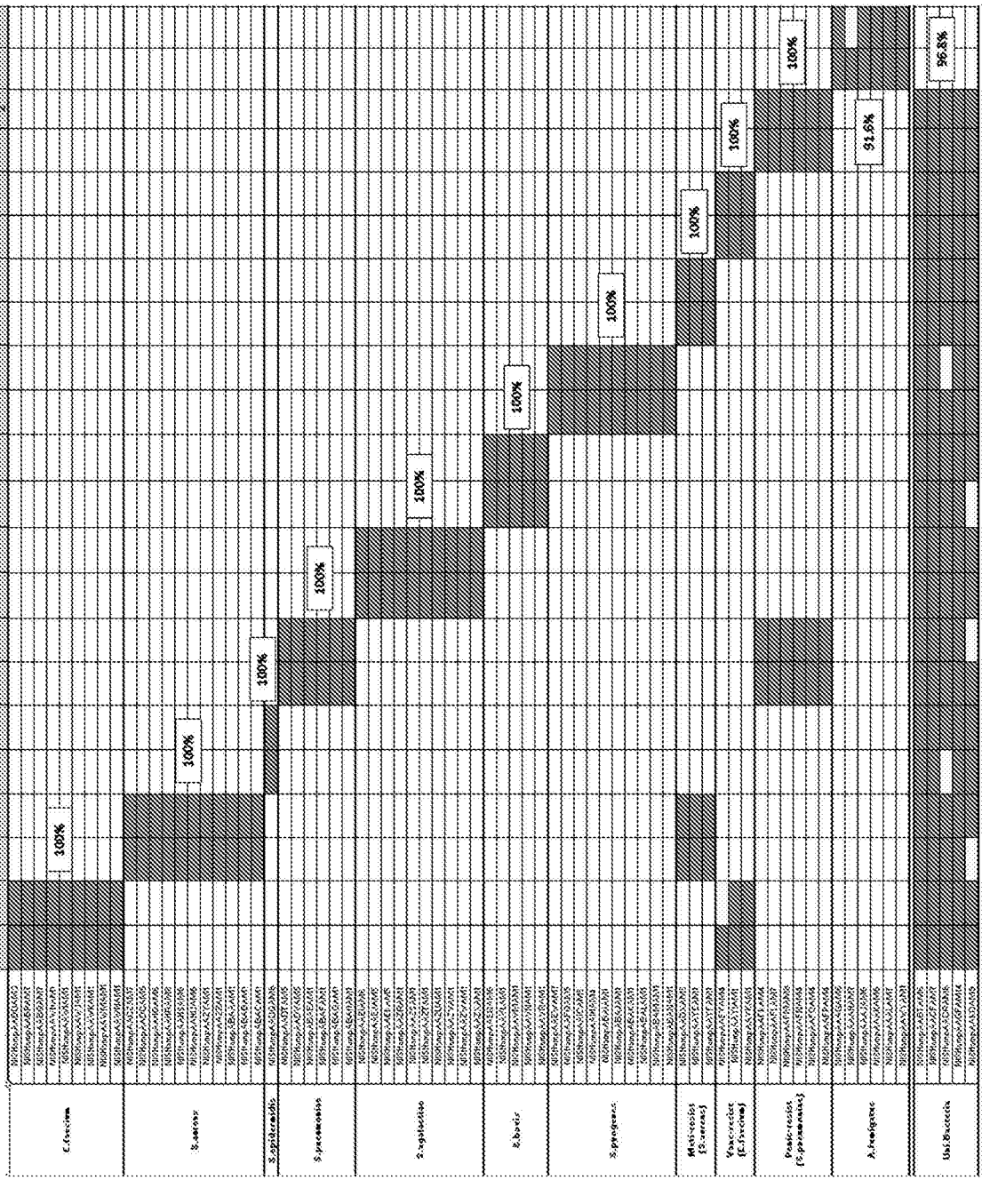
FIG. 3



p.i.: MOLECULAR STAMPING S.R.L.

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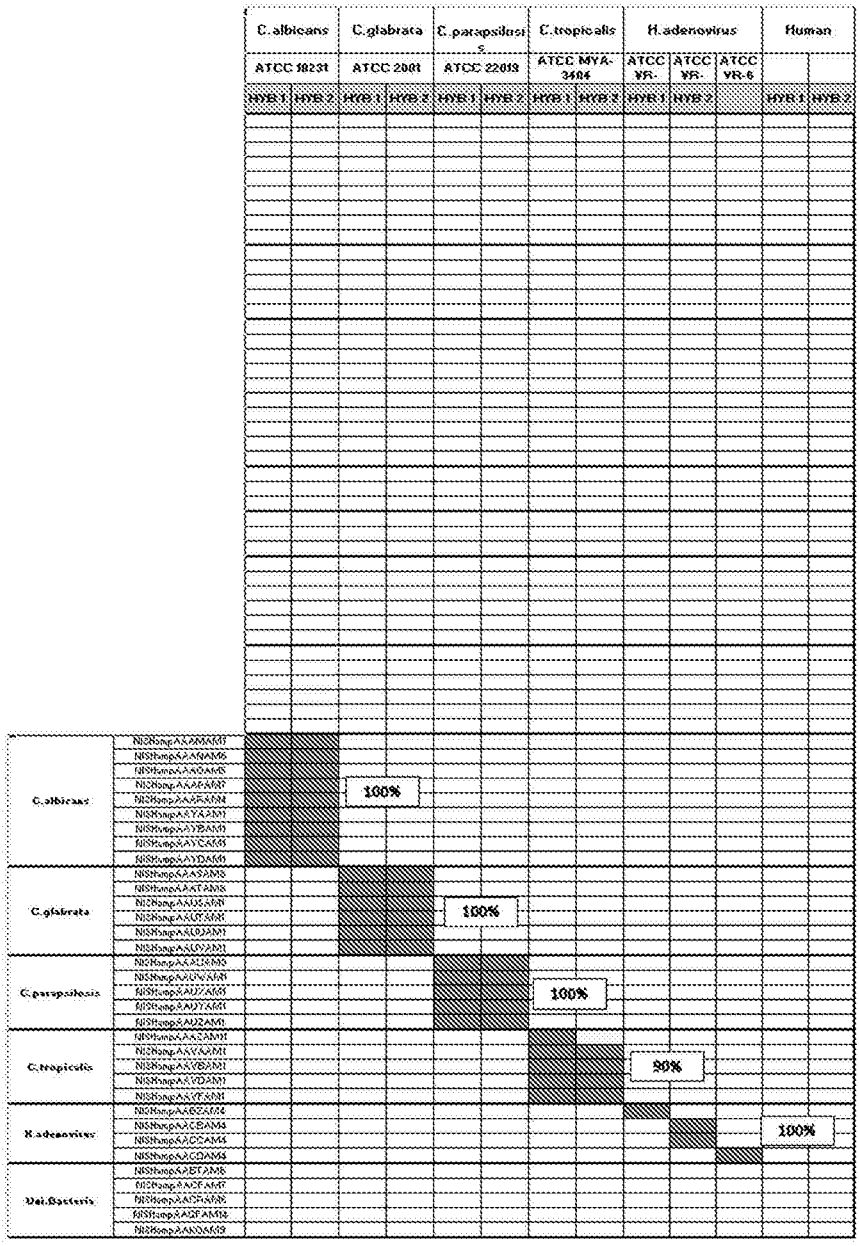
FIG. 4



p.i.: MOLECULAR STAMPING S.R.L.

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FIG. 5



p.i.: MOLECULAR STAMPING S.R.L.

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