

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
11 August 2011 (11.08.2011)

(10) International Publication Number
WO 2011/095623 A2

(51) International Patent Classification:

C12Q 1/68 (2006.01)

(21) International Application Number:

PCT/EP2011/051734

(22) International Filing Date:

7 February 2011 (07.02.2011)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10152809.9 5 February 2010 (05.02.2010) EP

(71) Applicant (for all designated States except US): **FEBIT HOLDING GMBH** [DE/DE]; Im Neuenheimer Feld 519, 69120 Heidelberg (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KELLER, Andreas** [DE/DE]; Albert-Schweizer-Str. 6, 66346 Püttlingen (DE). **SCHEFFLER, Matthias** [DE/DE]; Steig 16b, 69493 Hirschberg-Leutershausen (DE). **BEIER, Markus** [DE/DE]; Marc-Aurel-Weg 20, 69469 Weinheim (DE).

(74) Agent: **WEIB, Wolfgang**; Weickmann & Weickmann, Postfach 860 820, 81635 München (DE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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

Published:

- without international search report and to be republished upon receipt of that report (Rule 48.2(g))
- with sequence listing part of description (Rule 5.2(a))



WO 2011/095623 A2

(54) Title: miRNA IN THE DIAGNOSIS OF OVARIAN CANCER

(57) Abstract: The present invention provides novel methods for diagnosing a state of health based on the determination of specific miRNAs that have altered expression levels in different conditions, e.g. disease states compared to healthy controls.

miRNA in the diagnosis of ovarian cancer

Description

5

Background of the invention

MicroRNAs (miRNA) are a recently discovered class of small non-coding RNAs (17-14 nucleotides). Due to their function as regulators of gene expression they play a critical role both in physiological and in pathological processes, such as cancer (Calin and Croce 2006; Esquela-Kerscher and Slack 2006; Zhang, Pan et al. 2007; Sassen, Miska et al. 2008).

There is increasing evidence that miRNAs are not only found in tissues but also in human blood both as free circulating nucleic acids and in mononuclear cells. A recent proof-of-principle study demonstrated miRNA expression pattern in pooled blood sera and pooled blood cells, both in healthy individuals and in cancer patients including patients with lung cancer (Chen, Ba et al. 2008). In addition, a remarkable stability of miRNAs in human sera was recently demonstrated (Chen, Ba et al. 2008; Gilad, Meiri et al. 2008). These findings make miRNA a potential tool for diagnostics for various types of diseases based on blood analysis.

Thus, although various markers have been proposed to indicate specific types of disorders such as Ovarian cancer there is still a need for more efficient and effective methods and compositions for the diagnosis of diseases.

Ovarian cancer

30

Ovarian cancer is a cancerous growth arising from different parts of the ovary.

The most common form of ovarian cancer ($\geq 80\%$) arises from the outer

lining (epithelium) of the ovary. However, recent evidence shows cells that line the Fallopian tube (epithelium) also to be prone to develop into the same kind of cancer as seen in the ovaries. Since the ovaries and tubes are closely related to each other, it is hypothesized that these cells can mimic ovarian cancer. Other forms arise from the egg cells (germ cell tumor).

In 2004, in the United States, 25,580 new cases were diagnosed and 16,090 women died of ovarian cancer. The risk increases with age and decreases with pregnancy. Lifetime risk is about 1.6%, but women with affected first-degree relatives have a 5% risk. Women with a mutated BRCA1 or BRCA2 gene carry a risk between 25% and 60% depending on the specific mutation. Ovarian cancer is the fifth leading cause of death from cancer in women and the leading cause of death from gynecological cancer.

15 In early stages ovarian cancer is associated with abdominal distension

10-year relative survival ranges from 84.1% in stage IA to 10.4% in stage IIIC

20 Ovarian cancer causes non-specific symptoms. Early diagnosis would result in better survival, on the assumption that stage I and II cancers progress to stage III and IV cancers (but this has not been proven). Most women with ovarian cancer report one or more symptoms such as abdominal pain or discomfort, an abdominal mass, bloating, back pain, urinary urgency, constipation, tiredness and a range of other non-specific symptoms, as well 25 as more specific symptoms such as pelvic pain, abnormal vaginal bleeding or involuntary weight loss. There can be a build-up of fluid (ascites) in the abdominal cavity.

30 Diagnosis of ovarian cancer starts with a physical examination (including a pelvic examination), a blood test (for CA-125 and sometimes other markers), and transvaginal ultrasound. The diagnosis must be confirmed with surgery to inspect the abdominal cavity, take biopsies (tissue samples for

microscopic analysis) and look for cancer cells in the abdominal fluid.

Treatment usually involves chemotherapy and surgery, and sometimes radiotherapy.

5 In most cases, the cause of ovarian cancer remains unknown. Older women, and in those who have a first or second degree relative with the disease, have an increased risk. Hereditary forms of ovarian cancer can be caused by mutations in specific genes (most notably BRCA1 and BRCA2, but also in genes for hereditary nonpolyposis colorectal cancer). Infertile women and
10 those with a condition called endometriosis, those who have never been pregnant and those who use postmenopausal estrogen replacement therapy are at increased risk. Use of combined oral contraceptive pills is a protective factor. The risk is also lower in women who have had their uterine tubes blocked surgically (tubal ligation).

15 Ovarian cancer can also be a secondary cancer, the result of metastasis from a primary cancer elsewhere in the body. 7% of ovarian cancers are due to metastases while the rest are primary cancers. Common primary cancers are breast cancer and gastrointestinal cancer (A common mistake is to name
20 all peritoneal metastases from any gastrointestinal cancer as Krukenberg cancer, but this is only the case if it originates from primary gastric cancer). Surface epithelial-stromal tumor can originate in the peritoneum (the lining of the abdominal cavity), in which case the ovarian cancer is secondary to primary peritoneal cancer, but treatment is basically the same as for primary surface epithelial-stromal tumor involving the peritoneum.
25

Staging

30 Ovarian cancer is staged by the FIGO staging system and uses information obtained after surgery, which can include a total abdominal hysterectomy, removal of (usually) both ovaries and fallopian tubes, (usually) the omentum, and pelvic (peritoneal) washings for cytopathology. The AJCC stage is the same as the FIGO stage.

- Stage I - limited to one or both ovaries
 - o IA - involves one ovary; capsule intact; no tumor on ovarian surface; no malignant cells in ascites or peritoneal washings
 - o IB - involves both ovaries; capsule intact; no tumor on ovarian surface; negative washings
 - o IC - tumor limited to ovaries with any of the following: capsule ruptured, tumor on ovarian surface, positive washings
- Stage II - pelvic extension or implants
 - o IIA - extension or implants onto uterus or fallopian tube; negative washings
 - o IIB - extension or implants onto other pelvic structures; negative washings
 - o IIC - pelvic extension or implants with positive peritoneal washings
- Stage III - microscopic peritoneal implants outside of the pelvis; or limited to the pelvis with extension to the small bowel or omentum
 - o IIIA - microscopic peritoneal metastases beyond pelvis
 - o IIIB - macroscopic peritoneal metastases beyond pelvis less than 2 cm in size
 - o IIIC - peritoneal metastases beyond pelvis > 2 cm or lymph node metastases
- Stage IV - distant metastases to the liver or outside the peritoneal cavity

Para-aortic lymph node metastases are considered regional lymph nodes (Stage IIIC).

Screening

Routine screening of the general population is not recommended by any professional society. This includes the U.S. Preventive Services Task Force, the American Cancer Society, the American College of Obstetricians and Gynecologists, and the National Comprehensive Cancer Network.

No trial has shown improved survival for women undergoing screening.

Screening tests include the CA-125 marker, transvaginal ultrasound, and combinations of markers such as OvaSure (LabCorp). A definitive diagnosis requires surgical excision of the ovaries and fallopian tubes, so a positive screening test must be followed up by surgery.

The purpose of screening is to discover ovarian cancer in early stages, when it is more curable, on the hypothesis that early-stage cancer develops into later-stage cancer. However, it is not known whether early stage ovarian cancer evolves to later stage cancer, or whether stage III (peritoneal cavity involvement) arises as a diffuse process.

The goal of ovarian cancer screening is to detect ovarian cancer at stage I. Several large studies are ongoing, but none have recommended screening. In 2009, however, Menon et al. reported from the UKCTOCS that utilizing multimodal screening, in essence first performing annual CA 125 testing, followed by ultrasound imaging on the secondary level, the positive predictive value was 35.1% for primary invasive epithelial ovarian and tubal carcinoma, making such screening feasible. However, it remains to be seen if such screening is effective to reduce mortality.

Summary of the invention

The present invention provides novel methods for diagnosing diseases based on the determination of specific miRNAs that have altered expression levels in disease states compared to healthy controls or altered expression levels in a condition 1 (biological state or health state 1) compared to a condition 2 (biological state or health state 2).

The present invention further provides novel methods for the diagnosis and prognosis of ovarian cancer based on miRNA-biomarkers.

Definitions

miRNA

5 microRNAs (miRNA or μ RNA) are single-stranded RNA molecules of ~21-23 nucleotides in length, which regulate gene expression. miRNAs are encoded by genes from whose DNA they are transcribed but miRNAs are not translated into protein (i.e. they are non-coding RNAs). The genes encoding miRNAs are much longer than the processed mature miRNA molecule;
10 miRNAs are first transcribed as primary transcripts or pri-miRNA with a cap and poly-A tail and processed to short, 70-nucleotide stem-loop structures known as pre-miRNA in the cell nucleus. This processing is performed in animals by a protein complex known as the Microprocessor complex, consisting of the nuclease Drosha and the double-stranded RNA binding protein Pasha. These pre-miRNAs are then processed to mature miRNAs in
15 the cytoplasm by interaction with the endonuclease Dicer, which also initiates the formation of the RNA-induced silencing complex (RISC). When Dicer cleaves the pre-miRNA stem-loop, two complementary short RNA molecules are formed, but only one is integrated into the RISC. This strand
20 is known as the guide strand and is selected by the argonaute protein, the catalytically active RNase in the RISC, on the basis of the stability of the 5' end. The remaining strand, known as the miRNA*, anti-guide or passenger strand, is degraded as a RISC substrate. Therefore the miRNA*'s are derived from the same hairpin structure like the "normal" miRNAs. So if the "normal"
25 miRNA is then later called the "mature miRNA" or "guided strand", the miRNA* is the passenger strand.

miRNA* (see also above "miRNA")

30 The miRNA*'s, also known as the anti-guide or passenger strand, are mostly complementary to the guide strand, but there are usually single-stranded overhangs on each end, there is usually one or a few mispairs and there are sometimes extra or missing bases causing single-stranded "bubbles. The miRNA*'s are likely to act in a regulatory fashion as the miRNAs.

It is understood that according to the present invention the term "miRNA" also includes the term "miRNA*".

5 miRBase

A well established repository of validated miRNAs is the miRBase.

The miRBase (www.mirbase.org) is a searchable database of published miRNA sequences and annotation. Each entry in the miRBase Sequence database represents a predicted hairpin portion of a miRNA transcript (termed mir in the database), with information on the location and sequence of the mature miRNA sequence (termed miR). Both hairpin and mature sequences are available for searching and browsing, and entries can also be retrieved by name, keyword, references and annotation. All sequence and annotation data are also available for download.

15

miRNA-(expression) profile or miRNA fingerprint

A miRNA-Profile represents the collection of expression levels of a plurality of miRNAs, therefore it is a quantitative measure of individual miRNA expression levels. Hereby, each miRNA is represented by a numerical value.

20

The higher the value of an individual miRNA the higher is the expression level of this miRNA. A miRNA-profile is obtained from the RNA of a biological sample. There are various technologies to determine a miRNA-Profile, e.g. microarrays, RT-PCR, Next Generation Sequencing. As a starting material for analysis, RNA or total-RNA or any fraction thereof can be used. The plurality of miRNAs that are determined by a miRNA-profile can range from a selection of one up to all known miRNAs.

25

Pre-determined set of miRNAs or miRNA signature

The pre-determined set of miRNAs or miRNA signature is understood in the present invention as a fixed defined set of miRNAs which is able to differentiate between a condition 1 and another condition 2. e.g. when condition 1 is lung cancer and condition 2 is normal control, the corresponding pre-determined set of miRNAs is able to differentiate between

a samples derived from a lung cancer patient or a normal control patient. Alternatively, condition 1 is lung cancer and condition 2 is multiple sclerosis, the corresponding pre-determined set of miRNAs is able to differentiate between a lung cancer patient and a multiple sclerosis patient. In order to be
5 able to perform the sample analysis it is required that, e.g. on the matrix that will be used to determine a miRNA profile, these fixed defined set of miRNAs have to be represented by capture probes that are defined by the pre-determined set of miRNAs. For example, when the predetermined set of miRNAs for diagnosing lung cancer from healthy controls consists of 25
10 miRNAs, probes capable for detecting these 25 miRNAs have to be implemented for performing the diagnostic analysis.

Common miRNA Signature Profile

A common miRNA signature profile is understood in the present invention as
15 a non-fixed defined set of miRNAs or non-coding RNAs which is able to differentiate between a condition 1 and another condition 2. The common miRNA or non-coding RNA signature profile is calculated “on-the-fly” from a plurality of miRNA-profiles that are stored, e.g. in database. The common miRNA signature profile which is able to differentiate between a condition 1
20 and another condition 2 is changing as soon as a new profile is added to the database which is relevant to either to state of health 1 or another condition 2. In this respect it is different from a predetermined set of miRNAs (see above). Furthermore, the basis for generating the common miRNA signature profile- hence the miRNA profiles stored in the database – is generated from capture probes, e.g. on a matrix that is representing as
25 much as possible different capture probes for detecting as much as possible, ideally all known, miRNAs.

Non-coding RNA

30 A non-coding RNA (ncRNA) is a functional RNA molecule that is not translated into a protein. Less-frequently used synonyms are non-protein-coding RNA (npcRNA), non-messenger RNA (nmRNA), small non-messenger RNA (snmRNA), functional RNA (fRNA). The term small RNA

(sRNA) is often used for bacterial ncRNAs. The DNA sequence from which a non-coding RNA is transcribed as the end product is often called an RNA gene or non-coding RNA gene.

- 5 Non-coding RNA genes include highly abundant and functionally important RNAs such as transfer RNA (tRNA) and ribosomal RNA (rRNA), as well as RNAs such as snoRNAs, microRNAs, siRNAs and piRNAs and the long ncRNAs that include examples such as Xist and HOTAIR (see here for a more complete list of ncRNAs). The number of ncRNAs encoded within the
10 human genome is unknown, however recent transcriptomic and bioinformatic studies suggest the existence of thousands of ncRNAs. Since most of the newly identified ncRNAs have not been validated for their function, it is possible that many are non-functional.

15 Condition

A condition (biological state or health state or state of health) is understood in the present invention as status of a subject that can be described by physical, mental or social criteria. It includes as well so-called "healthy" and "diseased" conditions, therefore it is not limited to the WHO definition of health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." but includes disease and infirmity. For the definition of diseases comprised, e.g. by the conditions of the present invention, it is referred to the international classification of diseases (ICD) of the WHO (<http://www.who.int/classifications/icd/en/index.html>). When 2 or more conditions are compared according to the present invention, it is understood that this is possible for all conditions that can be defined and is not limited to a comparison of a disease versus healthy and extends to multi-way comparisons. Examples for comparison are, but not limited to:

30

pairwise comparisons:

- lung cancer vs. healthy control, pancreatic cancer vs. healthy control
- lung cancer vs. pancreatic cancer, lung cancer vs. multiple sclerosis

- lung cancer WHO grade 1 vs. lung cancer WHO grade 2
- lung cancer WHO grade 1 metastasing vs. lung cancer WHO grade 1 non-metastasing
- Morbus Crohn vs. Collitis
- 5 • Pancreatic cancer vs. Pancreatitis

multi-way comparisons :

- Lung cancer vs. pancreatic cancer vs. multiple sclerosis
- Pancreas cancer vs. pancreatitis vs. lung cancer WHO grade 1 non-metastasing

10

Biological sample

A “biological sample” in terms of the invention means a sample of biological tissue or fluid. Examples of biological samples are sections of tissues, blood, blood fractions, plasma, serum, urine or samples from other peripheral sources. or cell cultures, cell colonies of even single cells, or a collection of single cells. Furthermore, also pools or mixture of the above mentioned samples may be employed. A biological sample may be provided by removing a sample of cells from a subject, but can also be provided by using a previously isolated sample. For example, a tissue sample can be removed from a subject suspected of having a disease by conventional biopsy techniques. In a preferred embodiment, a blood sample is taken from the subject. In one embodiment, the blood or tissue sample is obtained from the subject prior to initiation of radiotherapy, chemotherapy or other therapeutic treatment. According to the invention, the biological sample preferably is a blood or a serum sample. Further, it is also preferred to use blood cells, e.g. erythrocytes, leukocytes or thrombocytes.

A biological sample from a patient means a sample from a subject suspected to be affected by a disease. As used herein, the term “subject” refers to any mammal, including both human and other mammals. Preferably, the methods of the present invention are applied to human subjects.

15

20

25

30

Subject-matter of the invention is a method for diagnosing a disease, comprising the steps

(a) determining an expression profile of a predetermined set of miRNAs in a biological sample from a patient (or subject); and

5 (b) comparing said expression profile to a reference expression profile, wherein the comparison of said determined expression profile to said reference expression profile allows for the diagnosis of the disease, wherein the disease is ovarian cancer.

10 In step (a) of the above method of the invention, an expression profile of a predetermined set of miRNAs is determined. The determination may be carried out by any convenient means for determining nucleic acids. For expression profiling, qualitative, semi-quantitative and preferably quantitative detection methods can be used. A variety of techniques are well known to 15 those of skill in the art. In particular, the determination may comprise nucleic acid hybridization and/or nucleic acid amplification steps.

Nucleic acid hybridization may for example be performed using a solid phase nucleic acid biochip array, in particular a microarray, or *in situ* hybridization.

20 The miRNA microarray technology affords the analysis of a complex biological sample for all expressed miRNAs. Nucleotides with complementarity to the corresponding miRNAs are spotted on coated carriers or are fabricated by *in-situ* synthesis methods on a carrier. Preferably, miRNAs isolated from the sample of interest are not labelled, e.g. 25 before hybridization of the miRNAs to the complementary sequences on the carrier and the resulting signal indicating the occurrence of a distinct miRNA is generated by incorporation of a detectable label (e.g. biotin, fluorescent dye) by means of an enzyme reaction.

30 According to another embodiment of the invention, miRNAs isolated from the sample of interest are labelled, e.g. fluorescently labelled, so that upon hybridization of the miRNAs to the complementary sequences on the carrier the resulting signal indicates the occurrence of a distinct miRNA.

On one miRNA microarray, preferably at least the whole predetermined set of miRNAs can be analyzed.

- 5 Further, quantitative real-time polymerase chain reaction (RT-PCR) can be used to detect miRNAs even at very low abundance.

Alternative methods for obtaining expression profiles may also contain sequencing, next generation sequencing or mass spectroscopy.

10

The predetermined set of miRNAs in step (a) of the above method of the invention depends on the disease to be diagnosed. The inventors found out that single miRNA biomarkers lack sufficient accuracy, specificity and sensitivity, and therefore it is preferred to analyze more complex miRNA expression patterns, so-called miRNA signatures. The predetermined set of miRNAs comprises one or more, preferably a larger number of miRNAs (miRNA signatures) that are differentially regulated in samples of a patient affected by a particular disease compared to healthy controls. Alternatively, the disease can also be compared to any other defined condition (e.g. another disease).

20

The expression profile determined in the above step (a) is subsequently compared to a reference expression profile or to a plurality of reference profiles in the above step (b). The reference expression profile is the expression profile of the same set of miRNAs in a biological sample originating from the same source as the biological sample from a patient but obtained from a healthy subject. Preferably, both the reference expression profile and the expression profile of the above step (a) are determined in a blood or serum sample or in a sample of erythrocytes, leukocytes and/or thrombocytes. It is understood that the reference expression profile is not necessarily obtained from a single healthy subject but may be an average expression profile of a plurality of healthy subjects. It is preferred to use a reference expression profile obtained from a person of the same gender,

25

30

and a similar age as the patient.

The above method of the invention is suitable for diagnosing any diseases for which a differential expression of miRNAs compared to healthy controls or other diseases exists. In particular, the method may be used for diagnosing ovarian cancer. The method of the invention also allows a differential diagnosis of ovarian cancer compared to other diseases including other cancers such as bladder cancer, brain cancer, breast cancer, colon cancer, endometrium cancer, gastrointestinal stromal cancer, glioma, head- and neck cancer, kidney cancer, leukemia, liver cancer, lung cancer, lymph node cancer, melanoma, meninges cancer, pancreas cancer, e.g. pancreas cancer ductal or non-ductal, prostate cancer, sarcoma, stomach cancer, testicular cancer, thyroid cancer, thymus cancer and Wilm's tumor or COPD.

The diagnosis may comprise determining type, rate and/or stage of cancer.

The course of the disease and the success of therapy such as chemotherapy may be monitored. The method of the invention provides a prognosis on the survivor rate and enables to determine a patient's response to drugs.

The inventors succeeded in developing an approach to arrive at miRNA signatures that are correlated with ovarian cancer. In more detail, the following steps are accomplished:

1. miRNAs are extracted from a biological sample of a patient (subject), preferably a blood or serum or urine sample or a sample comprising erythrocytes, leukocytes or thrombocytes, using suitable kits / purification methods. From these samples preferably the RNA-fraction is used for analysis.

2. The respective samples are measured using experimental techniques. These techniques include but are not restricted to:

- Array based approaches
- Real time quantitative polymerase chain reaction
- Sequencing

- Next Generation Sequencing
- Mass Spectroscopy

3. Mathematical approaches are applied to gather information on the value and the redundancy of single biomarkers. These methods include,
5 but are not restricted to:

- basic mathematic approaches (e.g. Fold Quotients, Signal to Noise ratios, Correlation)
- statistical methods as hypothesis tests (e.g. t-test, Wilcoxon-Mann-Whitney test), the Area under the Receiver operator Characteristics Curve
10
- Information Theory approaches, (e.g. the Mutual Information, Cross-entropy)
- Probability theory (e.g. joint and conditional probabilities)
- Combinations and modifications of the previously mentioned
15 examples

4. The information collected in 3) are used to estimate for each biomarker the diagnostic content or value. Usually, however, this diagnostic value of only one biomarker is too small to get a highly accurate diagnosis with accuracy rates, specificities and sensitivities beyond the 90% barrier.

20 Please note that the diagnostic content for our miRNAs can be found in the tables in Figures 2, and 7-13. These tables includes the miRNAs and the corresponding significance value as computed by a t-test (column : ttest_adjp = adjusted t-test values) for the comparison of ovarian cancer to healthy controls (Fig 2) and ovarian cancer to other diseases (Fig. 7-13).

25 5. Thus statistical learning / machine learning / bioinformatics / computational approaches are applied to define subsets of biomarkers that are tailored for the detection of diseases. These techniques includes but are not restricted to

- Wrapper subset selection techniques (e.g. forward step-wise, backward step-wise, combinatorial approaches, optimization approaches)
30
- Filter subset selection methods (e.g. the methods mentioned in 3)

- Principal Component Analysis
- Combinations and modifications of such methods (e.g. hybrid approaches)

6. The diagnostic content of each detected set can be estimated by
5 mathematical and/or computational techniques to define the diagnostic
information content of subsets.

7. The subsets, detected in step 5, which may range from only a
10 small number (at least two) to all measured biomarkers is then used to carry
out a diagnosis. To this end, statistical learning / machine learning /
bioinformatics / computational approaches are applied that include but are
not restricted to any type of supervised or unsupervised analysis:

15

- Classification techniques (e.g. naïve Bayes, Linear Discriminant Analysis, Quadratic Discriminant Analysis Neural Nets, Tree based approaches, Support Vector Machines, Nearest Neighbour Approaches)
- Regression techniques (e.g. linear Regression, Multiple Regression, logistic regression, probit regression, ordinal logistic regression ordinal Probit-Regression, Poisson Regression, negative binomial Regression, multinomial logistic Regression, truncated regression)
- Clustering techniques (e.g. k-means clustering, hierarchical clustering, PCA)
- Adaptations, extensions, and combinations of the previously mentioned approaches

20

25

The inventors surprisingly found out that the described approach yields in miRNA signatures that provide high diagnostic accuracy, specificity and sensitivity in the determination of ovarian cancer.

30

The inventors succeeded in determining miRNAs that are differentially regulated in samples from ovarian cancer patients as compared to healthy controls. A complete overview of all miRNAs that are found to be

differentially regulated in blood samples of ovarian cancer patients compared to healthy controls is provided in the tables shown in Figure 2.

Figures 7-13 include a list of miRNAs found to be differentially regulated between:

- Ovarian cancer vs Lung cancer (Fig 7)
- Ovarian cancer vs Melanoma (Fig 8)
- Ovarian cancer vs Pancreatic cancer (Fig 9)
- Ovarian cancer vs Prostate cancer (Fig 10)
- Ovarian cancer vs Wilms tumor (Fig 11)
- Ovarian cancer vs Pancreatic cancer non ductal (Fig 12)
- Ovarian cancer vs Pancreatic cancer ductal (Fig 13)

In the tables shown in Figures 2 and 7-13 the miRNAs that are found to be differentially regulated are sorted in the order of their t-test significance (see column : ttest_adjp = adjusted t-test values).

Another method for assessing the significance is to compute the Mutual information (MI) (Shannon, 1984) which is an adequate measure to estimate the overall diagnostic information content of single biomarkers (Keller, Ludwig et al., 2006). According to the invention mutual information is considered as the reduction in uncertainty about the class labels "0" for controls and "1" for tumor samples due to the knowledge of the miRNA expression. The higher the value of the MI of a miRNA, the higher is the diagnostic content of the respective miRNA.

Surprisingly, the inventors found out that miRNAs are differentially regulated in samples from ovarian cancer patients as compared to health controls. A complete overview of all miRNAs that are found to be differentially regulated in blood samples of ovarian cancer patients is provided in the table shown in Figure 2. In total, 75 miRNAs were found to be significantly deregulated (t-test significance <0.05) in blood cells of ovarian cancer patients as compared to the healthy controls.

Preferably, the predetermined set of miRNAs for the diagnosis of ovarian cancer comprises one or more nucleic acids selected from the deregulated miRNAs presented in the table in Figure 2.

5

The predetermined set of miRNAs should preferably comprise at least 1, preferably at least 7, 10, 15, 20, 25, 30, 35, 40, 50, 60, 70, or 75 of the indicated nucleic acids. It is particularly preferred to include the 75, 70, 60, 50, 40, 35, 30, 25, 20, 15, 10, 7 or at least 1 of the first mentioned miRNAs according to their order in the table in Figure 2.

10

Thus, preferably the predetermined set of miRNAs for the diagnosis of ovarian cancer comprises one or more nucleic acids selected from the 75 most deregulated miRNAs.

15

Thus, preferably the predetermined set of miRNAs for the diagnosis of ovarian cancer comprises one or more nucleic acids selected from the 75 most deregulated miRNAs.

20

Preferably, the predetermined set of miRNAs comprises at least 1, preferably at least 7, 10, 15, 20, 25, 30, 35, 40, 50, 60, 70 or 75 or all of the above-indicated nucleic acids (listed in Fig 2).

25

In a further embodiment the predetermined set of miRNAs for the diagnosis of Ovarian cancer comprises one or more miRNAs selected from the group consisting of hsa-miR-1248, hsa-miR-342-3p, hsa-miR-133b, hsa-miR-605, hsa-miR-450b-3p, hsa-miR-520a-3p, hsa-miR-23b*.

30

In a further embodiment the predetermined set of miRNAs for the diagnosis of Ovarian cancer comprises one or more miRNAs selected from the group consisting of hsa-miR-1248, hsa-miR-342-3p, hsa-miR-133b, hsa-miR-605, hsa-miR-450b-3p, hsa-miR-520a-3p, hsa-miR-23b*, hsa-miR-423-5p, hsa-miR-219-1-3p, hsa-miR-454*.

In a further embodiment the predetermined set of miRNAs for the diagnosis of Ovarian cancer comprises one or more miRNAs selected from the group consisting of hsa-miR-1248, hsa-miR-342-3p, hsa-miR-133b, hsa-miR-605,
5 hsa-miR-450b-3p, hsa-miR-520a-3p, hsa-miR-23b*, hsa-miR-423-5p, hsa-miR-219-1-3p, hsa-miR-454* hsa-miR-26b*, hsa-miR-1259, hsa-miR-655, hsa-miR-302c, hsa-miR-383.

In a further embodiment the predetermined set of miRNAs for the diagnosis of Ovarian cancer comprises one or more miRNAs selected from the group consisting of hsa-miR-1248, hsa-miR-342-3p, hsa-miR-133b, hsa-miR-605, hsa-miR-450b-3p, hsa-miR-520a-3p, hsa-miR-23b*, hsa-miR-423-5p, hsa-miR-219-1-3p, hsa-miR-454* hsa-miR-26b*, hsa-miR-1259, hsa-miR-655, hsa-miR-302c, hsa-miR-383, hsa-miR-150, hsa-miR-412, hsa-miR-548i,
15 hsa-let-7e*, hsa-miR-324-3p.

In a further embodiment the predetermined set of miRNAs for the diagnosis of Ovarian cancer comprises one or more miRNAs selected from the group consisting of hsa-miR-1248, hsa-miR-342-3p, hsa-miR-133b, hsa-miR-605,
20 hsa-miR-450b-3p, hsa-miR-520a-3p, hsa-miR-23b*, hsa-miR-423-5p, hsa-miR-219-1-3p, hsa-miR-454* hsa-miR-26b*, hsa-miR-1259, hsa-miR-655, hsa-miR-302c, hsa-miR-383, hsa-miR-150, hsa-miR-412, hsa-miR-548i, hsa-let-7e*, hsa-miR-324-3p, hsa-miR-335*, hsa-miR-320a, hsa-miR-320d, hsa-miR-409-3p, hsa-miR-590-3p.

25 In a further embodiment the predetermined set of miRNAs for the diagnosis of Ovarian cancer comprises one or more miRNAs selected from the group consisting of hsa-miR-1248, hsa-miR-342-3p, hsa-miR-133b, hsa-miR-605, hsa-miR-450b-3p, hsa-miR-520a-3p, hsa-miR-23b*, hsa-miR-423-5p, hsa-miR-219-1-3p, hsa-miR-454* hsa-miR-26b*, hsa-miR-1259, hsa-miR-655, hsa-miR-302c, hsa-miR-383, hsa-miR-150, hsa-miR-412, hsa-miR-548i, hsa-let-7e*, hsa-miR-324-3p, hsa-miR-335*, hsa-miR-320a, hsa-miR-320d, hsa-miR-409-3p, hsa-miR-590-3p, hsa-miR-545*, hsa-miR-889, hsa-miR-

1224-3p, hsa-miR-148a*, hsa-miR-9.

In a further embodiment the predetermined set of miRNAs for the diagnosis of Ovarian cancer comprises one or more miRNAs selected from the group consisting of hsa-miR-1248, hsa-miR-342-3p, hsa-miR-133b, hsa-miR-605, hsa-miR-450b-3p, hsa-miR-520a-3p, hsa-miR-23b*, hsa-miR-423-5p, hsa-miR-219-1-3p, hsa-miR-454* hsa-miR-26b*, hsa-miR-1259, hsa-miR-655, hsa-miR-302c, hsa-miR-383, hsa-miR-150, hsa-miR-412, hsa-miR-548i, hsa-let-7e*, hsa-miR-324-3p, hsa-miR-335*, hsa-miR-320a, hsa-miR-320d, hsa-miR-409-3p, hsa-miR-590-3p, hsa-miR-545*, hsa-miR-889, hsa-miR-1224-3p, hsa-miR-148a*, hsa-miR-9, hsa-miR-518f, hsa-miR-488, hsa-miR-182, hsa-miR-10a*, hsa-miR-19b.

In a further embodiment the predetermined set of miRNAs for the diagnosis of Ovarian cancer comprises one or more miRNAs selected from the group consisting of hsa-miR-1248, hsa-miR-342-3p, hsa-miR-133b, hsa-miR-605, hsa-miR-450b-3p, hsa-miR-520a-3p, hsa-miR-23b*, hsa-miR-423-5p, hsa-miR-219-1-3p, hsa-miR-454* hsa-miR-26b*, hsa-miR-1259, hsa-miR-655, hsa-miR-302c, hsa-miR-383, hsa-miR-150, hsa-miR-412, hsa-miR-548i, hsa-let-7e*, hsa-miR-324-3p, hsa-miR-335*, hsa-miR-320a, hsa-miR-320d, hsa-miR-409-3p, hsa-miR-590-3p, hsa-miR-545*, hsa-miR-889, hsa-miR-1224-3p, hsa-miR-148a*, hsa-miR-9, hsa-miR-518f, hsa-miR-488, hsa-miR-182, hsa-miR-10a*, hsa-miR-19b, hsa-miR-15a, hsa-miR-1289, hsa-miR-500, hsa-miR-1281, hsa-miR-942.

25

In a further embodiment the predetermined set of miRNAs for the diagnosis of Ovarian cancer comprises one or more miRNAs selected from the group consisting of hsa-miR-1248, hsa-miR-342-3p, hsa-miR-133b, hsa-miR-605, hsa-miR-450b-3p, hsa-miR-520a-3p, hsa-miR-23b*, hsa-miR-423-5p, hsa-miR-219-1-3p, hsa-miR-454* hsa-miR-26b*, hsa-miR-1259, hsa-miR-655, hsa-miR-302c, hsa-miR-383, hsa-miR-150, hsa-miR-412, hsa-miR-548i, hsa-let-7e*, hsa-miR-324-3p, hsa-miR-335*, hsa-miR-320a, hsa-miR-320d, hsa-miR-409-3p, hsa-miR-590-3p, hsa-miR-545*, hsa-miR-889, hsa-miR-

1224-3p, hsa-miR-148a*, hsa-miR-9, hsa-miR-518f, hsa-miR-488, hsa-miR-
182, hsa-miR-10a*, hsa-miR-19b, hsa-miR-15a, hsa-miR-1289, hsa-miR-
500, hsa-miR-1281, hsa-miR-942, hsa-miR-877*, hsa-let-7f-1*, hsa-miR-651,
hsa-miR-610, hsa-miR-664, hsa-miR-613, hsa-miR-483-3p, hsa-miR-320c,
5 hsa-miR-720, hsa-miR-299-5p.

In a further embodiment the predetermined set of miRNAs for the diagnosis
of Ovarian cancer comprises one or more miRNAs selected from the group
consisting of hsa-miR-1248, hsa-miR-342-3p, hsa-miR-133b, hsa-miR-605,
10 hsa-miR-450b-3p, hsa-miR-520a-3p, hsa-miR-23b*, hsa-miR-423-5p, hsa-
miR-219-1-3p, hsa-miR-454* hsa-miR-26b*, hsa-miR-1259, hsa-miR-655,
hsa-miR-302c, hsa-miR-383, hsa-miR-150, hsa-miR-412, hsa-miR-548i,
hsa-let-7e*, hsa-miR-324-3p, hsa-miR-335*, hsa-miR-320a, hsa-miR-320d,
hsa-miR-409-3p, hsa-miR-590-3p, hsa-miR-545*, hsa-miR-889, hsa-miR-
15 1224-3p, hsa-miR-148a*, hsa-miR-9, hsa-miR-518f, hsa-miR-488, hsa-miR-
182, hsa-miR-10a*, hsa-miR-19b, hsa-miR-15a, hsa-miR-1289, hsa-miR-
500, hsa-miR-1281, hsa-miR-942, hsa-miR-877*, hsa-let-7f-1*, hsa-miR-651,
hsa-miR-610, hsa-miR-664, hsa-miR-613, hsa-miR-483-3p, hsa-miR-320c,
hsa-miR-720, hsa-miR-299-5p, hsa-miR-579, hsa-miR-636, hsa-miR-197,
20 hsa-miR-668, hsa-miR-494, hsa-miR-1262, hsa-miR-578, hsa-miR-708*,
hsa-miR-329.

In a further embodiment the predetermined set of miRNAs for the diagnosis
of Ovarian cancer comprises one or more miRNAs selected from the group
25 consisting of hsa-miR-1248, hsa-miR-342-3p, hsa-miR-133b, hsa-miR-605,
hsa-miR-450b-3p, hsa-miR-520a-3p, hsa-miR-23b*, hsa-miR-423-5p, hsa-
miR-219-1-3p, hsa-miR-454* hsa-miR-26b*, hsa-miR-1259, hsa-miR-655,
hsa-miR-302c, hsa-miR-383, hsa-miR-150, hsa-miR-412, hsa-miR-548i,
hsa-let-7e*, hsa-miR-324-3p, hsa-miR-335*, hsa-miR-320a, hsa-miR-320d,
30 hsa-miR-409-3p, hsa-miR-590-3p, hsa-miR-545*, hsa-miR-889, hsa-miR-
1224-3p, hsa-miR-148a*, hsa-miR-9, hsa-miR-518f, hsa-miR-488, hsa-miR-
182, hsa-miR-10a*, hsa-miR-19b, hsa-miR-15a, hsa-miR-1289, hsa-miR-
500, hsa-miR-1281, hsa-miR-942, hsa-miR-877*, hsa-let-7f-1*, hsa-miR-651,

hsa-miR-610, hsa-miR-664, hsa-miR-613, hsa-miR-483-3p, hsa-miR-320c,
hsa-miR-720, hsa-miR-299-5p, hsa-miR-579, hsa-miR-636, hsa-miR-197,
hsa-miR-668, hsa-miR-494, hsa-miR-1262, hsa-miR-578, hsa-miR-708*,
hsa-miR-329, hsa-miR-941, hsa-miR-155, hsa-miR-26a-1*, hsa-miR-1246,
5 hsa-miR-892b, hsa-miR-146a, hsa-miR-337-3p, hsa-miR-130a*, hsa-let-7b,
hsa-miR-744*.

In a further embodiment the predetermined set of miRNAs for the diagnosis
of Ovarian cancer comprises one or more miRNAs selected from the group
10 consisting of hsa-miR-1248, hsa-miR-342-3p, hsa-miR-133b, hsa-miR-605,
hsa-miR-450b-3p, hsa-miR-520a-3p, hsa-miR-23b*, hsa-miR-423-5p, hsa-
miR-219-1-3p, hsa-miR-454* hsa-miR-26b*, hsa-miR-1259, hsa-miR-655,
hsa-miR-302c, hsa-miR-383, hsa-miR-150, hsa-miR-412, hsa-miR-548i,
hsa-let-7e*, hsa-miR-324-3p, hsa-miR-335*, hsa-miR-320a, hsa-miR-320d,
15 hsa-miR-409-3p, hsa-miR-590-3p, hsa-miR-545*, hsa-miR-889, hsa-miR-
1224-3p, hsa-miR-148a*, hsa-miR-9, hsa-miR-518f, hsa-miR-488, hsa-miR-
182, hsa-miR-10a*, hsa-miR-19b, hsa-miR-15a, hsa-miR-1289, hsa-miR-
500, hsa-miR-1281, hsa-miR-942, hsa-miR-877*, hsa-let-7f-1*, hsa-miR-651,
hsa-miR-610, hsa-miR-664, hsa-miR-613, hsa-miR-483-3p, hsa-miR-320c,
20 hsa-miR-720, hsa-miR-299-5p, hsa-miR-579, hsa-miR-636, hsa-miR-197,
hsa-miR-668, hsa-miR-494, hsa-miR-1262, hsa-miR-578, hsa-miR-708*,
hsa-miR-329, hsa-miR-941, hsa-miR-155, hsa-miR-26a-1*, hsa-miR-1246,
hsa-miR-892b, hsa-miR-146a, hsa-miR-337-3p, hsa-miR-130a*, hsa-let-7b,
hsa-miR-744*, hsa-miR-140-3p, hsa-miR-573, hsa-miR-378, hsa-miR-1237,
25 hsa-miR-363*.

In a further embodiment, the measured miRNA profiles were classified using
statistical learning approaches in order to compute accuracy, specificity, and
sensitivity for the diagnosis of ovarian cancer (see Figure 3). The miRNAs
30 that performed best for the diagnosis of ovarian cancer according to their
accuracy, specificity, and sensitivity are the 440 miRNAs listed in the table in
Figure 2 (entries No. 1-440) leading to an accuracy 82.8 %, a specificity of
87.5 % and a sensitivity of 71.9 %

The predetermined set of miRNAs for the diagnosis of ovarian cancer should preferably comprise at least 1, preferably at least 7.10, 15, 20, 25, 30, 35, 40, 50, 60, 70, 75, 440 or preferably all of the known miRNAs, preferably all 5 of the 962 (see Figure 1, representing the current status of all known miRNAs in the version 12, 13, and 14 of the miRBase repository (www.mirbase.org)).

Another embodiment of the present invention is a kit for diagnosing a 10 disease, comprising means for determining an expression profile of a predetermined set of miRNAs in a biological sample, in particular in a blood and/or serum or urine sample. Preferably, one or more reference expression profiles are also provided which show the expression profile of the same set of miRNAs in the same type of biological sample, in particular in a blood 15 and/or serum or urine sample, obtained from one or more healthy subjects. A comparison to said reference expression profile(s) allows for the diagnosis of the disease.

Another preferred embodiment of the present invention is a kit for diagnosing 20 ovarian cancer, comprising means for determining the expression profile of one or more miRNAs presented in the table in Figure 2, preferably one or more miRNAs selected from the group consisting of hsa-miR-1248, hsa-miR-342-3p, hsa-miR-133b, hsa-miR-605, hsa-miR-450b-3p, hsa-miR-520a-3p, hsa-miR-23b*, hsa-miR-423-5p, hsa-miR-219-1-3p, hsa-miR-454* hsa-miR-150, hsa-miR-412, hsa-miR-548i, hsa-let-7e*, hsa-miR-324-3p (20), hsa- 25 miR-335*, hsa-miR-320a, hsa-miR-320d, hsa-miR-409-3p, hsa-miR-590-3p, hsa-miR-545*, hsa-miR-889, hsa-miR-1224-3p, hsa-miR-148a*, hsa-miR-9, hsa-miR-518f, hsa-miR-488, hsa-miR-182, hsa-miR-10a*, hsa-miR-19b, hsa- 30 miR-15a, hsa-miR-1289, hsa-miR-500, hsa-miR-1281, hsa-miR-942, hsa-miR-877*, hsa-let-7f-1*, hsa-miR-651, hsa-miR-610, hsa-miR-664, hsa-miR-613, hsa-miR-483-3p, hsa-miR-320c, hsa-miR-720, hsa-miR-299-5p, hsa- 35 miR-579, hsa-miR-636, hsa-miR-197, hsa-miR-668, hsa-miR-494, hsa-miR-1262, hsa-miR-578, hsa-miR-708*, hsa-miR-329, hsa-miR-941, hsa-miR-

155, hsa-miR-26a-1*, hsa-miR-1246, hsa-miR-892b, hsa-miR-146a, hsa-miR-337-3p, hsa-miR-130a*, hsa-let-7b, hsa-miR-744*, hsa-miR-140-3p, hsa-miR-573, hsa-miR-378, hsa-miR-1237, hsa-miR-363*.

- 5 In a preferred embodiment the kit comprises means for determining at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50, 60, 70, 75, 440 or all of the indicated miRNAs. It is particularly preferred to include means for determining the 440, 75, 70, 60, 50, 40, 35, 30, 25, 20, 15, 10 or 7 at least 1 first mentioned miRNAs in the order of their diagnostic significance as represented by their order in the table in Figure 2. The kit for diagnosing ovarian cancer is particularly suitable for diagnosing ovarian cancer in a blood and/or serum or urine sample or in a sample comprising erythrocytes, leukocytes and/or thrombocytes.
- 10
- 15 The means for determining a predetermined set of miRNAs may for example comprise a microarray comprising miRNA-specific oligonucleotide probes. In a preferred embodiment, the microarray comprises miRNA-specific oligonucleotide probes for the detection of miRNAs. Depending on the intended use of the microarray in the diagnosis or prognosis of a particular disease (e.g ovarian cancer), probes for detecting different miRNAs may be included.
- 20

25 A microarray intended for use in the diagnosis of ovarian cancer preferably comprises miRNA specific oligonucleotide probes for one or more miRNAs presented in the table in Figure 2, preferably for one or more miRNAs selected from the group consisting hsa-miR-1248, hsa-miR-342-3p, hsa-miR-133b, hsa-miR-605, hsa-miR-450b-3p, hsa-miR-520a-3p, hsa-miR-23b*, hsa-miR-423-5p, hsa-miR-219-1-3p, hsa-miR-454* hsa-miR-150, hsa-miR-412, hsa-miR-548i, hsa-let-7e*, hsa-miR-324-3p (20), hsa-miR-335*, hsa-miR-320a, hsa-miR-320d, hsa-miR-409-3p, hsa-miR-590-3p, hsa-miR-545*, hsa-miR-889, hsa-miR-1224-3p, hsa-miR-148a*, hsa-miR-9, hsa-miR-518f, hsa-miR-488, hsa-miR-182, hsa-miR-10a*, hsa-miR-19b, hsa-miR-15a, hsa-miR-1289, hsa-miR-500, hsa-miR-1281, hsa-miR-942, hsa-miR-877*,

hsa-let-7f-1*, hsa-miR-651, hsa-miR-610, hsa-miR-664, hsa-miR-613, hsa-miR-483-3p, hsa-miR-320c, hsa-miR-720, hsa-miR-299-5p, hsa-miR-579, hsa-miR-636, hsa-miR-197, hsa-miR-668, hsa-miR-494, hsa-miR-1262, hsa-miR-578, hsa-miR-708*, hsa-miR-329, hsa-miR-941, hsa-miR-155, hsa-miR-26a-1*, hsa-miR-1246, hsa-miR-892b, hsa-miR-146a, hsa-miR-337-3p, hsa-miR-130a*, hsa-let-7b, hsa-miR-744*, hsa-miR-140-3p, hsa-miR-573, hsa-miR-378, hsa-miR-1237, hsa-miR-363*.

In a preferred embodiment the microarray comprises oligonucleotide probes for determining at least 1, preferably at least 7,10, 15, 20, 25, 30 ,35 ,40 ,50, 60, 70, 75, 440 or all of the indicated miRNAs. It is particularly preferred to include oligonucleotide probes for determining the most significant miRNAs, which is represented by their order in the table depicted in Figure 2.

The microarray can comprise oligonucleotide probes obtained from known or predicted miRNA sequences. The array may contain different oligonucleotide probes for each miRNA, for example one containing the active mature sequence and another being specific for the precursor of the miRNA. The array may also contain controls such as one or more sequences differing from the human orthologs by only a few bases, which can serve as controls for hybridization stringency conditions. It is also possible to include viral miRNAs or putative miRNAs as predicted from bioinformatic tools. Further, it is possible to include appropriate controls for non-specific hybridization on the microarray.

25

Differential diagnosis : ovarian cancer vs. lung cancer

Surprisingly, the inventors found out that miRNAs are differentially regulated in samples from ovarian cancer patients as compared to lung cancer patients. In total, 154 miRNAs were found to be significantly deregulated (t-test significance <0.05) in blood cells of ovarian cancer patients as compared to the lung cancer patients. In Figure 7 the 70 miRNAs with the highest diagnostic content or value for discrimination of ovarian cancer from lung cancer patients are listed.

These miRNAs include hsa-miR-1224-3p, hsa-miR-610, hsa-miR-668, hsa-miR-328, hsa-miR-942, hsa-miR-500, hsa-miR-423-5p, hsa-miR-1248, hsa-miR-324-3p, hsa-miR-1281, hsa-miR-193a-5p, hsa-miR-1825, hsa-miR-605, 5 hsa-miR-383, hsa-miR-485-3p, hsa-miR-148a*, hsa-miR-877*, hsa-miR-130a*, hsa-let-7d*, hsa-miR-337-3p, hsa-miR-1226, hsa-miR-148a, hsa-miR-219-1-3p, hsa-miR-29c*, hsa-miR-483-3p, hsa-miR-133a, hsa-miR-323-3p, hsa-miR-125a-5p, hsa-miR-130b*, hsa-miR-133b, hsa-miR-186*, hsa-miR-576-3p, hsa-miR-150, hsa-miR-26b*, hsa-miR-302c, hsa-miR-299-5p, hsa-miR-361-5p, hsa-miR-770-5p, hsa-miR-1303, hsa-miR-576-5p, hsa-miR-636, hsa-miR-1237, hsa-miR-15a, hsa-miR-15b, hsa-miR-720, hsa-miR-409-3p, hsa-miR-659, hsa-miR-664, hsa-miR-21*, hsa-miR-199a-5p, hsa-miR-518f*, hsa-miR-146b-3p, hsa-miR-23b*, hsa-miR-331-3p, hsa-miR-708*, hsa-miR-329, hsa-miR-564, hsa-miR-744*, hsa-miR-1282, hsa-miR-454*, 15 hsa-miR-302d*, hsa-miR-197, hsa-miR-1538, hsa-miR-877, hsa-miR-652, hsa-miR-573, hsa-miR-18b*, hsa-miR-494, hsa-miR-220b, hsa-miR-1274a.

In a further embodiment the predetermined set of miRNAs for the differential diagnosis of ovarian cancer and lung cancer comprises one or more miRNAs, at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50 , 60, 20 70 or all of the above indicated miRNAs.

In a preferred embodiment the kit for diagnosis of ovarian cancer from lung cancer comprises means for determining one or more, at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50 , 60, 70 or all of the above indicated 25 miRNAs.

A microarray intended for use in the differential diagnosis of ovarian cancer and lung cancer preferably comprises miRNA specific oligonucleotide probes for one or more miRNAs, at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50 , 60, 70 or all of the above indicated miRNAs. 30

Differential diagnosis : ovarian cancer vs melanoma

Surprisingly, the inventors found out that miRNAs are differentially regulated in samples from ovarian cancer patients as compared to melanoma patients. In total, 352 miRNAs were found to be significantly deregulated (t-test significance <0.05) in blood cells of ovarian cancer patients as compared to the melanoma patients. In Figure 8 the 70 miRNAs with the highest diagnostic content or value for discrimination of ovarian cancer from melanoma patients are listed.

These miRNAs include hsa-miR-328, hsa-miR-500, hsa-miR-424*, hsa-miR-1281, hsa-miR-186, hsa-miR-1224-3p, hsa-miR-1248, hsa-miR-483-3p, hsa-miR-1295, hsa-miR-130a*, hsa-miR-409-3p, hsa-miR-664, hsa-miR-146a, hsa-miR-155, hsa-miR-1249, hsa-miR-629*, hsa-miR-148a*, hsa-miR-193a-5p, hsa-miR-1226, hsa-miR-29c*, hsa-let-7d*, hsa-miR-99a, hsa-miR-1237, hsa-miR-361-5p, hsa-miR-30a, hsa-miR-634, hsa-miR-877*, hsa-miR-133a, hsa-miR-454*, hsa-miR-133b, hsa-miR-30e*, hsa-miR-501-5p, hsa-miR-150, hsa-miR-181a-2*, hsa-miR-1825, hsa-miR-135b, hsa-miR-337-3p, hsa-miR-383, hsa-miR-26b*, hsa-miR-365, hsa-miR-942, hsa-miR-342-5p, hsa-miR-146b-3p, hsa-miR-363*, hsa-miR-636, hsa-miR-605, hsa-miR-610, hsa-miR-1289, hsa-miR-519c-5p, hsa-miR-220a, hsa-miR-1324, hsa-miR-125a-5p, hsa-miR-1274a, hsa-miR-1259, hsa-miR-378, hsa-let-7d, hsa-miR-421, hsa-miR-148a, hsa-miR-224, hsa-miR-541, hsa-miR-15b, hsa-miR-490-3p, hsa-miR-485-3p, hsa-miR-299-5p, hsa-miR-1288, hsa-miR-494, hsa-miR-1228, hsa-miR-744*, hsa-miR-668, hsa-miR-92a.

In a further embodiment the predetermined set of miRNAs for the differential diagnosis of ovarian cancer and melanoma comprises one or more miRNAs, at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50 , 60, 70 or all of the above indicated miRNAs.

In a preferred embodiment the kit for diagnosis of ovarian cancer from melanoma comprises means for determining one or more, at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50 , 60, 70 or all of the above indicated miRNAs.

A microarray intended for use in the differential diagnosis of ovarian cancer and melanoma preferably comprises miRNA specific oligonucleotide probes for one or more miRNAs, at least 1, preferably at least 7,10, 15, 20, 25, 30,
5 35, 40, 50 , 60, 70 or all of the above indicated miRNAs.

Differential diagnosis : ovarian cancer vs. pancreatic cancer

Surprisingly, the inventors found out that miRNAs are differentially regulated in samples from ovarian cancer patients as compared to pancreatic cancer patients. In total, 96 miRNAs were found to be significantly deregulated (t-test significance <0.05) in blood cells of ovarian cancer patients as compared to the pancreatic cancer patients. In Figure 9 the 70 miRNAs with the highest diagnostic content or value for discrimination of ovarian cancer from pancreatic cancer patients are listed.
15

These miRNAs include hsa-let-7d, hsa-miR-146b-3p, hsa-miR-150, hsa-miR-454*, hsa-miR-1248, hsa-miR-133b, hsa-miR-610, hsa-miR-148a, hsa-miR-888, hsa-miR-519e*, hsa-miR-1288, hsa-miR-655, hsa-miR-302d*, hsa-miR-942, hsa-miR-374b*, hsa-miR-605, hsa-miR-10a*, hsa-miR-182, hsa-miR-148a*, hsa-miR-656, hsa-miR-374a, hsa-miR-744*, hsa-miR-429, hsa-miR-144*, hsa-miR-144, hsa-miR-668, hsa-miR-888*, hsa-miR-1259, hsa-miR-29a, hsa-miR-194, hsa-miR-1205, hsa-miR-149*, hsa-miR-221*, hsa-miR-302d, hsa-miR-299-5p, hsa-miR-1908, hsa-miR-573, hsa-miR-877, hsa-miR-212, hsa-miR-130a*, hsa-miR-551a, hsa-miR-936, hsa-miR-1226, hsa-miR-892b, hsa-miR-200a*, hsa-miR-519a*, hsa-miR-891a, hsa-miR-1287, hsa-miR-770-5p, hsa-miR-363*, hsa-miR-302c, hsa-miR-218-1*, hsa-miR-541, hsa-miR-500*, hsa-miR-485-3p, hsa-miR-21*, hsa-miR-662, hsa-miR-506, hsa-miR-1200, hsa-miR-22, hsa-miR-101, hsa-miR-129*, hsa-miR-224, hsa-miR-371-5p, hsa-miR-106a, hsa-miR-647, hsa-miR-219-1-3p, hsa-miR-519c-5p, hsa-miR-330-5p, hsa-miR-450a.
20
25
30

In a further embodiment the predetermined set of miRNAs for the differential diagnosis of ovarian cancer and pancreatic cancer comprises one or more

miRNAs, at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50 , 60, 70 or all of the above indicated miRNAs.

In a preferred embodiment the kit for diagnosis of ovarian cancer from
5 pancreatic cancer comprises means for determining one or more, at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50 , 60, 70 or all of the above indicated miRNAs.

A microarray intended for use in the differential diagnosis of ovarian cancer
10 and pancreatic cancer preferably comprises miRNA specific oligonucleotide probes for one or more miRNAs, at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50 , 60, 70 or all of the above indicated miRNAs.

Differential diagnosis : ovarian cancer vs. prostate cancer

15 Surprisingly, the inventors found out that miRNAs are differentially regulated in samples from ovarian cancer patients as compared to prostate cancer patients. In total, 302 miRNAs were found to be significantly deregulated (t-test significance <0.05) in blood cells of ovarian cancer patients as compared to the prostate cancer patients. In Figure 10 the 70 miRNAs with
20 the highest diagnostic content or value for discrimination of ovarian cancer from prostate cancer patients are listed.

These miRNAs include hsa-miR-500, hsa-miR-342-3p, hsa-miR-744*, hsa-miR-363*, hsa-miR-1295, hsa-miR-361-5p, hsa-miR-519b-5p, hsa-miR-1324, hsa-miR-519c-5p, hsa-miR-942, hsa-miR-15b, hsa-miR-148a, hsa-miR-335*, hsa-miR-20a*, hsa-miR-1289, hsa-miR-133b, hsa-miR-423-5p, hsa-miR-708*, hsa-miR-490-3p, hsa-miR-383, hsa-miR-877*, hsa-miR-1226, hsa-miR-629*, hsa-miR-1281, hsa-miR-664, hsa-miR-338-3p, hsa-miR-378, hsa-miR-137, hsa-miR-328, hsa-miR-1225-5p, hsa-miR-668, hsa-miR-320a, hsa-miR-27a*, hsa-miR-135a*, hsa-miR-1825, hsa-miR-483-3p, hsa-miR-522*, hsa-miR-15a, hsa-miR-193a-5p, hsa-miR-424*, hsa-miR-21*, hsa-miR-494, hsa-miR-1237, hsa-miR-578, hsa-miR-635, hsa-miR-33b, hsa-miR-541, hsa-miR-526a, hsa-miR-519a*, hsa-miR-573, hsa-miR-888, hsa-miR-33a,

hsa-miR-1229, hsa-miR-103-as, hsa-miR-197, hsa-miR-324-3p, hsa-miR-433, hsa-miR-671-3p, hsa-miR-211, hsa-miR-150, hsa-miR-885-5p, hsa-miR-34b, hsa-miR-551b*, hsa-miR-362-5p, hsa-miR-409-3p, hsa-miR-186*, hsa-miR-216a, hsa-miR-516b*, hsa-miR-1205, hsa-miR-1224-3p.

5

In a further embodiment the predetermined set of miRNAs for the differential diagnosis of ovarian cancer and prostate cancer comprises one or more miRNAs, at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50 , 60, 70 or all of the above indicated miRNAs.

10

In a preferred embodiment the kit for diagnosis of ovarian cancer from prostate cancer comprises means for determining one or more, at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50 , 60, 70 or all of the above indicated miRNAs.

15

A microarray intended for use in the differential diagnosis of ovarian cancer and prostate cancer preferably comprises miRNA specific oligonucleotide probes for one or more miRNAs, at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50 , 60, 70 or all of the above indicated miRNAs.

20

Differential diagnosis : ovarian cancer vs. Wilm's tumor

Surprisingly, the inventors found out that miRNAs are differentially regulated in samples from ovarian cancer patients as compared to Wilm's tumor patients. In total, 4 miRNAs were found to be significantly deregulated (t-test significance <0.05) in blood cells of ovarian cancer patients as compared to the melanoma patients. In Figure 11 the 70 miRNAs with the highest diagnostic content or value for discrimination of ovarian cancer from Wilm's tumor patients are listed.

30

These miRNAs include hsa-miR-363, hsa-miR-144, hsa-miR-139-5p, hsa-miR-639, hsa-miR-662, hsa-miR-886-3p, hsa-miR-342-3p, hsa-miR-218, hsa-miR-22, hsa-miR-140-5p, hsa-miR-590-5p, hsa-miR-20b, hsa-miR-206, hsa-miR-614, hsa-miR-103, hsa-miR-720, hsa-miR-181d, hsa-miR-17, hsa-

miR-20a, hsa-miR-580, hsa-miR-96, hsa-miR-425, hsa-miR-144*, hsa-miR-875-5p, hsa-miR-92a-1*, hsa-miR-15a, hsa-miR-16, hsa-miR-21, hsa-miR-323-5p, hsa-miR-105*, hsa-miR-30b*, hsa-miR-324-3p, hsa-miR-665, hsa-miR-384, hsa-miR-1276, hsa-miR-19a, hsa-miR-106a, hsa-miR-182, hsa-miR-632, hsa-miR-141*, hsa-miR-1288, hsa-miR-16-1*, hsa-miR-1268, hsa-miR-550, hsa-miR-517b, hsa-miR-545, hsa-miR-668, hsa-miR-374b, hsa-miR-10b*, hsa-miR-320a, hsa-miR-30b, hsa-miR-526b, hsa-miR-302d*, hsa-miR-187, hsa-miR-382, hsa-miR-453, hsa-miR-1250, hsa-miR-30c, hsa-miR-943, hsa-miR-636, hsa-miR-107, hsa-miR-744*, hsa-miR-1294, hsa-miR-802, hsa-miR-181a-2*, hsa-miR-572, hsa-miR-93, hsa-miR-595, hsa-miR-195*, hsa-miR-126.

In a further embodiment the predetermined set of miRNAs for the differential diagnosis of ovarian cancer and Wilm's tumor comprises one or more miRNAs, at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50 , 60, 70 or all of the above indicated miRNAs.

In a preferred embodiment the kit for diagnosis of ovarian cancer from Wilm's tumor comprises means for determining one or more, at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50 , 60, 70 or all of the above indicated miRNAs.

A microarray intended for use in the differential diagnosis of ovarian cancer and Wilm's tumor preferably comprises miRNA specific oligonucleotide probes for one or more miRNAs, at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50 , 60, 70 or all of the above indicated miRNAs.

Differential diagnosis : ovarian cancer vs. pancreatic cancer ductal

Surprisingly, the inventors found out that miRNAs are differentially regulated in samples from ovarian cancer patients as compared to pancreatic cancer ductal patients. In total, 217 miRNAs were found to be significantly deregulated (t-test significance <0.05) in blood cells of ovarian cancer patients as compared to the pancreatic cancer ductal patients. In Figure 12

the 70 miRNAs with the highest diagnostic content or value for discrimination of ovarian cancer from pancreatic cancer ductal patients.

These miRNAs include hsa-miR-1248, hsa-miR-1295, hsa-miR-454*, hsa-miR-942, hsa-miR-1228, hsa-miR-337-3p, hsa-miR-605, hsa-miR-363*, hsa-let-7d, hsa-miR-135b, hsa-miR-133b, hsa-miR-130a*, hsa-miR-589, hsa-miR-610, hsa-miR-150, hsa-miR-655, hsa-miR-409-3p, hsa-miR-1259, hsa-miR-573, hsa-miR-539, hsa-miR-578, hsa-miR-668, hsa-miR-576-5p, hsa-miR-651, hsa-miR-335*, hsa-miR-744*, hsa-miR-148a, hsa-miR-516b*, hsa-miR-302c, hsa-miR-892b, hsa-miR-26b*, hsa-miR-520a-3p, hsa-miR-146b-3p, hsa-miR-877*, hsa-miR-522*, hsa-miR-582-5p, hsa-miR-9, hsa-miR-133a, hsa-miR-599, hsa-miR-299-5p, hsa-miR-302d, hsa-miR-374a, hsa-miR-576-3p, hsa-miR-383, hsa-miR-374b*, hsa-miR-1911, hsa-miR-182, hsa-miR-564, hsa-miR-223*, hsa-miR-1226, hsa-miR-302d*, hsa-miR-92a, hsa-miR-548b-5p, hsa-miR-551a, hsa-miR-205, hsa-miR-1249, hsa-miR-496, hsa-miR-130b*, hsa-miR-618, hsa-miR-23b*, hsa-miR-211, hsa-miR-500*, hsa-miR-204, hsa-miR-1288, hsa-miR-19b-1*, hsa-miR-126*, hsa-miR-888, hsa-miR-526a, hsa-miR-26a-1*, hsa-miR-26a-2*.

In a further embodiment the predetermined set of miRNAs for the differential diagnosis of ovarian cancer and pancreatic cancer ductal comprises one or more miRNAs, at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50 , 60, 70 or all of the above indicated miRNAs.

In a preferred embodiment the kit for diagnosis of ovarian cancer from pancreatic cancer ductal comprises means for determining one or more, at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50 , 60, 70 or all of the above indicated miRNAs.

A microarray intended for use in the differential diagnosis of ovarian cancer and pancreatic cancer ductal preferably comprises miRNA specific oligonucleotide probes for one or more miRNAs, at least 1, preferably at least 7,10, 15, 20, 25, 30, 35, 40, 50 , 60, 70 or all of the above indicated

miRNAs.

Differential diagnosis : ovarian cancer vs. pancreatic cancer non-ductal

Surprisingly, the inventors found out that miRNAs are differentially regulated in samples from ovarian cancer patients as compared to pancreatic cancer non-ductal patients. In total, 96 miRNAs were found to be significantly deregulated (t-test significance <0.05) in blood cells of ovarian cancer patients as compared to the pancreatic cancer non-ductal patients. In Figure 13 the 70 miRNAs with the highest diagnostic content or value for discrimination of ovarian cancer from pancreatic cancer non-ductal patients.

These miRNAs include hsa-let-7d, hsa-miR-146b-3p, hsa-miR-150, hsa-miR-454*, hsa-miR-1248, hsa-miR-133b, hsa-miR-610, hsa-miR-148a, hsa-miR-888, hsa-miR-519e*, hsa-miR-1288, hsa-miR-655, hsa-miR-302d*, hsa-miR-942, hsa-miR-374b*, hsa-miR-605, hsa-miR-10a*, hsa-miR-182, hsa-miR-148a*, hsa-miR-656, hsa-miR-374a, hsa-miR-744*, hsa-miR-429, hsa-miR-144*, hsa-miR-144, hsa-miR-668, hsa-miR-888*, hsa-miR-1259, hsa-miR-29a, hsa-miR-194, hsa-miR-1205, hsa-miR-149*, hsa-miR-221*, hsa-miR-302d, hsa-miR-299-5p, hsa-miR-1908, hsa-miR-573, hsa-miR-877, hsa-miR-212, hsa-miR-130a*, hsa-miR-551a, hsa-miR-936, hsa-miR-1226, hsa-miR-892b, hsa-miR-200a*, hsa-miR-519a*, hsa-miR-891a, hsa-miR-1287, hsa-miR-770-5p, hsa-miR-363*, hsa-miR-302c, hsa-miR-218-1*, hsa-miR-541, hsa-miR-500*, hsa-miR-485-3p, hsa-miR-21*, hsa-miR-662, hsa-miR-506, hsa-miR-1200, hsa-miR-22, hsa-miR-101, hsa-miR-129*, hsa-miR-224, hsa-miR-371-5p, hsa-miR-106a, hsa-miR-647, hsa-miR-219-1-3p, hsa-miR-519c-5p, hsa-miR-330-5p, hsa-miR-450a.

In a further embodiment the predetermined set of miRNAs for the differential diagnosis of ovarian cancer and pancreatic cancer non-ductal comprises one or more miRNAs, at least 1, preferably at least 7, 10, 15, 20, 25, 30, 35, 40, 50, 60, 70 or all of the above indicated miRNAs.

In a preferred embodiment the kit for diagnosis of ovarian cancer from

pancreatic cancer non-ductal comprises means for determining one or more, at least 1, preferably at least 7, 10, 15, 20, 25, 30, 35, 40, 50, 60, 70 or all of the above indicated miRNAs.

- 5 A microarray intended for use in the differential diagnosis of ovarian cancer and pancreatic cancer non-ductal preferably comprises miRNA specific oligonucleotide probes for one or more miRNAs, at least 1, preferably at least 7, 10, 15, 20, 25, 30, 35, 40, 50, 60, 70 or all of the above indicated miRNAs.

10

The differential diagnosis is not limited to the example of differentiating ovarian cancer from the above mentioned diseases. According to the present invention the differential diagnosis is possible for each and every disease as soon as a set of biomarkers are available that exhibit a high diagnostic value to differentiate between the 2 diseases - or more general to differentialte between 2 clinical conditions.

15

The invention will now be illustrated by the following figures and the non-limiting experimental examples.

20

Figures

Figure 1:

Overview of miRNA sequences published in the miRNA database 14.0 plus additional miRNA sequences.

Figure 2:

Overview of all miRNAs that are found to be differentially regulated in blood samples of ovarian cancer patients compared to healthy controls, grouped accordingly to their results in t-tests (see column "ttest_adjp").

Figure 3:

This classification plot which is based on 440 miRNAs was computed using a

30

radial basis function Support Vector Machine as described in [17-18]. The blue boxes showing the accuracy ("acc"), specificity ("spec") and sensitivity ("sens") for classification of all ovarian cancer and control samples (n=15 for each group) and were calculated via 100 repetitions of 10-fold cross validation. The red boxes show the results obtained when the same mathematical operation is performed in permutation tests ("random") in which the class labels (ovarian cancer vs. control) have been assigned randomly before the values are computed. This is used to validate the classification procedure. The ordinate shows the percentage of samples that were classified correctly to their group

Figure 4:

Shown is the logarithmic intensity of expression for miR-383 (left) and miR-889 (right) in ovarian cancer samples (red, OV1 to OV15) and healthy controls (blue, neg1 to neg15). Median values are indicated for both groups (** indicates p<0.01 for ovarian cancer patients vs. healthy controls by unadjusted, two-tailed t-test).

Figure 5:

This classification plot which is based on 140 miRNAs : serous ovarian cancer (n=12) were compared with an extended group of healthy controls (n=37) as in 'Figure 3, using 20 repetitions and 140 miRNAs.

Figure 6:

Ovarian cancer patients characteristics

Figure 7:

Differential diagnosis : ovarian cancer vs. lung cancer; listed are the 70 miRNAs with the highest diagnostic content for differentiating between ovarian cancer and lung cancer.

Figure 8:

Differential diagnosis : ovarian cancer vs. melanoma; listed are the 70

miRNAs with the highest diagnostic content for differentiating between ovarian cancer and melanoma.

Figure 9:

5 Differential diagnosis : ovarian cancer vs. pancreatic cancer; listed are the 70 miRNAs with the highest diagnostic content for differentiating between ovarian cancer and pancreatic cancer.

Figure 10:

10 Differential diagnosis : ovarian cancer vs. prostate cancer; listed are the 70 miRNAs with the highest diagnostic content for differentiating between ovarian cancer and prostate cancer.

Figure 11:

15 Differential diagnosis : ovarian cancer vs. Wilm's tumor; listed are the 70 miRNAs with the highest diagnostic content for differentiating between ovarian cancer and Wilm's tumor.

Figure 12:

20 Differential diagnosis : ovarian cancer vs. pancreatic cancer ductal; listed are the 70 miRNAs with the highest diagnostic content for differentiating between ovarian cancer and pancreatic cancer ductal.

Figure 13:

25 Differential diagnosis : ovarian cancer vs. pancreatic cancer non-ductal; listed are the 70 miRNAs with the highest diagnostic content for differentiating between ovarian cancer and pancreatic cancer non-ductal.

Figure 14:

30 Overview of miRNAs that are found to be differentially regulated between healthy controls and subjects suffering from ovarian cancer. Experimental details: SEQ ID NO: sequence identification number, miRNA: identifier of the miRNA according to miRBase, median g1: median intensity obtained from

microarray analysis for healthy controls, median g2: median intensity obtained from microarray analysis for individuals with Wilms' tumor, qmedian: ratio of median g1/median g2, logqmedian: log of qmedian, ttest_rawp: p-value obtained when applying t-test, ttest_adjp: adjusted p-value in order to reduce false discovery rate by Benjamini-Hochberg adjustment, AUC: Area under the curve, wmw_rawp: p-value obtained when applying wmw-test (Wilcoxon Mann Whitney test), wmw_adjp: adjusted p-value in order to reduce false discovery rate by Benjamini-Hochberg adjustment.

10

Figure 15:

Predetermined sets of miRNAs (miRNA signatures SNO-1 to 756) that allow for effective diagnosis and/or prognosis of subjects suffering or subjects suspected to suffering from ovarian cancer. Experimental details: SEQ ID NO: sequence identification number, miRNA: identifier of the miRNA according to miRBase, Acc = accuracy, Spec = specificity, Sens = sensitivity

Examples

20 Screening is still an unsolved problem for ovarian cancer which is mostly discovered when already incurable. Recent findings suggest that patients suffering from various malignancies may be identified via characteristic miRNA profiles in blood cells. Thus, we investigated whether ovarian cancer patients display characteristically deregulated miRNAs that could form the 25 basis of a blood-based test for disease progression or even for preventive screening of wider collectives.

Results:

30 Comparing blood-borne miRNA profiles from 15 patients with ovarian cancer (OvCA) and 15 age- and sex-matched healthy controls, 51 out of >900 tested miRNAs were found to be significantly deregulated by unadjusted Student's t-test. The 30 most significantly deregulated miRNAs comprised

candidates known to be associated with cancer (e.g. miR-155) but also 25 miRNAs which had never been connected to a specific disease. A radial basis function Support Vector Machine and filter subset selection allowed for discrimination between blood samples of OvCA patients and healthy controls 5 with an accuracy of 73.9%, a specificity of 76.6%, and a sensitivity of 67.1% by using a subset of 440 miRNAs. When an extended control group (n=37) and just carcinomas of the serous subtype were analyzed, accuracy became 79.2%, specificity 70.8% and sensitivity 91.7%, based on 140 miRNAs.

10 **Conclusion:**

This study strengthens the hypothesis that neoplastic diseases generate characteristic miRNA fingerprints in blood cells. While combining our approach with other markers may lead to further increased specificity and 15 sensitivity, the present proof-of-principle study already demonstrates that microarray-based miRNA-profiling from peripheral blood may help to establish a biomarker profile that could improve the notoriously difficult screening for ovarian cancer.

20 **Methods**

Samples

Blood sampling from OvCA patients and healthy controls has been approved by the local ethics committee. All donors gave written informed consent. All 25 15 patients (median age: 64 years, range 29-80 years) had been diagnosed with relapsed ovarian cancer. The time elapsed since the last application of chemotherapy was sufficient to allow for a complete clearance of the drugs. Control samples were obtained from 15 age- and sex-matched volunteers without known disease (median age: 58 years, range 36-83 years). More 30 detailed information on patients is given in Table 1. miRNA profiles from 22 additional healthy controls were generously provided by Eckart Meese (University of Homburg, Germany).

miRNA extraction and microarray screening

Blood samples (5 ml per patient) were collected in PAXgene Blood RNA tubes (BD Biosciences, Heidelberg, Germany) and frozen at -86°C. After 5 thawing, cellular fractions were obtained by centrifugation (5000 g, 10 min), resuspended in 10 ml RNase free water and subjected to total RNA isolation using the miRNeasy kit (Qiagen GmbH, Hilden, Germany). RNA was eluted in water and shipped on dry ice to be analyzed on febit's Geniom real-time analyzer (GRTA, febit gmbh, Heidelberg, Germany) using the Geniom Biochip miRNA homo sapiens. Each array contains 7 replicates of 904 10 miRNAs and miRNA star sequences as annotated in the Sanger miRBase 14.0. Samples were biotinylated using either the miRVANA™ miRNA Labeling Kit (Applied Biosystems Inc, Foster City, California USA) or by microfluidic-based enzymatic on-chip labeling of miRNAs (MPEA).

15

After hybridization for 16 hours at 42°C, the biochip was washed automatically and a program for signal enhancement was processed with the GRTA. Results were analyzed using the Geniom Wizard Software. For each 20 array, the median signal intensity was extracted from the raw data file such that for each miRNA seven intensity values have been calculated corresponding to each replicate copy of miRBase on the array.

Following background correction, median values were calculated from the 25 seven replicate intensity values of each miRNA. To normalize arrays, Variance Stabilizing Normalization (VSN) as implemented in the R package vsn has been applied and all further analyses were carried out using the normalized and background-subtracted intensity values. All microarray data were stored in the freely accessible miRDBXP database (http://64.119.137.93/fmi/iwp) which is designed to store any type of 30 microRNA expression pattern (manuscript in preparation). In addition, the data have also been deposited in GEO (GSE).

Statistical analysis

The approximate normal distribution of the measured data was verified by Shapiro-Wilk test. Next, miRNAs showing a different behavior in the two groups were identified by unpaired two-tailed parametric t-test. p-values obtained for each individual miRNA were adjusted for multiple testing by Benjamini-Hochberg adjustment. In addition to the single biomarker analysis, samples were also classified according to miRNA patterns as calculated using Support Vector Machines (SVM) implemented in the R e1071 package. In detail, different kernel (linear, polynomial, sigmoid, radial basis function) Support Vector Machines were evaluated with the cost parameter being sampled from 0.01 to 10 in decimal powers. The measured miRNA profiles were classified using either 20 or 100 repetitions of standard 10-fold cross-validation and subsets were selected according to a t-test based filter approach. This means that in each repeat of the cross validation the s miRNAs with lowest p-values were computed on the training set, with s being sampled from 1 to 904. The respective subset was then used to train the SVM for the prediction of the test samples which enabled a calculation of the mean accuracy, specificity, and sensitivity for each subset size.

20

Permutation tests were applied to check for overtraining. Here, the class labels were sampled at random and classifications were carried out using the permuted class labels. All statistical analyses were performed using R.

25

In summary the present invention is composed of the following items:

1. A method of diagnosing a disease, comprising the steps
 - (a) determining an expression profile of a predetermined set of non-coding RNAs, including miRNAs, in a biological sample from a patient; and
 - (b) comparing said expression profile to a reference expression profile,
- wherein the comparison of said determined expression profile to said

30

reference expression profile allows for the diagnosis of the disease, wherein the disease is ovarian cancer.

2. The method according to item 1, wherein the reference expression profile is derived from a plurality of expression profiles obtained from a plurality of reference subjects.

3. The method according to item 1 or 2, wherein the reference expression profile is derived from healthy controls.

10

4. The method according to item 1 or 2, wherein the reference expression profile is derived from diseased subjects.

5. The method according to any one of items 1 to 4 , wherein the

expression profile is determined of non-coding RNAs, including miRNAs selected from the group consisting of hsa-miR-1248, hsa-miR-342-3p, hsa-miR-133b, hsa-miR-605, hsa-miR-450b-3p, hsa-miR-520a-3p, hsa-miR-23b*, hsa-miR-423-5p, hsa-miR-219-1-3p, hsa-miR-454*, hsa-miR-26b*, hsa-miR-1259, hsa-miR-655, hsa-miR-302c, hsa-miR-383, hsa-miR-150,

hsa-miR-412, hsa-miR-548i, hsa-let-7e*, hsa-miR-324-3p, hsa-miR-335*, hsa-miR-320a, hsa-miR-320d, hsa-miR-409-3p, hsa-miR-590-3p, hsa-miR-545*, hsa-miR-889, hsa-miR-1224-3p, hsa-miR-148a*, hsa-miR-9, hsa-miR-518f, hsa-miR-488, hsa-miR-182, hsa-miR-10a*, hsa-miR-19b, hsa-miR-15a,

hsa-miR-1289, hsa-miR-500, hsa-miR-1281, hsa-miR-942, hsa-miR-877*, hsa-let-7f-1*, hsa-miR-651, hsa-miR-610, hsa-miR-664, hsa-miR-613, hsa-miR-483-3p, hsa-miR-320c, hsa-miR-720, hsa-miR-299-5p, hsa-miR-579, hsa-miR-636, hsa-miR-197, hsa-miR-668, hsa-miR-494, hsa-miR-1262, hsa-miR-578, hsa-miR-708*, hsa-miR-369-3p, hsa-miR-329, hsa-miR-941, hsa-miR-155, hsa-miR-26a-1*, hsa-miR-1246, hsa-miR-892b, hsa-miR-146a,

hsa-miR-337-3p, hsa-miR-130a*, hsa-let-7b, hsa-miR-744*, hsa-miR-140-3p, hsa-miR-573, hsa-miR-378, hsa-miR-1237, hsa-miR-363*, hsa-miR-888, hsa-miR-607, hsa-miR-1236, hsa-miR-34b, hsa-miR-532-3p, hsa-miR-1229, hsa-miR-520g, hsa-miR-581, hsa-miR-323-3p, hsa-miR-155*, hsa-miR-15b,

hsa-miR-548d-3p, hsa-miR-302d*, hsa-miR-496, hsa-miR-186*, hsa-miR-599, hsa-miR-589, hsa-miR-519c-5p, hsa-miR-1249, hsa-miR-22, hsa-miR-614, hsa-miR-634, hsa-miR-486-5p, hsa-miR-548h, hsa-miR-19a, hsa-miR-32*, hsa-miR-367*, hsa-miR-218-1*, hsa-let-7a*, hsa-miR-328, hsa-miR-571,
5 hsa-miR-424*, hsa-miR-374b*, hsa-let-7d, hsa-miR-16, hsa-miR-490-3p, hsa-miR-1914*, hsa-miR-543, hsa-miR-526a, hsa-miR-875-5p, hsa-miR-1252, hsa-miR-495, hsa-miR-210, hsa-miR-514, hsa-miR-572, hsa-miR-1228, hsa-miR-589*, hsa-miR-1538, hsa-miR-300, hsa-miR-320b, hsa-miR-190b, hsa-miR-330-5p, hsa-miR-506, hsa-miR-1295, hsa-miR-485-3p, hsa-miR-629*, hsa-miR-130b*, hsa-miR-297, hsa-miR-1915*, hsa-miR-623, hsa-miR-133a, hsa-miR-433, hsa-miR-148b*, hsa-miR-372, hsa-miR-1288, hsa-miR-520e, hsa-miR-429, hsa-miR-30a, hsa-miR-556-3p, hsa-miR-576-3p, hsa-miR-200a*, hsa-miR-450b-5p, hsa-miR-219-2-3p, hsa-miR-633, hsa-miR-182*, hsa-miR-582-5p, hsa-miR-520c-5p, hsa-miR-934, hsa-miR-526b*,
15 hsa-miR-770-5p, hsa-miR-660, hsa-miR-411*, hsa-miR-576-5p, hsa-miR-606, hsa-miR-205, hsa-miR-1302, hsa-miR-301b, hsa-miR-891a, hsa-miR-516b*, hsa-miR-376a*, hsa-miR-936, hsa-miR-26a-2*, hsa-miR-544, hsa-miR-134, hsa-miR-542-3p, hsa-miR-518d-5p, hsa-miR-513a-3p, hsa-miR-548a-3p, hsa-miR-559, hsa-miR-1308, hsa-miR-1825, hsa-miR-585, hsa-miR-181a, hsa-miR-1470, hsa-miR-513c, hsa-miR-885-3p, hsa-miR-1205, hsa-miR-518f*, hsa-miR-1305, hsa-miR-190, hsa-miR-363, hsa-miR-519d, hsa-miR-181a-2*, hsa-miR-220b, hsa-miR-29c*, hsa-miR-1265, hsa-miR-1468, hsa-miR-96*, hsa-miR-562, hsa-miR-580, hsa-miR-92b, hsa-miR-523*, hsa-miR-548c-3p, hsa-miR-618, hsa-miR-662, hsa-miR-539, hsa-miR-548n, hsa-miR-203, hsa-miR-152, hsa-miR-1279, hsa-miR-640, hsa-miR-520a-5p, hsa-miR-23b, hsa-miR-431, hsa-miR-376b, hsa-miR-92a, hsa-miR-548k, hsa-miR-380, hsa-miR-202, hsa-miR-19b-2*, hsa-miR-128, hsa-miR-520d-3p, hsa-miR-1282, hsa-miR-564, hsa-miR-1226, hsa-miR-224, hsa-miR-574-5p, hsa-miR-548b-5p, hsa-miR-512-3p, hsa-miR-296-5p, hsa-miR-302a, hsa-miR-501-5p, hsa-miR-382, hsa-miR-18b*, hsa-miR-24-2*, hsa-miR-944, hsa-miR-520f, hsa-miR-1290, hsa-miR-595, hsa-miR-144*, hsa-miR-644, hsa-miR-650, hsa-miR-518a-5p, hsa-miR-129*, hsa-miR-1238, hsa-miR-154, hsa-miR-106b, hsa-miR-431*, hsa-miR-1202, hsa-miR-587,

hsa-miR-708, hsa-miR-451, hsa-miR-519a*, hsa-miR-105*, hsa-miR-625*,
hsa-miR-127-3p, hsa-miR-1911, hsa-let-7c, hsa-miR-1269, hsa-miR-370,
hsa-miR-298, hsa-miR-1, hsa-miR-28-3p, hsa-miR-635, hsa-miR-26a, hsa-
miR-1261, hsa-miR-211, hsa-miR-99b*, hsa-miR-183, hsa-miR-1184, hsa-
let-7g*, hsa-miR-519e, hsa-miR-453, hsa-miR-30a*, hsa-miR-1324, hsa-
miR-611, hsa-miR-1322, hsa-miR-1250, hsa-miR-574-3p, hsa-miR-518e,
hsa-miR-410, hsa-miR-125b-2*, hsa-miR-146b-3p, hsa-miR-1537, hsa-miR-
34c-3p, hsa-miR-1264, hsa-miR-302d, hsa-miR-221*, hsa-miR-1471, hsa-
miR-1183, hsa-miR-338-3p, hsa-miR-519e*, hsa-miR-1298, hsa-miR-376a,
hsa-miR-517c, hsa-miR-1286, hsa-miR-30b*, hsa-miR-361-5p, hsa-miR-
509-3-5p, hsa-miR-194, hsa-miR-135b, hsa-miR-153, hsa-miR-522*, hsa-
miR-1301, hsa-miR-147b, hsa-miR-548d-5p, hsa-miR-29a, hsa-miR-943,
hsa-miR-1306, hsa-miR-521, hsa-miR-124, hsa-miR-485-5p, hsa-miR-212,
hsa-miR-886-3p, hsa-miR-652, hsa-miR-135a, hsa-miR-608, hsa-miR-887,
hsa-miR-106b*, hsa-miR-34b*, hsa-miR-1257, hsa-miR-1263, hsa-miR-588,
hsa-miR-30d*, hsa-miR-423-3p, hsa-miR-766, hsa-miR-122, hsa-miR-29a*,
hsa-miR-107, hsa-miR-493, hsa-miR-1323, hsa-miR-486-3p, hsa-miR-583,
hsa-miR-19a*, hsa-miR-497, hsa-miR-504, hsa-miR-508-3p, hsa-miR-93*,
hsa-miR-659, hsa-miR-524-3p, hsa-miR-503, hsa-miR-517b, hsa-miR-617,
hsa-miR-590-5p, hsa-miR-138-1*, hsa-miR-135a*, hsa-miR-577, hsa-miR-
549, hsa-miR-194*, hsa-miR-199b-3p, hsa-miR-541*, hsa-miR-1299, hsa-
miR-374a*, hsa-miR-7-2*, hsa-miR-621, hsa-miR-1203, hsa-miR-27a*, hsa-
miR-548f, hsa-miR-151-3p, hsa-miR-409-5p, hsa-miR-129-3p, hsa-miR-922,
hsa-miR-890, hsa-miR-7-1*, hsa-miR-548j, hsa-miR-498, hsa-miR-195*,
hsa-miR-507, hsa-miR-593*, hsa-miR-501-3p, hsa-miR-302e, hsa-miR-204,
hsa-miR-767-3p, hsa-miR-483-5p, hsa-miR-193a-5p, hsa-miR-1270, hsa-
miR-658, hsa-miR-656, hsa-miR-1197, hsa-miR-342-5p, hsa-miR-612, hsa-
miR-876-5p, hsa-miR-136, hsa-miR-1253, hsa-miR-641, hsa-miR-671-3p,
hsa-miR-548g, hsa-miR-548c-5p, hsa-miR-603, hsa-miR-520b, hsa-miR-
1283, hsa-miR-1255a, hsa-miR-296-3p, hsa-miR-202*, hsa-miR-1200, hsa-
miR-630, hsa-miR-609, hsa-miR-149, hsa-miR-767-5p, hsa-miR-548m, hsa-
miR-381, hsa-miR-200c*, hsa-miR-425*, hsa-miR-30c, hsa-miR-1201, hsa-
miR-548a-5p, hsa-miR-33a*, hsa-miR-450a, hsa-miR-331-3p, hsa-miR-32,

hsa-miR-223*, hsa-miR-200b, hsa-miR-509-3p, hsa-miR-129-5p, hsa-miR-10b*, hsa-miR-195, hsa-miR-92a-2*, hsa-miR-548l, hsa-miR-345, hsa-miR-377*, hsa-miR-181c, hsa-miR-33b*, hsa-miR-455-5p, hsa-miR-181c*, hsa-miR-616, hsa-miR-208b, hsa-miR-891b, hsa-miR-138, hsa-miR-135b*, hsa-miR-1266, hsa-let-7i*, hsa-miR-877, hsa-miR-132*, hsa-miR-192, hsa-miR-940, hsa-miR-24-1*, hsa-miR-302b*, hsa-miR-602, hsa-miR-33b, hsa-miR-323-5p, hsa-miR-1908, hsa-miR-339-5p, hsa-miR-657, hsa-miR-553, hsa-miR-183*, hsa-miR-516a-3p, hsa-miR-125b, hsa-miR-1909*, hsa-miR-505, hsa-miR-616*, hsa-miR-875-3p, hsa-miR-527, hsa-miR-365, hsa-miR-147, hsa-miR-516a-5p, hsa-miR-493*, hsa-miR-933, hsa-miR-20a*, hsa-miR-671-5p, hsa-miR-490-5p, hsa-miR-302c*, hsa-let-7c*, hsa-miR-484, hsa-miR-187, hsa-miR-1251, hsa-miR-1307, hsa-miR-17*, hsa-miR-648, hsa-miR-1274b, hsa-miR-96, hsa-miR-302f, hsa-miR-331-5p, hsa-miR-149*, hsa-miR-99a, hsa-miR-1228*, hsa-miR-30d, hsa-miR-21*, hsa-miR-545, hsa-miR-600, hsa-miR-424, hsa-miR-21, hsa-miR-18b, hsa-miR-448, hsa-miR-126*, hsa-miR-98, hsa-miR-148a, hsa-miR-1280, hsa-miR-380*, hsa-miR-136*, hsa-miR-411, hsa-miR-523, hsa-miR-187*, hsa-miR-196b, hsa-miR-34c-5p, hsa-miR-627, hsa-miR-1296, hsa-miR-637, hsa-miR-1268, hsa-miR-379, hsa-miR-362-5p, hsa-miR-557, hsa-miR-326, hsa-miR-34a*, hsa-miR-548p, hsa-miR-1271, hsa-miR-876-3p, hsa-miR-30c-1*, hsa-miR-489, hsa-miR-500*, hsa-miR-100*, hsa-miR-892a, hsa-miR-556-5p, hsa-miR-140-5p, hsa-miR-20b*, hsa-miR-760, hsa-miR-101*, hsa-miR-1224-5p, hsa-miR-19b-1*, hsa-miR-92a-1*, hsa-miR-16-2*, hsa-miR-373*, hsa-let-7i, hsa-miR-555, hsa-miR-218, hsa-miR-25*, hsa-miR-449a, hsa-miR-582-3p, hsa-miR-502-5p, hsa-miR-515-3p, hsa-miR-654-5p, hsa-miR-214*, hsa-miR-455-3p, hsa-miR-199b-5p, hsa-miR-509-5p, hsa-miR-421, hsa-miR-1909, hsa-miR-425, hsa-miR-1273, hsa-miR-1293, hsa-miR-566, hsa-miR-7, hsa-miR-638, hsa-miR-1284, hsa-miR-1913, hsa-miR-1178, hsa-miR-1304, hsa-miR-1911*, hsa-miR-518a-3p, hsa-miR-330-3p, hsa-miR-518c*, hsa-miR-491-3p, hsa-miR-649, hsa-miR-558, hsa-miR-10b, hsa-miR-335, hsa-miR-103-as, hsa-miR-106a*, hsa-miR-27b, hsa-miR-1278, hsa-miR-505*, hsa-miR-628-3p, hsa-miR-542-5p, hsa-miR-1233, hsa-miR-185, hsa-miR-132, hsa-miR-139-3p, hsa-miR-1226*, hsa-miR-1272, hsa-miR-512-5p, hsa-miR-299-3p, hsa-

miR-937, hsa-miR-499-3p, hsa-miR-216b, hsa-miR-568, hsa-miR-596, hsa-miR-619, hsa-miR-1225-5p, hsa-miR-1181, hsa-miR-188-5p, hsa-let-7d*, hsa-miR-218-2*, hsa-miR-647, hsa-miR-139-5p, hsa-miR-654-3p, hsa-miR-138-2*, hsa-miR-675, hsa-miR-377, hsa-miR-374a, hsa-miR-215, hsa-miR-15a*, hsa-miR-769-5p, hsa-miR-362-3p, hsa-miR-192*, hsa-miR-125a-5p, hsa-miR-491-5p, hsa-miR-802, hsa-miR-33a, hsa-miR-142-5p, hsa-miR-663b, hsa-miR-1539, hsa-miR-95, hsa-miR-1275, hsa-miR-191*, hsa-miR-502-3p, hsa-miR-563, hsa-miR-1321, hsa-miR-1914, hsa-miR-185*, hsa-miR-639, hsa-miR-122*, hsa-miR-643, hsa-miR-1469, hsa-miR-1234, hsa-miR-622, hsa-miR-222*, hsa-miR-499-5p, hsa-miR-1260, hsa-miR-517a, hsa-miR-34a, hsa-miR-624*, hsa-miR-28-5p, hsa-miR-100, hsa-miR-625, hsa-miR-148b, hsa-miR-584, hsa-miR-769-3p, hsa-miR-1182, hsa-miR-198, hsa-miR-18a*, hsa-miR-206, hsa-miR-645, hsa-miR-508-5p, hsa-miR-518b, hsa-miR-873, hsa-miR-371-5p, hsa-miR-1910, hsa-miR-646, hsa-miR-452, hsa-miR-106a, hsa-miR-1287, hsa-miR-217, hsa-miR-1258, hsa-miR-620, hsa-miR-511, hsa-miR-301a, hsa-miR-1247, hsa-miR-325, hsa-miR-552, hsa-miR-642, hsa-miR-92b*, hsa-miR-193b*, hsa-miR-340, hsa-miR-520h, hsa-miR-9*, hsa-miR-758, hsa-miR-101, hsa-miR-591, hsa-miR-1297, hsa-miR-548e, hsa-miR-524-5p, hsa-miR-935, hsa-miR-575, hsa-miR-145*, hsa-miR-29b-1*, hsa-miR-27a, hsa-miR-615-3p, hsa-miR-1243, hsa-miR-525-3p, hsa-miR-551b*, hsa-miR-1292, hsa-miR-302a*, hsa-miR-30e, hsa-miR-541, hsa-miR-124*, hsa-miR-196a*, hsa-miR-222, hsa-miR-519c-3p, hsa-miR-146a*, hsa-miR-432, hsa-miR-601, hsa-miR-663, hsa-let-7b*, hsa-miR-452*, hsa-miR-220c, hsa-miR-519b-3p, hsa-miR-1227, hsa-miR-200b*, hsa-miR-143, hsa-miR-1274a, hsa-miR-25, hsa-miR-938, hsa-miR-519b-5p, hsa-miR-924, hsa-miR-127-5p, hsa-miR-920, hsa-miR-525-5p, hsa-miR-17, hsa-miR-324-5p, hsa-miR-188-3p, hsa-miR-31, hsa-miR-661, hsa-miR-379*, hsa-miR-1245, hsa-miR-142-3p, hsa-miR-513a-5p, hsa-let-7f-2*, hsa-miR-150*, hsa-miR-367, hsa-miR-548b-3p, hsa-miR-518c, hsa-miR-99b, hsa-miR-27b*, hsa-miR-214, hsa-miR-145, hsa-miR-653, hsa-miR-765, hsa-miR-570, hsa-miR-604, hsa-miR-93, hsa-miR-146b-5p, hsa-miR-29b, hsa-miR-181a*, hsa-miR-422a, hsa-miR-1206, hsa-miR-23a, hsa-miR-487b, hsa-miR-339-3p, hsa-miR-191, hsa-miR-340*, hsa-miR-1291, hsa-miR-208a, hsa-miR-23a*,

hsa-miR-1826, hsa-miR-1208, hsa-miR-1207-5p, hsa-miR-31*, hsa-miR-143*, hsa-let-7f, hsa-miR-105, hsa-miR-569, hsa-miR-30c-2*, hsa-miR-921, hsa-miR-628-5p, hsa-miR-1225-3p, hsa-miR-597, hsa-miR-10a, hsa-miR-302b, hsa-miR-1277, hsa-miR-1207-3p, hsa-miR-186, hsa-miR-626, hsa-miR-554, hsa-miR-99a*, hsa-miR-497*, hsa-miR-487a, hsa-miR-199a-5p, hsa-miR-454, hsa-miR-492, hsa-miR-338-5p, hsa-miR-125a-3p, hsa-miR-20a, hsa-miR-518d-3p, hsa-miR-664*, hsa-miR-520c-3p, hsa-miR-1303, hsa-miR-26b, hsa-miR-1256, hsa-miR-361-3p, hsa-miR-22*, hsa-miR-103, hsa-miR-888*, hsa-miR-1180, hsa-miR-432*, hsa-miR-126, hsa-miR-200a, hsa-miR-1285, hsa-miR-154*, hsa-miR-371-3p, hsa-miR-193a-3p, hsa-miR-1244, hsa-miR-200c, hsa-miR-125b-1*, hsa-miR-517*, hsa-miR-216a, hsa-miR-586, hsa-miR-375, hsa-let-7a, hsa-miR-1827, hsa-miR-518e*, hsa-miR-513b, hsa-miR-196a, hsa-miR-1915, hsa-miR-1204, hsa-miR-15b*, hsa-miR-516b, hsa-miR-1912, hsa-miR-550*, hsa-miR-632, hsa-miR-24, hsa-miR-561, hsa-miR-219-5p, hsa-miR-20b, hsa-miR-220a, hsa-miR-199a-3p, hsa-miR-665, hsa-miR-519a, hsa-miR-488*, hsa-miR-449b, hsa-miR-151-5p, hsa-miR-567, hsa-miR-522, hsa-miR-1267, hsa-miR-874, hsa-miR-376c, hsa-miR-510, hsa-miR-374b, hsa-miR-29c, hsa-miR-137, hsa-miR-337-5p, hsa-miR-1254, hsa-miR-193b, hsa-miR-520d-5p, hsa-miR-1179, hsa-miR-181b, hsa-miR-30b, hsa-miR-532-5p, hsa-miR-369-5p, hsa-miR-631, hsa-miR-130b, hsa-miR-551a, hsa-miR-551b, hsa-miR-593, hsa-miR-886-5p, hsa-miR-184, hsa-miR-624, hsa-miR-548o, hsa-miR-223, hsa-miR-1231, hsa-miR-1276, hsa-miR-29b-2*, hsa-miR-346, hsa-miR-141*, hsa-miR-181d, hsa-miR-615-5p, hsa-miR-1185, hsa-miR-141, hsa-miR-885-5p, hsa-miR-18a, hsa-let-7g, hsa-miR-130a, hsa-miR-744, hsa-miR-221, hsa-miR-1255b, hsa-miR-378*, hsa-miR-629, hsa-miR-526b, hsa-miR-373, hsa-miR-515-5p, hsa-miR-592, hsa-miR-16-1*, hsa-miR-30e*, hsa-let-7e, hsa-miR-550, hsa-miR-1294, hsa-miR-144, hsa-miR-939, hsa-miR-384, hsa-miR-598.

30 6. The method according to item 5, wherein the predetermined set of non-coding RNAs, including miRNAs representative for diagnosis of ovarian cancer comprises all of said miRNAs.

7. The method according to item 5, wherein the predetermined set of non-coding RNAs, including miRNAs representative for diagnosis of ovarian cancer comprises at least 1, 7 ,10 ,15 ,20, 25, 30, 35, 40, 50, 75, 100 or 440 of said miRNAs.

5

8. The method according to item 5, wherein the predetermined set of miRNAs representative for diagnosis of ovarian cancer comprises at least 1, 7 ,10 ,15 ,20, 25, 30, 35, 40, 50, 60, 70 or 75 of the miRNAs selected from the group consisting of hsa-miR-1248, hsa-miR-342-3p, hsa-miR-133b, hsa-miR-605, hsa-miR-450b-3p, hsa-miR-520a-3p, hsa-miR-23b*, hsa-miR-423-5p, hsa-miR-219-1-3p, hsa-miR-454*, hsa-miR-26b*, hsa-miR-1259, hsa-miR-655, hsa-miR-302c, hsa-miR-383, hsa-miR-150, hsa-miR-412, hsa-miR-548i, hsa-let-7e*, hsa-miR-324-3p, hsa-miR-335*, hsa-miR-320a, hsa-miR-320d, hsa-miR-409-3p, hsa-miR-590-3p, hsa-miR-545*, hsa-miR-889, hsa-miR-1224-3p, hsa-miR-148a*, hsa-miR-9, hsa-miR-518f, hsa-miR-488, hsa-miR-182, hsa-miR-10a*, hsa-miR-19b, hsa-miR-15a, hsa-miR-1289, hsa-miR-500, hsa-miR-1281, hsa-miR-942, hsa-miR-877*, hsa-let-7f-1*, hsa-miR-651, hsa-miR-610, hsa-miR-664, hsa-miR-613, hsa-miR-483-3p, hsa-miR-320c, hsa-miR-720, hsa-miR-299-5p, hsa-miR-579, hsa-miR-636, hsa-miR-197, hsa-miR-668, hsa-miR-494, hsa-miR-1262, hsa-miR-578, hsa-miR-708*, hsa-miR-369-3p, hsa-miR-329, hsa-miR-941, hsa-miR-155, hsa-miR-26a-1*, hsa-miR-1246, hsa-miR-892b, hsa-miR-146a, hsa-miR-337-3p, hsa-miR-130a*, hsa-let-7b, hsa-miR-744*, hsa-miR-140-3p, hsa-miR-573, hsa-miR-378, hsa-miR-1237, hsa-miR-363*.

25

9. The method according to any one of items 1-8 wherein said biological sample is selected from blood and/or serum or urine samples.

30

10. The method according to any one of items 1-9 wherein miRNA the expression profile is determined by nucleic acid hybridization, nucleic acid amplification, polymerase extension, sequencing, mass spectroscopy or any combinations thereof.

11. The method according to any one of items 1-10, wherein the miRNA expression profile of said subject and the reference expression profiles and optionally the predetermined set of miRNAs are stored in a database.

5

12. The method according to any one of items 1-11, wherein the biological sample is not labeled prior to determination of the expression profile.

10

13. The method according to any one of items 1-12 wherein the diagnosis comprises determining survival rate, responsiveness to drugs, and/or monitoring the course of the disease or the therapy, e.g. chemotherapy.

15

14. A kit for diagnosing and/or predicting ovarian cancer of a subject, comprising:

(a) means for determining the miRNA expression profile of a RNA sample of a subject, and

(b) at least one reference miRNA expression profile characteristic for ovarian cancer, and

(c) means for comparing the miRNA-profile of the said subject to the reference expression profile

20

15. A microarray for diagnosing and/or predicting ovarian cancer of a subject, comprising probes that are specific for the analysis of miRNAs selected from the group of miRNAs listed in any of the items 5, 6, 7 or 8.

So far, miRNAs have been extensively studied in tissue material. It has been found that miRNAs are expressed in a highly tissue-specific manner.

25

Disease-specific expression of miRNAs has been reported in many human cancers employing primarily tissue material as the miRNA source. In this context miRNAs expression profiles were found to be useful in identifying the tissue of origin for cancers of unknown primary origin. Since recently it is

known that miRNAs are not only present in tissues but also in other body fluid samples, including human blood. Nevertheless, the mechanism why miRNAs are found in body fluids, especially in blood, or their function in these body fluids is not understood yet.

5

Various miRNA biomarkers found in tissue material have been proposed to be correlated with certain diseases, e.g. cancer. However, there is still a need for novel miRNAs as biomarkers for the detection and/or prediction of these and other types of diseases. Especially desirable are non-invasive biomarkers, that allow for quick, easy and cost-effective diagnosis/prognosis which cause only minimal stress for the patient eliminating the need for surgical intervention.

15

Particularly, the potential role of miRNAs as non-invasive biomarkers for the diagnosis and/or prognosis of Ovarian cancer has not been systematically evaluated yet. In addition, many of the miRNA biomarkers presently available for diagnosing and/or prognosing of diseases have shortcomings such as reduced sensitivity, not sufficient specificity or do not allow timely diagnosis or represent invasive biomarkers. Accordingly, there is still a need for novel and efficient miRNAs or sets of miRNAs as markers, effective methods and kits for the non-invasive diagnosis and/or prognosis of diseases such as Ovarian cancer.

20

The inventors of the present invention assessed for the first time the expression of miRNAs on a whole-genome level in subjects with Ovarian cancer as non-invasive biomarkers from body fluids, preferably in blood. They surprisingly found that miRNAs are significantly dysregulated in blood of Ovarian cancer subjects in comparison to healthy controls and thus, miRNAs are appropriated non-invasive biomarkers for diagnosing and/or prognosing of Ovarian cancer. This finding is surprising, since there is nearly no overlap of the miRNA biomarkers found in blood and the miRNA biomarkers found in tissue material representing the origin of the disease.

The inventors of the present invention surprisingly found miRNA biomarkers in body fluids, especially in blood, that were not yet known to be correlated to Ovarian cancer when tissue material was used for this kind of analysis. Therefore, the inventors of the invention identified for the first time miRNAs as non-invasive surrogate biomarkers for diagnosis and/or prognosis of Ovarian cancer. The inventors of the present invention identified single miRNAs which predict Ovarian cancer with high specificity, sensitivity and accuracy. The inventors of the present invention also pursued a multiple biomarker strategy, thus implementing sets of miRNA biomarkers for diagnosing and/or prognosing of Ovarian cancer leading to added specificity, sensitivity, accuracy and predictive power, thereby circumventing the limitations of single biomarkers. They identified unique sets of miRNAs (miRNA signatures) that allow for non-invasive diagnosis of Ovarian cancer with even higher power, indicating that sets of miRNAs (miRNA signatures) derived from a body fluid sample, such as blood from a subject (e.g. human) can be used as novel non-invasive biomarkers.

The inventors of the present invention surprisingly found that miRNAs are significantly dysregulated in body fluid samples such as blood of Ovarian cancer subjects in comparison to a cohort of controls (healthy subjects) and thus, miRNAs are appropriate biomarkers for diagnosing and/or prognosing of Ovarian cancer in a non-invasive fashion. Furthermore, the predetermined sets of miRNAs of the present invention led to high performance in diagnosing and/or prognosing of Ovarian cancer providing very high specificity, sensitivity and accuracy. They succeeded in determining the miRNAs that are differentially regulated in body fluid samples from patients having Ovarian cancer compared to a cohort of controls (healthy subjects) (see experimental section for experimental details). Additionally, the inventors of the present invention performed hypothesis tests (e.g. t-test, limma-test) or other measurements (e.g. AUC, mutual information) on the expression level of the found miRNAs, in all controls (healthy subjects) and subjects suffering from Ovarian cancer. These tests resulted in a significance value (p-value) for each miRNA. This p-value is a measure for

the diagnostic power of each of these single miRNAs to discriminate, for example, between the two clinical conditions: controls (healthy subjects), i.e. not suffering from Ovarian cancer, or diseased, i.e. suffering from Ovarian cancer. Since a manifold of tests are carried out, one for each miRNA, the p-values were corrected for multiple testing by the Benjamini Hochberg approach.

The term "body fluid sample", as used in the context of the present invention, refers to liquids originating from the body of a subject. Said body fluid samples include, but are not limited to, blood, urine, sputum, breast milk, cerebrospinal fluid, cerumen (earwax), endolymph, perilymph, gastric juice, mucus, peritoneal fluid, pleural fluid, saliva, sebum (skin oil), semen, sweat, tears, vaginal secretion, vomit including components or fractions thereof. Said body fluid samples may be mixed or pooled, e.g. a body fluid sample may be a mixture of blood and urine samples or blood and tissue material. A "body fluid sample" may be provided by removing a body liquid from a subject, but may also be provided by using previously isolated sample material.

The term "blood sample", as used in the context of the present invention, refers to a blood sample originating from a subject. The "blood sample" may be derived by removing blood from a subject by conventional blood collecting techniques, but may also be provided by using previously isolated and/or stored blood samples. For example a blood sample may be whole blood, plasma, serum, PBMC (peripheral blood mononuclear cells), blood cellular fractions including red blood cells (erythrocytes), white blood cells (leukocytes), platelets (thrombocytes), or blood collected in blood collection tubes (e.g. EDTA-, heparin-, citrate-, PAXgene- , Tempus-tubes) including components or fractions thereof. For example, a blood sample may be taken from a subject suspected to be affected or to be suspected to be affected by Ovarian cancer, prior to initiation of a therapeutic treatment, during the therapeutic treatment and/or after the therapeutic treatment.

Preferably, the body fluid, e.g. blood sample from a subject (e.g. human or animal) has a volume of between 0.1 and 20 ml, more preferably of between 0.5 and 10 ml, more preferably between 1 and 8 ml and most preferably between 2 and 5 ml, i.e. 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1, 2, 2.5, 3, 5 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, or 20 ml. In the context of the present invention said "body fluid sample" or "blood sample" allows for a non-invasive diagnosis and/or prognosis of a subject.

10 Preferably, the collected blood sample, particularly the RNA-fraction, especially the miRNA fraction thereof, is protected against degradation. For this purpose special collection tubes (e.g. PAXgene RNA tubes from Preanalytix, Tempus Blood RNA tubes from Applied Biosystems) and/or additives (e.g. RNAlater from Ambion, RNAsin from Promega) that stabilize the RNA fraction and/or the miRNA fraction may be employed.

15 The biological sample, preferably the body fluid sample may originate from a subject (e.g. human or mammal) who is therapeutically treated, has been therapeutically treated or has not yet been therapeutically treated. In one embodiment, the therapeutical treatment may be monitored on the basis of 20 the detection of an miRNA or a set of miRNAs by the polynucleotide or set of polynucleotides of the invention. The detection may involve the use of miRNAs or sets of miRNAs isolated (e.g. extracted) from a biological sample of a subject (e.g. human or animal), and/or the use of polynucleotides or sets of polynucleotides or primer pairs of the invention.

25 The term "non-invasive", as used in the context of the present invention, refers to methods for obtaining a biological sample, particularly a body fluid sample, without the need for an invasive surgical intervention or invasive medical procedure. In the context of the present invention, drawing blood 30 represents a non-invasive procedure. Therefore a blood-based test (utilizing blood or fractions thereof) is a non-invasive test. Other body fluid samples for non-invasive tests are e.g. urine, sputum, tears, mothers milk, cerumen, sweat, saliva, vaginal secretion, vomit, etc..

The term "diagnosis" as used in the context of the present invention refers to the process of determining a possible disease or disorder and therefore is a process attempting to define the (clinical) condition of a subject. The 5 determination of the expression level of a set of miRNAs according to the present invention correlates with the (clinical) condition of a subject. Preferably, the diagnosis comprises (i) determining the occurrence/presence of Ovarian cancer, (ii) monitoring the course of Ovarian cancer, (iii) staging of Ovarian cancer, (iv) measuring the response of a patient with Ovarian 10 cancer to therapeutic intervention, and/or (v) segmentation of a subject suffering from Ovarian cancer.

The term "prognosis" as used in the context of the present invention refers to describing the likelihood of the outcome or course of a disease or a disorder. 15 Preferably, the prognosis comprises (i) identifying of a subject who has a risk to develop Ovarian cancer, (ii) predicting/estimating the occurrence, preferably the severity of occurrence of Ovarian cancer, and/or (iii) predicting the response of a subject with Ovarian cancer to therapeutic intervention.

20 The term "suffering or suspected to be suffering from Ovarian cancer" as used in the context of the present invention comprises the diagnosis and/or prognosis of Ovarian cancer in a suspect as defined above.

The present invention particularly comprises nine aspects as follows:

25

In a first aspect, the present invention relates to a method for diagnosing and/or prognosing of Ovarian cancer comprising the steps of:

30

- (i) determining an expression profile of a predetermined set comprising at least two miRNAs representative for Ovarian cancer in a body fluid sample from a subject, and
- (ii) comparing said expression profile to a reference expression profile, wherein the comparison of said expression profile to said reference expression profile allows for the diagnosis

and/or prognosis of Ovarian cancer.

In this aspect (and in the following aspects), it is preferred that the body fluid sample is a blood sample, particularly preferred it is a whole blood, PBMC, 5 serum or plasma sample, more particularly preferred it is a whole blood sample. The preferred subject may be a mammal including both a human and a non-human mammal, e.g. an animal such as a mouse, a rat, a rabbit, or a monkey. It is particularly preferred that the subject is a human.

10 In this aspect (and in the following aspects), the predetermined set comprising at least two miRNAs is preferably selected from the set of miRNAs listed in Figure 2 or 14, and/or from the sets of miRNAs listed in Figure 15 (SNO-1 to SNO-756). The predetermined set comprising at least two miRNAs may comprise at least one set of miRNAs listed in Figure 15, 15 e.g. one set or a plurality of sets of miRNAs listed in Figure 15.

For example, a set comprising 30 miRNAs representative for Ovarian cancer in a body fluid sample from a subject comprises at least the miRNAs from one predetermined set or several sets of miRNAs listed in Figure 15. 20 Alternatively, a set comprising 29, 28, 27, 26, 25, 24, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4 or 3 miRNAs representative for Ovarian cancer comprises at least the miRNAs from one set or several sets of miRNAs listed in Figure 15.

25 Further, in another preferred embodiment, the invention comprises determining an expression profile of combinations of sets of miRNAs listed in Figure 15.

For example, said predetermined set comprising 30 miRNAs representative 30 for Ovarian cancer in a body fluid sample from a subject comprises at least 2, e.g. 2, 3, 4, 5 or 6 of the sets of miRNAs listed in Figure 15. Alternatively, said predetermined set comprising 29, 28, 27, 26, 25, 24, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5 or 4 miRNAs comprises at

least 2, e.g. 2, 3, 4, 5 or 6 of the sets of miRNAs listed in Figure 15.

The reference expression profile may be obtained from at least two subjects (e.g. human or animal). Preferably the reference expression profile is an average expression profile (data) of at least 2 to 400 subjects, more preferably at least 20 to 200 subjects, and most preferably at least 40 to 150 subjects, with a specific clinical condition which is Ovarian cancer or a specific form of Ovarian cancer.

It is particularly preferred that the reference expression profile is an algorithm or mathematical function. Preferably the algorithm or mathematical function is obtained from a reference expression profile (data) of at least two subjects, preferably the algorithm or mathematical function is obtained from an average reference expression profile (data) of at least 2 to 400 subjects, more preferably of at least 20 to 200 subjects, and most preferably of at least 40 to 150 subjects. It is preferred that the algorithm or mathematical function is obtained using a machine learning approach. The algorithm or mathematical function may be saved on a data carrier comprised in the kit (according to the seventh aspect of the invention) or the computer program, wherein the algorithm or mathematical function is comprised, may be saved on a data carrier comprised in the kit.

It is preferred that the miRNA expression profile may be generated by any convenient means, e.g. nucleic acid hybridization (e.g. to a microarray), nucleic acid amplification (PCR, RT-PCR, qRT-PCR, high-throughput RT-PCR), ELISA for quantitation, next generation sequencing (e.g. ABI SOLID, Illumina Genome Analyzer, Roche/454 GS FLX), flow cytometry (e.g. LUMINEX) and the like, that allow the analysis of differential miRNA expression levels between samples of a subject (e.g. diseased) and a control subject (e.g. healthy, reference sample).

Nucleic acid hybridization may be performed using a microarray/biochip or *in situ* hybridization. *In situ* hybridization is preferred for the analysis of a single

miRNA or a set comprising a low number of miRNAs (e.g. a set of at least 2 to 50 miRNAs such as a set of 2, 5, 10, 20, 30, or 40 miRNAs). The microarray/biochip, however, allows the analysis of a single miRNA as well as a complex set of miRNAs (e.g. all known miRNAs or subsets thereof).

5

Nucleic acid amplification may be performed using real time polymerase chain reaction (RT-PCR) such as real time quantitative polymerase chain reaction (RT qPCR). The standard real time polymerase chain reaction (RT-PCR) is preferred for the analysis of a single miRNA or a set comprising a low number of miRNAs (e.g. a set of at least 2 to 50 miRNAs such as a set of 2, 5, 10, 20, 30, or 40 miRNAs), whereas high-throughput RT-PCR technologies (e.g. OpenArray from Applied Biosystems, SmartPCR from Wafergen, Biomark System from Fluidigm) are also able to measure large sets of miRNAs (e.g. a set of 10, 20, 30, 50, 80, 100, 200 or more) or all known miRNAs in a high parallel fashion. RT-PCR is particularly suitable for detecting low abundant miRNAs.

10

In a second aspect, the invention relates to a set comprising polynucleotides for detecting a predetermined set comprising at least two miRNAs for diagnosing and/or prognosing of Ovarian cancer in a body fluid sample from a subject.

15

It is preferred that the polynucleotides comprised in the set of the present invention are complementary to the miRNAs comprised in the predetermined set, wherein the nucleotide sequences of said miRNAs are preferably selected from the group consisting of miRNAs listed in Figure 2 or 14 or sets of miRNAs listed in Figure 15, fragments thereof, and sequences having at least 80%, 85%, 90% or 95% sequence identity thereto.

20

For example, the polynucleotides of the present invention are for detecting a predetermined set of 40 or 39 or 38 or 37 or 36 or 35 or 34 or 33 or 32 or 31 or 30 or 29 or 28 or 27 or 26 or 25 or 24 or 23 or 22 or 21 or 20 or 19 or 18 or 17 or 16 or 15 or 14 or 13 or 12 or 11 or 10 or 9 or 8 or 7 or 6 or 5 or 4 or

3 miRNAs wherein the predetermined set of miRNAs comprises at least one, e.g. 1, 2, 3, 4, 5 or 6, of the sets of miRNAs listed in Figure 15.

5 In a third aspect, the invention relates to the use of a set of polynucleotides according to the second aspect of the invention for diagnosing and/or prognosing Ovarian cancer in a subject.

10 In a fourth aspect, the invention relates to a set of at least two primer pairs for determining the expression level of a predetermined set of miRNAs in a body fluid sample of a subject suffering or suspected of suffering from Ovarian cancer.

15 It is preferred that the set of at least two primer pairs for determining the expression level of a predetermined set of miRNAs in a body fluid sample of a subject suffering or suspected of suffering from Ovarian cancer are primer pairs that are specific for at least one miRNA listed in Figure 2 or 14.

20 It is further preferred that the set of at least two primer pairs for determining the expression level of a predetermined set of miRNAs in a body fluid sample of a subject suffering or suspected of suffering from Ovarian cancer are primer pairs that are specific for at least one set of miRNAs listed in Figure 15.

25 It is preferred that the set of at least two primer pairs of the present invention are for detecting a set comprising, essentially consisting of, or consisting of at least 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 35, 40 or more miRNAs, and wherein the predetermined set of miRNAs comprises at least one of the sets listed in Figure 15.

30

For example, the set of at least two primer pairs of the present invention are for detecting a predetermined set of 40 or 39 or 38 or 37 or 36 or 35 or 34 or 33 or 32 or 31 or 30 or 29 or 28 or 27 or 26 or 25 or 24 or 23 or 22 or 21 or

20 or 19 or 18 or 17 or 16 or 15 or 14 or 13 or 12 or 11 or 10 or 9 or 8 or 7 or 6 or 5 or 4 or 3 or 2 miRNAs wherein the predetermined set of miRNAs comprises at least one of the sets of miRNAs listed in Figure 15.

5 Preferably, the primer pairs are used for amplifying cDNA transcripts of the predetermined set of miRNAs selected from the miRNAs listed in Figure 2 or Figure 14. Furthermore, the primer pairs may be used for amplifying cDNA transcripts of the set of miRNAs listed in Figure 15.

10 It is understood that the primer pairs for detecting a predetermined set of miRNAs may consist of specific primers, of a specific and a non-specific primer and/or of non-specific primers. Additionally, the set of primer pairs may be complemented by other substances or reagents (e.g. buffers, enzymes, dyes, labelled probes) known to the skilled in the art for 15 conducting amplification reactions, e.g. real time polymerase chain reaction (RT-PCR).

In a fifth aspect, the invention relates to the use of a set of primer pairs according to the fourth aspect of the invention for diagnosing and/or 20 prognosing Ovarian cancer in a subject.

In a sixth aspect, the invention relates to means for diagnosing and/or prognosing of Ovarian cancer in a body fluid sample of a subject.

25 Preferably, the invention relates to means for diagnosing and/or prognosing of Ovarian cancer in a body fluid sample of a subject comprising

- a set of at least two polynucleotides according to the second aspect of the invention and/or
- a set of at least two primer pairs according the fourth aspect of the 30 invention.

It is preferred that the set of at least two polynucleotides or the set of at least 2 primer pairs are for detecting a predetermined set comprising at least two

miRNAs for diagnosing and/or prognosing of Ovarian cancer in a body fluid sample, e.g. blood sample, from a subject, e.g. patient, human or animal, wherein the set of miRNAs is selected from the sets of miRNAs listed in Figure 15 (SNO-1 to SNO-756).

5

It is preferred that the set of at least two primer pairs for determining the expression level of a predetermined set of miRNAs in a body fluid sample of a subject suffering or suspected of suffering from Ovarian cancer are primer pairs that are specific for at least two miRNAs selected from the miRNAs listed in Figure 2 or Figure 14.

10

It is preferred that the set of at least two primer pairs for determining the expression level of a set of miRNAs in a body fluid sample of a subject suffering or suspected of suffering from Ovarian cancer are primer pairs that are specific for at least one set of miRNAs listed in Figure 15.

15

It is also preferred that said means for diagnosing and/or prognosing of Ovarian cancer comprise, of a set of beads comprising at least two polynucleotides according to the second aspect of the present invention. It is especially preferred that the beads are employed within a flow cytometer setup for diagnosing and/or prognosing of Ovarian cancer, e.g. in a LUMINEX system (www.luminexcorp.com).

20

In a seventh aspect, the invention relates to a kit for diagnosing and/or prognosing of Ovarian cancer in a subject.

25

Preferably, the invention relates to a kit for diagnosing and/or prognosing of Ovarian cancer comprising

30

- (i) means for determining an expression profile of a predetermined set comprising at least two miRNAs representative for Ovarian cancer in a body fluid sample from a subject, and
- (ii) at least one reference.

- Said means may comprise of at least two polynucleotides according to the second aspect of the present invention, a set of at least 2 primer pairs according to the fourth aspect of the invention; means according to the sixth 5 aspect of the present invention; primers suitable to perform reverse transcriptase reaction and/or real time polymerase chain reaction such as quantitative polymerase chain reaction; and/or means for conducting next generation sequencing.
- 10 In an eighth aspect, the invention relates to a predetermined set of miRNAs in a body fluid sample isolated from a subject for diagnosing and/or prognosing of Ovarian cancer.
- 15 In a ninth aspect, the invention relates to the use of a set of miRNAs according to the eighth aspect of the invention for diagnosing and/or prognosing of Ovarian cancer in a subject.

Claims

1. A method of diagnosing a disease, comprising the steps
 - 5 (a) determining an expression profile of a predetermined set of non-coding RNAs, including miRNAs, in a blood sample from a patient; and
 - (b) comparing said expression profile to a reference expression profile, wherein the comparison of said determined expression profile to said reference expression profile allows for the diagnosis of the disease, wherein the disease is ovarian cancer.
- 10
2. The method according to claim 1, wherein the reference expression profile is derived from a plurality of expression profiles obtained from a plurality of reference subjects.
- 15
3. The method according to claim 1 or 2, wherein the reference expression profile is derived from healthy controls.
- 20
4. The method according to any of the claims 1 to 3, wherein the expression profile is determined on non-coding RNAs, including miRNAs selected from Figure 2 or Figure 14.
- 25
5. The method according to any of the claims 1 to 4, wherein the predetermined set of miRNAs comprises at least one set of miRNAs listed in Figure 15.
- 30
6. The method according to any of the claims 1 to 5, wherein the predetermined set of non-coding RNAs, including miRNAs representative for diagnosis of ovarian cancer comprises at least 1, 7 , 10 ,15 ,20, 25, 30, 35, 40, 50, 75, 100 or 440 of said miRNAs.
7. The method according to any one of claims 1-6 wherein the miRNA expression profile is determined by nucleic acid hybridization, nucleic

acid amplification, polymerase extension, sequencing, mass spectroscopy or any combinations thereof.

8. The method according to any one of claims 1-7, wherein the miRNA expression profile of said subject and the reference expression profiles and optionally the predetermined set of miRNAs are stored in a database.
5
9. The method according to any one of claims 1-8 wherein the diagnosis comprises determining survival rate, responsiveness to drugs, and/or monitoring the course of the disease or the therapy, e.g. chemotherapy.
10
10. A set of polynucleotides for detecting a predetermined set comprising at least two miRNAs for diagnosing and/or prognosing of ovarian cancer in a blood sample from a patient.
15
11. The set of polynucleotides according to claim 10, wherein the miRNAs are selected from the miRNAs listed in Figure 2 or 14.
20
12. The set of polynucleotides according to claim 10 or 11, wherein the predetermined set of miRNAs is selected from the sets of miRNAs listed in Figure 15.
13. Use of a set of polynucleotides according to any of the claims 10 to 12 for diagnosing and/or prognosing ovarian cancer in a patient.
25
14. A set of primer pairs for determining the expression level of a predetermined set of miRNAs in a blood sample of a patient for diagnosing and/or prognosing ovarian cancer.
30
15. The set of primer pairs according to claim 14, wherein the miRNAs are selected from the miRNAs listed in Figure 2 or Figure 14.

16. The set of primer pairs according to claim 15, wherein the predetermined set of miRNAs comprises at least one set of miRNAs listed in Figure 15.

5

17. Use of a set of primer pairs according to any of the claims 14 to 16 for diagnosing and/or prognosing ovarian cancer in a patient.

- 10 18. Means for diagnosing and/or prognosing of ovarian cancer in a blood sample of a subject comprising :

- (i) a set of at least two polynucleotides according to claims 10 to 12 or
(ii) a set of at least two primer pairs according claims 14 to 16.

15

19. A kit for diagnosing and/or predicting ovarian cancer of a subject, comprising:

- 20 (a) means for determining the miRNA expression profile of a RNA sample of a subject, and
(b) at least one reference miRNA expression profile characteristic for ovarian cancer, and
(c) means for comparing the miRNA-profile of the said subject to the reference expression profile.

- 25 20. The kit according to claim 19 wherein the means (a) comprises a set of polynucleotides according to any of the claims 10 to 12 and/or a set of primer pairs according to any of the claims 14-16.

- 30 21. A set of miRNAs isolated from a blood sample from a subject for diagnosing and/or prognosing of ovarian cancer, wherein the miRNAs are selected from the miRNAs as indicated in claims 4 or 5.

22. The set of miRNAs of claim 21 bound to a carrier, e.g. a micro-array.

23. Use of a set of miRNAs according to claim 21 or 22 for diagnosing and/or prognosing of ovarian cancer in a subject.

FIG 1

| No. | Name (miRNA, miRNA*) | SEQUENCE | No. | Name (miRNA, miRNA*) | SEQUENCE |
|-----|-------------------------|-------------------------|-----|-------------------------|-------------------------|
| 1 | hsa-miR-99b* | CAAGCUCUGUCUGGGGUCCG | 482 | hsa-miR-30c-1* | CUGGGAGGGGUUUACUCC |
| 2 | hsa-miR-99b | CACCCGUAGAACCGGACCUUCCG | 483 | hsa-miR-30c | UGUAAAACAUCUACACUCUCAGC |
| 3 | hsa-miR-99a* | CAAGCUCGCCUUCAUGGGUCUG | 484 | hsa-miR-30b* | CUGGGAGGGGAUGUUACUUC |
| 4 | hsa-miR-99a | AACCCGUAGAUCCGAUCUJUGUG | 485 | hsa-miR-30b | UGUAAAACAUCUACACUCAGCU |
| 5 | hsa-miR-98 | UGAGGUAGUAAGGUUAUJGUU | 486 | hsa-miR-30a* | CUUUCAGUCGGGAUGUUUGCAGC |
| 6 | hsa-miR-96* | AAUCAUGUGGCAGGCCAAUJAUG | 487 | hsa-miR-30a | UGUAAAACAUCUCCGACUGGAAG |
| 7 | hsa-miR-96 | UUUGGCACUAGGCACAUUUUJGU | 488 | hsa-miR-302f | UAUUUGCUUCCAUUUU |
| 8 | hsa-miR-95 | UUCAACGGGUUAUJUAGCA | 489 | hsa-miR-302e | UAAGUGCUUCCAUUCGUU |
| 9 | hsa-miR-944 | AAAUAUUUGUACAUCCGGAUGAG | 490 | hsa-miR-302d* | ACUUUAACAUUGGAGGCACUUGC |
| 10 | hsa-miR-943 | CUGACUGUUGCCGUCCUCAG | 491 | hsa-miR-302d | UAAGUGCUUCCAUUUUGAGUGU |
| 11 | hsa-miR-942 | UCUUUCUGUUUUUGCCAUGUG | 492 | hsa-miR-302c* | UUUUACAUUGGGGUACCUGUCUG |
| 12 | hsa-miR-941 | CACCCGGCUGUGUGCACAUUGGC | 493 | hsa-miR-302c | UAAGUGCUUCCAUUUUCAGUGG |
| 13 | hsa-miR-940 | AAGGCAGGGCCCCGCCUCCCC | 494 | hsa-miR-302b* | ACUUUAACAUUGGAAGUGCUUC |
| 14 | hsa-miR-939 | UGGGGAGGCUGGGCUCGGGGUG | 495 | hsa-miR-302b | UAAGUGCUUCCAUUUUAGUAG |
| 15 | hsa-miR-938 | UGCCCCUUAAAGGUGAACCCAGU | 496 | hsa-miR-302a* | ACUUAAACUGGGGAUGUACUUGC |
| 16 | hsa-miR-937 | AUCCGGCGCUCUGACUCUCUGCC | 497 | hsa-miR-302a | UAAGUGCUUCCAUUUUGGUGA |
| 17 | hsa-miR-936 | ACAGUAGAGGGAGGAUCGCAG | 498 | hsa-miR-301b | CAGUGCAAUGAUUUGUCAAAGC |
| 18 | hsa-miR-935 | CCAGUUACCCUUCCGUACCGC | 499 | hsa-miR-301a | CAGUGCAAUGAUUUGUCAAAGC |
| 19 | hsa-miR-934 | UGUCUACUACUGGGAGACACUGG | 500 | hsa-miR-300 | UAUACAAGGGCAGACUCUCU |

FIG 1 (continued)

| | | | | | |
|----|----------------|----------------------------|-----|----------------|---------------------------|
| 20 | hsa-miR-933 | UGUGGCCAGGGAGACCUCUCCC | 501 | hsa-miR-29c* | UGACCGAUUUCUCCUGGUGUUC |
| 21 | hsa-miR-93* | ACUGCUGAGCUAGCACUCCCC | 502 | hsa-miR-29c | UAGCACCAUUUGAAAUCCGUUA |
| 22 | hsa-miR-93 | CAAAGUGCUGUUUCGUGGAGUAG | 503 | hsa-miR-29b-2* | CUGGUUUCACAUGGUGGUUAG |
| 23 | hsa-miR-92b* | AGGGACGGGACGGGGGGAGUG | 504 | hsa-miR-29b-1* | GCUGGUUUCAU AUGGUGGUUAG |
| 24 | hsa-miR-92b | UAUUGCACUCGUCCCCGGCCUCC | 505 | hsa-miR-29b | UAGCACCAUUUGAAAUCAUGGUU |
| 25 | hsa-miR-92a-2* | GGGUGGGGAUUVUUGCAUUAUC | 506 | hsa-miR-29a* | ACUGAUUUCUUUUGGUUUCAG |
| 26 | hsa-miR-92a-1* | AGGUUUGGGGAUCGGGUUGCAAUGCU | 507 | hsa-miR-29a | UAGGCCACCAUCUGAAAUCGGGUUA |
| 27 | hsa-miR-92a | UAUUGCACUUUGGUCCCCGGCCUGU | 508 | hsa-miR-299-5p | UGGUUUACCGUCCACAUACAU |
| 28 | hsa-miR-924 | AGAGUCUUUGUGAUGUCUUGC | 509 | hsa-miR-299-3p | UAUGGGGAUGGUAAAACCGCUU |
| 29 | hsa-miR-922 | GCAGCGAGAGAAUAGGACUACGUC | 510 | hsa-miR-298 | AGCAGAACGGAGGGAGGUUCUCCA |
| 30 | hsa-miR-921 | CUAGUGAGGGACAGAACCGAUUC | 511 | hsa-miR-297 | AUGUAUGUGUGCAUGUGCAUG |
| 31 | hsa-miR-920 | GGGGAGCUGUGGGAAAGCAGUA | 512 | hsa-miR-296-5p | AGGGCCCCCUAAUCCUGU |
| 32 | hsa-miR-9* | AUAAAAGCUAGAUAAACCGAAAGU | 513 | hsa-miR-296-3p | GAGGGUUGGGUGGGAGGCUCUCC |
| 33 | hsa-miR-9 | UCUUUGGUUAUCUAGCUAUGA | 514 | hsa-miR-28-5p | AGGGAGGCUACAGUCUAUUGAG |
| 34 | hsa-miR-892b | CACUGGGCUUUUCUGGGUAGA | 515 | hsa-miR-28-3p | CACUAGAUUGUGAGCUCCUGGA |
| 35 | hsa-miR-892a | CACUGUGGUCCUUUCUGGGUAG | 516 | hsa-miR-27b* | AGAGCUUAGCUGAUUUGGUGAAC |
| 36 | hsa-miR-891b | UGCAACUUAACCUGAGCUAUGA | 517 | hsa-miR-27b | UUCACAGUGGGCUAAGGUUCUGC |
| 37 | hsa-miR-891a | UGCAACGAAACCUGAGCCACUGA | 518 | hsa-miR-27a* | AGGGCUUAGCUGGUUUGUGAGCA |
| 38 | hsa-miR-890 | UACUUGGAAAGGCAUCAGUUG | 519 | hsa-miR-27a | UUCACAGUGGGCUAAGGUUCCGC |

FIG 1 (continued)

| | | | | | |
|----|----------------|--------------------------|-----|----------------|-------------------------|
| 39 | hsa-miR-889 | UUAAAUAUCGGACAAACCAUUGU | 520 | hsa-miR-26b* | CCUGUUUCUCCAUUACUUGGCUC |
| 40 | hsa-miR-888* | GACUGACACCUCUUUGGGUGAA | 521 | hsa-miR-26b | UCAAGUAAUUCAGGAUAGGU |
| 41 | hsa-miR-888 | UACUCAAAAAGCUGUCAGUCA | 522 | hsa-miR-26a-2* | CCUAUUCUUGAUUACUUGUUUC |
| 42 | hsa-miR-887 | GUGAACGGGCCAUCCCCGAGG | 523 | hsa-miR-26a-1* | CCUAUUCUUGGUUACUUGCACG |
| 43 | hsa-miR-886-5p | CGGGUCGGAGGUAGCUAAGCGG | 524 | hsa-miR-26a | UCAAGUAAUCCAGGAUAGGU |
| 44 | hsa-miR-886-3p | CGGGGGGUUACUGACCCUU | 525 | hsa-miR-25* | AGGGGGAGACUUGGGCAAUUG |
| 45 | hsa-miR-885-5p | UCCAUUACACUACCCUGCCUCU | 526 | hsa-miR-25 | CAUUGCACUUGUCUCGGUCUGA |
| 46 | hsa-miR-885-3p | AGGCAGCGGGGUAGUGGAUA | 527 | hsa-miR-24-2* | UGCCUACUGAGCUAUACAG |
| 47 | hsa-miR-877* | UCCUCUUCUCCCUCUCCAG | 528 | hsa-miR-24-1* | UGCCUACUGAGCUAUACAGU |
| 48 | hsa-miR-877 | GUAGAGGGAGAUGGGCGAGG | 529 | hsa-miR-24 | UGGCUCAGUUCAGCAGGAACAG |
| 49 | hsa-miR-876-5p | UGGAUUUCUUGUGAAUCACCA | 530 | hsa-miR-23b* | UGGGUUCUGGCAUGCUGAUUU |
| 50 | hsa-miR-876-3p | UGGUGGUUACAAAGUAAUCA | 531 | hsa-miR-23b | AUCACAUUUGCCAGGGAUUACC |
| 51 | hsa-miR-875-5p | UAUACCUCAGUUUAUCAGGUG | 532 | hsa-miR-23a* | GGGGUUCUGGGGAUGGGAUUU |
| 52 | hsa-miR-875-3p | CCUGGAAACACUUGAGGUUGUG | 533 | hsa-miR-23a | AUCACAUUUGCCAGGGAUUCC |
| 53 | hsa-miR-874 | CUGCCCCUGGCCGAGGGACCGA | 534 | hsa-miR-2278 | GAGAGCAGUGUGUGGUUGCCUGG |
| 54 | hsa-miR-873 | GCAGGAACUUGUGAGUCUCCU | 535 | hsa-miR-2277 | UGACAGGCCUGCCUGGCUC |
| 55 | hsa-miR-802 | CAGUAAACAAAGAUUCAUCCUUGU | 536 | hsa-miR-2276 | UCUGCAAGUGUCAGGGCGAGG |
| 56 | hsa-miR-770-5p | UCCAGUACCACGUGCAGGGCCA | 537 | hsa-miR-224* | AAAAGGGUGGCCUAGUGACUACA |
| 57 | hsa-miR-769-5p | UGAGACCUCUGGGUUCAGAGCU | 538 | hsa-miR-224 | CAAGUCACUAGUGGUUCGGUU |
| 58 | hsa-miR-769-3p | CUGGGAUCUCGGGGGUUUGGUU | 539 | hsa-miR-223* | CGUGUAUUGACAAGCUGAGUU |
| 59 | hsa-miR-767-5p | UGCACCAUGGUUGUCUGAGCAUG | 540 | hsa-miR-223 | UGUCAGUUJUGUCAAUACCCA |

FIG 1 (continued)

| | | | | | |
|----|----------------|--------------------------|-----|------------------|--------------------------|
| 60 | hsa-miR-767-3p | UCUGCUCAUACCCCAUGGUUUUCU | 541 | hsa-miR-222* | CUCAGUAGCCAGUGUAGAUCCU |
| 61 | hsa-miR-766 | ACUCCAGCCCCACAGCCUCAGC | 542 | hsa-miR-222 | AGCUACAUCCGGCUACUGGGU |
| 62 | hsa-miR-765 | UGGAGGGAGAAGGAAGGUGAUG | 543 | hsa-miR-221* | ACUCCGCAUACAUGUAGAUUU |
| 63 | hsa-miR-764 | GCAGGUGGCUCACUUGUCCUCCU | 544 | hsa-miR-221 | AGCUACAUUGUCUGCGGGUUC |
| 64 | hsa-miR-762 | GGGCUGGGGGGGGGGGAGC | 545 | hsa-miR-220c | ACACAGGGCUGUUUGUGAAAGACU |
| 65 | hsa-miR-761 | GCAGCAGGGUGAAACUGACACA | 546 | hsa-miR-220b | CCACCCACCGUGUCUGACACUU |
| 66 | hsa-miR-760 | CGGCUCUGGGUCUGUGGGGA | 547 | hsa-miR-220a | CCACACCGUAUCUGACACUU |
| 67 | hsa-miR-759 | GCAGAGUGCAAACAAUUUUGAC | 548 | hsa-miR-22* | AGUUUUUCAGUGGCCAAGCUUUA |
| 68 | hsa-miR-758 | UUUGUGACCUGGUCCACUAAACC | 549 | hsa-miR-22 | AAGCUGGCCAGUUGAAGAACUGU |
| 69 | hsa-miR-744* | CUGUUGGCCACUAACCUAACCU | 550 | hsa-miR-219-5p | UGAUUUGUCCAAACGCAAUUCU |
| 70 | hsa-miR-744 | UGCAGGGGUAGGGCUAACAGCA | 551 | hsa-miR-219-2-3p | AGAAUUGGGCUGGGACAUUGU |
| 71 | hsa-miR-720 | UCUCGCUGGGGCCUCCA | 552 | hsa-miR-219-1-3p | AGAGUUGAGUCUGGCACGCCG |
| 72 | hsa-miR-7-2* | CAACAAAUCCCAGUCCUACCUAA | 553 | hsa-miR-218-2* | CAUGGUUCUGUCAAGCACCGCG |
| 73 | hsa-miR-718 | CUUCGGCCCCGGGGGUCCG | 554 | hsa-miR-218-1* | AUGGUUCCGUCAAGCACCAUGG |
| 74 | hsa-miR-711 | GGGACCCAGGGAGAGACGUAAAG | 555 | hsa-miR-218 | UGUGGUUGAUCAACCAUGU |
| 75 | hsa-miR-7-1* | CAACAAAUCACAGUCUGCCAU | 556 | hsa-miR-217 | UACUGCAUCAGGAACUGAUJGGA |
| 76 | hsa-miR-708* | CAACUAGACUGUGAGCUUCUAG | 557 | hsa-miR-216b | AAAUUCUCUGCCAGGCAAAUGUGA |
| 77 | hsa-miR-708 | AAGGAGGCUUACAAUCUAGCUGGG | 558 | hsa-miR-216a | UAUAUCUCAGCUGGGCAACUGUGA |
| 78 | hsa-miR-7 | UGGAAGACUAGUGAUUUUGUUGU | 559 | hsa-miR-215 | AUGACCUAUGAAUUGACAGAC |
| 79 | hsa-miR-675* | CUGUAUGCCCCUACCGCUCA | 560 | hsa-miR-214* | UGCCUGUCUACACUJGCGUGUC |

FIG 1 (continued)

| | | | | | |
|----|----------------|-----------------------------|-----|---------------|--------------------------|
| 80 | hsa-miR-675 | UGGUGGGAGAGGGCCACAGUG | 561 | hsa-miR-214 | ACAGCAGGCACAGACAGGCAGU |
| 81 | hsa-miR-671-5p | AGGAAGCCCUGGGGGUGGAG | 562 | hsa-miR-212 | UAACAGUCUCCAGUCACGGCC |
| 82 | hsa-miR-671-3p | UCCGGUUUCUCAGGGCUCCACC | 563 | hsa-miR-2117 | UGUUCUCUUUGCCAAGGACAG |
| 83 | hsa-miR-670 | GUCCCUGAGUGUAUGUGGUG | 564 | hsa-miR-2116* | CCUCCCAUGCCAAGAACUCCC |
| 84 | hsa-miR-668 | UGUCACUCUGGCCUCGGCACUAC | 565 | hsa-miR-2116 | GGUUCUJAGCAUAGGAGGUUCU |
| 85 | hsa-miR-665 | ACCAGGAGGGCUGAGGGCCCCU | 566 | hsa-miR-2115* | CAUCAGAAUUCAUAGGAGGCUAAG |
| 86 | hsa-miR-664* | ACUGGCUAGGGAAAAUGAUUGGAU | 567 | hsa-miR-2115 | AGCUUCCAUGACUCCUGAUGGA |
| 87 | hsa-miR-664 | UAUCAUUUAUCCAGCCUACAUCA | 568 | hsa-miR-2114* | CGAGCCUCAAGCAAGGGACAUU |
| 88 | hsa-miR-663b | GGUGGGCGGCCGUGCCUGAGG | 569 | hsa-miR-2114 | UAGUCCCCUUCCUUGAACGGGUC |
| 89 | hsa-miR-663 | AGGGGGGGCGCCGGGGACCGC | 570 | hsa-miR-2113 | AUJUGUGCUUJGGCUCUGUCAC |
| 90 | hsa-miR-662 | UCCCACGUUGGGCCAGCAG | 571 | hsa-miR-2110 | UGGGGAAACGGGCCUGAGUG |
| 91 | hsa-miR-661 | UGCCUGGGGUUCUCUGGCCUGGGCGU | 572 | hsa-miR-211 | UCCCCUUJGUCAUCCUUCGCCU |
| 92 | hsa-miR-660 | UACCCAUUGCAUAUCGGAGUUUG | 573 | hsa-miR-210 | CUGUGCGUGUGACAGGGCUGA |
| 93 | hsa-miR-659 | CUUGGUUCAGGGAGGGUCCCCA | 574 | hsa-miR-21* | CAACACCAGUCGAUGGGCUGU |
| 94 | hsa-miR-658 | GGCGGGAGGUAGGUUGGUUGGU U | 575 | hsa-miR-21 | UAGCUUUAUCAGACUGAUGUGUA |
| 95 | hsa-miR-657 | GGCAGGUUCUCACCUUCUAGG | 576 | hsa-miR-20b* | ACUGUAGUAUGGGCACUUCAG |
| 96 | hsa-miR-656 | AAUAAUUAACAGUCAACCUCU | 577 | hsa-miR-20b | CAAAGUGUCUCAUAGUGCAGGUAG |
| 97 | hsa-miR-655 | AUAAUACAUGGGUUACCUUU | 578 | hsa-miR-20a* | ACUGCAUUUAUGAGCACUUAAG |
| 98 | hsa-miR-654-5p | UGGUGGGCCGGCAGAACAUUGC | 579 | hsa-miR-20a | AAAAGUGCUUAUAGUGCAGGUAG |
| 99 | hsa-miR-654-3p | UAUGUCUGCUGACCAUCACUU | 580 | hsa-miR-208b | AUAAGACGAACAAAGGUUGU |

FIG 1 (continued)

| | | | | | |
|-----|-------------|--------------------------|-----|----------------|--------------------------|
| 100 | hsa-miR-653 | GUGUUGAAACAAUCUCUACUG | 581 | hsa-miR-208a | AUAAGACGAGCAAAAGCUUGU |
| 101 | hsa-miR-652 | AUGGCCAACUAGGGUUGUG | 582 | hsa-miR-206 | UGGAAGGUAGGAAGGUGUGGG |
| 102 | hsa-miR-651 | UUUAGGAUAAAGCUUJUUG | 583 | hsa-miR-2054 | CUGUAAUAAAUAUAAAUAU |
| 103 | hsa-miR-650 | AGGAGGCAGGGCUCUCAGGAC | 584 | hsa-miR-2053 | GUGUAAAACCUCUAAUUAUC |
| 104 | hsa-miR-649 | AAACCUGUUGUUGUCAAGAGUC | 585 | hsa-miR-2052 | UGUUUJUGAUACAGUAAUGU |
| 105 | hsa-miR-648 | AAGUGUGCAGGGCACUGGU | 586 | hsa-miR-205* | GAUUUCAGUGGGAGUGAAGUUC |
| 106 | hsa-miR-647 | GUGGCUGGCACUCACUUUC | 587 | hsa-miR-205 | UCCUUCAUCCACCGGAGUCUG |
| 107 | hsa-miR-646 | AAGCAGCUGCCUCUGAGGC | 588 | hsa-miR-204 | UUCCCUUJUGCAUCCUAUGGCC |
| 108 | hsa-miR-645 | UCUAGGCUGGUACUGGUAGA | 589 | hsa-miR-203 | GUGAAAGUUUAGGACCACUAG |
| 109 | hsa-miR-644 | AGUGUGGCUUUCUUAGAGC | 590 | hsa-miR-202* | UUCCUAUGCAUUAUCUUUCUJUG |
| 110 | hsa-miR-643 | ACUUUGUAUGCUAGCUCAGGUAG | 591 | hsa-miR-202 | AGAGGUUAUGGGCAUGGGAA |
| 111 | hsa-miR-642 | GUCCCCUCUCCAAUUGUCUUG | 592 | hsa-miR-200c* | CGUCUUACCCAGCAGGUUJGG |
| 112 | hsa-miR-641 | AAAGACAUAGGAUAGAGUCACCUC | 593 | hsa-miR-200c | UAAUACUGCCGGGUAAAUGAUGGA |
| 113 | hsa-miR-640 | AUGAUCCAGGAACCUGCCUCU | 594 | hsa-miR-200b* | CAUCUUACUGGGACAGUGUGGA |
| 114 | hsa-miR-639 | AUCGCUGCGGUUGGGAGGGCUGU | 595 | hsa-miR-200b | UAAUACUGCCUGGUAAAUGAUGGA |
| 115 | hsa-miR-638 | AGGGGAUCCGCGGGGGGGCC | 596 | hsa-miR-200a* | CAUCUUACCGGACAGUGUGGA |
| | | U | | | |
| 116 | hsa-miR-637 | ACUGGGGGCUUUCGGGCUCUGCGU | 597 | hsa-miR-200a | UAAACACUGUCUGGUACCGAUGU |
| 117 | hsa-miR-636 | UGUGCUUUCUGGUCCCCGGCA | 598 | hsa-miR-19b-2* | AGUUUUGCAGGUUUGCAUUCUA |
| 118 | hsa-miR-635 | ACUUGGGCACUGAAACAUUGUCC | 599 | hsa-miR-19b-1* | AGUUUUGCAGGUUUGCAUCCAGC |
| 119 | hsa-miR-634 | AACCAGCACCACUUUGGAC | 600 | hsa-miR-19b | UGUGCAAUCCAUGAAAAACUGA |

FIG 1 (continued)

| | | | | | |
|-----|----------------|-------------------------|-----|---------------|---------------------------|
| 120 | hsa-miR-633 | CUAAUAGGUACUACCAAUAAA | 601 | hsa-miR-19a* | AGUUUUGCAUAGGUUGGCACUACA |
| 121 | hsa-miR-632 | GUGUCUGGUUCCUGGGGA | 602 | hsa-miR-19a | UGUGCAAUCUAUGCAAAACUGA |
| 122 | hsa-miR-631 | AGACCUGGCCAGACCUCAGC | 603 | hsa-miR-199b- | CCCAGUGUUAGACUACUGGUUC |
| 123 | hsa-miR-630 | AGUAUUCUGGUACCGGGAAAGGU | 604 | hsa-miR-199b- | ACAGUAGUCUGCACAUUGGUUA |
| 124 | hsa-miR-629* | GUUCUCCCCAACGUAGCCAGC | 605 | hsa-miR-199b- | CCCAGUGUUACGUACCUUGGUUC |
| 125 | hsa-miR-629 | UGGGUUUACGUUGGGAGAACU | 606 | hsa-miR-199a- | ACAGUAGUCUGCACAUUGGUUA |
| 126 | hsa-miR-628-5p | AUGCUGACAUUUACUAGAGG | 607 | hsa-miR-198 | GGUCCAGAGGGAGAUAGGUUC |
| 127 | hsa-miR-628-3p | UCUAGGUAGAGUGGCAGUGGA | 608 | hsa-miR-1979 | CUCCCACUGGUUCUACIUGACUA |
| 128 | hsa-miR-627 | GUGAGUCUCUAGAAAAGAGGA | 609 | hsa-miR-1978 | GGUUUGGUCCUAGCCUUUCUA |
| 129 | hsa-miR-626 | AGCUGUCUGAAAAUGUCUU | 610 | hsa-miR-1977 | GAUUAGGGUGGUUAGCUGUUA |
| 130 | hsa-miR-625* | GACUAUAGAACUUCCCCCUCA | 611 | hsa-miR-1976 | CCUCCUGGCCCUCCUUGCUGU |
| 131 | hsa-miR-625 | AGGGGGAAAGGUUCUUAUGUCC | 612 | hsa-miR-1975 | CCCCCACAAACCGGCCUUGACUAGC |
| 132 | hsa-miR-624* | UAGUACCAGUACCUUGGUUCA | 613 | hsa-miR-1974 | UGGUUGUAGGUCCGUGCGAGAAUA |
| 133 | hsa-miR-624 | CACAAGGUUUGGUUUACCU | 614 | hsa-miR-1973 | ACCGUGCAAGGUAGCAUA |
| 134 | hsa-miR-623 | AUCCCUUGCAGGGCUGUUGGGU | 615 | hsa-miR-1972 | UCAGGCCAGGCACAGUGGCUCUA |
| 135 | hsa-miR-622 | ACAGUCUGCUGAGGUUGGGAGC | 616 | hsa-miR-197 | UCUACCCACCUUCUCCACCCAGC |
| 136 | hsa-miR-621 | GGCUAGCCAACAGGCCUJACCU | 617 | hsa-miR-196b* | UCGACAGGACGACACUGCCUUC |
| 137 | hsa-miR-620 | AUGGAGAUAGAUUAUAGAAAU | 618 | hsa-miR-196b | UAGGUAGUUUCCUGUUGUUGGG |
| 138 | hsa-miR-619 | GACCUUGGACAUGUUUGGCCAGU | 619 | hsa-miR-196a* | CGGCAACAGAAACUGCCUGAG |

FIG 1 (continued)

| | | | | | |
|-----|----------------|---------------------------|-----|-----------------|-------------------------|
| 139 | hsa-miR-618 | AAACUCUACUUGGUCCUUUCUGAGU | 620 | hsa-miR-196a | UAGGUAGUUUCAUGUUGUUGGG |
| 140 | hsa-miR-617 | AGACUUCCAUUUGAAGGGGGC | 621 | hsa-miR-195* | CCAAUUUGGCUGGCGCUCC |
| 141 | hsa-miR-616* | ACUAAAACCCUUUCAGUGACUU | 622 | hsa-miR-195 | UAGCAGCACAGAAUAUUGGC |
| 142 | hsa-miR-616 | AGUCAUUUGAGGGUUUGAGCAG | 623 | hsa-miR-194* | CCAGUGGGCUGGUUAUCUG |
| 143 | hsa-miR-615-5p | GGGGGUCCCCGGGUCCGGGAUC | 624 | hsa-miR-194 | UGUAACAGCAACUCCAGUGGA |
| 144 | hsa-miR-615-3p | UCCGAGCCUGGGUCUCCUCUU | 625 | hsa-miR-193b* | CGGGUUUUGAGGGCGAGAUGA |
| 145 | hsa-miR-614 | GAACGCCUGUUCUUGCCAGGUG | 626 | hsa-miR-193b | AACUGGCCUCAAAGUCCGGCU |
| 146 | hsa-miR-613 | AGGAAUUGUCCUUUCUUGGCC | 627 | hsa-miR-193a-5p | UGGGUCUUUGGGGGAGAUGA |
| 147 | hsa-miR-612 | GCUGGGCAGGGCUUCUGAGCUCCU | 628 | hsa-miR-193a-5p | AACUGGCCUACAAAGUCCAGU |
| 148 | hsa-miR-611 | GCGAGGACCCCCUCGGGUCUGAC | 629 | hsa-miR-192* | CUGCCAAUUCAUAGGUACACAG |
| 149 | hsa-miR-610 | UGAGCUAA AUGUGUGGU GGGGA | 630 | hsa-miR-192 | CUGACCUAUGAAUUGACAGGCC |
| 150 | hsa-miR-609 | AGGGUGUUIUCUCUCAUCUCU | 631 | hsa-miR-1915* | ACCUUGCCU UUGCUGCCGGGCC |
| 151 | hsa-miR-608 | AGGGGGGGGUUGGGACAGCUCCG | 632 | hsa-miR-1915 | CCCCAGGGCGACGGGGGG |
| 152 | hsa-miR-607 | GUUCAA AUCCAGAUCUAUAAAC | 633 | hsa-miR-1914* | GGAGGGGUCCGGCACUGGGAGG |
| 153 | hsa-miR-606 | AAACUACUGAAAUAAGAU | 634 | hsa-miR-1914 | CCCUGUGCCGGCCACUUCUG |
| 154 | hsa-miR-605 | UAAAUCCCAUGGGGUCCUUCUCCU | 635 | hsa-miR-1913 | UCUGCCCCUCCGGCUGGCC |
| 155 | hsa-miR-604 | AGGCUGCGGAUUCAGGGAC | 636 | hsa-miR-1912 | UACCCAGAGCAUGCAGUGUGAA |
| 156 | hsa-miR-603 | CACACACUGCAAUUAUCUUUGC | 637 | hsa-miR-1911* | CACCA GGCAUUGGGGUCC |
| 157 | hsa-miR-602 | GACACGGGGCAGCAGCUGGGCCC | 638 | hsa-miR-1911 | UGAGUACCGCCCAUGCUGUGGG |
| 158 | hsa-miR-601 | UGGUCUAGGAUUGUUGGAGGAG | 639 | hsa-miR-1910 | CCAGGUCCUGGGCCUGCCGCCU |

FIG 1 (continued)

| | | | | | |
|-----|----------------|----------------------------|-----|--------------------|---------------------------|
| 159 | hsa-miR-600 | ACUUACAGACAAGAGCCUUCGCUC | 640 | hsa-miR-191* | GCUGGCCUJGGAUUUCGUCCCC |
| 160 | hsa-miR-599 | GUUGUGUCAGUUUAUCAAAAC | 641 | hsa-miR-191 | CAACGGAAUCCAAAGCAGCUG |
| 161 | hsa-miR-598 | UACGUCAUCGUUGUCAUCGUCA | 642 | hsa-miR-190b | UGAUUAUGUUUGAUUAUJGGGUU |
| 162 | hsa-miR-597 | UGUGUCACUCGAUGACCACUGU | 643 | hsa-miR-1909* | UGAGUGCCGGUGGCCUGCCUG |
| 163 | hsa-miR-596 | AAGCCUGCCCCGUCCUCGGG | 644 | hsa-miR-1909 | CGCAGGGGGGGGGGGGUUCACCG |
| 164 | hsa-miR-595 | GAAGUGUGGCCGUGGUGUGUCU | 645 | hsa-miR-1908 | CGGGGGGACGGCGAUUGGUC |
| 165 | hsa-miR-593* | AGGCACCCAGCCAGGCAUUGCUCAGC | 646 | hsa-miR-190 | UGAUUAUGUUUGAUUAUJAGGU |
| 166 | hsa-miR-593 | UGUCUCUGCGGGGUUUCU | 647 | hsa-miR-18b* | UGCCCUAAAUGCCCCUUUCUGGC |
| 167 | hsa-miR-592 | UUGUGUCAAU AUGCGGAUGAUGU | 648 | hsa-miR-18b | UAAGGUGGCAUCUAGUGCAGUJAG |
| 168 | hsa-miR-591 | AGACCAUGGGGUUCUCAUUGU | 649 | hsa-miR-18a* | ACUGCCCUAAGUGGCCUUCUGG |
| 169 | hsa-miR-590-5p | GAGCUUAUUCAUAAAAGUGCAG | 650 | hsa-miR-18a | UAAGGUGGCAUCUAGUGCAGAUJAG |
| 170 | hsa-miR-590-3p | UAAAAUUUAUGUAUAAAGCUAGU | 651 | hsa-miR-188- | CAUCCCUGCAUGUGGGAGGG |
| 171 | hsa-miR-589* | UCAGAACAAAUGCCGGUCCCCAGA | 652 | hsa-miR-188- 5p | CUCCCACAUUGCAGGGUUUGCA |
| 172 | hsa-miR-589 | UGAGAACCAAGCUCUGCGUCAG | 653 | hsa-miR-187* | GGCUACAAACAGGGACCCGGGC |
| 173 | hsa-miR-588 | UUGGCCACAAUGGGUUAGAAC | 654 | hsa-miR-187 | UCGUGUCUUGUGUGGCAGCCGG |
| 174 | hsa-miR-587 | UUUCCAUAGGUGAUGAGUCAC | 655 | hsa-miR-186* | GCCCCAAAGGGUGAAUUUUUUUGG |
| 175 | hsa-miR-586 | UAUGCAUUGGUUUUAGGUCC | 656 | hsa-miR-186 | CAAAGAAUUCUCCUUUGGGCU |
| 176 | hsa-miR-585 | UGGGCGUAUCUGUAUGCUA | 657 | hsa-miR-185* | AGGGCUGGCCUUUCUCUGGUC |
| 177 | hsa-miR-584 | UUAUGGUUUGGCCUGGGACUGAG | 658 | hsa-miR-185 | UGGAGAGAAAGGCAGUUCUGA |
| 178 | hsa-miR-583 | CAAAGAGGAAGGUCCCCAUUAC | 659 | hsa-miR-184 | UGGACGGAGAACUGAUAAAGGGU |

FIG 1 (continued)

| | | | | | |
|-----|----------------|---------------------------|-----|-----------------|--------------------------|
| 179 | hsa-miR-582-5p | UUACAGUUUGGUUCAACCAGUUACU | 660 | hsa-miR-183* | GUGAAUUACCGAAGGGCCAUAA |
| 180 | hsa-miR-582-3p | UAUCUGGUUGGUACAACUGAAC | 661 | hsa-miR-183 | UAUGGCACUGGUAGAAUUCACU |
| 181 | hsa-miR-581 | UCUUGGUUCUCUAGAUCAUCGU | 662 | hsa-miR-1827 | UGAGGCAGUAGAUUGGAU |
| 182 | hsa-miR-580 | UUGAGAAUGAUGAAUCAUUAGG | 663 | hsa-miR-1826 | AUUGAUCAUCGACACUUCGAACGC |
| 183 | hsa-miR-579 | UUCAUJUGGUAAAACCGGGAUU | 664 | hsa-miR-1825 | AAUUCAGUGGCCCUCCUCUCC |
| 184 | hsa-miR-578 | CJUCUJUGGUCCUAGGAUUGU | 665 | hsa-miR-182* | UGGUUCUAGACUUGGCCAACUA |
| 185 | hsa-miR-577 | UAGAUAAAUAUJUGGUACCGUG | 666 | hsa-miR-182 | UJUGGCAAUGGUAGAACUCACACU |
| 186 | hsa-miR-576-5p | AUUCUAAUJUUCUCCACGUUUU | 667 | hsa-miR-181d | AACAUCAUJGUUGGUUGGGGU |
| 187 | hsa-miR-576-3p | AAGAUGUGGAAAAAUJUGGAUC | 668 | hsa-miR-181c* | AACCAUCGACCGGUUGAGUGGAC |
| 188 | hsa-miR-575 | GAGCCAGUUGGACAGGGAGC | 669 | hsa-miR-181c | AACAUUCAACCUGUGGGUGAGU |
| 189 | hsa-miR-574-5p | UGAGUGUGUGUGUGUGUGU | 670 | hsa-miR-181b | AACAUUCAUJUGCUGUGGGGU |
| 190 | hsa-miR-574-3p | CACGCCUCAUGGCACACCCCCACA | 671 | hsa-miR-181a-2* | ACCACUGACCGGUUGACGUACC |
| 191 | hsa-miR-573 | CUGAAAGUGUGGUAAACUGAUCA | 672 | hsa-miR-181a* | ACCAUCGACCGGUUGAUUGUACC |
| 192 | hsa-miR-572 | GUCCGGCUCGGGGUGGCCA | 673 | hsa-miR-181a | AACAUUCAACCGCUGUGGGUGAGU |
| 193 | hsa-miR-571 | UGAGGUUGGCCAUCUGAGUGAG | 674 | hsa-miR-17* | ACUGCAGUGGAAGGCACUUGUAG |
| 194 | hsa-miR-570 | CGAAAAACAGCAAUJUCCUUUGC | 675 | hsa-miR-17 | CAAAGUGGUACAGUGGGAGGUAG |
| 195 | hsa-miR-569 | AGUUAUUGAAUCCUGGAAAGU | 676 | hsa-miR-16-2* | CCAAAUUUACUGUGCUGCUUUA |
| 196 | hsa-miR-568 | AUGUAUAAAUGUAUACACAC | 677 | hsa-miR-16-1* | CCAGUAUUUACUGUGCUGCUGA |
| 197 | hsa-miR-567 | AGUAUGUUUCUCCAGGACAGAAC | 678 | hsa-miR-16 | UAGCAGGCACGUAAAUAUUGGCG |
| 198 | hsa-miR-566 | GGGGCCUGUGGAUCCCAAC | 679 | hsa-miR-15b* | CGAAUCAUUAUUGCUGCUCUA |

FIG 1 (continued)

| | | | | | |
|-----|----------------|--------------------------|-----|----------------|---------------------------|
| 199 | hsa-miR-564 | AGGCACGGUGUCAGCAGGC | 680 | hsa-miR-15b | UAGCAGCACAUCAUGGUUUACA |
| 200 | hsa-miR-563 | AGGUUGACAUACGUUUCCC | 681 | hsa-miR-15a* | CAGGCCAUUUGUGUGCCUCA |
| 201 | hsa-miR-562 | AAAGUAGCGUGUACCAUUGC | 682 | hsa-miR-15a | UAGCAGCACAUAAUGGUUUGUG |
| 202 | hsa-miR-561 | CAAAGUUUAAGAUCCCCUUGAAGU | 683 | hsa-miR-155* | CUCCUACAUUAGCAUUAACA |
| 203 | hsa-miR-559 | UAAAAGUAAAUGCACAAAAA | 684 | hsa-miR-155 | UUAAAUGCUAAUCGUAGAUAGGGGU |
| 204 | hsa-miR-558 | UGAGCGUGCUGUACCAAAAU | 685 | hsa-miR-154* | AAUCAUACACGGUUUGACCUAUU |
| 205 | hsa-miR-557 | GUUUGCACGGGGGCCUUGUCU | 686 | hsa-miR-154 | UAGGUUAUCCGUGUGGCCUUCG |
| 206 | hsa-miR-556-5p | GAUGAGGCUCAUUGUAAAUGAG | 687 | hsa-miR-1539 | UCUGCCGGGUCCAGAUGGCC |
| 207 | hsa-miR-556-3p | AUAUUACCAUUAGCUCAUUU | 688 | hsa-miR-1538 | CGGCCCGGGCUGCGUGUUCU |
| 208 | hsa-miR-555 | AGGGUAAGCUGAACCUUCUGAU | 689 | hsa-miR-1537 | AAAACCGGUUCAGUACAGUUGU |
| 209 | hsa-miR-554 | GCUAGGUCCUGACUCAGCCAGU | 690 | hsa-miR-153 | UUGCAUAGUCACAAAAGUGAUC |
| 210 | hsa-miR-553 | AAAACGGUGAGAUUUUUUUU | 691 | hsa-miR-152 | UCAGUGCAUGACAGAACUJGG |
| 211 | hsa-miR-552 | AACAGGUGUGACUGGUUAGACAA | 692 | hsa-miR-151-5p | UCGAGGAGGCUCACAGUCUAGU |
| 212 | hsa-miR-551b* | GAAAUCUAAGCGUGGGUGAGACC | 693 | hsa-miR-151-3p | CUAGACUJGAAGGUCCUJUGAGG |
| 213 | hsa-miR-551b | GCGACCCAUACUUGGUUUUCAG | 694 | hsa-miR-150* | CUGGUACAGGCCUGGGGACAG |
| 214 | hsa-miR-551a | GCGACCCACUCUUGGUUUUCCA | 695 | hsa-miR-150 | UCUCCCCAACCCUUUGUACCAUG |
| 215 | hsa-miR-550* | UGUCUUACUCCCCUAGGCACAU | 696 | hsa-miR-149* | AGGGAGGGACGGGGCUGUGC |
| 216 | hsa-miR-550 | AGUGCCUGAGGGAGUAAGGCC | 697 | hsa-miR-149 | UCUGGCCUCCGUGUCUUCACUCCC |
| 217 | hsa-miR-549 | UGACAAACUAUGGAUGAGGCUU | 698 | hsa-miR-148b* | AAGUUCUGUUUAACACUCAGGC |
| 218 | hsa-miR-548q | GCUGGUGGCAAAAGUAAUGGGG | 699 | hsa-miR-148b | UCAGUGCAUCACAGAACUUGU |

FIG 1 (continued)

| | | | | | |
|-----|-----------------|-------------------------|-----|-----------------|---------------------------|
| 219 | hsa-miR-548p | UAGCAAAAACUGGCAGUUACUUU | 700 | hsa-miR-148a* | AAAGUUUCUGAGACACUCCGACU |
| 220 | hsa-miR-548o | CCAAAACUGGCAGUUACUUUGC | 701 | hsa-miR-148a | UCAGUGGCACUACAGAACUUUGU |
| 221 | hsa-miR-548n | CAAAGGUAAUUGGGAUUUUGU | 702 | hsa-miR-147b | GUGUGGGGAAUGCUCUGCUA |
| 222 | hsa-miR-548m | CAAAGGUAAUUGGGGUUUUG | 703 | hsa-miR-1471 | GCCCCGCGUGUGGGAGGCCAGGUGU |
| 223 | hsa-miR-548l | AAAAGGUAAUUGGGGUUUUGUC | 704 | hsa-miR-1470 | GCCCCUCCGCCGGUGCACCCG |
| 224 | hsa-miR-548k | AAAAGGUACUUGCGGAUUUGCU | 705 | hsa-miR-147 | GUGUGGGAAAUGCUCUGGC |
| 225 | hsa-miR-548j | AAAAGGUAAUUGGGGUUUUGGU | 706 | hsa-miR-146b-5p | UGAGAACUGAAUCCAUAGGCC |
| 226 | hsa-miR-548i | AAAAGGUAAUUGGGGAUUUGCC | 707 | hsa-miR-146b-3p | UGCCCUGUGGGACUCAGUUCUGG |
| 227 | hsa-miR-548h | AAAAGGUAAUUGGGGUUUUGUC | 708 | hsa-miR-146a* | CCUCUGAAAAUUCAGUUUCUUCAG |
| 228 | hsa-miR-548g | AAAACUGGUAAUACUUUGUAC | 709 | hsa-miR-146a | UGAGAACUGAAUCCAUUGGUU |
| 229 | hsa-miR-548f | AAAACUGGUAAUUAUACUUUU | 710 | hsa-miR-1469 | CUCGGCGGGGGGGGGCUCC |
| 230 | hsa-miR-548e | AAAACUGGAGACUACUUUGCA | 711 | hsa-miR-1468 | CUCCGUUUUGCCUGUUUCGUG |
| 231 | hsa-miR-548d-5p | AAAAGGUAAUUGGGGUUUUGCC | 712 | hsa-miR-145* | GGAUUCCUGGAAAUACGUUCU |
| 232 | hsa-miR-548d-3p | CAAAAACCACAGUUUCUUUGC | 713 | hsa-miR-145 | GUCCAGUUUCCAGGAAUCCU |
| 233 | hsa-miR-548c-5p | AAAAGGUAAUUGGGGUUUUGCC | 714 | hsa-miR-144* | GGAUAUCAUAAUACGUAAAG |
| 234 | hsa-miR-548c-3p | CAAAAACUCAAUUACUUUGC | 715 | hsa-miR-144 | UACAGUAUAGAUGAUGUACU |
| 235 | hsa-miR-548b-5p | AAAAGGUAAUUGGGGUUUUGCC | 716 | hsa-miR-143* | GGUGCAGUGGCUGCAUCUGGU |
| 236 | hsa-miR-548b-3p | CAAGAACCUACAGUUUGCUGU | 717 | hsa-miR-143 | UGAGAUGAAGCACGUAGCUC |
| 237 | hsa-miR-548a-5p | AAAAGGUAAUUGGCAGUUUACC | 718 | hsa-miR-142-5p | CAAAAAGUAGAAAGCACUACU |
| 238 | hsa-miR-548a-3p | CAAAACUGGCACAUUACUUUGC | 719 | hsa-miR-142- | UGUAGUGUUUCCUACUUUAGGA |

FIG 1 (continued)

| | | | | | | |
|-----|----------------|--------------------------|-----|----------------|----|--------------------------|
| | | | | | | |
| 239 | hsa-miR-545* | UCAGUAAAUGUUUAUAGAUGA | 720 | hsa-miR-141* | 3p | CAUCUCCAGUACAGGUUGGA |
| 240 | hsa-miR-545 | UCAGCAAACAUUUAUUGUGUGC | 721 | hsa-miR-141 | 5p | UAACACUGUCUGGUAAAGAUGG |
| 241 | hsa-miR-544 | AUUCUGCAUUUUAGCAAGUUC | 722 | hsa-miR-140- | 5p | CAGGGGUUUUACCCUAUGGUAG |
| 242 | hsa-miR-543 | AAACAUUUGGGUGGCACUUUU | 723 | hsa-miR-140- | 3p | UACCACAGGGUAGAACCCACGG |
| 243 | hsa-miR-542-5p | UCGGGGAUCAUCAUUGACGAGA | 724 | hsa-miR-139- | 3p | UCUACAGUGGCACGUGUCUCCAG |
| 244 | hsa-miR-542-3p | UGUGACAGAUUUGAUAAACUGAAA | 725 | hsa-miR-139- | 5p | GGAGACGGCCCUGUUGGAGU |
| 245 | hsa-miR-541* | AAAGGGAUUCUGCUGGUCCCCACU | 726 | hsa-miR-138-2* | 3p | GCUAUUUACGACACCCAGGGUU |
| 246 | hsa-miR-541 | UGGUGGGCACAGAAUCUGGACU | 727 | hsa-miR-138-1* | 5p | GCUACUUCACAAACACCGGGCC |
| 247 | hsa-miR-539 | GGAGAAAAUUAUCCUJGGUGUGU | 728 | hsa-miR-138 | 3p | AGCUGGUGUGUGAAUCAGGGCG |
| 248 | hsa-miR-532-5p | CAUGCCUUGAGGUAGGACCGU | 729 | hsa-miR-137 | 5p | UUAUUGCUUAGAAAUACGCCUAG |
| 249 | hsa-miR-532-3p | CCUCCCACACCCAAAGGCCUUGCA | 730 | hsa-miR-136* | 3p | CAUCAUCGUUCUCAAAUGAGUCU |
| 250 | hsa-miR-527 | CUGCAAAGGGAAAGCCCCUUUC | 731 | hsa-miR-136 | 5p | ACUCCAUUUGUUUGAUGAUGGA |
| 251 | hsa-miR-526b* | GAAAGUGCUUCCUUUAGGGC | 732 | hsa-miR-135b* | 3p | AUGUAGGGCUAAAAGCCAUGGG |
| 252 | hsa-miR-526b | CUCUUGAGGGAAAGCACUUUCUGU | 733 | hsa-miR-135b | 5p | UAUGGCCUUUUCAUUCUAUUGUGA |
| 253 | hsa-miR-526a | CUCUAGAGGGAAAGCACUUUCUG | 734 | hsa-miR-135a* | 3p | UAUAGGGAUUUGGGCCGUGGCG |
| 254 | hsa-miR-525-5p | CUCCAGAGGGAAUGGCACUUUCU | 735 | hsa-miR-135a | 5p | UAUGGCCUUUUAUUCCUAUUGUGA |
| 255 | hsa-miR-525-3p | GAAAGGGCUUCCUUUAGGGC | 736 | hsa-miR-134 | 3p | UGUGACUGGUUGACCAGAGGG |
| 256 | hsa-miR-524-5p | CUACAAAGGGAAAGCACUUUCU | 737 | hsa-miR-133b | 5p | UUUGGUCCCCUUCAACCAGCUA |

FIG 1 (continued).

| | | | | | |
|-----|-----------------|---------------------------|-----|---------------|---------------------------|
| 257 | hsa-miR-524-3p | GAAGGCCGUUCCCCUUUAGAGU | 738 | hsa-miR-133a | UUUGGUCCCCUUUACCCAGCUC |
| 258 | hsa-miR-523* | CUCUAGAGGGAAAGCGCUUUUCUG | 739 | hsa-miR-1324 | CCAGACAGAAUUUCUAUGCACUUUC |
| 259 | hsa-miR-523 | GAACGCCGUUCCCCUAUAGAGGGU | 740 | hsa-miR-1323 | UCAAAACUGAGGGCAUUUCU |
| 260 | hsa-miR-522* | CUCUAGAGGGAAAGCGCUUUUCUG | 741 | hsa-miR-1322 | GAUGAUGCUGCGUAUGCUC |
| 261 | hsa-miR-522 | AAAUAUGGUUCCCUUUAGAGGU | 742 | hsa-miR-1321 | CAGGGAGGUGAAUGUGAU |
| 262 | hsa-miR-521 | AACGCACUUCCCCUUUAGAGGU | 743 | hsa-miR-132* | ACCGUGGCCUUUCGAAUUGUUACU |
| 263 | hsa-miR-520h | ACAAAGUGCUUCCCCUUUAGAGU | 744 | hsa-miR-132 | UAACAGUCUACAGCCAUGGUCA |
| 264 | hsa-miR-520g | ACAAAAGUGCUUCCCCUUUAGAGGU | 745 | hsa-miR-130b* | ACUCUUUCCUGUUGCACUAC |
| 265 | hsa-miR-520f | AAGUGCUUCCCCUUUAGAGGUU | 746 | hsa-miR-130b | CAGUGCAAUGAUGAAAGGGCAU |
| 266 | hsa-miR-520e | AAAGUGCUUCCCCUUUAGAGGG | 747 | hsa-miR-130a* | UUCACAUUGUGCUACUGUCUGC |
| 267 | hsa-miR-520d-5p | CUACAAAGGGAAAGGCCUUUC | 748 | hsa-miR-130a | CAGUGCAAUGUUAAAAGGGCAU |
| 268 | hsa-miR-520d-3p | AAAGUGCUUCUUJUGGGGU | 749 | hsa-miR-1308 | GCAUGGGUGGUUCAGUGGG |
| 269 | hsa-miR-520c-5p | CUCUAGAGGGAAAGCACUUUCUG | 750 | hsa-miR-1307 | ACUCGGCGUGGGGUCCGGUG |
| 270 | hsa-miR-520c-3p | AAAGUGCUUCCCCUUUAGAGGU | 751 | hsa-miR-1306 | ACGUUUGGCUCUGGGUGGUG |
| 271 | hsa-miR-520b | AAAGUGCUUCCCCUUUAGAGGG | 752 | hsa-miR-1305 | UUUUCAACUCUAAUGGGAGAGA |
| 272 | hsa-miR-520a-5p | CUCAGAGGGAAAGCUUUCU | 753 | hsa-miR-1304 | UUUGAGGGCUACAGUGAGAU |
| 273 | hsa-miR-520a-3p | AAAGUGCUUCCCCUUJUGGACU | 754 | hsa-miR-1303 | UUUAGAGACGGGGGUUCUUGCUC |
| 274 | hsa-miR-519e* | UUCUCCAAAAGGGAGCACUUUC | 755 | hsa-miR-1302 | UGGGACAUACUUUAUGCUAAA |
| 275 | hsa-miR-519e | AAGUGGCCUUUUAGAGGUU | 756 | hsa-miR-1301 | UUGCAGCUGGCCUGGGAGUGACUU |
| 276 | hsa-miR-519d | CAAAGUGGCCUUUUAGAGUG | 757 | hsa-miR-1299 | UUCUGGAAUUCUGUGAGGGAC |

C

FIG 1 (continued)

| | | | | | |
|-----|-----------------|------------------------|-----|----------------|-------------------------|
| 277 | hsa-miR-519c-5p | CUCUAGGGAAAGGCCUUUCUG | 758 | hsa-miR-1298 | UUCAUUCGGCUGGUCCAGAUGUA |
| 278 | hsa-miR-519c-3p | AAAGUGGCAUCUUUUAGGGAU | 759 | hsa-miR-1297 | UUCAGGUAAAUCAGGUG |
| 279 | hsa-miR-519b-5p | CUCUAGGGAAAGGCCUUUCUG | 760 | hsa-miR-1296 | UUAGGGCCUGGCCAUUCUCC |
| 280 | hsa-miR-519b-3p | AAAGUGGCAUCUUUUAGGGUU | 761 | hsa-miR-129-5p | CUUUUGGGCUGGGCUUGC |
| 281 | hsa-miR-519a* | CUCUAGGGAAAGGCCUUUCUG | 762 | hsa-miR-1295 | UUAGGCCCGAGAUCUGGGUGA |
| 282 | hsa-miR-519a | AAAGUGGCAUCUUUUAGGGUGU | 763 | hsa-miR-1294 | UGUGAGGUUGGCAUUGUUUGUCU |
| 283 | hsa-miR-518f* | CUCUAGGGAAAGCACUUUCUC | 764 | hsa-miR-129-3p | AAGCCCUUACCCCCAAAAGCAU |
| 284 | hsa-miR-518f | GAAAGGCCUUUCUCUUAGAGG | 765 | hsa-miR-1293 | UGGGUGGUUGGAGAUUUGUGGC |
| 285 | hsa-miR-518e* | CUCUAGGGAAAGGCCUUUCUG | 766 | hsa-miR-1292 | UGGAACGGGUUCCGGAGACGC |
| 286 | hsa-miR-518e | AAAGGCCUUCCUUCAGAGUG | 767 | hsa-miR-1291 | UGGCCCUUGACUGAACGAGCAGU |
| 287 | hsa-miR-518d-5p | CUCUAGGGAAAGCACUUUCUG | 768 | hsa-miR-1290 | UGGAUUUUGGAUCAGGGA |
| 288 | hsa-miR-518d-3p | CAAAGGCCUUCCUUUGGAGC | 769 | hsa-miR-129* | AAGCCCUUACCCCCAAAAGUAU |
| 289 | hsa-miR-518c* | UCUCUGGGAAAGCACUUUCUG | 770 | hsa-miR-1289 | UGGAGUCCAGGAAUCUGCAUUUU |
| 290 | hsa-miR-518c | CAAAGGCCUUUCUUAGGUGU | 771 | hsa-miR-1288 | UGGACUGGCCUGAUCUGGAGA |
| 291 | hsa-miR-518b | CAAAGGCCUUCCUUAGGGU | 772 | hsa-miR-1287 | UGCUGGAUCAGUGGUUCGGAGUC |
| 292 | hsa-miR-518a-5p | CUGCAAAGGGAAAGCCCUUUC | 773 | hsa-miR-1286 | UGCAGGACCAAGAUGAGCCC |
| 293 | hsa-miR-518a-3p | GAAAGGCCUUCCUUUGGUGA | 774 | hsa-miR-1285 | UCUGGGCAACAAAGUGAGACCU |
| 294 | hsa-miR-517c | AUCUGGCAUCCCCUUAGGUGU | 775 | hsa-miR-1284 | UCUAUACAGACCCUGGUUUUC |
| 295 | hsa-miR-517b | UCUGGCAUCCCCUUAGGUGU | 776 | hsa-miR-1283 | UCUACAAAGGAAAGGGCUUUCU |
| 296 | hsa-miR-517a | AUCUGGCAUCCCCUUAGGUGU | 777 | hsa-miR-1282 | UCGUUUGCCCCUUUCUGGUU |

FIG 1 (continued)

| | | | | | |
|-----|------------------|--------------------------|-----|----------------|--------------------------|
| 297 | hsa-miR-517* | CCUCUAGAUGGAAGCACUGUCU | 778 | hsa-miR-1281 | UCGCCUCCUCCUCUCCCC |
| 298 | hsa-miR-516b* | UGCUCUCCUUUCAGAGGGU | 779 | hsa-miR-1280 | UCCCACCGCUGGCCACCC |
| 299 | hsa-miR-516b | AUCUGGAGGUAAAAGAACUUU | 780 | hsa-miR-128 | UCACAGUGAACCGGUCUCUUU |
| 300 | hsa-miR-516a-5p | UUCUCUGAGGAAAGCACUUUC | 781 | hsa-miR-1279 | UCAUAUUGCUUCUUUCUUC |
| 301 | hsa-miR-516a-3p | UGCUCUCCUUUCAGAGGGU | 782 | hsa-miR-1278 | UAGUACUJUGGCALAUCAUCUAU |
| 302 | hsa-miR-515-5p | UUCUCCCAAAAGAACUUUCUG | 783 | hsa-miR-1277 | UACGUAGAUAAUAAUGUAUUUU |
| 303 | hsa-miR-515-3p | GAGUGCCUUCUUUGGAGCGUU | 784 | hsa-miR-1276 | UAAAGAGGCCUGUGGAGACA |
| 304 | hsa-miR-514 | AUUGACACUUUCUGUGAGUAGA | 785 | hsa-miR-127-5p | CUGAAGCCUCAAGAGGGCUCUGAU |
| 305 | hsa-miR-513c | UUCUCAAGGAGGUGUGGUUAU | 786 | hsa-miR-1275 | GUGGGGAGAGGGCUGUC |
| 306 | hsa-miR-513b | UUCACAAAGGAGGUGUCAUUAU | 787 | hsa-miR-1274b | UCCCUGUUCGGGGGCCA |
| 307 | hsa-miR-513a-5p | UUCACAGGGAGGUGUCAU | 788 | hsa-miR-1274a | GUCCUGUUCAGGGGCCA |
| 308 | hsa-miR-513a-3p | UAAAUUUCACCUUUCUGAGGAAGG | 789 | hsa-miR-127-3p | UCGGAUCCGUCUGAGCUUGGCCU |
| 309 | hsa-miR-512-5p | CACUCAGCCUUGAGGGCACUUUC | 790 | hsa-miR-1273 | GGGGCACAAAGCAAGACUCUUUC |
| 310 | hsa-miR-512-3p | AAGUGCGUGCUAUAGCUGAGGUC | 791 | hsa-miR-1272 | UGAUGAUGGGCAGCAAAUUCUGAA |
| 311 | hsa-miR-511 | GUGUCUUUUGCUUGCAGUCA | 792 | hsa-miR-1271 | CUUGGCACCUAGCAAGCACUCA |
| 312 | hsa-miR-510 | UACUCAGGAGGUGGCAAUCAC | 793 | hsa-miR-1270 | CUGGAGAUAGGAAGAGCUGUGU |
| 313 | hsa-miR-509-5p | UACUGGAGACAGUGGCAAUCA | 794 | hsa-miR-1269 | CUGGACUGAGGCCUGUCACUGG |
| 314 | hsa-miR-509-3p | UGAUUUGGUACGUCUGGGGUAG | 795 | hsa-miR-1268 | CGGGCGUGGGUGGGGGGG |
| 315 | hsa-miR-509-3-5p | UACUGCAGACGUGGCAAUC AUG | 796 | hsa-miR-1267 | CCUGUUGAAGGUAAUCCCCA |

FIG 1 (continued)

| | | | | | |
|-----|----------------|--------------------------|-----|---------------|--------------------------|
| 316 | hsa-miR-508-5p | UACUCCAGGGGUCACUCAUG | 797 | hsa-miR-1266 | CCUCAGGGCUGUAGAACAGGGCU |
| 317 | hsa-miR-508-3p | UGAUUGUAGCCUUUUGGAGUAGA | 798 | hsa-miR-1265 | CAGGAUGGGGUCAAGGGUUGUU |
| 318 | hsa-miR-507 | UUUUGCACCUUUUGGAGGUGAA | 799 | hsa-miR-1264 | CAAGUCUUUUUGAGCACCUGUU |
| 319 | hsa-miR-506 | UAAGGCACCCUUUCAGAGUAGA | 800 | hsa-miR-1263 | AUGGUACCCUGGCAUACUGAGU |
| 320 | hsa-miR-505* | GGGAGCCAGGAAGUAAUUGAUGU | 801 | hsa-miR-1262 | AUGGGUGUAUUUGUAGAAGGAU |
| 321 | hsa-miR-505 | CGUCAACACUUCGGGUUUCCU | 802 | hsa-miR-1261 | AUGGAAUAGGCCUUUGGUU |
| 322 | hsa-miR-504 | AGACCCUGGUCUGCACCUAUC | 803 | hsa-miR-1260 | AUCCCACCUUCUGGCCACCA |
| 323 | hsa-miR-503 | UAGCAGGGAAACAGUUCUGCAG | 804 | hsa-miR-126* | CAUUAUACUUUGGUACGGG |
| 324 | hsa-miR-502-5p | AUCCUUGCUAUCUGGGUGCUA | 805 | hsa-miR-126 | UCGUACCCGUGAGUAAUAGGC |
| 325 | hsa-miR-502-3p | AAUGCACCUGGCAAGGAUUAUC | 806 | hsa-miR-125b- | UCAAAGUCAGGCUCUUGGGAC |
| 326 | hsa-miR-501-5p | AAUCCUUUGGUCCCCUGGGUGAGA | 807 | hsa-miR-125b- | ACGGGUAGGCUCUUGGGACGU |
| 327 | hsa-miR-501-3p | AAUGCACCCGGCAAGGAUUCU | 808 | hsa-miR-125b | UCCCUGAGACCCUAAACUUGUGA |
| 328 | hsa-miR-500* | AUGCACCUGGCAAGGAUUCUG | 809 | hsa-miR-125a- | UCCCUGAGACCCUUAAACCUGUGA |
| 329 | hsa-miR-500 | UAAAUCUUGCUACCUUGGGUGAGA | 810 | hsa-miR-125a- | 5p |
| | | | | 3p | ACAGGGAGGGUUCUUGGGAGCC |
| 330 | hsa-miR-499-5p | UUAAGACUUGCAGUGUUU | 811 | hsa-miR-1259 | AUUAUAGAUGACUUAGCUUUU |
| 331 | hsa-miR-499-3p | AACAUACACAGCAAGUCUGUGCU | 812 | hsa-miR-1258 | AGUUAGGAUAGGUUGUGGAA |
| 332 | hsa-miR-498 | UUUCAAGCCAGGGGGGUUUUC | 813 | hsa-miR-1257 | AGUGAAUGAUGGGUUCUGACC |
| 333 | hsa-miR-497* | CAAACCACACUGUGGUUAGA | 814 | hsa-miR-1256 | AGGCAUUGACUUCUCACUAGCU |
| 334 | hsa-miR-497 | CAGCAGCACACUGUGGUUUGU | 815 | hsa-miR-1255b | CGGAUGAGCAAAAGAAAGUGGUU |

FIG 1 (continued)

| | | | | | |
|-----|----------------|-------------------------|-----|---------------|--------------------------|
| 335 | hsa-miR-496 | UGAGUAUUACAUAGGCCAAUCUC | 816 | hsa-miR-1255a | AGGAUGAGCAAAGAAAGUAGAUU |
| 336 | hsa-miR-495 | AAACAAACAUAGGUAGCACUUUU | 817 | hsa-miR-1254 | AGCCUGGAAGCUGGGGCCUGCAG |
| 337 | hsa-miR-494 | UGAAACAUACACGGAAACCUUC | 818 | hsa-miR-1253 | AGAGAAGGAAGGAUCAGGCCUGCA |
| 338 | hsa-miR-493* | UGUACAUAGGUAGGCCUUCAUU | 819 | hsa-miR-1252 | AGAAGGAAAUAUUGAAUUCAUUA |
| 339 | hsa-miR-493 | UGAAGGUUCUACUGUGGCCAGG | 820 | hsa-miR-1251 | ACUCUAGCUGGCCAAAGGCCU |
| 340 | hsa-miR-492 | AGGACCUGGGGACAAGAUUCUU | 821 | hsa-miR-1250 | ACGGUGCGUGGAUGUGGCCUUU |
| 341 | hsa-miR-491-5p | AGUGGGAAACCCUUCUAGAGG | 822 | hsa-miR-1249 | ACGCCCUUCCCCUUCUUCUCA |
| 342 | hsa-miR-491-3p | CUUAUGCAAGAUUCCUUCUAC | 823 | hsa-miR-1248 | ACCUUCUUGUAUAAGCACUGUGC |
| 343 | hsa-miR-490-5p | CCAUGGAUCUCCAGGGGGU | 824 | hsa-miR-1247 | ACCCGUCCCCGUUUGGCCGG |
| 344 | hsa-miR-490-3p | CAACCUGGGACUCCAUUGCUG | 825 | hsa-miR-1246 | AAUGGAUUUUJGGAGCAGG |
| 345 | hsa-miR-489 | GUGACAUCACAUAUACGGCAGC | 826 | hsa-miR-1245 | AAGUGAUCAUUAAGGCCUACAU |
| 346 | hsa-miR-488* | CCCAGAUAAUGGCACUCUAA | 827 | hsa-miR-1244 | AAGUAGUUGUUUGUAUGAGAUG |
| 347 | hsa-miR-488 | UGAAAAAGGCCAUUUUUGGUC | 828 | hsa-miR-1243 | GUU |
| 348 | hsa-miR-487b | AAUCGUACAGGGCAUCCACUU | 829 | hsa-miR-124* | CGUGUUCACAGCGGGACCUUGAU |
| 349 | hsa-miR-487a | AAUCAUACAGGGACAUCGUU | 830 | hsa-miR-124 | UAAGGCACGGGGUGAAUGC |
| 350 | hsa-miR-486-5p | UCCUGUACUGAGGCCCGAG | 831 | hsa-miR-1238 | CUUCCUCGUCUGUCUGCCCC |
| 351 | hsa-miR-486-3p | CGGGCAGCUCAGUACAGGAU | 832 | hsa-miR-1237 | UCCUUCUGCUCCGUCCCCCAG |
| 352 | hsa-miR-485-5p | AGAGGCUGGCCGUAGAAUUC | 833 | hsa-miR-1236 | CCUCUUCCCUUGUCUC |
| 353 | hsa-miR-485-3p | GUCAUACACGGCUUCUCUUCU | 834 | hsa-miR-1234 | UCGGCCUGACCCACCCAC |
| 354 | hsa-miR-484 | UCAGGGCUCAGUCCCCUCCG | 835 | hsa-miR-1233 | UGAGCCCCUCCGUCCCCGAG |

FIG 1 (continued)

| | | | | | |
|-----|-----------------|---------------------------|-----|-----------------|---------------------------|
| 355 | hsa-miR-483-5p | AAGACGGGAGGAAGGAAGGAG | 836 | hsa-miR-1231 | GUGUCUGGGGGACAGCUGC |
| 356 | hsa-miR-483-3p | UCACUCCUCUCCCCGUUU | 837 | hsa-miR-1229 | CUCUCACCACUGCCCCACAG |
| 357 | hsa-miR-455-5p | UAUGUGCCUUUGGACUACUUCG | 838 | hsa-miR-1228* | GUCCCCGGGGCAGGUGUGUG |
| 358 | hsa-miR-455-3p | GCAGGUCCAUGGGCAUUAUCAC | 839 | hsa-miR-1228 | UCACACCUGCCUUGCCCCCCC |
| 359 | hsa-miR-454* | ACCCUAUCAAUAUUGUCUCUGC | 840 | hsa-miR-1227 | CGUGCCACCCUUUCCCCAG |
| 360 | hsa-miR-454 | UAGUGCCAAUAUUGCUUAUAGGGU | 841 | hsa-miR-1226* | GUGAGGGCAUUGCAGGCCUGGAUG |
| 361 | hsa-miR-453 | AGGUUGGUCCUGGGAGUUCGCA | 842 | hsa-miR-1226 | UCACCCAGCCCCUGGUUUCCCCUAG |
| 362 | hsa-miR-452* | CUCAUUCUGCAAAGAAGUAAAGUG | 843 | hsa-miR-1225-5p | GUGGGUACGGCCCAGUGGGGG |
| 363 | hsa-miR-452 | AACUGUUUJGGCAGAGGAAAACUGA | 844 | hsa-miR-1225-3p | UGAGCCCCUUGGGCCCCCAG |
| 364 | hsa-miR-451 | AAACCGUUACCAUACUGAGUU | 845 | hsa-miR-1224-5p | GUGAGGACUCGGGGAGGUUGG |
| 365 | hsa-miR-450b-5p | UUUUGCCAAUAUGGUUCCUGAAUA | 846 | hsa-miR-1224-3p | CCCCACCUCCUCUCCUCAG |
| 366 | hsa-miR-450b-3p | UGGGGAUCAUUUUGCAUCCAUUA | 847 | hsa-miR-1224-3p | AACGCCAUUAUCACAUAAUA |
| 367 | hsa-miR-450a | UUUUGCGAUGGUUCCUAUAUAU | 848 | hsa-miR-122 | UGGAGUGUGACAAUGGUUGUUUG |
| 368 | hsa-miR-449c* | UUGGUAGGUUJGGCACUCCUCUGU | 849 | hsa-miR-1208 | UCACUGUUCAGACAGGGGA |
| 369 | hsa-miR-449c | UAGGGCAGGUUAGGUAGCGGCUG | 850 | hsa-miR-1207-5p | UGGCAGGGCUGGGAGGGGG |
| 370 | hsa-miR-449b* | CAGCCACAAACUACCCUGCCACU | 851 | hsa-miR-1207-3p | UCAGCUGGCCCUAUUUC |
| 371 | hsa-miR-449b | AGGCAGGUUAGGUAGCGGCC | 852 | hsa-miR-1206 | UGGUCAUGGUAGGUUUUAGC |
| 372 | hsa-miR-449a | UGGCAGGUUAGGUAGCGGU | 853 | hsa-miR-1205 | UCUGCAGGGGUUJGGCUUUGAG |

FIG 1 (continued)

| | | | | | |
|-----|----------------|--------------------------|-----|---------------|---------------------------|
| 373 | hsa-miR-448 | UUGCAUAUGGUAGGUCCCCAU | 854 | hsa-miR-1204 | UCGUGGCCUGGUCCAUUAU |
| 374 | hsa-miR-433 | AUCAUGAUGGGCUCCUCGGUGU | 855 | hsa-miR-1203 | CCCGGAGGCCAGGAUGGCACUC |
| 375 | hsa-miR-432* | CUGGAUGGCCUCCAUAGUCU | 856 | hsa-miR-1202 | GUGCCAGGCUGGCAGUGGGGGAG |
| 376 | hsa-miR-432 | UCUJGGAGGUAGGUCAUUGGGUGG | 857 | hsa-miR-1201 | AGCCUGAUAAAACACAUGCUUCUGA |
| 377 | hsa-miR-431* | CAGGUUCGUUUJGGCAGGGCUUCU | 858 | hsa-miR-1200 | CUCCUGAGCCAUUCUGAGCUC |
| 378 | hsa-miR-431 | UGCUUUGCAGGCCGUCAUGCA | 859 | hsa-miR-1197 | UAGGACACAUUGGUACUUCU |
| 379 | hsa-miR-429 | UAUACUGUCUGGUAAAACCGU | 860 | hsa-miR-1185 | AGAGGAUACCCUUJGUUAUGGUU |
| 380 | hsa-miR-425* | AUCGGGAAUUGUCGUCCCCCCC | 861 | hsa-miR-1184 | CCUGCAGCGACUUGAUGGCCUCC |
| 381 | hsa-miR-425 | AAUGACACGAUCACUCCCGUUGA | 862 | hsa-miR-1183 | CACUGUAGGUAGGUAGGAGGUG |
| 382 | hsa-miR-424* | CAAAACGUGAGGGCUGCUAU | 863 | hsa-miR-1182 | GAGGGUCUUGGGAGGGGAUGUGAC |
| 383 | hsa-miR-424 | CAGCAGCAAUUCAUUUUGAA | 864 | hsa-miR-1181 | CCGUCGCACGCCAGGCC |
| 384 | hsa-miR-423-5p | UGAGGGGCAGAGGGGAGACUUU | 865 | hsa-miR-1180 | UUUCGGCUCGGGGUGUGU |
| 385 | hsa-miR-423-3p | AGCUUCGGUCUGAGGCCCUACGU | 866 | hsa-miR-1179 | AAGCAUUCUUCAUUGGUUGG |
| 386 | hsa-miR-422a | ACUGGACAUAGGGUCAGAAGGC | 867 | hsa-miR-1178 | UUGCUCACUGUUUCUCCUAG |
| 387 | hsa-miR-421 | AUCAAACAGACAUAAAUGGGCGC | 868 | hsa-miR-10b* | ACAGAUUCGAUUCUAGGGGAU |
| 388 | hsa-miR-412 | ACUUCACCUGGUCCACUAGCCGU | 869 | hsa-miR-10b | UACCCUGUAGAACCGAAUJUGUG |
| 389 | hsa-miR-411* | UAUGUAACACGGGUCCACUAACC | 870 | hsa-miR-10a* | CAAAUUCGUACUAGGGAAUA |
| 390 | hsa-miR-411 | UAGUAGACCGGUAUAGCGUACG | 871 | hsa-miR-10a | UACCCUGUAGAUCCGAAUJUGUG |
| 391 | hsa-miR-410 | AAUUAACACAGAUGGCCUGU | 872 | hsa-miR-107 | AGCAGCAUJGUACAGGGCUAUC |
| 392 | hsa-miR-409-5p | AGGUUACCCGAGCAACUUUGCAU | 873 | hsa-miR-106b* | CCGCACUGGGGUACUUGCUGC |

FIG 1 (continued)

| | | | | | |
|-----|----------------|--------------------------|-----|--------------------|--------------------------------------|
| 393 | hsa-miR-409-3p | GAAUGUUUCUGGUGAACCCU | 874 | hsa-miR-106b | UAAAGUGCUGACAGUGGAGAU |
| 394 | hsa-miR-384 | AUUCCUAGAAUJGUCAUA | 875 | hsa-miR-106a* | CUGCAAUGUAAGCACUUUAC |
| 395 | hsa-miR-383 | AGAUCAGAAGGGUGGUCCU | 876 | hsa-miR-106a | AAAAGUGCUUACAGUGGAGGUAG |
| 396 | hsa-miR-382 | GAAGGUUGUUCGGUGGUUCG | 877 | hsa-miR-105* | ACGGAUGUUUGAGCAUGUGCUA |
| 397 | hsa-miR-381 | UAUACAAGGGCAAGCUCUGU | 878 | hsa-miR-105 | UCAAAUGCUACAGACUCCUGGGU |
| 398 | hsa-miR-380* | UGGUUGACCAUAGAACAGGCC | 879 | hsa-miR-103- as | UCAUAGCCCCGUACAAUGCUGCU |
| 399 | hsa-miR-380 | UAUGUAAU AUGGUUCCACAUU | 880 | hsa-miR-103-2* | AGCUUCUUUACAGUGCUGCCUUG |
| 400 | hsa-miR-379* | UAUGUAAACAUUGGUCCACUAUC | 881 | hsa-miR-103 | AGCAGCAUUGUACAGGGCUAUGA |
| 401 | hsa-miR-379 | UGGUAGACUAUGGAACGUAGG | 882 | hsa-miR-101* | CAGUUUAUCACAGUGCUGAU ^U GC |
| 402 | hsa-miR-378* | CUCCUGACUCCAGGUCCUGUGU | 883 | hsa-miR-101 | UACAGUACUGUGAUAAACUGAA |
| 403 | hsa-miR-378 | ACUGGACUUGGAGUCAGAAGG | 884 | hsa-miR-100* | CAAGCUUUGUAUCUAUAGGU AUG |
| 404 | hsa-miR-377* | AGAGGUUGGCCUUGGUGAAUUC | 885 | hsa-miR-100 | AACCCGUAGAUCCGAACUUUGUG |
| 405 | hsa-miR-377 | AUCACACAAAGGCAACUUUUGU | 886 | hsa-miR-1 | UGGAAUGUAAAAGAAGUAUGUAU |
| 406 | hsa-miR-376c | AACAUAGAGGAAAUCUCCACGU | 887 | hsa-let-7* | CUGCGCAAGCUACUGGCCUUUGC |
| 407 | hsa-miR-376b | AUCAUAGAGGAAAUCUAGGUU | 888 | hsa-let-7i | UGAGGUAGUAGUUUGGCCUU |
| 408 | hsa-miR-376a* | GUAGAUUCUCCUUUCU AUGAGUA | 889 | hsa-let-7g* | CIGUACAGGCCACUGGCCUU |
| 409 | hsa-miR-376a | AUCAUAGAGGAAAUCACGU | 890 | hsa-let-7g | UGAGGUAGUAGUUUGGUACAGUU |
| 410 | hsa-miR-375 | UUUGUUCGUUCGGCUCGGUGA | 891 | hsa-let-7f-2* | CUAUACAGCUACUGCUU |
| 411 | hsa-miR-374b* | CUJAGCAGGUUGUUAUCAUU | 892 | hsa-let-7f-1* | CUAUACAAUCUAUUGCCUU |
| 412 | hsa-miR-374b | AUAUAAAUCACCUAGUG | 893 | hsa-let-7f | UGAGGUAGUAGAUUGUAUAGUU |

FIG 1 (continued)

| | | | | | |
|-----|----------------|---------------------------|-----|---------------|-------------------------|
| 413 | hsa-miR-374a* | CUAUCAGAUUGUAUUGUAUU | 894 | hsa-let-7e* | CUAUACGGCCUCCUAGCUUCC |
| 414 | hsa-miR-374a | UUAAUAAUACAACCUGAUAGUG | 895 | hsa-let-7e | UGAGGUAGGAGGUUGUAUAGUU |
| 415 | hsa-miR-373* | ACUCAAAUGGGGGCUUUCCC | 896 | hsa-let-7d* | CUAUACGACCUGGCCUUUCU |
| 416 | hsa-miR-373 | GAAGGCUUCCGAAUJJGGGUGU | 897 | hsa-let-7d | AGAGGUAGUAGGUUGCAUAGUU |
| 417 | hsa-miR-372 | AAAGUGCGUGCGACAUJJUGAGCGU | 898 | hsa-let-7c* | UAGAGGUUACACCCUJGGAGUU |
| 418 | hsa-miR-371-5p | ACUCAAACUGGGGGCACU | 899 | hsa-let-7c | UGAGGUAGUAGGUUGUAUGGUU |
| 419 | hsa-miR-371-3p | AAGUGC CGCCAUCUUJJUGAGUGU | 900 | hsa-let-7b* | CUAUACAACCUACUGCCUUCCC |
| 420 | hsa-miR-370 | GCCUGCGGGGUGGAACCGUGU | 901 | hsa-let-7b | UGAGGUAGUAGGUUGUGGGUU |
| 421 | hsa-miR-369-5p | AGAUUCGACCGUGUUAUUCGC | 902 | hsa-let-7a-2* | CUGUACAGGCCUCCUAGCUUCC |
| 422 | hsa-miR-369-3p | AAUAAUACAUGGUUGAUUCUU | 903 | hsa-let-7a* | CUAUACAACUACUGCUUUC |
| 423 | hsa-miR-367* | ACUGUUGCUAAUUAUGCAACUCU | 904 | hsa-let-7a | UGAGGUAGUAGGUUGUAUAGUU |
| 424 | hsa-miR-367 | AAUUGCACUUAGCAAUGUGA | 905 | hsa-plus-1 | UAUACUGGCCUCCUAGAUGA |
| 425 | hsa-miR-365* | AGGGACUUUCAGGGCAGCUGU | 906 | hsa-plus-2 | CUCUCCUCUCCUAAACCUCGU |
| 426 | hsa-miR-365 | UAAUGCCCCUAAAACCUUAU | 907 | hsa-plus-2-AS | AGUCGAGAGGGAGAAGAGCGG |
| 427 | hsa-miR-363* | CGGGGGAUCACGAUGCAAUUU | 908 | hsa-plus-3 | AAAACCGUCUAGUUAACAGU |
| 428 | hsa-miR-363 | AAUUGCACGGUAUCCAUUGUA | 909 | hsa-plus-4 | CUCAGUGAUGAAAACUUUGCCA |
| 429 | hsa-miR-362-5p | AAUCCUUGGAACCUAGGUGGAGU | 910 | hsa-plus-6-5p | GUUGGCCUUUUUGUCCCAUGC |
| 430 | hsa-miR-362-3p | AACACACCUAUUCAAGGAUUCU | 911 | hsa-plus-6-3p | UAGGCACCCAAAAAGCAACAAAC |
| 431 | hsa-miR-361-5p | UUAUUCAGAAUUCUCCAGGGGUAC | 912 | hsa-plus-7-AS | GCUGCACCGGAGACUGGGUAA |
| 432 | hsa-miR-361-3p | UCCCCAGGGUGUAUUCUGAUUU | 913 | hsa-plus-7 | UACCCAGUCUCCGGUGGCAGCC |
| 433 | hsa-miR-34c-5p | AGGCAGUGUAGUAGCUGAUUGC | 914 | hsa-plus-9 | UUCCUCUGAUGACUUCGUUAGU |

FIG 1 (continued)

| | | | | | |
|-----|----------------|----------------------------|-----|----------------|---------------------------|
| 434 | hsa-miR-34c-3p | AAUCACUAACCACACGGCCAGG | 915 | hsa-plus-9-AS | UGGAACUGAGGAUCUGAGGGAA |
| 435 | hsa-miR-34b* | UAGGCAGGUCAUUAGCUGAUUG | 916 | hsa-plus-11 | AGGGCAAAGCUUUCCAUAU |
| 436 | hsa-miR-34b | CAAUCACUACUCCACUGCCAU | 917 | hsa-plus-12-5p | UAGGCUCAGCGGUACUUUCGAC |
| 437 | hsa-miR-34a* | CAAUCAGCAAGUAUACUGGCCU | 918 | hsa-plus-12-3p | CAAGCAACCUGUCUGGGGUUGU |
| 438 | hsa-miR-34a | UGGCAGUIGUCUIAGCUGGUUGU | 919 | hsa-plus-13-3p | UAACGCCAUAAUJAUGGACAU |
| 439 | hsa-miR-346 | UGUCUGGCCGCAUGCCUGCCUCU | 920 | hsa-plus-13-5p | AUGUCCAUAAUUAUGGGGUAGU |
| 440 | hsa-miR-345 | GCUGACUCUAGCUAGGUCCAGGGCUC | 921 | hsa-plus-14-3p | CAGUUGCUAGUUGCACUCUC |
| 441 | hsa-miR-342-5p | AGGGGUGCUAUCUGUGAUUGA | 922 | hsa-plus-14-5p | AGGCAGUGUAUUGCUAGGGCC |
| 442 | hsa-miR-342-3p | UCUCACACAGAAAUCGCACCCGU | 923 | hsa-plus-17 | GUUUCUUGCCUGGUUUCUCUA |
| 443 | hsa-miR-340* | UCCGUCUCAGUUACUUUAUGC | 924 | hsa-plus-21 | UCUGCAUUGCCAGGGGAUU |
| 444 | hsa-miR-340 | UUAAAAGCAAUGAGACUGAUU | 925 | hsa-plus-22 | UAGCUUUAAGAGACUGAGAG |
| 445 | hsa-miR-33b* | CAGUGCCUCGGCAGUGCGGCC | 926 | hsa-plus-26-3p | UGAGACAGGCCUU AUGCUGCUAUC |
| 446 | hsa-miR-33b | GUGCAUUGCUGUUGCAUUGC | 927 | hsa-plus-26-5p | AGCAGCAUGAACCUUGCUCAC |
| 447 | hsa-miR-33a* | CAAUGUUUCCACAGUGCAUCAC | 928 | hsa-plus-27 | CGGGCGCAGGGGUGGCCCG |
| 448 | hsa-miR-33a | GUGCAUUGUAGUUGCAUUGC | 929 | hsa-plus-31-5p | GCCUUAGGAGAAAGUUUCUG |
| 449 | hsa-miR-339-5p | UCCCCGUCCUCCAGGCUACG | 930 | hsa-plus-31-3p | UCCUAAGGCAGGUCCUGGA |
| 450 | hsa-miR-339-3p | UGAGGGCCUCGGACAGAGGCC | 931 | hsa-plus-33-AS | AAGGUOCGCCUCAAGGUAGACC |
| 451 | hsa-miR-338-5p | ACAAUAUCCUGGUGCUGAGUG | 932 | hsa-plus-33 | AUGCCUGGGAGUUGCGAUCUG |
| 452 | hsa-miR-338-3p | UCAGGCAUCAGUGAUUUUGUUG | 933 | hsa-plus-36-3p | UGGAGGUAAAGACUUUUUCUC |
| 453 | hsa-miR-337-5p | GAACGGCUUCAUACAGGAGUU | 934 | hsa-plus-36-5p | CAGAGAAUAGUJAAUUAUGAAC |
| 454 | hsa-miR-337-3p | CUCCUAUAUGAUGCCUUUCUUC | 935 | hsa-plus-37-3p | UGCAACUUACUGAGGGCUUUGAA |

FIG 1 (continued)

| | | | | | |
|-----|----------------|--------------------------|-----|----------------|--------------------------|
| 455 | hsa-miR-335* | UUUUCAUUAUUGCUCCUGACCC | 936 | hsa-plus-37-5p | UGGGGUUJUGCAGGUCCUUAGC |
| 456 | hsa-miR-335 | UCAAGAGCAAUAAACGAAAAAUGU | 937 | hsa-plus-5-5p | AGACACUUAUCAGGUCAUAUA |
| 457 | hsa-miR-331-5p | CUAGGUAUUGGUCCCCAGGGAUCC | 938 | hsa-plus-5-3p | AUAGGACUCAUUAUGUGCCAG |
| 458 | hsa-miR-331-3p | GCCCCUGGGCUAUCCUAGAA | 939 | hsa-plus-8 | AUCCCCAGAUACAAUGGACAAU |
| 459 | hsa-miR-330-5p | UCUCUGGGCCUGGUCCUAGGC | 940 | hsa-plus-10 | UUCACCUGUAGGCCUGGUCCAGAG |
| 460 | hsa-miR-330-3p | GCAAAGCACACGGCCUGGAGAGA | 941 | hsa-plus-15-3p | UGACAGGGCCUGCCUGGUCCUGG |
| 461 | hsa-miR-329 | AACACACCUGGUUAACCUCUUU | 942 | hsa-plus-15-5p | AGCGCGGGCUGAGGCCAGU |
| 462 | hsa-miR-328 | CUGGCCCCUCUCUGCCCCUUCCGU | 943 | hsa-plus-16-5p | UAUACUACAUAAUAAUAAUAGUA |
| 463 | hsa-miR-326 | CCUCUGGGCCCUUCCUCAG | 944 | hsa-plus-16-3p | UAUACUACAUAAUAAUAAUAGUA |
| 464 | hsa-miR-325 | CCUAGUAGGUCCAGUAAGUGU | 945 | hsa-plus-18 | UAGCACCAUCUGAAAUCGGUUAU |
| 465 | hsa-miR-324-5p | CGCAUCCCCUAGGGCAUUGGUGU | 946 | hsa-plus-19-5p | GUGCAAAAGGUCAUCACGGUUUU |
| 466 | hsa-miR-324-3p | ACUGCCCCAGGGUGGUCCUGG | 947 | hsa-plus-19-3p | ACCGCGAUGACUUUUGCAUC |
| 467 | hsa-miR-323-5p | AGGGGUCCGUGGGCGUUCGCG | 948 | hsa-plus-20-3p | UCACCGGGGUCCUUUCCUCCAC |
| 468 | hsa-miR-323-3p | CACAUUACACGGUCCACCUU | 949 | hsa-plus-20-5p | UUGGGAAAACGGCCUGAGU |
| 469 | hsa-miR-320d | AAAAGCUGGGGUJUGAGAGGA | 950 | hsa-plus-23-3p | UCCUCCCCAUGCACAAAGAACUCC |
| 470 | hsa-miR-320c | AAAAGCUGGGGUJUGAGAGGGU | 951 | hsa-plus-23-5p | GGUUUCUUAUGCAUAGGGGUCU |
| 471 | hsa-miR-320b | AAAAGCUGGGGUJUGAGAGGGCAA | 952 | hsa-plus-24 | CUGCGUGUCCQUAGGUAGGGGG |
| 472 | hsa-miR-320a | AAAAGCUGGGGUJUGAGAGGGCGA | 953 | hsa-plus-25 | GGCACAGGGGGAGGUAGGAAAGAA |
| 473 | hsa-miR-32* | CAAUUUAGUGUGUGUGAUUUU | 954 | hsa-plus-28-3p | UCACUACCUGACAAUACGUAU |
| 474 | hsa-miR-32 | UAUUGCACAUUACUAAGUUGCA | 955 | hsa-plus-28-5p | UGCUGUAUUGUCAGGUAGUGAU |
| 475 | hsa-miR-31* | UGCUAUGCACAUUUGCCAU | 956 | hsa-plus-29 | UGGAGGUGAUGAACUGUCUGAGC |

FIG 1 (continued)

| | | | | C |
|-----|----------------|------------------------|-----|----------------|
| 476 | hsa-miR-31 | AGGCAAGAUGCUGGGCAUAGCU | 957 | hsa-plus-30 |
| 477 | hsa-miR-30e* | CUUUCAGUCCGAUGUUACAGC | 958 | hsa-plus-32-AS |
| 478 | hsa-miR-30e | UGUAACAUCCUUGACUGGAAG | 959 | hsa-plus-32 |
| 479 | hsa-miR-30d* | CUUUCAGUCAUGGUUUGCUGC | 960 | hsa-plus-34-3p |
| 480 | hsa-miR-30d | UGUAACAUCCCCGACUGGAAG | 961 | hsa-plus-34-5p |
| 481 | hsa-miR-30c-2* | CUGGGAGAAAGGUUUACUCU | 962 | hsa-plus-35 |

FIG 2

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | Log ₂ median | Ttest_ rawp | Ttest_ adjp | Limma_ rawp | Limma_ adjp |
|-----|------------------|-----------|-----------|-----------|-------------------------|-------------|-------------|-------------|-------------|
| 1 | hsa-miR-1248 | 2.177E+01 | 1.000E-00 | 2.177E+01 | 3.081E-00 | 7.597E-09 | 3.278E-06 | 7.689E-05 | 1.659E-02 |
| 2 | hsa-miR-342-3p | 4.401E+03 | 2.357E+03 | 1.867E-00 | 6.244E-01 | 6.662E-09 | 3.278E-06 | 9.012E-06 | 7.777E-03 |
| 3 | hsa-miR-133b | 1.680E+01 | 1.000E-00 | 1.680E+01 | 2.821E-00 | 1.523E-07 | 4.382E-05 | 5.484E-04 | 5.258E-02 |
| 4 | hsa-miR-605 | 1.336E+01 | 1.000E-00 | 1.336E+01 | 2.592E-00 | 4.035E-07 | 8.706E-05 | 1.849E-03 | 7.297E-02 |
| 5 | hsa-miR-450b-3p | 3.376E+01 | 8.612E-00 | 3.920E-00 | 1.366E-00 | 1.473E-06 | 1.867E-04 | 4.976E-04 | 5.258E-02 |
| 6 | hsa-miR-520a-3p | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 1.514E-06 | 1.867E-04 | 1.771E-03 | 7.297E-02 |
| 7 | hsa-miR-23b* | 2.851E+01 | 1.000E-00 | 2.851E+01 | 3.350E-00 | 1.090E-06 | 1.867E-04 | 7.434E-05 | 1.659E-02 |
| 8 | hsa-miR-423-5p | 2.877E+03 | 1.962E+03 | 1.466E-00 | 3.827E-01 | 1.855E-06 | 2.002E-04 | 5.752E-03 | 1.418E-01 |
| 9 | hsa-miR-219-1-3p | 1.586E+01 | 1.000E-00 | 1.586E+01 | 2.764E-00 | 3.193E-06 | 2.755E-04 | 4.285E-03 | 1.176E-01 |
| 10 | hsa-miR-454* | 1.252E+01 | 1.000E-00 | 1.252E+01 | 2.527E-00 | 3.157E-06 | 2.755E-04 | 7.623E-03 | 1.481E-01 |
| 11 | hsa-miR-26b* | 1.997E-00 | 1.000E-00 | 1.997E-00 | 6.915E-01 | 5.271E-06 | 4.135E-04 | 1.467E-03 | 7.297E-02 |
| 12 | hsa-miR-1259 | 2.515E+01 | 1.000E-00 | 2.515E+01 | 3.225E-00 | 1.176E-05 | 8.459E-04 | 2.060E-03 | 7.408E-02 |
| 13 | hsa-miR-655 | 2.765E+01 | 1.000E-00 | 2.765E+01 | 3.320E-00 | 1.847E-05 | 1.226E-03 | 6.249E-03 | 1.431E-01 |
| 14 | hsa-miR-302C | 7.413E-00 | 1.000E-00 | 7.413E-00 | 2.003E-00 | 2.664E-05 | 1.642E-03 | 1.060E-03 | 7.297E-02 |
| 10 | hsa-miR-383 | 5.068E+01 | 9.810E+01 | 5.166E-01 | -6.605E-01 | 3.246E-05 | 1.868E-03 | 1.907E-03 | 7.297E-02 |
| 16 | hsa-miR-150 | 1.620E+03 | 6.288E+02 | 2.576E-00 | 9.462E-01 | 3.632E-05 | 1.959E-03 | 3.894E-05 | 1.659E-02 |
| 17 | hsa-miR-412 | 5.144E+01 | 3.238E+01 | 1.589E-00 | 4.630E-01 | 5.672E-05 | 2.880E-03 | 1.945E-03 | 7.297E-02 |
| 18 | hsa-miR-548i | 4.779E-00 | 1.000E-00 | 4.779E-00 | 1.564E-00 | 6.469E-05 | 3.101E-03 | 7.647E-03 | 1.481E-01 |
| 19 | hsa-let-7e* | 1.139E+01 | 1.000E-00 | 1.139E+01 | 2.433E-00 | 8.264E-05 | 3.448E-03 | 1.440E-02 | 2.301E-01 |
| 20 | hsa-miR-324-3p | 8.192E+02 | 5.331E+02 | 1.537E-00 | 4.296E-01 | 8.309E-05 | 3.448E-03 | 3.891E-03 | 1.158E-01 |

FIG 2 (continued)

| | | | | | | | | | |
|----|-----------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|
| 21 | hsa-miR-335* | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 8.390E-05 | 3.448E-03 | 1.636E-02 | 2.393E-01 |
| 22 | hsa-miR-320a | 1.763E+04 | 9.808E+03 | 1.798E-00 | 5.867E-01 | 1.173E-04 | 4.600E-03 | 1.248E-04 | 2.154E-02 |
| 23 | hsa-miR-320d | 8.946E+02 | 5.129E+02 | 1.744E-00 | 5.562E-01 | 1.576E-04 | 5.915E-03 | 8.577E-02 | 4.158E-01 |
| 24 | hsa-miR-409-3p | 3.526E+01 | 1.000E-00 | 3.526E+01 | 3.563E-00 | 2.236E-04 | 8.040E-03 | 4.622E-03 | 1.209E-01 |
| 25 | hsa-miR-590-3p | 4.779E-00 | 1.000E-00 | 4.779E-00 | 1.564E-00 | 2.761E-04 | 8.947E-03 | 4.150E-03 | 1.176E-01 |
| 26 | hsa-miR-545* | 2.384E+01 | 5.671E-00 | 4.203E-00 | 1.436E-00 | 2.777E-04 | 8.947E-03 | 6.709E-03 | 1.443E-01 |
| 27 | hsa-miR-889 | 2.904E+01 | 5.416E-00 | 5.362E-00 | 1.679E-00 | 2.799E-04 | 8.947E-03 | 1.003E-03 | 7.297E-02 |
| 28 | hsa-miR-1224-3p | 9.372E+01 | 5.332E+01 | 1.758E-00 | 5.640E-01 | 2.993E-04 | 9.226E-03 | 2.603E-04 | 3.744E-02 |
| 29 | hsa-miR-148a* | 2.355E+01 | 4.674E-00 | 5.038E-00 | 1.617E-00 | 3.256E-04 | 9.690E-03 | 8.259E-02 | 4.158E-01 |
| 30 | hsa-miR-9 | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 3.462E-04 | 9.958E-03 | 4.018E-02 | 3.373E-01 |
| 31 | hsa-miR-518f | 5.239E+01 | 7.637E+01 | 6.860E-01 | -3.769E-01 | 4.282E-04 | 1.185E-02 | 1.575E-02 | 2.379E-01 |
| 32 | hsa-miR-488 | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 4.393E-04 | 1.185E-02 | 1.392E-01 | 4.686E-01 |
| 33 | hsa-miR-182 | 4.196E+03 | 7.310E+03 | 5.739E-01 | -5.553E-01 | 4.808E-04 | 1.257E-02 | 1.110E-03 | 7.297E-02 |
| 34 | hsa-miR-10a* | 3.879E+01 | 1.502E+01 | 2.582E-00 | 9.486E-01 | 5.253E-04 | 1.333E-02 | 5.307E-02 | 3.652E-01 |
| 35 | hsa-miR-19b | 1.041E+04 | 1.298E+04 | 8.018E-01 | -2.209E-01 | 5.887E-04 | 1.452E-02 | 8.427E-02 | 4.158E-01 |
| 36 | hsa-miR-15a | 2.877E+03 | 5.379E+03 | 5.349E-01 | -6.257E-01 | 6.373E-04 | 1.487E-02 | 8.735E-03 | 1.538E-01 |
| 37 | hsa-miR-1289 | 9.249E+01 | 1.244E+02 | 7.435E-01 | -2.964E-01 | 6.278E-04 | 1.487E-02 | 3.237E-02 | 3.139E-01 |
| 38 | hsa-miR-500 | 2.119E+02 | 1.141E+02 | 1.857E-00 | 6.188E-01 | 7.321E-04 | 1.620E-02 | 4.125E-02 | 3.373E-01 |
| 39 | hsa-miR-1281 | 6.814E+01 | 1.756E+01 | 3.880E-00 | 1.356E-00 | 7.178E-04 | 1.620E-02 | 1.776E-03 | 7.297E-02 |
| 40 | hsa-miR-942 | 1.575E+01 | 1.000E-00 | 1.575E+01 | 2.757E-00 | 8.446E-04 | 1.822E-02 | 1.263E-02 | 2.096E-01 |
| 41 | hsa-miR-877* | 7.382E+01 | 1.734E+01 | 4.256E-00 | 1.448E-00 | 8.971E-04 | 1.888E-02 | 9.014E-02 | 4.174E-01 |
| 42 | hsa-let-7f-1* | 3.466E+01 | 1.555E+01 | 2.229E-00 | 8.017E-01 | 9.460E-04 | 1.944E-02 | 7.439E-02 | 4.115E-01 |
| 43 | hsa-miR-651 | 1.359E-00 | 1.000E-00 | 1.359E-00 | 3.070E-01 | 1.086E-03 | 2.037E-02 | 4.143E-02 | 3.373E-01 |
| 44 | hsa-miR-610 | 4.835E+01 | 1.137E+02 | 4.253E-01 | -8.550E-01 | 1.078E-03 | 2.037E-02 | 7.004E-03 | 1.443E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|----------------|-----------|-----------|-----------|-------------|-------------|------------|-------------|-------------|
| 45 | hsa-miR-664 | 2.530E+02 | 1.385E+02 | 1.826E-00 | 6.021E-01 | 1.077E-03 | 2.037E-02 | 8.152E-03 | 1.497E-01 |
| 46 | hsa-miR-613 | 2.449E-00 | 1.000E-00 | 2.449E-00 | 8.959E-01 | 1.081E-03 | 2.037E-02 | 3.134E-02 | 3.110E-01 |
| 47 | hsa-miR-483-3p | 1.898E+01 | 1.000E-00 | 1.898E+01 | 2.943E-00 | 1.302E-03 | 2.391E-02 | 5.193E-02 | 3.644E-01 |
| 48 | hsa-miR-320c | 7.734E+02 | 4.231E+02 | 1.828E-00 | 6.032E-01 | 1.338E-03 | 2.405E-02 | 7.911E-02 | 4.158E-01 |
| 49 | hsa-miR-720 | 4.196E+03 | 2.998E+03 | 1.399E-00 | 3.360E-01 | 1.407E-03 | 2.478E-02 | 6.483E-02 | 4.025E-01 |
| 50 | hsa-miR-299-5p | 2.066E+01 | 1.000E-00 | 2.066E+01 | 3.028E-00 | 1.510E-03 | 2.607E-02 | 1.842E-03 | 7.297E-02 |
| 51 | hsa-miR-579 | 3.200E+01 | 2.329E+01 | 1.374E-00 | 3.176E-01 | 1.964E-03 | 3.020E-02 | 2.834E-02 | 3.110E-01 |
| 52 | hsa-miR-636 | 1.575E+02 | 1.131E+02 | 1.392E-00 | 3.310E-01 | 1.972E-03 | 3.020E-02 | 1.397E-01 | 4.686E-01 |
| 53 | hsa-miR-197 | 6.478E+02 | 4.526E+02 | 1.431E-00 | 3.586E-01 | 1.915E-03 | 3.020E-02 | 1.391E-01 | 4.686E-01 |
| 54 | hsa-miR-668 | 3.705E+01 | 1.125E+01 | 3.294E-00 | 1.192E-00 | 2.022E-03 | 3.020E-02 | 2.528E-03 | 8.431E-02 |
| 55 | hsa-miR-494 | 5.553E+01 | 3.701E+01 | 1.500E-00 | 4.058E-01 | 1.970E-03 | 3.020E-02 | 7.556E-02 | 4.133E-01 |
| 56 | hsa-miR-1262 | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 1.837E-03 | 3.020E-02 | 7.977E-02 | 4.158E-01 |
| 57 | hsa-miR-578 | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 1.842E-03 | 3.020E-02 | 3.172E-02 | 3.110E-01 |
| 58 | hsa-miR-708* | 5.144E+01 | 8.373E+01 | 6.144E-01 | -4.871E-01 | 2.030E-03 | 3.020E-02 | 2.033E-02 | 2.699E-01 |
| 59 | hsa-miR-369-3p | 1.680E+01 | 6.601E-00 | 2.545E-00 | 9.341E-01 | 2.214E-03 | 3.239E-02 | 8.434E-02 | 4.158E-01 |
| 60 | hsa-miR-329 | 5.447E+01 | 4.534E+01 | 1.201E-00 | 1.834E-01 | 2.535E-03 | 3.445E-02 | 1.915E-01 | 5.248E-01 |
| 61 | hsa-miR-941 | 1.027E+02 | 1.264E+02 | 8.123E-01 | -2.079E-01 | 2.460E-03 | 3.445E-02 | 2.318E-02 | 2.817E-01 |
| 62 | hsa-miR-155 | 8.508E+01 | 4.958E+01 | 1.716E-00 | 5.400E-01 | 2.609E-03 | 3.445E-02 | 4.720E-02 | 3.580E-01 |
| 63 | hsa-miR-26a-1* | 1.031E+01 | 1.000E-00 | 1.031E+01 | 2.333E-00 | 2.634E-03 | 3.445E-02 | 3.964E-02 | 3.373E-01 |
| 64 | hsa-miR-1246 | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 2.629E-03 | 3.445E-02 | 3.650E-01 | 6.763E-01 |
| 65 | hsa-miR-892b | 2.729E+01 | 1.252E+01 | 2.180E-00 | 7.794E-01 | 2.580E-03 | 3.445E-02 | 5.343E-02 | 3.652E-01 |
| 66 | hsa-miR-146a | 1.886E+02 | 1.218E+02 | 1.549E-00 | 4.376E-01 | 2.504E-03 | 3.445E-02 | 1.731E-01 | 5.030E-01 |
| 67 | hsa-miR-337-3p | 8.436E-00 | 1.000E-00 | 8.436E-00 | 2.133E-00 | 2.816E-03 | 3.627E-02 | 1.715E-03 | 7.297E-02 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra | limma_ad jp |
|-----|-----------------|-----------|-----------|-----------|-------------|-------------|------------|-----------|-------------|
| 68 | hsa-miR-130a* | 5.317E+01 | 3.526E+01 | 1.508E-00 | 4.106E-01 | 2.927E-03 | 3.715E-02 | 3.526E-01 | 6.760E-01 |
| 69 | hsa-let-7b | 9.066E+02 | 6.222E+02 | 1.457E-00 | 3.764E-01 | 3.110E-03 | 3.890E-02 | 1.199E-01 | 4.510E-01 |
| 70 | hsa-miR-744* | 3.994E+01 | 9.746E-00 | 4.098E-00 | 1.410E-00 | 3.456E-03 | 4.261E-02 | 5.313E-04 | 5.258E-02 |
| 71 | hsa-miR-140-3p | 2.473E+04 | 3.058E+04 | 8.085E-01 | -2.126E-01 | 3.613E-03 | 4.391E-02 | 6.848E-02 | 4.115E-01 |
| 72 | hsa-miR-573 | 5.144E+01 | 7.302E+01 | 7.045E-01 | -3.503E-01 | 3.772E-03 | 4.402E-02 | 2.212E-02 | 2.756E-01 |
| 73 | hsa-miR-378 | 2.555E+02 | 1.645E+02 | 1.553E-00 | 4.402E-01 | 3.775E-03 | 4.402E-02 | 6.382E-01 | 8.540E-01 |
| 74 | hsa-miR-1237 | 7.937E+01 | 6.762E+01 | 1.174E-00 | 1.603E-01 | 3.718E-03 | 4.402E-02 | 1.801E-01 | 5.097E-01 |
| 75 | hsa-miR-363* | 6.193E+01 | 9.794E+01 | 6.323E-01 | -4.583E-01 | 3.969E-03 | 4.567E-02 | 4.736E-02 | 3.580E-01 |
| 76 | hsa-miR-888 | 4.958E+01 | 1.060E+01 | 4.676E-00 | 1.543E-00 | 4.855E-03 | 5.200E-02 | 1.930E-01 | 5.254E-01 |
| 77 | hsa-miR-607 | 8.159E+01 | 6.327E+01 | 1.290E-00 | 2.543E-01 | 4.880E-03 | 5.200E-02 | 4.643E-01 | 7.529E-01 |
| 78 | hsa-miR-1236 | 2.177E+01 | 1.000E-00 | 2.177E+01 | 3.081E-00 | 4.822E-03 | 5.200E-02 | 3.683E-02 | 3.311E-01 |
| 79 | hsa-miR-34b | 4.111E+01 | 1.784E+01 | 2.304E-00 | 8.346E-01 | 4.600E-03 | 5.200E-02 | 3.631E-02 | 3.299E-01 |
| 80 | hsa-miR-532-3p | 4.401E+03 | 3.623E+03 | 1.215E-00 | 1.946E-01 | 4.684E-03 | 5.200E-02 | 1.002E-01 | 4.218E-01 |
| 81 | hsa-miR-1229 | 1.841E+02 | 1.173E+02 | 1.570E-00 | 4.511E-01 | 4.869E-03 | 5.200E-02 | 5.329E-01 | 7.996E-01 |
| 82 | hsa-miR-520g | 4.835E+01 | 2.566E+01 | 1.884E-00 | 6.336E-01 | 5.042E-03 | 5.295E-02 | 1.362E-01 | 4.686E-01 |
| 83 | hsa-miR-581 | 8.436E-00 | 1.000E-00 | 8.436E-00 | 2.133E-00 | 5.092E-03 | 5.295E-02 | 4.551E-02 | 3.570E-01 |
| 84 | hsa-miR-323-3p | 3.376E+01 | 8.612E-00 | 3.920E-00 | 1.366E-00 | 5.278E-03 | 5.422E-02 | 1.054E-01 | 4.251E-01 |
| 85 | hsa-miR-155* | 5.900E+01 | 4.958E+01 | 1.190E-00 | 1.739E-01 | 5.375E-03 | 5.458E-02 | 5.366E-01 | 7.996E-01 |
| 86 | hsa-miR-15b | 1.415E+04 | 1.763E+04 | 8.024E-01 | -2.201E-01 | 5.635E-03 | 5.592E-02 | 2.837E-02 | 3.110E-01 |
| 87 | hsa-miR-548d-3p | 4.508E+01 | 3.289E+01 | 1.371E-00 | 3.154E-01 | 5.702E-03 | 5.592E-02 | 7.075E-01 | 8.834E-01 |
| 88 | hsa-miR-302d* | 4.723E+01 | 3.029E+01 | 1.559E-00 | 5.700E-01 | 4.440E-01 | 5.592E-02 | 7.414E-02 | 4.115E-01 |
| 89 | hsa-miR-496 | 6.894E+01 | 4.697E+01 | 1.468E-00 | 3.836E-01 | 5.900E-03 | 5.721E-02 | 1.980E-01 | 5.254E-01 |
| 90 | hsa-miR-186* | 1.016E+02 | 1.325E+02 | 7.664E-01 | -2.661E-01 | 6.042E-03 | 5.794E-02 | 4.939E-02 | 3.580E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw P | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|-----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 91 | hsa-miR-599 | 3.010E+01 | 1.694E+01 | 1.777E-00 | 5.748E-01 | 6.315E-03 | 5.988E-02 | 6.814E-01 | 8.698E-01 |
| 92 | hsa-miR-589 | 7.844E+01 | 1.003E+02 | 7.817E-01 | -2.462E-01 | 7.001E-03 | 6.567E-02 | 7.262E-02 | 4.115E-01 |
| 93 | hsa-miR-519c-5p | 1.283E+02 | 2.042E+02 | 6.282E-01 | -4.648E-01 | 7.199E-03 | 6.610E-02 | 2.487E-02 | 2.925E-01 |
| 94 | hsa-miR-1249 | 6.645E+01 | 4.048E+01 | 1.642E-00 | 4.956E-01 | 7.125E-03 | 6.610E-02 | 8.486E-02 | 4.158E-01 |
| 95 | hsa-miR-22 | 7.714E+03 | 9.808E+03 | 7.865E-01 | -2.401E-01 | 7.502E-03 | 6.815E-02 | 1.599E-02 | 2.379E-01 |
| 96 | hsa-miR-614 | 3.507E+01 | 1.995E+01 | 1.758E-00 | 5.640E-01 | 7.830E-03 | 6.907E-02 | 4.757E-01 | 7.581E-01 |
| 97 | hsa-miR-634 | 1.008E+02 | 7.302E+01 | 1.380E-00 | 3.220E-01 | 7.843E-03 | 6.907E-02 | 8.165E-01 | 9.284E-01 |
| 98 | hsa-miR-486-5p | 4.147E+04 | 4.147E+04 | 1.000E-00 | 0.000E+01 | 7.837E-03 | 6.907E-02 | 5.488E-01 | 8.015E-01 |
| 99 | hsa-miR-548h | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 8.428E-03 | 7.347E-02 | 3.117E-02 | 3.110E-01 |
| 100 | hsa-miR-19a | 2.412E+03 | 2.998E+03 | 8.044E-01 | -2.176E-01 | 9.090E-03 | 7.845E-02 | 5.061E-02 | 3.580E-01 |
| 101 | hsa-miR-32* | 2.821E+01 | 6.702E+01 | 4.209E-01 | -8.653E-01 | 9.596E-03 | 8.200E-02 | 5.502E-03 | 1.397E-01 |
| 102 | hsa-miR-367* | 5.144E+01 | 3.289E+01 | 1.564E-00 | 4.474E-01 | 1.021E-02 | 8.636E-02 | 7.338E-02 | 4.115E-01 |
| 103 | hsa-miR-218-1* | 6.686E+01 | 4.995E+01 | 1.338E-00 | 2.915E-01 | 1.080E-02 | 9.048E-02 | 7.790E-01 | 9.019E-01 |
| 104 | hsa-let-7a* | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 1.101E-02 | 9.051E-02 | 1.528E-01 | 4.795E-01 |
| 105 | hsa-miR-328 | 5.447E+01 | 2.530E+01 | 2.153E-00 | 7.667E-01 | 1.098E-02 | 9.051E-02 | 2.760E-01 | 6.190E-01 |
| 106 | hsa-miR-571 | 4.419E+01 | 5.868E+01 | 7.532E-01 | -2.834E-01 | 1.120E-02 | 9.059E-02 | 3.026E-02 | 3.110E-01 |
| 107 | hsa-miR-424* | 1.110E+02 | 9.232E+01 | 1.202E-00 | 1.838E-01 | 1.123E-02 | 9.059E-02 | 6.421E-01 | 8.565E-01 |
| 108 | hsa-miR-374b* | 2.384E+01 | 1.596E+01 | 1.493E-00 | 4.010E-01 | 1.143E-02 | 9.130E-02 | 4.299E-01 | 7.218E-01 |
| 109 | hsa-let-7d | 2.008E+03 | 1.687E+03 | 1.190E-00 | 1.742E-01 | 1.155E-02 | 9.145E-02 | 8.924E-01 | 9.651E-01 |
| 110 | hsa-miR-16 | 1.574E+04 | 1.763E+04 | 8.927E-01 | -1.135E-01 | 1.219E-02 | 9.566E-02 | 2.224E-02 | 2.756E-01 |
| 111 | hsa-miR-490-3p | 8.739E+01 | 1.283E+02 | 6.812E-01 | -3.839E-01 | 1.256E-02 | 9.767E-02 | 3.434E-02 | 3.208E-01 |
| 112 | hsa-miR-1914* | 1.374E+02 | 1.249E+02 | 1.100E-00 | 9.557E-02 | 1.294E-02 | 9.974E-02 | 3.608E-01 | 6.763E-01 |
| 113 | hsa-miR-543 | 3.800E+01 | 1.756E+01 | 2.163E-00 | 7.716E-01 | 1.329E-02 | 1.006E-01 | 1.478E-02 | 2.319E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|----------------|-----------|-----------|-----------|-------------|-------------|------------|-------------|-------------|
| 114 | hsa-miR-526a | 1.385E+02 | 2.306E+02 | 6.008E-01 | -5.095E-01 | 1.318E-02 | 1.006E-01 | 6.692E-03 | 1.443E-01 |
| 115 | hsa-miR-875-5p | 2.660E+01 | 9.746E-00 | 2.729E-00 | 1.004E-00 | 1.365E-02 | 1.024E-01 | 1.388E-01 | 4.686E-01 |
| 116 | hsa-miR-1252 | 7.413E-00 | 1.000E-00 | 7.413E-00 | 2.003E-00 | 1.391E-02 | 1.035E-01 | 1.548E-02 | 2.379E-01 |
| 117 | hsa-miR-495 | 6.746E+01 | 4.785E+01 | 1.410E-00 | 3.435E-01 | 1.416E-02 | 1.044E-01 | 1.279E-01 | 4.625E-01 |
| 118 | hsa-miR-210 | 7.902E+02 | 4.768E+02 | 1.657E-00 | 5.053E-01 | 1.447E-02 | 1.049E-01 | 2.986E-01 | 6.348E-01 |
| 119 | hsa-miR-514 | 3.902E+01 | 2.660E+01 | 1.467E-00 | 3.834E-01 | 1.435E-02 | 1.049E-01 | 3.967E-01 | 7.046E-01 |
| 120 | hsa-miR-572 | 5.810E+01 | 4.111E+01 | 1.413E-00 | 3.460E-01 | 1.499E-02 | 1.078E-01 | 3.877E-01 | 6.985E-01 |
| 121 | hsa-miR-1228 | 2.272E+02 | 1.820E+02 | 1.248E-00 | 2.215E-01 | 1.592E-02 | 1.126E-01 | 1.721E-01 | 5.030E-01 |
| 122 | hsa-miR-589* | 8.323E+01 | 1.043E+02 | 7.983E-01 | -2.253E-01 | 1.589E-02 | 1.126E-01 | 7.347E-02 | 4.115E-01 |
| 123 | hsa-miR-1538 | 7.057E+01 | 9.539E+01 | 7.397E-01 | -3.015E-01 | 1.628E-02 | 1.133E-01 | 5.683E-02 | 3.715E-01 |
| 124 | hsa-miR-300 | 4.865E+01 | 1.964E+01 | 2.478E-00 | 9.074E-01 | 1.616E-02 | 1.133E-01 | 6.989E-02 | 4.115E-01 |
| 125 | hsa-miR-320b | 2.998E+03 | 2.110E+03 | 1.421E-00 | 3.515E-01 | 1.741E-02 | 1.193E-01 | 3.781E-02 | 3.364E-01 |
| 126 | hsa-miR-190b | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 1.740E-02 | 1.193E-01 | 8.434E-02 | 4.158E-01 |
| 127 | hsa-miR-330-5p | 1.307E+01 | 9.198E-00 | 1.421E-00 | 3.514E-01 | 1.773E-02 | 1.205E-01 | 2.056E-01 | 5.254E-01 |
| 128 | hsa-miR-506 | 3.800E+01 | 1.479E+01 | 2.569E-00 | 9.437E-01 | 1.848E-02 | 1.246E-01 | 9.682E-02 | 4.199E-01 |
| 129 | hsa-miR-1295 | 1.110E+02 | 1.493E+02 | 7.429E-01 | -2.972E-01 | 1.989E-02 | 1.331E-01 | 7.017E-02 | 4.115E-01 |
| 130 | hsa-miR-485-3p | 5.144E+01 | 3.733E+01 | 1.378E-00 | 3.206E-01 | 2.043E-02 | 1.357E-01 | 4.205E-01 | 7.157E-01 |
| 131 | hsa-miR-629* | 9.088E+01 | 8.596E+01 | 1.057E-00 | 5.567E-02 | 2.116E-02 | 1.373E-01 | 9.908E-01 | 9.975E-01 |
| 132 | hsa-miR-130b* | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 2.113E-02 | 1.373E-01 | 1.785E-01 | 5.097E-01 |
| 133 | hsa-miR-297 | 4.958E+01 | 1.076E+02 | 4.608E-01 | -7.749E-01 | 2.092E-02 | 1.373E-01 | 1.160E-03 | 7.297E-02 |
| 134 | hsa-miR-1915* | 2.765E+01 | 8.814E-00 | 3.138E-00 | 1.143E-00 | 2.141E-02 | 1.379E-01 | 2.672E-01 | 6.068E-01 |
| 135 | hsa-miR-623 | 5.068E+01 | 6.936E+01 | 7.306E-01 | -3.139E-01 | 2.235E-02 | 1.418E-01 | 1.376E-01 | 4.686E-01 |
| 136 | hsa-miR-133a | 4.958E+01 | 2.704E+01 | 1.834E-00 | 6.063E-01 | 2.224E-02 | 1.418E-01 | 3.966E-02 | 3.373E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|------------------|-----------|-----------|-----------|-------------|-------------|------------|-------------|-------------|
| 137 | hsa-miR-433 | 6.273E+01 | 1.218E+02 | 5.150E-01 | -6.635E-01 | 2.305E-02 | 1.452E-01 | 1.944E-02 | 2.663E-01 |
| 138 | hsa-miR-148b* | 3.217E+01 | 1.995E+01 | 1.612E-00 | 4.775E-01 | 2.351E-02 | 1.457E-01 | 3.674E-01 | 6.763E-01 |
| 139 | hsa-miR-372 | 3.315E+01 | 2.035E+01 | 1.629E-00 | 4.881E-01 | 2.356E-02 | 1.457E-01 | 1.380E-01 | 4.686E-01 |
| 140 | hsa-miR-1288 | 5.447E+01 | 3.753E+01 | 1.451E-00 | 3.726E-01 | 2.364E-02 | 1.457E-01 | 4.782E-01 | 7.581E-01 |
| 141 | hsa-miR-520e | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 2.449E-02 | 1.497E-01 | 1.405E-01 | 4.686E-01 |
| 142 | hsa-miR-429 | 3.037E+01 | 1.071E+01 | 2.835E-00 | 1.042E-00 | 2.480E-02 | 1.497E-01 | 4.020E-01 | 7.080E-01 |
| 143 | hsa-miR-30a | 3.229E+02 | 2.185E+02 | 1.478E-00 | 3.909E-01 | 2.463E-02 | 1.497E-01 | 1.519E-01 | 4.795E-01 |
| 144 | hsa-miR-556-3p | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 2.518E-02 | 1.500E-01 | 9.830E-02 | 4.199E-01 |
| 145 | hsa-miR-576-3p | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 2.520E-02 | 1.500E-01 | 1.216E-02 | 2.058E-01 |
| 146 | hsa-miR-200a* | 6.273E+01 | 4.471E+01 | 1.403E-00 | 3.385E-01 | 2.620E-02 | 1.538E-01 | 3.072E-01 | 6.412E-01 |
| 147 | hsa-miR-450b-5p | 6.084E+01 | 4.315E+01 | 1.410E-00 | 3.434E-01 | 2.609E-02 | 1.538E-01 | 1.937E-01 | 5.254E-01 |
| 148 | hsa-miR-219-2-3p | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 2.727E-02 | 1.580E-01 | 1.115E-01 | 4.396E-01 |
| 149 | hsa-miR-633 | 7.302E+01 | 6.006E+01 | 1.216E-00 | 1.954E-01 | 2.712E-02 | 1.580E-01 | 7.653E-01 | 8.949E-01 |
| 150 | hsa-miR-182* | 4.708E+01 | 3.114E+01 | 1.512E-00 | 4.134E-01 | 2.779E-02 | 1.588E-01 | 2.511E-01 | 5.856E-01 |
| 151 | hsa-miR-582-5p | 1.898E+01 | 1.000E-00 | 1.898E+01 | 2.943E-00 | 2.775E-02 | 1.588E-01 | 4.272E-02 | 3.414E-01 |
| 152 | hsa-miR-520c-5p | 1.212E+02 | 1.881E+02 | 6.442E-01 | -4.398E-01 | 2.823E-02 | 1.603E-01 | 3.170E-02 | 3.110E-01 |
| 153 | hsa-miR-934 | 8.572E+01 | 6.702E+01 | 1.279E-00 | 2.460E-01 | 2.970E-02 | 1.663E-01 | 4.700E-02 | 3.580E-01 |
| 154 | hsa-miR-526b* | 1.336E+01 | 1.745E+01 | 7.655E-01 | -2.673E-01 | 3.006E-02 | 1.663E-01 | 6.560E-01 | 8.645E-01 |
| 155 | hsa-miR-770-5p | 5.447E+01 | 9.611E+01 | 5.667E-01 | -5.679E-01 | 3.026E-02 | 1.663E-01 | 7.309E-02 | 4.115E-01 |
| 156 | hsa-miR-660 | 4.413E+02 | 3.840E+02 | 1.149E-00 | 1.392E-01 | 3.017E-02 | 1.663E-01 | 6.066E-01 | 8.369E-01 |
| 157 | hsa-miR-411* | 5.046E+01 | 3.581E+01 | 1.409E-00 | 3.432E-01 | 3.064E-02 | 1.663E-01 | 2.508E-02 | 2.925E-01 |
| 158 | hsa-miR-576-5p | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 3.044E-02 | 1.663E-01 | 1.937E-02 | 2.663E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|-----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 159 | hsa-miR-606 | 6.273E+01 | 5.092E+01 | 1.232E-00 | 2.086E-01 | 3.063E-02 | 1.663E-01 | 6.948E-01 | 8.769E-01 |
| 160 | hsa-miR-205 | 4.708E+01 | 2.904E+01 | 1.621E-00 | 4.830E-01 | 3.141E-02 | 1.694E-01 | 4.697E-01 | 7.556E-01 |
| 161 | hsa-miR-1302 | 3.119E+01 | 1.953E+01 | 1.597E-00 | 4.680E-01 | 3.211E-02 | 1.711E-01 | 1.837E-01 | 5.104E-01 |
| 162 | hsa-miR-301b | 1.857E+02 | 2.627E+02 | 7.069E-01 | -3.468E-01 | 3.204E-02 | 1.711E-01 | 7.725E-03 | 1.481E-01 |
| 163 | hsa-miR-891a | 1.082E+02 | 1.857E+02 | 5.824E-01 | -5.405E-01 | 3.412E-02 | 1.795E-01 | 8.556E-03 | 1.538E-01 |
| 164 | hsa-miR-516b* | 2.024E+01 | 2.234E-00 | 9.060E-00 | 2.204E-00 | 3.401E-02 | 1.795E-01 | 1.039E-01 | 4.251E-01 |
| 165 | hsa-miR-376a* | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 3.481E-02 | 1.810E-01 | 2.138E-01 | 5.318E-01 |
| 166 | hsa-miR-936 | 6.298E+01 | 8.307E+01 | 7.581E-01 | -2.769E-01 | 3.482E-02 | 1.810E-01 | 4.805E-02 | 3.580E-01 |
| 167 | hsa-miR-26a-2* | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 3.527E-02 | 1.818E-01 | 6.729E-02 | 4.115E-01 |
| 168 | hsa-miR-544 | 3.683E+01 | 2.530E+01 | 1.456E-00 | 3.755E-01 | 3.539E-02 | 1.818E-01 | 1.377E-01 | 4.686E-01 |
| 169 | hsa-miR-134 | 5.693E+01 | 4.088E+01 | 1.393E-00 | 3.311E-01 | 3.637E-02 | 1.857E-01 | 5.933E-01 | 8.254E-01 |
| 170 | hsa-miR-542-3p | 7.419E+01 | 9.334E+01 | 7.949E-01 | -2.295E-01 | 3.657E-02 | 1.857E-01 | 4.143E-02 | 3.373E-01 |
| 171 | hsa-miR-518d-5p | 1.569E+02 | 2.542E+02 | 6.170E-01 | -4.828E-01 | 3.791E-02 | 1.901E-01 | 7.024E-03 | 1.443E-01 |
| 172 | hsa-miR-513a-3p | 3.315E+01 | 1.964E+01 | 1.688E-00 | 5.238E-01 | 3.811E-02 | 1.901E-01 | 3.578E-01 | 6.760E-01 |
| 173 | hsa-miR-548a-3p | 7.070E+01 | 6.366E+01 | 1.110E-00 | 1.048E-01 | 3.779E-02 | 1.901E-01 | 7.208E-01 | 8.841E-01 |
| 174 | hsa-miR-559 | 4.850E+01 | 3.289E+01 | 1.475E-00 | 3.885E-01 | 3.873E-02 | 1.921E-01 | 1.819E-03 | 7.297E-02 |
| 175 | hsa-miR-1308 | 4.419E+01 | 7.310E+01 | 6.046E-01 | -5.032E-01 | 3.986E-02 | 1.966E-01 | 4.591E-02 | 3.570E-01 |
| 176 | hsa-miR-1825 | 4.629E+01 | 3.136E+01 | 1.476E-00 | 3.895E-01 | 4.048E-02 | 1.985E-01 | 7.134E-01 | 8.840E-01 |
| 177 | hsa-miR-585 | 1.336E+01 | 1.000E-00 | 1.336E+01 | 2.592E-00 | 4.100E-02 | 1.988E-01 | 5.375E-02 | 3.652E-01 |
| 178 | hsa-miR-181a | 6.353E+02 | 2.272E+02 | 2.797E-00 | 1.028E-00 | 4.094E-02 | 1.988E-01 | 6.299E-03 | 1.431E-01 |
| 179 | hsa-miR-1470 | 1.590E+02 | 1.203E+02 | 1.322E-00 | 2.789E-01 | 4.252E-02 | 1.994E-01 | 3.190E-01 | 6.508E-01 |
| 180 | hsa-miR-513c | 2.133E-00 | 2.660E+01 | 8.020E-02 | -2.523E-00 | 4.164E-02 | 1.994E-01 | 2.679E-03 | 8.564E-02 |
| 181 | hsa-miR-885-3p | 1.738E+02 | 2.568E+02 | 6.769E-01 | -3.902E-01 | 4.197E-02 | 1.994E-01 | 3.137E-03 | 9.669E-02 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|-----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 182 | hsa-miR-1205 | 7.070E+01 | 1.309E+02 | 5.402E-01 | -6.158E-01 | 4.162E-02 | 1.994E-01 | 3.457E-02 | 3.208E-01 |
| 183 | hsa-miR-518f* | 1.220E+02 | 1.684E+02 | 7.247E-01 | -3.219E-01 | 4.251E-02 | 1.994E-01 | 2.236E-02 | 2.756E-01 |
| 184 | hsa-miR-1305 | 9.061E+01 | 7.452E+01 | 1.216E-00 | 1.954E-01 | 4.234E-02 | 1.994E-01 | 4.078E-01 | 7.106E-01 |
| 185 | hsa-miR-190 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 0.000E+01 | 4.291E-02 | 2.002E-01 | 7.885E-02 | 4.158E-01 |
| 186 | hsa-miR-363 | 3.450E+03 | 3.998E+03 | 8.629E-01 | -1.475E-01 | 4.421E-02 | 2.034E-01 | 7.128E-02 | 4.115E-01 |
| 187 | hsa-miR-519d | 5.762E+01 | 5.046E+01 | 1.142E-00 | 1.325E-01 | 4.390E-02 | 2.034E-01 | 1.614E-01 | 4.883E-01 |
| 188 | hsa-miR-181a-2* | 8.635E+01 | 7.727E+01 | 1.117E-00 | 1.111E-01 | 4.430E-02 | 2.034E-01 | 5.383E-01 | 7.996E-01 |
| 189 | hsa-miR-220b | 4.639E+01 | 6.233E+01 | 7.442E-01 | -2.954E-01 | 4.557E-02 | 2.081E-01 | 2.383E-02 | 2.856E-01 |
| 190 | hsa-miR-29c* | 1.359E-00 | 1.000E-00 | 1.359E-00 | 3.070E-01 | 4.646E-02 | 2.110E-01 | 1.129E-01 | 4.396E-01 |
| 191 | hsa-miR-1265 | 1.359E-00 | 4.629E+01 | 2.936E-02 | -3.528E-00 | 4.779E-02 | 2.133E-01 | 7.927E-03 | 1.487E-01 |
| 192 | hsa-miR-1468 | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 4.754E-02 | 2.133E-01 | 4.797E-01 | 7.581E-01 |
| 193 | hsa-miR-96* | 1.152E+02 | 1.141E+02 | 1.009E-00 | 9.048E-03 | 4.739E-02 | 2.133E-01 | 7.321E-01 | 8.857E-01 |
| 194 | hsa-miR-562 | 2.904E+01 | 1.502E+01 | 1.933E-00 | 6.593E-01 | 4.819E-02 | 2.133E-01 | 5.514E-01 | 8.015E-01 |
| 195 | hsa-miR-580 | 4.327E+01 | 2.566E+01 | 1.686E-00 | 5.226E-01 | 4.809E-02 | 2.133E-01 | 2.110E-02 | 2.725E-01 |
| 196 | hsa-miR-92b | 3.182E+02 | 2.627E+02 | 1.212E-00 | 1.919E-01 | 4.889E-02 | 2.153E-01 | 3.699E-01 | 6.792E-01 |
| 197 | hsa-miR-523* | 1.152E+02 | 1.417E+02 | 8.125E-01 | -2.076E-01 | 4.970E-02 | 2.177E-01 | 7.615E-02 | 4.133E-01 |
| 198 | hsa-miR-548c-3p | 3.674E+01 | 2.643E+01 | 1.390E-00 | 3.293E-01 | 4.998E-02 | 2.178E-01 | 4.174E-01 | 7.134E-01 |
| 199 | hsa-miR-618 | 1.534E+01 | 1.000E-00 | 1.534E+01 | 2.730E-00 | 5.044E-02 | 2.188E-01 | 2.540E-03 | 8.431E-02 |
| 200 | hsa-miR-662 | 5.200E+01 | 4.639E+01 | 1.121E-00 | 1.142E-01 | 5.083E-02 | 2.193E-01 | 4.777E-01 | 7.581E-01 |
| 201 | hsa-miR-539 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 5.112E-02 | 2.195E-01 | 7.836E-02 | 4.158E-01 | |
| 202 | hsa-miR-548n | 2.896E+01 | 1.479E+01 | 1.958E-00 | 6.721E-01 | 5.154E-02 | 2.202E-01 | 6.621E-01 | 8.657E-01 |
| 203 | hsa-miR-203 | 8.436E-00 | 1.000E-00 | 8.436E-00 | 2.133E-00 | 5.360E-02 | 2.279E-01 | 8.337E-02 | 4.158E-01 |
| 204 | hsa-miR-152 | 2.154E+02 | 3.279E+02 | 6.569E-01 | -4.202E-01 | 5.501E-02 | 2.303E-01 | 1.717E-02 | 2.469E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|-----------------|-----------|-----------|-----------|-------------|-------------|------------|-------------|-------------|
| 205 | hsa-miR-1279 | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 5.472E-02 | 2.303E-01 | 5.518E-02 | 3.692E-01 |
| 206 | hsa-miR-640 | 9.955E+01 | 9.140E+01 | 1.089E-00 | 8.550E-02 | 5.525E-02 | 2.303E-01 | 4.958E-01 | 7.737E-01 |
| 207 | hsa-miR-520a-5p | 1.003E+02 | 1.502E+02 | 6.681E-01 | -4.033E-01 | 5.461E-02 | 2.303E-01 | 2.028E-02 | 2.699E-01 |
| 208 | hsa-miR-23b | 3.143E+03 | 3.790E+03 | 8.294E-01 | -1.870E-01 | 5.719E-02 | 2.324E-01 | 9.788E-02 | 4.199E-01 |
| 209 | hsa-miR-431 | 1.758E+02 | 2.001E+02 | 8.786E-01 | -1.294E-01 | 5.762E-02 | 2.324E-01 | 8.349E-02 | 4.158E-01 |
| 210 | hsa-miR-376b | 6.046E+01 | 9.322E+01 | 6.486E-01 | -4.329E-01 | 5.603E-02 | 2.324E-01 | 2.922E-02 | 3.110E-01 |
| 211 | hsa-miR-92a | 1.198E+04 | 1.198E+04 | 1.000E-00 | 0.000E+01 | 5.753E-02 | 2.324E-01 | 4.503E-01 | 7.402E-01 |
| 212 | hsa-miR-548k | 1.139E+01 | 1.000E-00 | 1.139E+01 | 2.433E-00 | 5.758E-02 | 2.324E-01 | 3.104E-02 | 3.110E-01 |
| 213 | hsa-miR-380 | 2.076E+01 | 1.680E+01 | 1.236E-00 | 2.119E-01 | 5.689E-02 | 2.324E-01 | 1.256E-01 | 4.594E-01 |
| 214 | hsa-miR-202 | 2.177E+01 | 6.601E-00 | 3.298E-00 | 1.193E-00 | 5.676E-02 | 2.324E-01 | 4.165E-01 | 7.132E-01 |
| 215 | hsa-miR-19b-2* | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 5.800E-02 | 2.328E-01 | 3.646E-01 | 6.763E-01 |
| 216 | hsa-miR-128 | 6.222E+02 | 9.066E+02 | 6.863E-01 | -3.764E-01 | 5.900E-02 | 2.332E-01 | 5.430E-02 | 3.661E-01 |
| 217 | hsa-miR-520d-3p | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 5.945E-02 | 2.332E-01 | 5.693E-01 | 8.120E-01 |
| 218 | hsa-miR-1282 | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 5.945E-02 | 2.332E-01 | 1.045E-01 | 4.251E-01 |
| 219 | hsa-miR-564 | 1.565E+02 | 2.008E+02 | 7.793E-01 | -2.494E-01 | 5.879E-02 | 2.332E-01 | 4.232E-02 | 3.413E-01 |
| 220 | hsa-miR-1226 | 4.944E+01 | 3.581E+01 | 1.381E-00 | 3.226E-01 | 5.844E-02 | 2.332E-01 | 9.508E-01 | 9.850E-01 |
| 221 | hsa-miR-224 | 4.774E+01 | 5.917E+01 | 8.069E-01 | -2.146E-01 | 6.034E-02 | 2.339E-01 | 2.945E-02 | 3.110E-01 |
| 222 | hsa-miR-574-5p | 8.284E+02 | 1.242E+03 | 6.671E-01 | -4.048E-01 | 6.044E-02 | 2.339E-01 | 1.020E-02 | 1.760E-01 |
| 223 | hsa-miR-548b-5p | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 6.037E-02 | 2.339E-01 | 7.569E-02 | 4.133E-01 |
| 224 | hsa-miR-512-3p | 3.587E+01 | 2.530E+01 | 1.418E-00 | 3.489E-01 | 6.095E-02 | 2.348E-01 | 7.806E-01 | 9.019E-01 |
| 225 | hsa-miR-296-5p | 2.352E+02 | 1.906E+02 | 1.234E-00 | 2.103E-01 | 6.316E-02 | 2.423E-01 | 2.610E-01 | 5.971E-01 |
| 226 | hsa-miR-302a | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 6.570E-02 | 2.502E-01 | 1.890E-01 | 5.194E-01 |
| 227 | hsa-miR-501-5p | 3.808E+01 | 1.555E+01 | 2.449E-00 | 8.957E-01 | 6.611E-02 | 2.502E-01 | 9.431E-02 | 4.174E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|-----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 228 | hsa-miR-382 | 1.439E+01 | 5.529E+01 | 2.603E-01 | -1.346E-00 | 6.588E-02 | 2.502E-01 | 5.841E-02 | 3.768E-01 |
| 229 | hsa-miR-18b* | 7.232E+01 | 9.249E+01 | 7.819E-01 | -2.461E-01 | 6.672E-02 | 2.503E-01 | 1.131E-01 | 4.396E-01 |
| 230 | hsa-miR-24-2* | 1.506E+02 | 1.462E+02 | 1.030E-00 | 2.924E-02 | 6.658E-02 | 2.503E-01 | 7.583E-01 | 8.928E-01 |
| 231 | hsa-miR-944 | 1.439E+01 | 1.000E-00 | 1.439E+01 | 2.667E-00 | 6.707E-02 | 2.506E-01 | 2.036E-01 | 5.254E-01 |
| 232 | hsa-miR-520f | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 6.750E-02 | 2.511E-01 | 3.353E-01 | 6.638E-01 |
| 233 | hsa-miR-1290 | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 6.882E-02 | 2.549E-01 | 1.617E-01 | 4.883E-01 |
| 234 | hsa-miR-595 | 1.025E+02 | 1.325E+02 | 7.733E-01 | -2.570E-01 | 6.960E-02 | 2.567E-01 | 1.643E-01 | 4.908E-01 |
| 235 | hsa-miR-144* | 6.543E+02 | 3.352E+02 | 1.952E-00 | 6.688E-01 | 7.001E-02 | 2.569E-01 | 6.307E-01 | 8.496E-01 |
| 236 | hsa-miR-644 | 2.530E+01 | 1.840E+01 | 1.375E-00 | 3.188E-01 | 7.024E-02 | 2.569E-01 | 7.561E-01 | 8.927E-01 |
| 237 | hsa-miR-650 | 1.236E+02 | 1.300E+02 | 9.509E-01 | -5.033E-02 | 7.318E-02 | 2.665E-01 | 9.347E-02 | 4.174E-01 |
| 238 | hsa-miR-518a-5p | 1.649E+02 | 3.160E+02 | 5.218E-01 | -6.505E-01 | 7.517E-02 | 2.702E-01 | 1.785E-02 | 2.526E-01 |
| 239 | hsa-miR-129* | 4.433E+01 | 3.081E+01 | 1.439E-00 | 3.638E-01 | 7.521E-02 | 2.702E-01 | 9.255E-01 | 9.719E-01 |
| 240 | hsa-miR-1238 | 2.851E+01 | 1.745E+01 | 1.634E-00 | 4.907E-01 | 7.545E-02 | 2.702E-01 | 3.372E-01 | 6.638E-01 |
| 241 | hsa-miR-154 | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 7.483E-02 | 2.702E-01 | 2.927E-01 | 6.299E-01 |
| 242 | hsa-miR-106b | 1.041E+04 | 1.041E+04 | 1.000E-00 | 0.000E+01 | 7.601E-02 | 2.711E-01 | 7.807E-01 | 9.019E-01 |
| 243 | hsa-miR-431* | 2.729E+01 | 1.953E+01 | 1.397E-00 | 3.344E-01 | 7.737E-02 | 2.725E-01 | 1.024E-01 | 4.251E-01 |
| 244 | hsa-miR-1202 | 2.102E+02 | 3.279E+02 | 6.411E-01 | -4.446E-01 | 7.700E-02 | 2.725E-01 | 5.561E-02 | 3.692E-01 |
| 245 | hsa-miR-587 | 3.902E+01 | 2.566E+01 | 1.521E-00 | 4.192E-01 | 7.731E-02 | 2.725E-01 | 5.048E-01 | 7.779E-01 |
| 246 | hsa-miR-708 | 3.648E+01 | 2.680E+01 | 1.361E-00 | 3.084E-01 | 7.788E-02 | 2.732E-01 | 6.271E-01 | 8.496E-01 |
| 247 | hsa-miR-451 | 1.585E+03 | 1.096E+03 | 1.446E-00 | 3.687E-01 | 7.914E-02 | 2.754E-01 | 1.397E-01 | 4.686E-01 |
| 248 | hsa-miR-519a* | 1.458E+02 | 1.852E+02 | 7.874E-01 | -2.391E-01 | 7.892E-02 | 2.754E-01 | 5.044E-02 | 3.580E-01 |
| 249 | hsa-miR-105* | 8.304E-00 | 7.252E-00 | 1.145E-00 | 1.356E-01 | 8.011E-02 | 2.777E-01 | 5.436E-01 | 8.015E-01 |
| 250 | hsa-miR-625* | 2.318E+02 | 1.788E+02 | 1.296E-00 | 2.596E-01 | 8.246E-02 | 2.847E-01 | 1.643E-01 | 4.908E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|----------------|-----------|-----------|-----------|-------------|-------------|------------|-------------|-------------|
| 251 | hsa-miR-127-3p | 5.339E+01 | 7.302E+01 | 7.311E-01 | -3.131E-01 | 8.319E-02 | 2.860E-01 | 1.388E-01 | 4.688E-01 |
| 252 | hsa-miR-1911 | 2.319E+01 | 1.734E+01 | 1.337E-00 | 2.905E-01 | 8.368E-02 | 2.866E-01 | 7.787E-01 | 9.019E-01 |
| 253 | hsa-let-7c | 4.231E+02 | 1.649E+02 | 2.566E-00 | 9.424E-01 | 8.475E-02 | 2.891E-01 | 1.267E-01 | 4.614E-01 |
| 254 | hsa-miR-1269 | 4.656E+01 | 5.868E+01 | 7.935E-01 | -2.313E-01 | 8.548E-02 | 2.904E-01 | 2.012E-01 | 5.254E-01 |
| 255 | hsa-miR-370 | 4.835E+01 | 7.104E+01 | 6.806E-01 | -3.848E-01 | 8.674E-02 | 2.936E-01 | 2.322E-01 | 5.594E-01 |
| 256 | hsa-miR-298 | 1.192E+02 | 1.678E+02 | 7.104E-01 | -3.419E-01 | 8.763E-02 | 2.943E-01 | 3.994E-02 | 3.373E-01 |
| 257 | hsa-miR-1 | 1.322E+01 | 1.000E-00 | 1.322E+01 | 2.581E-00 | 8.742E-02 | 2.943E-01 | 1.229E-01 | 4.534E-01 |
| 258 | hsa-miR-28-3p | 1.809E+02 | 1.689E+02 | 1.071E-00 | 6.829E-02 | 8.810E-02 | 2.945E-01 | 9.110E-01 | 9.682E-01 |
| 259 | hsa-miR-635 | 1.008E+02 | 1.268E+02 | 7.944E-01 | -2.302E-01 | 8.839E-02 | 2.945E-01 | 5.623E-02 | 3.705E-01 |
| 260 | hsa-miR-26a | 6.572E+03 | 7.310E+03 | 8.991E-01 | -1.064E-01 | 8.943E-02 | 2.960E-01 | 1.449E-01 | 4.686E-01 |
| 261 | hsa-miR-1261 | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 8.952E-02 | 2.960E-01 | 2.583E-02 | 2.973E-01 |
| 262 | hsa-miR-211 | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 9.213E-02 | 3.025E-01 | 8.318E-02 | 4.158E-01 |
| 263 | hsa-miR-99b* | 4.995E+01 | 5.959E+01 | 8.382E-01 | -1.765E-01 | 9.242E-02 | 3.025E-01 | 5.851E-02 | 3.768E-01 |
| 264 | hsa-miR-183 | 3.304E+02 | 4.953E+02 | 6.670E-01 | -4.049E-01 | 9.252E-02 | 3.025E-01 | 4.902E-02 | 3.580E-01 |
| 265 | hsa-miR-1184 | 1.769E+02 | 1.862E+02 | 9.502E-01 | -5.110E-02 | 9.401E-02 | 3.062E-01 | 3.136E-02 | 3.110E-01 |
| 266 | hsa-let-7g* | 1.107E+02 | 1.624E+02 | 6.814E-01 | -3.837E-01 | 9.489E-02 | 3.079E-01 | 1.735E-01 | 5.030E-01 |
| 267 | hsa-miR-519e | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 9.526E-02 | 3.079E-01 | 6.003E-01 | 8.318E-01 |
| 268 | hsa-miR-453 | 2.056E+01 | 4.534E+01 | 4.535E-01 | -7.909E-01 | 9.612E-02 | 3.084E-01 | 3.120E-01 | 6.426E-01 |
| 269 | hsa-miR-30a* | 3.985E+01 | 1.745E+01 | 2.283E-00 | 8.254E-01 | 9.586E-02 | 3.084E-01 | 6.428E-02 | 4.020E-01 |
| 270 | hsa-miR-1324 | 1.254E+02 | 1.498E+02 | 8.373E-01 | -1.775E-01 | 9.882E-02 | 3.135E-01 | 9.042E-02 | 4.174E-01 |
| 271 | hsa-miR-611 | 9.955E+01 | 1.325E+02 | 7.512E-01 | -2.861E-01 | 9.854E-02 | 3.135E-01 | 2.557E-01 | 5.917E-01 |
| 272 | hsa-miR-1322 | 7.419E+01 | 1.322E+02 | 5.610E-01 | -5.780E-01 | 9.824E-02 | 3.135E-01 | 2.116E-02 | 2.725E-01 |
| 273 | hsa-miR-1250 | 3.683E+01 | 7.661E+01 | 4.807E-01 | -7.324E-01 | 9.994E-02 | 3.159E-01 | 3.452E-01 | 6.710E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median_g1 | median_g2 | qmedian | logqmedi_an | ttest_raw_p | ttest_adjp | limma_ra_wp | limma_ad_ip |
|-----|------------------|-----------|-----------|-----------|-------------|-------------|------------|-------------|-------------|
| 274 | hsa-miR-574-3p | 2.110E+03 | 1.492E+03 | 1.414E-00 | 3.466E-01 | 1.027E-01 | 3.194E-01 | 9.801E-02 | 4.199E-01 |
| 275 | hsa-miR-518e | 5.959E+01 | 8.991E+01 | 6.628E-01 | -4.113E-01 | 1.021E-01 | 3.194E-01 | 1.682E-01 | 4.987E-01 |
| 276 | hsa-miR-410 | 7.244E+01 | 6.163E+01 | 1.175E-00 | 1.616E-01 | 1.027E-01 | 3.194E-01 | 7.127E-01 | 8.840E-01 |
| 277 | hsa-miR-125b-2* | 3.249E+01 | 6.762E+01 | 4.805E-01 | -7.330E-01 | 1.016E-01 | 3.194E-01 | 3.530E-02 | 3.241E-01 |
| 278 | hsa-miR-146b-3p | 5.447E+01 | 8.415E+01 | 6.473E-01 | -4.349E-01 | 1.029E-01 | 3.194E-01 | 6.910E-02 | 4.115E-01 |
| 279 | hsa-miR-1537 | 2.729E+01 | 1.756E+01 | 1.554E-00 | 4.406E-01 | 1.037E-01 | 3.207E-01 | 2.334E-01 | 5.594E-01 |
| 280 | hsa-miR-34c-3p | 8.188E+01 | 7.773E+01 | 1.053E-00 | 5.201E-02 | 1.084E-01 | 3.240E-01 | 3.569E-01 | 6.760E-01 |
| 281 | hsa-miR-1264 | 2.013E+01 | 1.624E+01 | 1.239E-00 | 2.145E-01 | 1.082E-01 | 3.240E-01 | 9.025E-01 | 9.671E-01 |
| 282 | hsa-miR-302d | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 1.074E-01 | 3.240E-01 | 1.489E-01 | 4.742E-01 |
| 283 | hsa-miR-221* | 1.034E+02 | 1.268E+02 | 8.156E-01 | -2.038E-01 | 1.068E-01 | 3.240E-01 | 1.612E-01 | 4.883E-01 |
| 284 | hsa-miR-1471 | 1.112E+02 | 1.543E+02 | 7.210E-01 | -3.271E-01 | 1.085E-01 | 3.240E-01 | 7.293E-02 | 4.115E-01 |
| 285 | hsa-miR-1183 | 8.815E+01 | 1.649E+02 | 5.346E-01 | -6.262E-01 | 1.072E-01 | 3.240E-01 | 1.465E-03 | 7.297E-02 |
| 286 | hsa-miR-338-3p | 1.273E+02 | 1.743E+02 | 7.302E-01 | -3.144E-01 | 1.065E-01 | 3.240E-01 | 1.445E-01 | 4.686E-01 |
| 287 | hsa-miR-519e* | 6.006E+01 | 8.761E+01 | 6.855E-01 | -3.776E-01 | 1.075E-01 | 3.240E-01 | 1.336E-01 | 4.686E-01 |
| 288 | hsa-miR-1298 | 4.315E+01 | 1.596E+01 | 2.704E-00 | 9.946E-01 | 1.053E-01 | 3.240E-01 | 6.941E-02 | 4.115E-01 |
| 289 | hsa-miR-376a | 8.836E+01 | 1.218E+02 | 7.255E-01 | -3.209E-01 | 1.062E-01 | 3.240E-01 | 8.382E-02 | 4.158E-01 |
| 290 | hsa-miR-517c | 8.713E-00 | 6.601E-00 | 1.320E-00 | 2.776E-01 | 1.094E-01 | 3.256E-01 | 9.605E-01 | 9.865E-01 |
| 291 | hsa-miR-1286 | 1.200E+02 | 1.620E+02 | 7.410E-01 | -2.998E-01 | 1.101E-01 | 3.265E-01 | 1.226E-01 | 4.534E-01 |
| 292 | hsa-miR-30b* | 1.711E+01 | 3.701E+01 | 4.622E-01 | -7.717E-01 | 1.114E-01 | 3.269E-01 | 1.054E-01 | 4.251E-01 |
| 293 | hsa-miR-361-5p | 4.159E+02 | 3.138E+02 | 1.325E-00 | 2.817E-01 | 1.111E-01 | 3.269E-01 | 3.446E-01 | 6.710E-01 |
| 294 | hsa-miR-509-3-5p | 2.136E+02 | 3.721E+02 | 5.739E-01 | -5.554E-01 | 1.108E-01 | 3.269E-01 | 5.056E-02 | 3.580E-01 |
| 295 | hsa-miR-194 | 6.572E+03 | 6.927E+03 | 9.488E-01 | -5.259E-02 | 1.124E-01 | 3.276E-01 | 2.093E-01 | 5.292E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|-----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 296 | hsa-miR-135b | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 1.122E-01 | 3.276E-01 | 6.027E-03 | 1.431E-01 |
| 297 | hsa-miR-153 | 1.027E+02 | 1.473E+02 | 6.968E-01 | -3.613E-01 | 1.141E-01 | 3.284E-01 | 5.034E-02 | 3.580E-01 |
| 298 | hsa-miR-522* | 1.325E+02 | 2.063E+02 | 6.423E-01 | -4.427E-01 | 1.132E-01 | 3.284E-01 | 9.343E-02 | 4.174E-01 |
| 299 | hsa-miR-1301 | 2.019E+02 | 2.627E+02 | 7.686E-01 | -2.632E-01 | 1.140E-01 | 3.284E-01 | 8.120E-02 | 4.158E-01 |
| 300 | hsa-miR-147b | 3.190E+01 | 2.485E+01 | 1.284E-00 | 2.498E-01 | 1.144E-01 | 3.284E-01 | 2.024E-01 | 5.254E-01 |
| 301 | hsa-miR-548d-5p | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 1.145E-01 | 3.284E-01 | 1.798E-01 | 5.097E-01 |
| 302 | hsa-miR-29a | 6.967E+02 | 9.970E+02 | 6.988E-01 | -3.585E-01 | 1.157E-01 | 3.305E-01 | 1.425E-01 | 4.686E-01 |
| 303 | hsa-miR-943 | 3.902E+01 | 3.029E+01 | 1.288E-00 | 2.533E-01 | 1.162E-01 | 3.308E-01 | 2.304E-01 | 5.594E-01 |
| 304 | hsa-miR-1306 | 2.496E+01 | 3.701E+01 | 6.744E-01 | -3.939E-01 | 1.170E-01 | 3.310E-01 | 3.563E-01 | 6.760E-01 |
| 305 | hsa-miR-521 | 4.708E+01 | 4.271E+01 | 1.102E-00 | 9.725E-02 | 1.170E-01 | 3.310E-01 | 3.976E-01 | 7.046E-01 |
| 306 | hsa-miR-124 | 1.045E+02 | 1.2118E+02 | 8.579E-01 | -1.532E-01 | 1.207E-01 | 3.405E-01 | 1.117E-01 | 4.396E-01 |
| 307 | hsa-miR-485-5p | 4.708E+01 | 6.563E+01 | 7.173E-01 | -3.322E-01 | 1.219E-01 | 3.421E-01 | 9.428E-02 | 4.174E-01 |
| 308 | hsa-miR-212 | 5.653E+01 | 5.577E+01 | 1.014E-00 | 1.350E-02 | 1.229E-01 | 3.421E-01 | 8.363E-01 | 9.407E-01 |
| 309 | hsa-miR-886-3p | 1.000E-00 | 1.125E+01 | 8.889E-02 | -2.420E-00 | 1.223E-01 | 3.421E-01 | 4.886E-01 | 7.667E-01 |
| 310 | hsa-miR-652 | 1.096E+03 | 1.127E+03 | 9.723E-01 | -2.811E-02 | 1.229E-01 | 3.421E-01 | 4.656E-01 | 7.529E-01 |
| 311 | hsa-miR-135a | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 1.233E-01 | 3.423E-01 | 1.953E-01 | 5.254E-01 |
| 312 | hsa-miR-608 | 5.339E+01 | 6.084E+01 | 8.775E-01 | -1.306E-01 | 1.260E-01 | 3.470E-01 | 7.806E-01 | 9.019E-01 |
| 313 | hsa-miR-887 | 1.027E+02 | 9.810E+01 | 1.047E-00 | 4.554E-02 | 1.271E-01 | 3.470E-01 | 9.738E-01 | 9.887E-01 |
| 314 | hsa-miR-106b* | 1.769E+02 | 2.027E+02 | 8.728E-01 | -1.361E-01 | 1.268E-01 | 3.470E-01 | 9.322E-02 | 4.174E-01 |
| 315 | hsa-miR-34b* | 4.482E+01 | 6.574E+01 | 6.817E-01 | -3.831E-01 | 1.260E-01 | 3.470E-01 | 6.365E-02 | 4.020E-01 |
| 316 | hsa-miR-1257 | 3.777E-00 | 1.000E-00 | 3.777E-00 | 1.329E-00 | 1.270E-01 | 3.470E-01 | 1.835E-01 | 5.104E-01 |
| 317 | hsa-miR-1263 | 5.339E+01 | 4.785E+01 | 1.116E-00 | 1.095E-01 | 1.276E-01 | 3.474E-01 | 4.418E-01 | 7.304E-01 |
| 318 | hsa-miR-588 | 1.197E+02 | 1.543E+02 | 7.762E-01 | -2.534E-01 | 1.306E-01 | 3.527E-01 | 1.325E-01 | 4.686E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|----------------|-----------|-----------|-----------|-------------|-------------|------------|-------------|-------------|
| 319 | hsa-miR-30d* | 5.068E+01 | 3.753E+01 | 1.350E-00 | 3.003E-01 | 1.304E-01 | 3.527E-01 | 9.086E-01 | 9.671E-01 |
| 320 | hsa-miR-423-3p | 1.096E+03 | 1.376E+03 | 7.968E-01 | -2.271E-01 | 1.308E-01 | 3.527E-01 | 1.395E-01 | 4.686E-01 |
| 321 | hsa-miR-766 | 4.858E+02 | 2.644E+02 | 1.837E-00 | 6.083E-01 | 1.315E-01 | 3.535E-01 | 2.934E-01 | 6.299E-01 |
| 322 | hsa-miR-122 | 2.066E+01 | 2.530E+01 | 8.166E-01 | -2.026E-01 | 1.328E-01 | 3.559E-01 | 5.360E-01 | 7.996E-01 |
| 323 | hsa-miR-29a* | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 1.332E-01 | 3.560E-01 | 2.110E-01 | 5.294E-01 |
| 324 | hsa-miR-107 | 1.326E+03 | 1.687E+03 | 7.864E-01 | -2.403E-01 | 1.343E-01 | 3.565E-01 | 8.529E-02 | 4.158E-01 |
| 325 | hsa-miR-493 | 2.474E+01 | 2.423E+01 | 1.021E-00 | 2.083E-02 | 1.341E-01 | 3.565E-01 | 9.154E-01 | 9.693E-01 |
| 326 | hsa-miR-1323 | 4.032E+01 | 1.756E+01 | 2.296E-00 | 8.310E-01 | 1.347E-01 | 3.565E-01 | 1.041E-01 | 4.251E-01 |
| 327 | hsa-miR-486-3p | 2.194E+02 | 1.862E+02 | 1.179E-00 | 1.645E-01 | 1.364E-01 | 3.577E-01 | 6.806E-01 | 8.698E-01 |
| 328 | hsa-miR-583 | 4.708E+01 | 3.289E+01 | 1.431E-00 | 3.587E-01 | 1.356E-01 | 3.577E-01 | 1.194E-01 | 4.510E-01 |
| 329 | hsa-miR-19a* | 4.471E+01 | 3.081E+01 | 1.451E-00 | 3.723E-01 | 1.361E-01 | 3.577E-01 | 8.844E-01 | 9.618E-01 |
| 330 | hsa-miR-497 | 1.672E+02 | 2.251E+02 | 7.427E-01 | -2.974E-01 | 1.386E-01 | 3.582E-01 | 5.288E-02 | 3.652E-01 |
| 331 | hsa-miR-504 | 3.406E+01 | 3.172E+01 | 1.074E-00 | 7.121E-02 | 1.379E-01 | 3.582E-01 | 4.789E-01 | 7.581E-01 |
| 332 | hsa-miR-508-3p | 1.000E-00 | 1.000E-00 | 0.000E+01 | 0.000E+01 | 1.385E-01 | 3.582E-01 | 2.044E-01 | 5.254E-01 |
| 333 | hsa-miR-93* | 1.326E+03 | 1.242E+03 | 1.068E-00 | 6.581E-02 | 1.372E-01 | 3.582E-01 | 5.235E-01 | 7.967E-01 |
| 334 | hsa-miR-659 | 6.387E+01 | 6.629E+01 | 9.635E-01 | -3.716E-02 | 1.379E-01 | 3.582E-01 | 7.797E-01 | 9.019E-01 |
| 335 | hsa-miR-524-3p | 2.066E+01 | 3.753E+01 | 5.506E-01 | -5.968E-01 | 1.422E-01 | 3.592E-01 | 1.185E-01 | 4.505E-01 |
| 336 | hsa-miR-503 | 2.595E+02 | 3.543E+02 | 7.325E-01 | -3.113E-01 | 1.428E-01 | 3.592E-01 | 1.205E-01 | 4.510E-01 |
| 337 | hsa-miR-517b | 1.680E+01 | 1.252E+01 | 1.342E-00 | 2.944E-01 | 1.427E-01 | 3.592E-01 | 7.551E-01 | 8.926E-01 |
| 338 | hsa-miR-617 | 1.868E+01 | 5.416E-00 | 3.449E-00 | 1.238E-00 | 1.412E-01 | 3.592E-01 | 2.765E-01 | 6.190E-01 |
| 339 | hsa-miR-590-5p | 1.539E+02 | 1.565E+02 | 9.831E-01 | -1.705E-02 | 1.427E-01 | 3.592E-01 | 1.143E-01 | 4.408E-01 |
| 340 | hsa-miR-138-1* | 9.249E+01 | 1.000E-00 | 0.000E+01 | 1.418E-01 | 3.592E-01 | 9.088E-01 | 9.671E-01 | |
| 341 | hsa-miR-135a* | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 1.420E-01 | 3.592E-01 | 2.830E-01 | 6.220E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|-----------------|-----------|-----------|-----------|-------------|-------------|------------|-------------|-------------|
| 342 | hsa-miR-577 | 1.868E+01 | 1.596E+01 | 1.170E-00 | 1.574E-01 | 1.397E-01 | 3.592E-01 | 6.797E-01 | 8.698E-01 |
| 343 | hsa-miR-549 | 5.144E+01 | 3.733E+01 | 1.378E-00 | 3.206E-01 | 1.428E-01 | 3.592E-01 | 1.720E-01 | 5.030E-01 |
| 344 | hsa-miR-194* | 4.339E+01 | 6.327E+01 | 6.858E-01 | -3.771E-01 | 1.439E-01 | 3.600E-01 | 1.218E-01 | 4.531E-01 |
| 345 | hsa-miR-199b-3p | 9.372E+01 | 7.937E+01 | 1.181E-00 | 1.662E-01 | 1.436E-01 | 3.600E-01 | 3.580E-01 | 6.760E-01 |
| 346 | hsa-miR-541* | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 1.463E-01 | 3.643E-01 | 1.567E-01 | 4.881E-01 |
| 347 | hsa-miR-1299 | 3.618E+01 | 5.447E+01 | 6.643E-01 | -4.091E-01 | 1.465E-01 | 3.643E-01 | 1.326E-02 | 2.158E-01 |
| 348 | hsa-miR-374a* | 3.249E+01 | 2.660E+01 | 1.221E-00 | 2.000E-01 | 1.472E-01 | 3.650E-01 | 8.692E-01 | 9.543E-01 |
| 349 | hsa-miR-7-2* | 2.715E+01 | 2.485E+01 | 1.092E-00 | 8.840E-02 | 1.501E-01 | 3.694E-01 | 3.375E-01 | 6.638E-01 |
| 350 | hsa-miR-621 | 3.404E+02 | 4.720E+02 | 7.212E-01 | -3.268E-01 | 1.502E-01 | 3.694E-01 | 1.126E-01 | 4.396E-01 |
| 351 | hsa-miR-1203 | 2.001E+02 | 2.352E+02 | 8.509E-01 | -1.614E-01 | 1.502E-01 | 3.694E-01 | 8.915E-02 | 4.174E-01 |
| 352 | hsa-miR-27a* | 3.406E+01 | 3.289E+01 | 1.036E-00 | 3.494E-02 | 1.510E-01 | 3.703E-01 | 8.560E-01 | 9.508E-01 |
| 353 | hsa-miR-548f | 4.835E+01 | 4.315E+01 | 1.120E-00 | 1.137E-01 | 1.515E-01 | 3.704E-01 | 8.738E-01 | 9.545E-01 |
| 354 | hsa-miR-151-3p | 6.222E+02 | 6.967E+02 | 8.931E-01 | -1.130E-01 | 1.519E-01 | 3.704E-01 | 9.692E-01 | 9.875E-01 |
| 355 | hsa-miR-409-5p | 7.844E+01 | 6.163E+01 | 1.273E-00 | 2.412E-01 | 1.524E-01 | 3.705E-01 | 2.810E-01 | 6.204E-01 |
| 356 | hsa-miR-129-3p | 7.541E+01 | 8.653E+01 | 8.715E-01 | -1.375E-01 | 1.530E-01 | 3.708E-01 | 3.311E-01 | 6.638E-01 |
| 357 | hsa-miR-922 | 1.266E+02 | 2.119E+02 | 5.976E-01 | -5.148E-01 | 1.536E-01 | 3.713E-01 | 4.032E-02 | 3.373E-01 |
| 358 | hsa-miR-890 | 3.674E+01 | 4.629E+01 | 7.937E-01 | -2.310E-01 | 1.558E-01 | 3.749E-01 | 2.080E-01 | 5.280E-01 |
| 359 | hsa-miR-7-1* | 2.947E+02 | 2.306E+02 | 1.278E-00 | 2.452E-01 | 1.560E-01 | 3.749E-01 | 4.590E-01 | 7.498E-01 |
| 360 | hsa-miR-548j | 1.000E-00 | 1.000E-00 | 0.000E-00 | 0.000E+01 | 1.566E-01 | 3.754E-01 | 3.579E-01 | 6.760E-01 |
| 361 | hsa-miR-498 | 2.787E+01 | 2.397E+01 | 1.163E-00 | 1.508E-01 | 1.575E-01 | 3.755E-01 | 7.439E-01 | 8.883E-01 |
| 362 | hsa-miR-195* | 6.733E+01 | 9.249E+01 | 7.279E-01 | -3.176E-01 | 1.571E-01 | 3.755E-01 | 8.927E-02 | 4.174E-01 |
| 363 | hsa-miR-507 | 1.745E+01 | 1.720E-00 | 1.015E+01 | 2.317E-00 | 1.588E-01 | 3.755E-01 | 1.945E-01 | 5.254E-01 |
| 364 | hsa-miR-593 | 2.965E+02 | 4.673E+02 | 6.346E-01 | -4.547E-01 | 1.583E-01 | 3.755E-01 | 9.745E-02 | 4.199E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|-----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 365 | hsa-miR-501-3p | 3.753E+02 | 3.840E+02 | 9.773E-01 | -2.294E-02 | 1.586E-01 | 3.755E-01 | 1.426E-01 | 4.686E-01 |
| 366 | hsa-miR-302e | 2.335E-00 | 1.000E-00 | 2.335E-00 | 8.481E-01 | 1.614E-01 | 3.806E-01 | 1.584E-01 | 4.883E-01 |
| 367 | hsa-miR-204 | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 1.619E-01 | 3.807E-01 | 4.080E-02 | 3.373E-01 |
| 368 | hsa-miR-767-3p | 4.433E+01 | 4.315E+01 | 1.027E-00 | 2.696E-02 | 1.629E-01 | 3.819E-01 | 3.089E-01 | 6.412E-01 |
| 369 | hsa-miR-483-5p | 1.792E+02 | 1.649E+02 | 1.087E-00 | 8.339E-02 | 1.651E-01 | 3.847E-01 | 5.884E-01 | 8.254E-01 |
| 370 | hsa-miR-193a-5p | 5.447E+01 | 5.868E+01 | 9.283E-01 | -7.437E-02 | 1.654E-01 | 3.847E-01 | 6.575E-01 | 8.645E-01 |
| 371 | hsa-miR-1270 | 2.066E+01 | 4.674E-00 | 4.421E-00 | 1.486E-00 | 1.648E-01 | 3.847E-01 | 2.321E-01 | 5.594E-01 |
| 372 | hsa-miR-658 | 4.881E+01 | 6.006E+01 | 8.126E-01 | -2.075E-01 | 1.666E-01 | 3.864E-01 | 6.335E-02 | 4.020E-01 |
| 373 | hsa-miR-656 | 2.821E+01 | 1.964E+01 | 1.437E-00 | 3.624E-01 | 1.671E-01 | 3.865E-01 | 9.563E-01 | 9.865E-01 |
| 374 | hsa-miR-1197 | 3.710E+01 | 2.530E+01 | 1.466E-00 | 3.826E-01 | 1.684E-01 | 3.885E-01 | 3.891E-01 | 6.996E-01 |
| 375 | hsa-miR-342-5p | 8.373E+01 | 7.844E+01 | 1.068E-00 | 6.533E-02 | 1.706E-01 | 3.926E-01 | 4.368E-02 | 3.458E-01 |
| 376 | hsa-miR-6112 | 6.841E+01 | 8.174E+01 | 8.369E-01 | -1.780E-01 | 1.719E-01 | 3.939E-01 | 1.471E-01 | 4.728E-01 |
| 377 | hsa-miR-876-5p | 3.674E+01 | 3.114E+01 | 1.180E-00 | 1.656E-01 | 1.725E-01 | 3.939E-01 | 1.814E-01 | 5.104E-01 |
| 378 | hsa-miR-136 | 2.904E+01 | 2.146E+01 | 1.353E-00 | 3.024E-01 | 1.722E-01 | 3.939E-01 | 1.778E-01 | 5.097E-01 |
| 379 | hsa-miR-1253 | 6.936E+01 | 8.531E+01 | 8.131E-01 | -2.070E-01 | 1.795E-01 | 4.065E-01 | 1.523E-01 | 4.795E-01 |
| 380 | hsa-miR-641 | 5.762E+01 | 8.991E+01 | 6.408E-01 | -4.450E-01 | 1.791E-01 | 4.065E-01 | 4.738E-01 | 7.572E-01 |
| 381 | hsa-miR-671-3p | 3.637E+01 | 3.149E+01 | 1.155E-00 | 1.442E-01 | 1.799E-01 | 4.065E-01 | 9.146E-01 | 9.693E-01 |
| 382 | hsa-miR-548g | 2.615E+01 | 1.876E+01 | 1.394E-00 | 3.323E-01 | 1.799E-01 | 4.065E-01 | 6.166E-01 | 8.420E-01 |
| 383 | hsa-miR-548c-5p | 5.192E-00 | 1.071E+01 | 4.847E-01 | -7.243E-01 | 1.822E-01 | 4.105E-01 | 9.043E-01 | 9.671E-01 |
| 384 | hsa-miR-603 | 1.152E+02 | 1.218E+02 | 9.456E-01 | -5.589E-02 | 1.831E-01 | 4.105E-01 | 9.548E-01 | 9.865E-01 |
| 385 | hsa-miR-520b | 1.450E+01 | 2.234E-00 | 6.488E-00 | 1.870E-00 | 1.828E-01 | 4.105E-01 | 2.215E-01 | 5.476E-01 |
| 386 | hsa-miR-1283 | 1.098E+02 | 8.126E+01 | 1.351E-00 | 3.009E-01 | 1.854E-01 | 4.145E-01 | 4.831E-01 | 7.617E-01 |
| 387 | hsa-miR-1255a | 4.835E+01 | 7.714E+01 | 6.268E-01 | -4.672E-01 | 1.882E-01 | 4.154E-01 | 6.406E-02 | 4.020E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|-----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 388 | hsa-miR-296-3p | 5.144E+01 | 4.958E+01 | 1.038E-00 | 3.686E-02 | 1.874E-01 | 4.154E-01 | 9.167E-01 | 9.695E-01 |
| 389 | hsa-miR-202* | 5.447E+01 | 6.563E+01 | 8.300E-01 | -1.863E-01 | 1.871E-01 | 4.154E-01 | 7.703E-01 | 8.986E-01 |
| 390 | hsa-miR-1200 | 7.370E+01 | 9.487E+01 | 7.769E-01 | -2.525E-01 | 1.881E-01 | 4.154E-01 | 2.049E-01 | 5.254E-01 |
| 391 | hsa-miR-630 | 3.081E+01 | 2.485E+01 | 1.240E-00 | 2.151E-01 | 1.882E-01 | 4.154E-01 | 6.601E-01 | 8.656E-01 |
| 392 | hsa-miR-609 | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 1.899E-01 | 4.178E-01 | 4.605E-01 | 7.498E-01 |
| 393 | hsa-miR-149 | 2.100E+01 | 1.995E+01 | 1.053E-00 | 5.121E-02 | 1.902E-01 | 4.178E-01 | 8.707E-01 | 9.545E-01 |
| 394 | hsa-miR-767-5p | 1.590E+02 | 1.862E+02 | 8.543E-01 | -1.575E-01 | 1.936E-01 | 4.220E-01 | 7.753E-02 | 4.158E-01 |
| 395 | hsa-miR-548m | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 1.930E-01 | 4.220E-01 | 3.102E-01 | 6.412E-01 |
| 396 | hsa-miR-381 | 8.739E+01 | 9.232E+01 | 9.466E-01 | -5.489E-02 | 1.936E-01 | 4.220E-01 | 1.716E-01 | 5.030E-01 |
| 397 | hsa-miR-200c* | 4.835E+01 | 3.172E+01 | 1.525E-00 | 4.217E-01 | 1.961E-01 | 4.262E-01 | 4.706E-01 | 7.556E-01 |
| 398 | hsa-miR-425* | 6.788E+01 | 7.937E+01 | 8.552E-01 | -1.564E-01 | 1.968E-01 | 4.268E-01 | 1.237E-01 | 4.543E-01 |
| 399 | hsa-miR-30c | 2.158E+03 | 2.630E+03 | 8.203E-01 | -1.981E-01 | 1.984E-01 | 4.290E-01 | 1.174E-01 | 4.483E-01 |
| 400 | hsa-miR-1201 | 5.959E+01 | 5.518E+01 | 1.080E-00 | 7.687E-02 | 1.988E-01 | 4.290E-01 | 8.289E-01 | 9.363E-01 |
| 401 | hsa-miR-548a-5p | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 2.001E-01 | 4.300E-01 | 2.964E-01 | 6.325E-01 |
| 402 | hsa-miR-33a* | 6.151E+01 | 6.327E+01 | 9.721E-01 | -2.826E-02 | 2.003E-01 | 4.300E-01 | 5.121E-01 | 7.822E-01 |
| 403 | hsa-miR-450a | 1.000E-00 | 6.601E-00 | 1.515E-01 | -1.887E-00 | 2.012E-01 | 4.309E-01 | 8.096E-01 | 9.242E-01 |
| 404 | hsa-miR-331-3p | 9.557E+02 | 7.902E+02 | 1.209E-00 | 1.901E-01 | 2.017E-01 | 4.309E-01 | 3.073E-01 | 6.412E-01 |
| 405 | hsa-miR-32 | 1.417E+02 | 1.411E+02 | 1.005E-00 | 4.663E-03 | 2.032E-01 | 4.330E-01 | 7.156E-01 | 8.841E-01 |
| 406 | hsa-miR-223* | 2.888E+01 | 2.566E+01 | 1.125E-00 | 1.181E-01 | 2.049E-01 | 4.355E-01 | 4.710E-01 | 7.556E-01 |
| 407 | hsa-miR-200b | 4.865E+01 | 4.376E+01 | 1.112E-00 | 1.060E-01 | 2.064E-01 | 4.377E-01 | 9.893E-01 | 9.974E-01 |
| 408 | hsa-miR-509-3p | 1.000E-00 | 1.860E-00 | 5.375E-01 | -6.208E-01 | 2.089E-01 | 4.418E-01 | 8.653E-01 | 9.528E-01 |
| 409 | hsa-miR-129-5p | 3.315E+01 | 1.252E+01 | 2.649E-00 | 9.742E-01 | 2.105E-01 | 4.420E-01 | 3.748E-01 | 6.823E-01 |
| 410 | hsa-miR-10b* | 5.144E+01 | 5.046E+01 | 1.019E-00 | 1.919E-02 | 2.095E-01 | 4.420E-01 | 4.142E-01 | 7.106E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|----------------|-----------|-----------|-----------|-------------|-------------|------------|-------------|-------------|
| 411 | hsa-miR-195 | 6.222E+02 | 7.305E+02 | 8.518E-01 | -1.605E-01 | 2.105E-01 | 4.420E-01 | 1.566E-01 | 4.881E-01 |
| 412 | hsa-miR-92a-2* | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 2.113E-01 | 4.425E-01 | 7.189E-01 | 8.841E-01 |
| 413 | hsa-miR-548l | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 2.124E-01 | 4.430E-01 | 9.939E-01 | 9.982E-01 |
| 414 | hsa-miR-345 | 1.066E+02 | 1.120E+02 | 9.513E-01 | -4.996E-02 | 2.125E-01 | 4.430E-01 | 1.789E-01 | 5.097E-01 |
| 415 | hsa-miR-377* | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 2.139E-01 | 4.448E-01 | 6.770E-01 | 8.698E-01 |
| 416 | hsa-miR-181c | 1.259E+02 | 8.783E+01 | 1.434E-00 | 3.603E-01 | 2.154E-01 | 4.469E-01 | 3.816E-01 | 6.917E-01 |
| 417 | hsa-miR-33b* | 1.358E+02 | 1.488E+02 | 9.131E-01 | -9.094E-02 | 2.161E-01 | 4.469E-01 | 1.420E-01 | 4.686E-01 |
| 418 | hsa-miR-455-5p | 1.322E+01 | 6.768E-00 | 1.953E-00 | 6.692E-01 | 2.165E-01 | 4.469E-01 | 3.595E-01 | 6.763E-01 |
| 419 | hsa-miR-181c* | 6.030E+01 | 6.127E+01 | 9.841E-01 | -1.605E-02 | 2.171E-01 | 4.471E-01 | 5.557E-01 | 8.023E-01 |
| 420 | hsa-miR-616 | 1.711E+01 | 2.485E+01 | 6.884E-01 | -3.734E-01 | 2.206E-01 | 4.498E-01 | 9.876E-01 | 9.974E-01 |
| 421 | hsa-miR-208b | 6.046E+01 | 6.281E+01 | 9.626E-01 | -3.812E-02 | 2.220E-01 | 4.498E-01 | 8.384E-01 | 9.407E-01 |
| 422 | hsa-miR-891b | 9.652E+01 | 8.761E+01 | 1.102E-00 | 9.681E-02 | 2.221E-01 | 4.498E-01 | 7.642E-01 | 8.948E-01 |
| 423 | hsa-miR-138 | 3.376E+01 | 5.092E+01 | 6.630E-01 | -4.110E-01 | 2.190E-01 | 4.498E-01 | 2.811E-01 | 6.204E-01 |
| 424 | hsa-miR-135b* | 5.332E+01 | 6.983E+01 | 7.636E-01 | -2.697E-01 | 2.217E-01 | 4.498E-01 | 1.328E-01 | 4.686E-01 |
| 425 | hsa-miR-1266 | 1.129E+02 | 1.264E+02 | 8.929E-01 | -1.133E-01 | 2.217E-01 | 4.498E-01 | 1.526E-01 | 4.795E-01 |
| 426 | hsa-let-7i* | 2.293E+02 | 2.676E+02 | 8.570E-01 | -1.543E-01 | 2.197E-01 | 4.498E-01 | 1.044E-01 | 4.251E-01 |
| 427 | hsa-miR-877 | 5.900E+01 | 4.737E+01 | 1.245E-00 | 2.194E-01 | 2.239E-01 | 4.504E-01 | 5.729E-01 | 8.132E-01 |
| 428 | hsa-miR-132* | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 2.229E-01 | 4.504E-01 | 4.667E-01 | 7.529E-01 |
| 429 | hsa-miR-192 | 5.646E+03 | 6.228E+03 | 9.067E-01 | -9.800E-02 | 2.239E-01 | 4.504E-01 | 2.942E-01 | 6.299E-01 |
| 430 | hsa-miR-940 | 1.565E+02 | 1.594E+02 | 9.819E-01 | -1.831E-02 | 2.254E-01 | 4.524E-01 | 9.692E-01 | 9.875E-01 |
| 431 | hsa-miR-24-1* | 8.704E+01 | 8.687E+01 | 1.002E-00 | 1.921E-03 | 2.274E-01 | 4.554E-01 | 7.955E-01 | 9.130E-01 |
| 432 | hsa-miR-302b* | 6.685E-00 | 1.000E-00 | 6.685E-00 | 1.900E-00 | 2.292E-01 | 4.558E-01 | 3.247E-01 | 6.562E-01 |
| 433 | hsa-miR-602 | 1.072E+02 | 1.350E+02 | 7.941E-01 | -2.305E-01 | 2.291E-01 | 4.558E-01 | 2.901E-01 | 6.289E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad ip |
|-----|-----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 434 | hsa-miR-33b | 1.728E+02 | 1.784E+02 | 9.684E-01 | -3.214E-02 | 2.292E-01 | 4.558E-01 | 6.912E-01 | 8.767E-01 |
| 435 | hsa-miR-323-5p | 4.708E+01 | 5.868E+01 | 8.023E-01 | -2.203E-01 | 2.301E-01 | 4.566E-01 | 4.908E-02 | 3.580E-01 |
| 436 | hsa-miR-1908 | 1.028E+03 | 1.326E+03 | 7.755E-01 | -2.543E-01 | 2.308E-01 | 4.568E-01 | 8.966E-02 | 4.174E-01 |
| 437 | hsa-miR-339-5p | 6.883E+02 | 4.526E+02 | 1.521E-00 | 4.192E-01 | 2.313E-01 | 4.568E-01 | 1.429E-01 | 4.686E-01 |
| 438 | hsa-miR-657 | 5.943E+01 | 5.015E+01 | 1.185E-00 | 1.697E-01 | 2.360E-01 | 4.618E-01 | 7.406E-01 | 8.878E-01 |
| 439 | hsa-miR-553 | 3.329E-00 | 9.746E-00 | 3.416E-01 | -1.074E-00 | 2.357E-01 | 4.618E-01 | 5.569E-01 | 8.023E-01 |
| 440 | hsa-miR-183* | 8.383E+01 | 9.955E+01 | 8.421E-01 | -1.719E-01 | 2.347E-01 | 4.618E-01 | 2.071E-01 | 5.273E-01 |
| 441 | hsa-miR-516a-3p | 6.768E-00 | 9.746E-00 | 6.944E-01 | -3.646E-01 | 2.352E-01 | 4.618E-01 | 8.422E-01 | 9.427E-01 |
| 442 | hsa-miR-125b | 5.429E+02 | 4.231E+02 | 1.283E-00 | 2.493E-01 | 2.372E-01 | 4.621E-01 | 8.608E-01 | 9.528E-01 |
| 443 | hsa-miR-1909* | 4.482E+01 | 4.629E+01 | 9.682E-01 | -3.233E-02 | 2.370E-01 | 4.621E-01 | 5.411E-01 | 8.006E-01 |
| 444 | hsa-miR-505 | 1.898E+01 | 1.502E+01 | 1.263E-00 | 2.338E-01 | 2.389E-01 | 4.634E-01 | 8.664E-01 | 9.528E-01 |
| 445 | hsa-miR-616* | 5.447E+01 | 5.380E+01 | 1.012E-00 | 1.236E-02 | 2.384E-01 | 4.634E-01 | 4.974E-01 | 7.748E-01 |
| 446 | hsa-miR-875-3p | 5.239E+01 | 8.174E+01 | 6.409E-01 | -4.449E-01 | 2.409E-01 | 4.661E-01 | 8.770E-02 | 4.174E-01 |
| 447 | hsa-miR-527 | 1.562E+02 | 1.938E+02 | 8.060E-01 | -2.157E-01 | 2.430E-01 | 4.692E-01 | 1.078E-01 | 4.325E-01 |
| 448 | hsa-miR-365 | 6.366E+01 | 3.753E+01 | 1.696E-00 | 5.285E-01 | 2.443E-01 | 4.707E-01 | 3.085E-02 | 3.110E-01 |
| 449 | hsa-miR-147 | 2.925E+01 | 3.489E+01 | 8.382E-01 | -1.765E-01 | 2.467E-01 | 4.741E-01 | 9.116E-02 | 4.174E-01 |
| 450 | hsa-miR-516a-5p | 1.900E+02 | 2.854E+02 | 6.656E-01 | -4.070E-01 | 2.472E-01 | 4.741E-01 | 9.183E-02 | 4.174E-01 |
| 451 | hsa-miR-493* | 3.395E+01 | 2.397E+01 | 1.416E-00 | 3.480E-01 | 2.487E-01 | 4.757E-01 | 8.594E-01 | 9.528E-01 |
| 452 | hsa-miR-933 | 1.763E+02 | 2.530E+02 | 6.970E-01 | -3.610E-01 | 2.491E-01 | 4.757E-01 | 7.820E-02 | 4.158E-01 |
| 453 | hsa-miR-20a* | 1.407E+02 | 1.738E+02 | 8.095E-01 | -2.114E-01 | 2.529E-01 | 4.819E-01 | 1.618E-01 | 4.883E-01 |
| 454 | hsa-miR-671-5p | 6.193E+01 | 6.905E+01 | 8.970E-01 | -1.087E-01 | 2.539E-01 | 4.827E-01 | 1.846E-01 | 5.107E-01 |
| 455 | hsa-miR-490-5p | 1.306E+02 | 1.430E+02 | 9.132E-01 | -9.080E-02 | 2.560E-01 | 4.855E-01 | 2.058E-01 | 5.254E-01 |
| 456 | hsa-miR-302c* | 2.496E+01 | 2.566E+01 | 9.727E-01 | -2.766E-02 | 2.565E-01 | 4.855E-01 | 9.313E-01 | 9.739E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 457 | hsa-let-7c* | 1.816E+01 | 1.000E-00 | 1.816E+01 | 2.899E-00 | 2.572E-01 | 4.856E-01 | 1.609E-01 | 4.883E-01 |
| 458 | hsa-miR-484 | 7.714E+03 | 6.927E+03 | 1.114E-00 | 1.075E-01 | 2.622E-01 | 4.929E-01 | 6.563E-01 | 8.645E-01 |
| 459 | hsa-miR-187 | 1.406E+01 | 3.289E+01 | 4.277E-01 | -8.494E-01 | 2.619E-01 | 4.929E-01 | 4.275E-01 | 7.192E-01 |
| 460 | hsa-miR-1251 | 1.300E+02 | 1.414E+02 | 9.192E-01 | -8.426E-02 | 2.634E-01 | 4.941E-01 | 1.474E-01 | 4.728E-01 |
| 461 | hsa-miR-1307 | 5.601E+01 | 7.255E+01 | 7.719E-01 | -2.589E-01 | 2.668E-01 | 4.995E-01 | 1.609E-01 | 4.883E-01 |
| 462 | hsa-miR-17* | 5.591E+02 | 8.284E+02 | 6.749E-01 | -3.932E-01 | 2.697E-01 | 5.005E-01 | 1.443E-01 | 4.686E-01 |
| 463 | hsa-miR-648 | 4.708E+01 | 4.367E+01 | 1.078E-00 | 7.512E-02 | 2.699E-01 | 5.005E-01 | 9.571E-01 | 9.865E-01 |
| 464 | hsa-miR-1274b | 7.558E+02 | 5.531E+02 | 1.366E-00 | 3.122E-01 | 2.689E-01 | 5.005E-01 | 5.496E-01 | 8.015E-01 |
| 465 | hsa-miR-96 | 1.569E+02 | 1.543E+02 | 1.017E-00 | 1.661E-02 | 2.702E-01 | 5.005E-01 | 2.655E-01 | 6.045E-01 |
| 466 | hsa-miR-302f | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 2.689E-01 | 5.005E-01 | 3.445E-01 | 6.710E-01 |
| 467 | hsa-miR-331-5p | 3.260E+01 | 6.601E-00 | 4.938E-00 | 1.597E-00 | 2.715E-01 | 5.007E-01 | 2.138E-01 | 5.318E-01 |
| 468 | hsa-miR-149* | 7.135E+02 | 1.127E+03 | 6.329E-01 | -4.575E-01 | 2.710E-01 | 5.007E-01 | 1.153E-01 | 4.422E-01 |
| 469 | hsa-miR-99a | 1.021E+02 | 9.862E+01 | 1.036E-00 | 3.511E-02 | 2.737E-01 | 5.010E-01 | 4.401E-01 | 7.290E-01 |
| 470 | hsa-miR-1228* | 1.351E+03 | 1.760E+03 | 7.675E-01 | -2.646E-01 | 2.735E-01 | 5.010E-01 | 8.307E-02 | 4.158E-01 |
| 471 | hsa-miR-30d | 7.714E+03 | 5.922E+03 | 1.303E-00 | 2.643E-01 | 2.740E-01 | 5.010E-01 | 8.086E-01 | 9.242E-01 |
| 472 | hsa-miR-21* | 1.016E+02 | 1.288E+02 | 7.885E-01 | -2.377E-01 | 2.735E-01 | 5.010E-01 | 1.837E-01 | 5.104E-01 |
| 473 | hsa-miR-545 | 1.152E+02 | 1.358E+02 | 8.478E-01 | -1.651E-01 | 2.751E-01 | 5.019E-01 | 1.840E-01 | 5.104E-01 |
| 474 | hsa-miR-600 | 7.396E+01 | 5.653E+01 | 1.308E-00 | 2.688E-01 | 2.761E-01 | 5.025E-01 | 3.366E-02 | 3.208E-01 |
| 475 | hsa-miR-424 | 2.194E+02 | 3.051E+02 | 7.192E-01 | -3.295E-01 | 2.766E-01 | 5.025E-01 | 1.281E-01 | 4.625E-01 |
| 476 | hsa-miR-21 | 8.391E+02 | 9.187E+02 | 9.133E-01 | -9.066E-02 | 2.772E-01 | 5.026E-01 | 1.669E-01 | 4.966E-01 |
| 477 | hsa-miR-18b | 1.672E+02 | 1.257E+02 | 1.330E-00 | 2.853E-01 | 2.791E-01 | 5.039E-01 | 3.055E-01 | 6.412E-01 |
| 478 | hsa-miR-448 | 8.557E+01 | 1.030E+02 | 8.306E-01 | -1.856E-01 | 2.788E-01 | 5.039E-01 | 4.667E-01 | 7.529E-01 |
| 479 | hsa-miR-126* | 2.133E-00 | 1.720E-00 | 1.240E-00 | 2.153E-01 | 2.802E-01 | 5.049E-01 | 7.231E-01 | 8.841E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|----------------|-----------|-----------|-----------|-------------|-------------|------------|-------------|-------------|
| 480 | hsa-miR-98 | 4.937E-00 | 1.000E-00 | 4.937E-00 | 1.597E-00 | 2.850E-01 | 5.124E-01 | 6.811E-02 | 4.115E-01 |
| 481 | hsa-miR-148a | 9.557E+02 | 1.431E+03 | 6.677E-01 | -4.040E-01 | 2.861E-01 | 5.132E-01 | 1.691E-01 | 4.998E-01 |
| 482 | hsa-miR-1280 | 4.196E+03 | 4.640E+03 | 9.042E-01 | -1.008E-01 | 2.866E-01 | 5.132E-01 | 6.790E-01 | 8.698E-01 |
| 483 | hsa-miR-380* | 7.294E+01 | 7.160E+01 | 1.019E-00 | 1.851E-02 | 2.874E-01 | 5.135E-01 | 1.988E-01 | 5.254E-01 |
| 484 | hsa-miR-136* | 5.092E+01 | 3.692E+01 | 1.379E-00 | 3.214E-01 | 2.889E-01 | 5.140E-01 | 9.332E-01 | 9.739E-01 |
| 485 | hsa-miR-411 | 5.092E+01 | 4.785E+01 | 1.064E-00 | 6.215E-02 | 2.883E-01 | 5.140E-01 | 2.905E-01 | 6.289E-01 |
| 486 | hsa-miR-523 | 8.399E+01 | 8.023E+01 | 1.047E-00 | 4.578E-02 | 2.911E-01 | 5.170E-01 | 5.830E-01 | 8.222E-01 |
| 487 | hsa-miR-187* | 1.251E+02 | 2.154E+02 | 5.807E-01 | -5.436E-01 | 2.934E-01 | 5.184E-01 | 6.680E-01 | 8.661E-01 |
| 488 | hsa-miR-196b | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 2.929E-01 | 5.184E-01 | 3.213E-01 | 6.524E-01 |
| 489 | hsa-miR-34c-5p | 5.068E+01 | 4.088E+01 | 1.240E-00 | 2.147E-01 | 2.944E-01 | 5.184E-01 | 6.551E-01 | 8.645E-01 |
| 490 | hsa-miR-627 | 1.535E+02 | 1.565E+02 | 9.806E-01 | -1.957E-02 | 2.940E-01 | 5.184E-01 | 8.385E-01 | 9.407E-01 |
| 491 | hsa-miR-1296 | 4.723E+01 | 4.629E+01 | 1.020E-00 | 1.993E-02 | 2.981E-01 | 5.240E-01 | 2.779E-01 | 6.190E-01 |
| 492 | hsa-miR-637 | 9.439E-00 | 1.479E+01 | 6.383E-01 | -4.490E-01 | 2.988E-01 | 5.241E-01 | 9.062E-01 | 9.671E-01 |
| 493 | hsa-miR-1268 | 3.635E+02 | 5.176E+02 | 7.022E-01 | -3.536E-01 | 2.998E-01 | 5.241E-01 | 9.293E-02 | 4.174E-01 |
| 494 | hsa-miR-379 | 8.436E-00 | 6.601E-00 | 1.278E-00 | 2.453E-01 | 3.011E-01 | 5.241E-01 | 6.679E-01 | 8.661E-01 |
| 495 | hsa-miR-362-5p | 1.259E+02 | 1.096E+02 | 1.149E-00 | 1.390E-01 | 3.008E-01 | 5.241E-01 | 1.054E-01 | 4.251E-01 |
| 496 | hsa-miR-557 | 2.715E+01 | 3.753E+01 | 7.233E-01 | -3.239E-01 | 3.012E-01 | 5.241E-01 | 2.441E-01 | 5.739E-01 |
| 497 | hsa-miR-326 | 8.606E+01 | 9.955E+01 | 8.644E-01 | -1.457E-01 | 3.020E-01 | 5.244E-01 | 2.409E-01 | 5.711E-01 |
| 498 | hsa-miR-34a* | 9.061E+01 | 8.761E+01 | 1.034E-00 | 3.359E-02 | 3.026E-01 | 5.244E-01 | 9.687E-01 | 9.875E-01 |
| 499 | hsa-miR-548p | 1.145E+02 | 1.371E+02 | 8.356E-01 | -1.796E-01 | 3.036E-01 | 5.251E-01 | 6.994E-01 | 8.798E-01 |
| 500 | hsa-miR-1271 | 1.509E+02 | 1.543E+02 | 9.784E-01 | -2.183E-02 | 3.043E-01 | 5.252E-01 | 9.557E-01 | 9.865E-01 |
| 501 | hsa-miR-876-3p | 1.015E+01 | 1.418E+01 | 7.155E-01 | -3.348E-01 | 3.080E-01 | 5.257E-01 | 9.349E-01 | 9.744E-01 |
| 502 | hsa-miR-30c-1* | 3.915E+01 | 4.598E+01 | 8.514E-01 | -1.608E-01 | 3.080E-01 | 5.257E-01 | 9.942E-02 | 4.218E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|-----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 503 | hsa-miR-489 | 1.562E+02 | 2.293E+02 | 6.810E-01 | -3.842E-01 | 3.058E-01 | 5.257E-01 | 1.770E-01 | 5.097E-01 |
| 504 | hsa-miR-500* | 2.513E+02 | 3.254E+02 | 7.722E-01 | -2.585E-01 | 3.082E-01 | 5.257E-01 | 1.316E-01 | 4.686E-01 |
| 505 | hsa-miR-100* | 6.193E+01 | 6.233E+01 | 9.937E-01 | -6.367E-03 | 3.076E-01 | 5.257E-01 | 5.492E-01 | 8.015E-01 |
| 506 | hsa-miR-892a | 2.646E-00 | 1.125E+01 | 2.352E-01 | -1.447E-00 | 3.074E-01 | 5.257E-01 | 2.054E-01 | 5.254E-01 |
| 507 | hsa-miR-556-5p | 1.181E+02 | 9.232E+01 | 1.279E-00 | 2.463E-01 | 3.108E-01 | 5.259E-01 | 2.889E-01 | 6.289E-01 |
| 508 | hsa-miR-140-5p | 2.904E+01 | 4.088E+01 | 7.104E-01 | -3.419E-01 | 3.106E-01 | 5.259E-01 | 9.106E-02 | 4.174E-01 |
| 509 | hsa-miR-20b* | 6.151E+01 | 7.294E+01 | 8.432E-01 | -1.705E-01 | 3.099E-01 | 5.259E-01 | 9.141E-01 | 9.693E-01 |
| 510 | hsa-miR-760 | 4.181E+01 | 5.621E+01 | 7.438E-01 | -2.959E-01 | 3.104E-01 | 5.259E-01 | 6.673E-02 | 4.113E-01 |
| 511 | hsa-miR-101* | 6.894E+01 | 6.905E+01 | 9.985E-01 | -1.529E-03 | 3.144E-01 | 5.309E-01 | 6.881E-01 | 8.759E-01 |
| 512 | hsa-miR-1224-5p | 2.888E+01 | 3.289E+01 | 8.780E-01 | -1.301E-01 | 3.181E-01 | 5.351E-01 | 1.998E-01 | 5.254E-01 |
| 513 | hsa-miR-19b-1* | 4.944E+01 | 4.471E+01 | 1.106E-00 | 1.005E-01 | 3.178E-01 | 5.351E-01 | 7.359E-01 | 8.857E-01 |
| 514 | hsa-miR-92a-1* | 1.406E+01 | 9.746E-00 | 1.443E-00 | 3.668E-01 | 3.202E-01 | 5.376E-01 | 8.884E-01 | 9.632E-01 |
| 515 | hsa-miR-16-2* | 8.373E+01 | 8.653E+01 | 9.677E-01 | -3.286E-02 | 3.241E-01 | 5.432E-01 | 5.535E-01 | 8.015E-01 |
| 516 | hsa-miR-373* | 2.990E+01 | 1.840E+01 | 1.625E-00 | 4.856E-01 | 3.272E-01 | 5.468E-01 | 4.274E-01 | 7.192E-01 |
| 517 | hsa-let-7i | 5.480E+02 | 4.452E+02 | 1.231E-00 | 2.078E-01 | 3.276E-01 | 5.468E-01 | 7.232E-01 | 8.841E-01 |
| 518 | hsa-miR-555 | 2.975E+01 | 1.734E+01 | 1.715E-00 | 5.395E-01 | 3.301E-01 | 5.499E-01 | 1.391E-01 | 4.686E-01 |
| 519 | hsa-miR-218 | 3.305E+01 | 3.289E+01 | 1.005E-00 | 5.066E-03 | 3.323E-01 | 5.515E-01 | 6.383E-01 | 8.540E-01 |
| 520 | hsa-miR-25* | 5.802E+01 | 6.958E+01 | 8.339E-01 | -1.817E-01 | 3.317E-01 | 5.515E-01 | 1.801E-01 | 5.097E-01 |
| 521 | hsa-miR-449a | 1.000E-00 | 8.612E-00 | 1.161E-01 | -2.153E-00 | 3.336E-01 | 5.526E-01 | 7.849E-01 | 9.043E-01 |
| 522 | hsa-miR-582-3p | 6.018E+01 | 6.327E+01 | 9.512E-01 | -5.001E-02 | 3.351E-01 | 5.540E-01 | 5.068E-01 | 7.781E-01 |
| 523 | hsa-miR-502-5p | 1.015E+01 | 1.000E-00 | 1.015E+01 | 2.317E-00 | 3.366E-01 | 5.555E-01 | 2.097E-01 | 5.292E-01 |
| 524 | hsa-miR-515-3p | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 3.394E-01 | 5.590E-01 | 7.841E-01 | 9.043E-01 |
| 525 | hsa-miR-654-5p | 1.820E+02 | 2.042E+02 | 8.914E-01 | -1.149E-01 | 3.412E-01 | 5.598E-01 | 1.737E-01 | 5.030E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|-----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 526 | hsa-miR-214* | 5.794E+01 | 6.177E+01 | 9.380E-01 | -6.406E-02 | 3.410E-01 | 5.598E-01 | 3.105E-01 | 6.412E-01 |
| 527 | hsa-miR-455-3p | 1.706E+02 | 1.689E+02 | 1.010E-00 | 9.945E-03 | 3.428E-01 | 5.613E-01 | 2.907E-01 | 6.289E-01 |
| 528 | hsa-miR-199b-5p | 3.443E-00 | 9.198E-00 | 3.743E-01 | -9.827E-01 | 3.450E-01 | 5.628E-01 | 9.866E-01 | 9.974E-01 |
| 529 | hsa-miR-509-5p | 2.165E+02 | 2.818E+02 | 7.681E-01 | -2.638E-01 | 3.450E-01 | 5.628E-01 | 9.649E-02 | 4.199E-01 |
| 530 | hsa-miR-421 | 8.761E+01 | 8.307E+01 | 1.055E-00 | 5.328E-02 | 3.464E-01 | 5.640E-01 | 6.282E-01 | 8.496E-01 |
| 531 | hsa-miR-1909 | 1.012E+02 | 1.361E+02 | 7.435E-01 | -2.964E-01 | 3.477E-01 | 5.650E-01 | 1.044E-01 | 4.251E-01 |
| 532 | hsa-miR-425 | 1.198E+04 | 1.198E+04 | 1.000E-00 | 0.000E+01 | 3.515E-01 | 5.702E-01 | 9.688E-01 | 9.875E-01 |
| 533 | hsa-miR-1273 | 9.825E+01 | 1.037E+02 | 9.478E-01 | -5.359E-02 | 3.529E-01 | 5.703E-01 | 9.381E-01 | 9.756E-01 |
| 534 | hsa-miR-1293 | 1.711E+01 | 1.876E+01 | 9.120E-01 | -9.211E-02 | 3.529E-01 | 5.703E-01 | 6.724E-01 | 8.686E-01 |
| 535 | hsa-miR-566 | 8.653E+01 | 1.096E+02 | 7.896E-01 | -2.363E-01 | 3.553E-01 | 5.731E-01 | 2.927E-01 | 6.299E-01 |
| 536 | hsa-miR-7 | 3.010E+01 | 8.612E-00 | 3.495E-00 | 1.251E-00 | 3.566E-01 | 5.742E-01 | 2.147E-01 | 5.325E-01 |
| 537 | hsa-miR-638 | 3.607E+02 | 4.025E+02 | 8.962E-01 | -1.096E-01 | 3.589E-01 | 5.768E-01 | 7.351E-01 | 8.857E-01 |
| 538 | hsa-miR-1284 | 1.784E+01 | 2.942E+01 | 6.064E-01 | -5.002E-01 | 3.608E-01 | 5.787E-01 | 3.739E-01 | 6.822E-01 |
| 539 | hsa-miR-1913 | 3.543E+02 | 3.006E+02 | 1.179E-00 | 1.644E-01 | 3.614E-01 | 5.787E-01 | 5.928E-01 | 8.254E-01 |
| 540 | hsa-miR-1178 | 1.624E+01 | 1.000E-00 | 1.624E+01 | 2.788E-00 | 3.640E-01 | 5.794E-01 | 1.001E-01 | 4.218E-01 |
| 541 | hsa-miR-1304 | 4.944E+01 | 3.733E+01 | 1.324E-00 | 2.808E-01 | 3.646E-01 | 5.794E-01 | 2.755E-01 | 6.190E-01 |
| 542 | hsa-miR-1911* | 8.704E+01 | 1.076E+02 | 8.089E-01 | -2.121E-01 | 3.645E-01 | 5.794E-01 | 2.586E-01 | 5.968E-01 |
| 543 | hsa-miR-518a-3p | 5.339E+01 | 5.255E+01 | 1.016E-00 | 1.577E-02 | 3.632E-01 | 5.794E-01 | 1.877E-01 | 5.175E-01 |
| 544 | hsa-miR-330-3p | 3.784E+02 | 5.591E+02 | 6.768E-01 | -3.903E-01 | 3.671E-01 | 5.803E-01 | 3.667E-01 | 6.763E-01 |
| 545 | hsa-miR-518c* | 5.332E+01 | 4.958E+01 | 1.075E-00 | 7.273E-02 | 3.671E-01 | 5.803E-01 | 8.308E-01 | 9.373E-01 |
| 546 | hsa-miR-491-3p | 7.786E+01 | 7.844E+01 | 9.927E-01 | -7.326E-03 | 3.666E-01 | 5.803E-01 | 1.449E-01 | 4.686E-01 |
| 547 | hsa-miR-649 | 1.031E+01 | 1.000E-00 | 1.031E+01 | 2.333E-00 | 3.696E-01 | 5.832E-01 | 7.232E-02 | 4.115E-01 |
| 548 | hsa-miR-558 | 6.894E+01 | 9.249E+01 | 7.454E-01 | -2.939E-01 | 3.716E-01 | 5.849E-01 | 5.706E-01 | 8.125E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw P | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 549 | hsa-miR-10b | 5.068E+01 | 5.868E+01 | 8.637E-01 | -1.466E-01 | 3.721E-01 | 5.849E-01 | 6.776E-01 | 8.698E-01 |
| 550 | hsa-miR-335 | 4.413E+02 | 3.931E+02 | 1.123E-00 | 1.156E-01 | 3.732E-01 | 5.857E-01 | 8.849E-01 | 9.618E-01 |
| 551 | hsa-miR-103-as | 1.264E+02 | 1.502E+02 | 8.416E-01 | -1.725E-01 | 3.777E-01 | 5.895E-01 | 2.899E-01 | 6.289E-01 |
| 552 | hsa-miR-106a* | 1.318E+02 | 1.911E+02 | 6.894E-01 | -3.719E-01 | 3.772E-01 | 5.895E-01 | 1.089E-01 | 4.352E-01 |
| 553 | hsa-miR-27b | 2.035E+02 | 2.008E+02 | 1.013E-00 | 1.292E-02 | 3.777E-01 | 5.895E-01 | 2.032E-01 | 5.254E-01 |
| 554 | hsa-miR-1278 | 5.447E+01 | 5.332E+01 | 1.022E-00 | 2.131E-02 | 3.786E-01 | 5.897E-01 | 4.053E-01 | 7.094E-01 |
| 555 | hsa-miR-505* | 1.609E+02 | 1.417E+02 | 1.135E-00 | 1.269E-01 | 3.824E-01 | 5.946E-01 | 7.211E-01 | 8.841E-01 |
| 556 | hsa-miR-628-3p | 1.539E+02 | 1.312E+02 | 1.173E-00 | 1.596E-01 | 3.856E-01 | 5.959E-01 | 7.171E-01 | 8.841E-01 |
| 557 | hsa-miR-542-5p | 8.383E+01 | 7.786E+01 | 1.077E-00 | 7.387E-02 | 3.855E-01 | 5.959E-01 | 9.917E-01 | 9.975E-01 |
| 558 | hsa-miR-1233 | 8.159E+01 | 8.307E+01 | 9.822E-01 | -1.794E-02 | 3.858E-01 | 5.959E-01 | 7.339E-01 | 8.857E-01 |
| 559 | hsa-miR-185 | 2.473E+04 | 2.473E+04 | 1.000E-00 | 0.000E+01 | 3.860E-01 | 5.959E-01 | 9.877E-01 | 9.974E-01 |
| 560 | hsa-miR-132 | 1.105E+02 | 1.120E+02 | 9.861E-01 | -1.400E-02 | 3.875E-01 | 5.961E-01 | 6.531E-01 | 8.645E-01 |
| 561 | hsa-miR-139-3p | 7.874E+01 | 8.307E+01 | 9.479E-01 | -5.356E-02 | 3.874E-01 | 5.961E-01 | 8.524E-01 | 9.488E-01 |
| 562 | hsa-miR-1226* | 1.900E+02 | 2.627E+02 | 7.233E-01 | -3.240E-01 | 3.908E-01 | 5.991E-01 | 1.637E-01 | 4.908E-01 |
| 563 | hsa-miR-1272 | 1.312E+02 | 1.506E+02 | 8.712E-01 | -1.379E-01 | 3.903E-01 | 5.991E-01 | 3.099E-01 | 6.412E-01 |
| 564 | hsa-miR-512-5p | 5.361E+01 | 5.332E+01 | 1.005E-00 | 5.344E-03 | 3.918E-01 | 5.995E-01 | 5.099E-01 | 7.802E-01 |
| 565 | hsa-miR-299-3p | 1.450E+01 | 1.000E-00 | 1.450E+01 | 2.674E-00 | 3.939E-01 | 6.016E-01 | 1.207E-01 | 4.510E-01 |
| 566 | hsa-miR-937 | 3.940E+01 | 3.753E+01 | 1.050E-00 | 4.858E-02 | 3.956E-01 | 6.032E-01 | 8.218E-01 | 9.320E-01 |
| 567 | hsa-miR-499-3p | 5.601E+01 | 7.727E+01 | 7.248E-01 | -3.218E-01 | 3.990E-01 | 6.073E-01 | 3.291E-01 | 6.621E-01 |
| 568 | hsa-miR-216b | 1.184E+02 | 1.371E+02 | 8.635E-01 | -1.467E-01 | 4.031E-01 | 6.124E-01 | 6.165E-01 | 8.420E-01 |
| 569 | hsa-miR-568 | 7.147E+01 | 7.844E+01 | 9.112E-01 | -9.304E-02 | 4.056E-01 | 6.152E-01 | 1.999E-01 | 5.254E-01 |
| 570 | hsa-miR-596 | 7.255E+01 | 8.991E+01 | 8.070E-01 | -2.144E-01 | 4.065E-01 | 6.155E-01 | 4.203E-01 | 7.157E-01 |
| 571 | hsa-miR-619 | 5.397E+01 | 5.255E+01 | 1.027E-00 | 2.658E-02 | 4.125E-01 | 6.175E-01 | 5.903E-01 | 8.254E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad ip |
|-----|-----------------|--------------|--------------|-----------|-----------------|----------------|------------|----------------|----------------|
| 572 | hsa-miR-1225-5p | 5.975E+01 | 5.577E+01 | 1.071E-00 | 6.899E-02 | 4.132E-01 | 6.175E-01 | 3.650E-01 | 6.763E-01 |
| 573 | hsa-miR-1181 | 1.710E+02 | 1.798E+02 | 9.510E-01 | -5.024E-02 | 4.119E-01 | 6.175E-01 | 7.352E-01 | 8.857E-01 |
| 574 | hsa-miR-188-5p | 1.120E+02 | 1.072E+02 | 1.045E-00 | 4.386E-02 | 4.136E-01 | 6.175E-01 | 8.990E-01 | 9.671E-01 |
| 575 | hsa-let-7d* | 5.728E+01 | 6.719E+01 | 8.525E-01 | -1.595E-01 | 4.119E-01 | 6.175E-01 | 3.470E-01 | 6.715E-01 |
| 576 | hsa-miR-218-2* | 5.144E+01 | 4.190E+01 | 1.228E-00 | 2.052E-01 | 4.135E-01 | 6.175E-01 | 9.327E-01 | 9.739E-01 |
| 577 | hsa-miR-647 | 6.884E+01 | 8.586E+01 | 8.018E-01 | -2.209E-01 | 4.131E-01 | 6.175E-01 | 3.973E-01 | 7.046E-01 |
| 578 | hsa-miR-139-5p | 1.249E+02 | 1.266E+02 | 9.863E-01 | -1.384E-02 | 4.102E-01 | 6.175E-01 | 7.112E-01 | 8.840E-01 |
| 579 | hsa-miR-654-3p | 3.087E+01 | 1.745E+01 | 1.769E-00 | 5.703E-01 | 4.174E-01 | 6.204E-01 | 2.783E-01 | 6.190E-01 |
| 580 | hsa-miR-138-2* | 5.447E+01 | 5.845E+01 | 9.319E-01 | -7.054E-02 | 4.176E-01 | 6.204E-01 | 3.625E-01 | 6.763E-01 |
| 581 | hsa-miR-675 | 1.354E+02 | 1.195E+02 | 1.133E-00 | 1.248E-01 | 4.177E-01 | 6.204E-01 | 7.549E-01 | 8.926E-01 |
| 582 | hsa-miR-377 | 1.135E+02 | 1.179E+02 | 9.627E-01 | -3.799E-02 | 4.203E-01 | 6.232E-01 | 7.344E-01 | 8.857E-01 |
| 583 | hsa-miR-374a | 2.496E+02 | 2.119E+02 | 1.178E-00 | 1.639E-01 | 4.265E-01 | 6.313E-01 | 9.884E-01 | 9.974E-01 |
| 584 | hsa-miR-215 | 3.753E+02 | 4.413E+02 | 8.503E-01 | -1.621E-01 | 4.275E-01 | 6.318E-01 | 2.535E-01 | 5.897E-01 |
| 585 | hsa-miR-15a* | 1.107E+02 | 1.208E+02 | 9.164E-01 | -8.735E-02 | 4.289E-01 | 6.328E-01 | 3.331E-01 | 6.638E-01 |
| 586 | hsa-miR-769-5p | 1.000E-00 | 6.768E-00 | 1.478E-01 | -1.912E-00 | 4.308E-01 | 6.345E-01 | 9.257E-01 | 9.719E-01 |
| 587 | hsa-miR-362-3p | 2.019E+02 | 1.788E+02 | 1.129E-00 | 1.213E-01 | 4.339E-01 | 6.379E-01 | 6.311E-01 | 8.496E-01 |
| 588 | hsa-miR-192* | 1.141E+02 | 1.405E+02 | 8.124E-01 | -2.077E-01 | 4.354E-01 | 6.391E-01 | 3.968E-01 | 7.046E-01 |
| 589 | hsa-miR-125a-5p | 1.506E+02 | 1.122E+02 | 1.342E-00 | 2.939E-01 | 4.371E-01 | 6.394E-01 | 8.748E-01 | 9.545E-01 |
| 590 | hsa-miR-491-5p | 8.739E+01 | 8.415E+01 | 1.039E-00 | 3.784E-02 | 4.371E-01 | 6.394E-01 | 7.037E-01 | 8.807E-01 |
| 591 | hsa-miR-802 | 5.975E+01 | 5.728E+01 | 1.043E-00 | 4.222E-02 | 4.384E-01 | 6.401E-01 | 3.797E-01 | 6.898E-01 |
| 592 | hsa-miR-33a | 1.027E+02 | 9.862E+01 | 1.041E-00 | 4.022E-02 | 4.395E-01 | 6.406E-01 | 2.388E-01 | 5.709E-01 |
| 593 | hsa-miR-142-5p | 7.475E+02 | 7.051E+02 | 1.060E-00 | 5.842E-02 | 4.453E-01 | 6.481E-01 | 4.439E-01 | 7.313E-01 |
| 594 | hsa-miR-663b | 6.353E+01 | 6.006E+01 | 1.058E-00 | 5.621E-02 | 4.473E-01 | 6.498E-01 | 7.084E-01 | 8.834E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|----------------|-----------|-----------|-----------|-------------|-------------|------------|-------------|-------------|
| 595 | hsa-miR-1539 | 8.086E+01 | 9.844E+01 | 8.214E-01 | -1.967E-01 | 4.512E-01 | 6.525E-01 | 2.105E-01 | 5.294E-01 |
| 596 | hsa-miR-95 | 1.635E+01 | 2.660E+01 | 6.147E-01 | -4.866E-01 | 4.505E-01 | 6.525E-01 | 1.096E-01 | 4.361E-01 |
| 597 | hsa-miR-1275 | 6.006E+01 | 6.629E+01 | 9.061E-01 | -9.861E-02 | 4.514E-01 | 6.525E-01 | 8.444E-01 | 9.427E-01 |
| 598 | hsa-miR-191* | 4.967E+01 | 5.959E+01 | 8.335E-01 | -1.821E-01 | 4.525E-01 | 6.531E-01 | 7.628E-01 | 8.948E-01 |
| 599 | hsa-miR-502-3p | 6.676E+02 | 6.967E+02 | 9.583E-01 | -4.260E-02 | 4.586E-01 | 6.573E-01 | 4.126E-01 | 7.106E-01 |
| 600 | hsa-miR-563 | 2.234E-00 | 1.000E-00 | 2.234E-00 | 8.038E-01 | 4.575E-01 | 6.573E-01 | 2.432E-01 | 5.735E-01 |
| 601 | hsa-miR-1321 | 1.000E-00 | 6.601E-00 | 1.515E-01 | -1.887E-00 | 4.586E-01 | 6.573E-01 | 4.883E-01 | 7.667E-01 |
| 602 | hsa-miR-1914 | 5.144E+01 | 5.116E+01 | 1.005E-00 | 5.484E-03 | 4.593E-01 | 6.573E-01 | 2.296E-01 | 5.594E-01 |
| 603 | hsa-miR-185* | 1.565E+01 | 2.530E+01 | 6.185E-01 | -4.805E-01 | 4.590E-01 | 6.573E-01 | 3.055E-01 | 6.412E-01 |
| 604 | hsa-miR-639 | 6.105E+01 | 5.529E+01 | 1.104E-00 | 9.907E-02 | 4.606E-01 | 6.581E-01 | 7.448E-01 | 8.883E-01 |
| 605 | hsa-miR-122* | 4.881E+01 | 4.785E+01 | 1.020E-00 | 1.985E-02 | 4.639E-01 | 6.617E-01 | 9.089E-01 | 9.671E-01 |
| 606 | hsa-miR-643 | 4.016E+01 | 3.315E+01 | 1.211E-00 | 1.916E-01 | 4.662E-01 | 6.630E-01 | 5.337E-01 | 7.996E-01 |
| 607 | hsa-miR-1469 | 1.609E+02 | 1.986E+02 | 8.101E-01 | -2.106E-01 | 4.663E-01 | 6.630E-01 | 9.641E-02 | 4.199E-01 |
| 608 | hsa-miR-1234 | 6.745E+02 | 7.475E+02 | 9.024E-01 | -1.027E-01 | 4.708E-01 | 6.682E-01 | 7.022E-01 | 8.807E-01 |
| 609 | hsa-miR-622 | 6.387E+01 | 8.174E+01 | 7.814E-01 | -2.467E-01 | 4.752E-01 | 6.722E-01 | 5.417E-01 | 8.006E-01 |
| 610 | hsa-miR-222* | 6.170E+01 | 8.687E+01 | 7.102E-01 | -3.422E-01 | 4.750E-01 | 6.722E-01 | 3.508E-01 | 6.758E-01 |
| 611 | hsa-miR-499-5p | 2.056E+01 | 1.995E+01 | 1.031E-00 | 3.006E-02 | 4.781E-01 | 6.753E-01 | 8.748E-01 | 9.545E-01 |
| 612 | hsa-miR-1260 | 2.412E+03 | 2.756E+03 | 8.750E-01 | -1.336E-01 | 4.804E-01 | 6.765E-01 | 7.634E-01 | 8.948E-01 |
| 613 | hsa-miR-517a | 2.821E+01 | 1.876E+01 | 1.504E-00 | 4.082E-01 | 4.805E-01 | 6.765E-01 | 6.303E-01 | 8.496E-01 |
| 614 | hsa-miR-34a | 2.191E+01 | 2.485E+01 | 8.817E-01 | -1.259E-01 | 4.824E-01 | 6.781E-01 | 6.487E-01 | 8.639E-01 |
| 615 | hsa-miR-624* | 2.076E+01 | 1.995E+01 | 1.041E-00 | 3.984E-02 | 4.835E-01 | 6.785E-01 | 8.532E-01 | 9.488E-01 |
| 616 | hsa-miR-28-5p | 3.635E+02 | 2.609E+02 | 1.393E-00 | 3.314E-01 | 4.851E-01 | 6.796E-01 | 6.137E-01 | 8.407E-01 |
| 617 | hsa-miR-100 | 1.224E+02 | 1.257E+02 | 9.734E-01 | -2.697E-02 | 4.873E-01 | 6.816E-01 | 4.364E-01 | 7.256E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|----------------|-----------|-----------|-----------|-------------|-------------|------------|-------------|-------------|
| 618 | hsa-miR-625 | 5.728E+01 | 6.177E+01 | 9.273E-01 | -7.550E-02 | 4.911E-01 | 6.858E-01 | 9.601E-01 | 9.865E-01 |
| 619 | hsa-miR-148b | 5.277E+02 | 5.757E+02 | 9.166E-01 | -8.705E-02 | 4.942E-01 | 6.879E-01 | 2.331E-01 | 5.594E-01 |
| 620 | hsa-miR-584 | 8.363E+01 | 1.195E+02 | 7.000E-01 | -3.567E-01 | 4.936E-01 | 6.879E-01 | 4.231E-01 | 7.159E-01 |
| 621 | hsa-miR-769-3p | 2.879E-00 | 1.624E+01 | 1.773E-01 | -1.730E-00 | 4.961E-01 | 6.881E-01 | 9.312E-02 | 4.174E-01 |
| 622 | hsa-miR-1182 | 2.729E+01 | 1.479E+01 | 1.845E-00 | 6.126E-01 | 4.965E-01 | 6.881E-01 | 9.295E-01 | 9.735E-01 |
| 623 | hsa-miR-198 | 4.708E+01 | 6.177E+01 | 7.621E-01 | -2.717E-01 | 4.967E-01 | 6.881E-01 | 5.265E-01 | 7.972E-01 |
| 624 | hsa-miR-18a* | 1.900E+02 | 2.165E+02 | 8.777E-01 | -1.305E-01 | 4.977E-01 | 6.883E-01 | 4.077E-01 | 7.106E-01 |
| 625 | hsa-miR-206 | 1.000E-00 | 4.315E+01 | 2.317E-02 | -3.765E-00 | 4.998E-01 | 6.901E-01 | 4.359E-03 | 1.176E-01 |
| 626 | hsa-miR-645 | 5.339E+01 | 3.289E+01 | 1.623E-00 | 4.845E-01 | 5.014E-01 | 6.912E-01 | 5.029E-01 | 7.779E-01 |
| 627 | hsa-miR-508-5p | 1.139E+02 | 1.139E+02 | 1.000E-00 | 0.000E+01 | 5.058E-01 | 6.954E-01 | 8.524E-01 | 9.488E-01 |
| 628 | hsa-miR-518b | 9.590E+01 | 9.810E+01 | 9.776E-01 | -2.262E-02 | 5.069E-01 | 6.954E-01 | 8.799E-01 | 9.587E-01 |
| 629 | hsa-miR-873 | 6.387E+01 | 8.373E+01 | 7.628E-01 | -2.708E-01 | 5.064E-01 | 6.954E-01 | 3.134E-01 | 6.438E-01 |
| 630 | hsa-miR-371-5p | 4.348E+01 | 5.518E+01 | 7.880E-01 | -2.382E-01 | 5.105E-01 | 6.993E-01 | 3.529E-01 | 6.760E-01 |
| 631 | hsa-miR-1910 | 3.902E+01 | 3.081E+01 | 1.266E-00 | 2.362E-01 | 5.120E-01 | 7.001E-01 | 7.487E-01 | 8.913E-01 |
| 632 | hsa-miR-646 | 2.063E+02 | 2.396E+02 | 8.611E-01 | -1.495E-01 | 5.127E-01 | 7.001E-01 | 2.052E-01 | 5.254E-01 |
| 633 | hsa-miR-452 | 5.025E+01 | 4.190E+01 | 1.199E-00 | 1.818E-01 | 5.203E-01 | 7.029E-01 | 2.492E-01 | 5.831E-01 |
| 634 | hsa-miR-106a | 5.922E+03 | 6.228E+03 | 9.510E-01 | -5.028E-02 | 5.213E-01 | 7.029E-01 | 4.089E-01 | 7.106E-01 |
| 635 | hsa-miR-1287 | 5.424E+01 | 5.860E+01 | 9.256E-01 | -7.732E-02 | 5.206E-01 | 7.029E-01 | 6.929E-01 | 8.767E-01 |
| 636 | hsa-miR-217 | 1.417E+02 | 1.788E+02 | 7.926E-01 | -2.324E-01 | 5.208E-01 | 7.029E-01 | 6.533E-01 | 8.645E-01 |
| 637 | hsa-miR-1258 | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 5.179E-01 | 7.029E-01 | 1.377E-01 | 4.686E-01 |
| 638 | hsa-miR-620 | 1.354E+01 | 1.479E+01 | 9.154E-01 | -8.844E-02 | 5.175E-01 | 7.029E-01 | 7.125E-01 | 8.840E-01 |
| 639 | hsa-miR-511 | 2.821E+01 | 1.479E+01 | 1.908E-00 | 6.459E-01 | 5.170E-01 | 7.029E-01 | 1.982E-01 | 5.254E-01 |
| 640 | hsa-miR-301a | 2.694E+02 | 2.836E+02 | 9.498E-01 | -5.148E-02 | 5.209E-01 | 7.029E-01 | 2.037E-01 | 5.254E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 641 | hsa-miR-1247 | 5.339E+01 | 6.084E+01 | 8.775E-01 | -1.306E-01 | 5.249E-01 | 7.056E-01 | 1.819E-01 | 5.104E-01 |
| 642 | hsa-miR-325 | 5.144E+01 | 5.529E+01 | 9.304E-01 | -7.214E-02 | 5.247E-01 | 7.056E-01 | 5.076E-01 | 7.781E-01 |
| 643 | hsa-miR-552 | 2.024E+01 | 1.964E+01 | 1.031E-00 | 3.029E-02 | 5.260E-01 | 7.060E-01 | 6.923E-01 | 8.767E-01 |
| 644 | hsa-miR-642 | 2.704E+01 | 2.530E+01 | 1.069E-00 | 6.643E-02 | 5.288E-01 | 7.069E-01 | 8.177E-01 | 9.285E-01 |
| 645 | hsa-miR-92b* | 1.283E+02 | 1.405E+02 | 9.132E-01 | -9.077E-02 | 5.288E-01 | 7.069E-01 | 2.724E-01 | 6.155E-01 |
| 646 | hsa-miR-193b* | 3.479E+01 | 1.105E+01 | 3.148E-00 | 1.147E-00 | 5.292E-01 | 7.069E-01 | 2.799E-01 | 6.204E-01 |
| 647 | hsa-miR-340 | 1.411E+02 | 1.624E+02 | 8.686E-01 | -1.409E-01 | 5.329E-01 | 7.109E-01 | 3.721E-01 | 6.804E-01 |
| 648 | hsa-miR-520h | 3.648E+01 | 2.660E+01 | 1.372E-00 | 3.160E-01 | 5.346E-01 | 7.120E-01 | 9.588E-01 | 9.865E-01 |
| 649 | hsa-miR-9* | 8.586E+01 | 8.307E+01 | 1.034E-00 | 3.313E-02 | 5.388E-01 | 7.165E-01 | 1.144E-01 | 4.408E-01 |
| 650 | hsa-miR-758 | 9.746E-00 | 1.000E-00 | 9.746E-00 | 2.277E-00 | 5.397E-01 | 7.166E-01 | 3.434E-02 | 3.208E-01 |
| 651 | hsa-miR-101 | 5.865E+02 | 4.561E+02 | 1.286E-00 | 2.515E-01 | 5.415E-01 | 7.179E-01 | 7.806E-01 | 9.019E-01 |
| 652 | hsa-miR-591 | 5.361E+01 | 6.177E+01 | 8.678E-01 | -1.418E-01 | 5.475E-01 | 7.224E-01 | 7.517E-01 | 8.926E-01 |
| 653 | hsa-miR-1297 | 4.433E+01 | 5.046E+01 | 8.785E-01 | -1.295E-01 | 5.468E-01 | 7.224E-01 | 8.646E-01 | 9.528E-01 |
| 654 | hsa-miR-548e | 3.789E+01 | 3.733E+01 | 1.015E-00 | 1.465E-02 | 5.470E-01 | 7.224E-01 | 3.720E-01 | 6.804E-01 |
| 655 | hsa-miR-524-5p | 4.865E+01 | 4.471E+01 | 1.088E-00 | 8.451E-02 | 5.491E-01 | 7.235E-01 | 6.276E-01 | 8.496E-01 |
| 656 | hsa-miR-935 | 2.904E+01 | 2.680E+01 | 1.084E-00 | 8.041E-02 | 5.512E-01 | 7.251E-01 | 7.941E-01 | 9.130E-01 |
| 657 | hsa-miR-575 | 1.273E+02 | 1.414E+02 | 8.998E-01 | -1.056E-01 | 5.572E-01 | 7.319E-01 | 4.332E-01 | 7.246E-01 |
| 658 | hsa-miR-145* | 6.006E+01 | 5.635E+01 | 1.066E-00 | 6.385E-02 | 5.596E-01 | 7.340E-01 | 7.139E-01 | 8.840E-01 |
| 659 | hsa-miR-29b-1* | 1.000E-00 | 4.674E-00 | 2.140E-01 | -1.542E-00 | 5.624E-01 | 7.365E-01 | 4.992E-01 | 7.749E-01 |
| 660 | hsa-miR-27a | 2.728E+02 | 2.854E+02 | 9.558E-01 | -4.520E-02 | 5.634E-01 | 7.367E-01 | 4.049E-01 | 7.094E-01 |
| 661 | hsa-miR-615-3p | 2.896E+01 | 3.029E+01 | 9.560E-01 | -4.500E-02 | 5.644E-01 | 7.368E-01 | 6.202E-01 | 8.442E-01 |
| 662 | hsa-miR-1243 | 5.046E+01 | 4.958E+01 | 1.018E-00 | 1.766E-02 | 5.652E-01 | 7.368E-01 | 8.735E-01 | 9.545E-01 |
| 663 | hsa-miR-525-3p | 5.802E+01 | 6.127E+01 | 9.469E-01 | -5.455E-02 | 5.690E-01 | 7.374E-01 | 6.364E-01 | 8.540E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|-----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 664 | hsa-miR-551b* | 3.8001E+01 | 4.2711E+01 | 8.896E-01 | -1.170E-01 | 5.694E-01 | 7.374E-01 | 2.428E-01 | 5.735E-01 |
| 665 | hsa-miR-1292 | 5.9599E+01 | 7.070E+01 | 8.429E-01 | -1.709E-01 | 5.700E-01 | 7.374E-01 | 2.968E-01 | 6.325E-01 |
| 666 | hsa-miR-302a* | 4.327E+01 | 3.733E+01 | 1.159E-00 | 1.476E-01 | 5.675E-01 | 7.374E-01 | 2.898E-01 | 6.289E-01 |
| 667 | hsa-miR-30e | 2.331E+02 | 1.454E+02 | 1.602E-00 | 4.716E-01 | 5.688E-01 | 7.374E-01 | 3.461E-01 | 6.711E-01 |
| 668 | hsa-miR-541 | 1.051E+02 | 1.030E+02 | 1.020E-00 | 1.960E-02 | 5.748E-01 | 7.414E-01 | 2.239E-01 | 5.508E-01 |
| 669 | hsa-miR-124* | 9.436E+01 | 1.056E+02 | 8.934E-01 | -1.127E-01 | 5.748E-01 | 7.414E-01 | 4.557E-01 | 7.477E-01 |
| 670 | hsa-miR-196a* | 1.400E+02 | 1.632E+02 | 8.576E-01 | -1.536E-01 | 5.784E-01 | 7.445E-01 | 9.225E-01 | 9.719E-01 |
| 671 | hsa-miR-222 | 4.489E+02 | 4.061E+02 | 1.105E-00 | 1.001E-01 | 5.789E-01 | 7.445E-01 | 9.082E-01 | 9.671E-01 |
| 672 | hsa-miR-519c-3p | 3.879E+01 | 1.964E+01 | 1.975E-00 | 6.807E-01 | 5.833E-01 | 7.491E-01 | 3.106E-01 | 6.412E-01 |
| 673 | hsa-miR-146a* | 6.841E+01 | 1.003E+02 | 6.818E-01 | -3.830E-01 | 5.874E-01 | 7.532E-01 | 3.336E-01 | 6.638E-01 |
| 674 | hsa-miR-432 | 1.000E-00 | 6.601E-00 | 1.515E-01 | -1.887E-00 | 5.890E-01 | 7.540E-01 | 3.410E-01 | 6.674E-01 |
| 675 | hsa-miR-601 | 1.000E-00 | 5.416E-00 | 1.846E-01 | -1.689E-00 | 5.897E-01 | 7.540E-01 | 5.918E-01 | 8.254E-01 |
| 676 | hsa-miR-663 | 3.460E+02 | 3.662E+02 | 9.447E-01 | -5.690E-02 | 5.914E-01 | 7.551E-01 | 2.250E-01 | 5.513E-01 |
| 677 | hsa-let-7b* | 4.252E-00 | 1.252E+01 | 3.397E-01 | -1.080E-00 | 5.975E-01 | 7.616E-01 | 9.383E-01 | 9.756E-01 |
| 678 | hsa-miR-452* | 2.947E+02 | 3.229E+02 | 9.125E-01 | -9.161E-02 | 6.013E-01 | 7.654E-01 | 4.595E-01 | 7.498E-01 |
| 679 | hsa-miR-220c | 1.037E+02 | 1.137E+02 | 9.118E-01 | -9.234E-02 | 6.061E-01 | 7.703E-01 | 7.635E-01 | 8.948E-01 |
| 680 | hsa-miR-519b-3p | 2.666E+01 | 3.581E+01 | 7.447E-01 | -2.948E-01 | 6.089E-01 | 7.719E-01 | 5.863E-01 | 8.253E-01 |
| 681 | hsa-miR-1227 | 6.327E+01 | 6.193E+01 | 1.022E-00 | 2.136E-02 | 6.091E-01 | 7.719E-01 | 5.592E-01 | 8.031E-01 |
| 682 | hsa-miR-200b* | 6.788E+01 | 7.104E+01 | 9.556E-01 | -4.544E-02 | 6.177E-01 | 7.792E-01 | 3.244E-01 | 6.562E-01 |
| 683 | hsa-miR-143 | 1.701E+02 | 1.763E+02 | 9.645E-01 | -3.617E-02 | 6.182E-01 | 7.792E-01 | 4.665E-01 | 7.529E-01 |
| 684 | hsa-miR-1274a | 1.417E+02 | 1.066E+02 | 1.330E-00 | 2.851E-01 | 6.194E-01 | 7.792E-01 | 8.270E-01 | 9.354E-01 |
| 685 | hsa-miR-25 | 6.228E+03 | 6.228E+03 | 1.000E-00 | 0.000E+01 | 6.158E-01 | 7.792E-01 | 5.720E-01 | 8.132E-01 |
| 686 | hsa-miR-938 | 8.635E+01 | 9.232E+01 | 9.353E-01 | -6.692E-02 | 6.190E-01 | 7.792E-01 | 5.037E-01 | 7.779E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqqmedi an | ttest_raw p | ttest_adjP | limma_ra wp | limma_ad jp |
|-----|-----------------|--------------|--------------|-----------|-----------------|----------------|------------|----------------|----------------|
| 687 | hsa-miR-519b-5p | 1.280E+02 | 1.493E+02 | 8.570E-01 | -1.543E-01 | 6.213E-01 | 7.796E-01 | 2.255E-01 | 5.513E-01 |
| 688 | hsa-miR-924 | 1.816E+01 | 2.530E+01 | 7.176E-01 | -3.318E-01 | 6.215E-01 | 7.796E-01 | 9.061E-01 | 9.671E-01 |
| 689 | hsa-miR-127-5p | 1.264E+02 | 1.385E+02 | 9.123E-01 | -9.184E-02 | 6.254E-01 | 7.834E-01 | 1.482E-01 | 4.738E-01 |
| 690 | hsa-miR-920 | 2.729E+01 | 3.587E+01 | 7.608E-01 | -2.734E-01 | 6.316E-01 | 7.882E-01 | 1.376E-01 | 4.686E-01 |
| 691 | hsa-miR-525-5p | 8.126E+01 | 8.761E+01 | 9.275E-01 | -7.521E-02 | 6.330E-01 | 7.882E-01 | 4.213E-01 | 7.157E-01 |
| 692 | hsa-miR-17 | 6.228E+03 | 5.922E+03 | 1.052E-00 | 5.028E-02 | 6.321E-01 | 7.882E-01 | 5.171E-01 | 7.884E-01 |
| 693 | hsa-miR-324-5p | 3.304E+02 | 3.515E+02 | 9.399E-01 | -6.203E-02 | 6.303E-01 | 7.882E-01 | 3.958E-01 | 7.046E-01 |
| 694 | hsa-miR-188-3p | 1.312E+02 | 1.551E+02 | 8.459E-01 | -1.673E-01 | 6.339E-01 | 7.883E-01 | 3.384E-01 | 6.638E-01 |
| 695 | hsa-miR-31 | 1.293E+02 | 1.165E+02 | 1.110E-00 | 1.042E-01 | 6.376E-01 | 7.906E-01 | 3.206E-01 | 6.524E-01 |
| 696 | hsa-miR-661 | 4.419E+01 | 2.530E+01 | 1.747E-00 | 5.577E-01 | 6.369E-01 | 7.906E-01 | 2.616E-01 | 5.971E-01 |
| 697 | hsa-miR-379* | 5.397E+01 | 6.563E+01 | 8.224E-01 | -1.956E-01 | 6.415E-01 | 7.943E-01 | 2.778E-01 | 6.190E-01 |
| 698 | hsa-miR-1245 | 4.459E+01 | 3.427E+01 | 1.301E-00 | 2.634E-01 | 6.537E-01 | 8.082E-01 | 3.963E-01 | 7.046E-01 |
| 699 | hsa-miR-142-3p | 1.784E+01 | 1.000E-00 | 1.784E+01 | 2.882E-00 | 6.547E-01 | 8.083E-01 | 8.938E-02 | 4.174E-01 |
| 700 | hsa-miR-513a-5p | 4.797E+01 | 4.048E+01 | 1.185E-00 | 1.697E-01 | 6.565E-01 | 8.083E-01 | 1.934E-01 | 5.254E-01 |
| 701 | hsa-let-7f-2* | 4.779E-00 | 1.000E-00 | 4.779E-00 | 1.564E-00 | 6.565E-01 | 8.083E-01 | 6.081E-01 | 8.369E-01 |
| 702 | hsa-miR-150* | 7.626E+01 | 9.436E+01 | 8.081E-01 | -2.130E-01 | 6.577E-01 | 8.086E-01 | 2.240E-01 | 5.508E-01 |
| 703 | hsa-miR-367 | 8.557E+01 | 8.687E+01 | 9.850E-01 | -1.506E-02 | 6.598E-01 | 8.100E-01 | 5.922E-01 | 8.254E-01 |
| 704 | hsa-miR-548b-3p | 4.708E+01 | 4.923E+01 | 9.562E-01 | -4.474E-02 | 6.618E-01 | 8.113E-01 | 9.024E-01 | 9.671E-01 |
| 705 | hsa-miR-518c | 6.298E+01 | 6.563E+01 | 9.596E-01 | -4.120E-02 | 6.780E-01 | 8.299E-01 | 6.075E-01 | 8.369E-01 |
| 706 | hsa-miR-99b | 1.664E+02 | 1.775E+02 | 9.378E-01 | -6.420E-02 | 6.814E-01 | 8.329E-01 | 5.930E-01 | 8.254E-01 |
| 707 | hsa-miR-27b* | 6.105E+01 | 6.281E+01 | 9.719E-01 | -2.850E-02 | 6.841E-01 | 8.351E-01 | 6.777E-01 | 8.698E-01 |
| 708 | hsa-miR-214 | 3.006E+02 | 3.871E+02 | 7.766E-01 | -2.528E-01 | 6.858E-01 | 8.360E-01 | 2.407E-01 | 5.711E-01 |
| 709 | hsa-miR-145 | 1.264E+02 | 1.397E+02 | 9.050E-01 | -9.987E-02 | 6.878E-01 | 8.362E-01 | 6.119E-01 | 8.406E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|-----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 710 | hsa-miR-653 | 2.384E+01 | 1.756E+01 | 1.357E-00 | 3.054E-01 | 6.880E-01 | 8.362E-01 | 5.939E-01 | 8.254E-01 |
| 711 | hsa-miR-765 | 4.881E+01 | 4.938E+01 | 9.884E-01 | -1.164E-02 | 6.916E-01 | 8.394E-01 | 6.950E-01 | 8.769E-01 |
| 712 | hsa-miR-570 | 7.701E+01 | 8.472E+01 | 9.090E-01 | -9.537E-02 | 6.953E-01 | 8.427E-01 | 6.894E-01 | 8.762E-01 |
| 713 | hsa-miR-604 | 8.976E+01 | 1.082E+02 | 8.300E-01 | -1.864E-01 | 6.968E-01 | 8.434E-01 | 7.543E-01 | 8.926E-01 |
| 714 | hsa-miR-93 | 3.450E+03 | 3.374E+03 | 1.023E-00 | 2.227E-02 | 7.010E-01 | 8.459E-01 | 5.611E-01 | 8.044E-01 |
| 715 | hsa-miR-146b-5p | 1.016E+02 | 1.005E+02 | 1.011E-00 | 1.071E-02 | 7.009E-01 | 8.459E-01 | 2.712E-01 | 6.143E-01 |
| 716 | hsa-miR-29b | 4.061E+02 | 3.902E+02 | 1.041E-00 | 3.997E-02 | 7.018E-01 | 8.459E-01 | 6.547E-01 | 8.645E-01 |
| 717 | hsa-miR-181a* | 7.344E+01 | 7.937E+01 | 9.252E-01 | -7.773E-02 | 7.029E-01 | 8.460E-01 | 5.380E-01 | 7.996E-01 |
| 718 | hsa-miR-422a | 1.385E+02 | 1.769E+02 | 7.833E-01 | -2.443E-01 | 7.040E-01 | 8.462E-01 | 3.380E-01 | 6.638E-01 |
| 719 | hsa-miR-1206 | 6.041E+01 | 5.653E+01 | 1.069E-00 | 6.646E-02 | 7.078E-01 | 8.484E-01 | 3.619E-01 | 6.763E-01 |
| 720 | hsa-miR-23a | 4.401E+03 | 3.998E+03 | 1.101E-00 | 9.621E-02 | 7.073E-01 | 8.484E-01 | 6.610E-01 | 8.656E-01 |
| 721 | hsa-miR-487b | 5.424E+01 | 5.917E+01 | 9.167E-01 | -8.703E-02 | 7.090E-01 | 8.487E-01 | 7.344E-01 | 8.857E-01 |
| 722 | hsa-miR-339-3p | 2.728E+02 | 2.542E+02 | 1.073E-00 | 7.055E-02 | 7.123E-01 | 8.506E-01 | 5.362E-01 | 7.996E-01 |
| 723 | hsa-miR-191 | 1.198E+04 | 1.109E+04 | 1.080E-00 | 7.663E-02 | 7.127E-01 | 8.506E-01 | 6.670E-01 | 8.661E-01 |
| 724 | hsa-miR-340* | 1.586E+01 | 6.601E-00 | 2.402E-00 | 8.763E-01 | 7.292E-01 | 8.675E-01 | 3.831E-01 | 6.917E-01 |
| 725 | hsa-miR-1291 | 9.487E+01 | 1.096E+02 | 8.657E-01 | -1.442E-01 | 7.286E-01 | 8.675E-01 | 3.316E-01 | 6.638E-01 |
| 726 | hsa-miR-208a | 5.959E+01 | 6.629E+01 | 8.990E-01 | -1.065E-01 | 7.298E-01 | 8.675E-01 | 7.042E-01 | 8.807E-01 |
| 727 | hsa-miR-23a* | 4.779E-00 | 1.000E-00 | 4.779E-00 | 1.564E-00 | 7.398E-01 | 8.757E-01 | 9.270E-01 | 9.720E-01 |
| 728 | hsa-miR-1826 | 1.952E+02 | 2.078E+02 | 9.395E-01 | -6.241E-02 | 7.385E-01 | 8.757E-01 | 4.047E-01 | 7.094E-01 |
| 729 | hsa-miR-1208 | 9.372E+01 | 1.179E+02 | 7.951E-01 | -2.293E-01 | 7.393E-01 | 8.757E-01 | 4.381E-01 | 7.271E-01 |
| 730 | hsa-miR-1207-5p | 4.673E+02 | 6.478E+02 | 7.213E-01 | -3.267E-01 | 7.413E-01 | 8.764E-01 | 2.493E-01 | 5.831E-01 |
| 731 | hsa-miR-31* | 1.722E+02 | 1.718E+02 | 1.002E-00 | 2.479E-03 | 7.427E-01 | 8.768E-01 | 4.137E-01 | 7.106E-01 |
| 732 | hsa-miR-143* | 1.110E+02 | 1.203E+02 | 9.221E-01 | -8.109E-02 | 7.447E-01 | 8.780E-01 | 4.735E-01 | 7.572E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|-----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 733 | hsa-let-7f | 4.159E+02 | 2.433E+02 | 1.709E-00 | 5.359E-01 | 7.540E-01 | 8.865E-01 | 4.227E-01 | 7.159E-01 |
| 734 | hsa-miR-105 | 4.881E+01 | 4.327E+01 | 1.128E-00 | 1.203E-01 | 7.537E-01 | 8.865E-01 | 4.986E-01 | 7.749E-01 |
| 735 | hsa-miR-569 | 1.139E+01 | 1.995E+01 | 5.709E-01 | -5.606E-01 | 7.553E-01 | 8.868E-01 | 4.951E-01 | 7.737E-01 |
| 736 | hsa-miR-30c-2* | 2.222E+01 | 5.416E-00 | 4.103E-00 | 1.412E-00 | 7.610E-01 | 8.887E-01 | 4.264E-01 | 7.192E-01 |
| 737 | hsa-miR-921 | 5.900E+01 | 5.868E+01 | 1.005E-00 | 5.454E-03 | 7.584E-01 | 8.887E-01 | 9.237E-01 | 9.719E-01 |
| 738 | hsa-miR-628-5p | 7.874E+01 | 9.775E+01 | 8.054E-01 | -2.164E-01 | 7.592E-01 | 8.887E-01 | 4.094E-01 | 7.106E-01 |
| 739 | hsa-miR-1225-3p | 1.371E+02 | 1.713E+02 | 8.000E-01 | -2.232E-01 | 7.607E-01 | 8.887E-01 | 6.703E-01 | 8.673E-01 |
| 740 | hsa-miR-597 | 6.298E+01 | 6.814E+01 | 9.242E-01 | -7.886E-02 | 7.630E-01 | 8.898E-01 | 5.076E-01 | 7.781E-01 |
| 741 | hsa-miR-10a | 4.697E+01 | 4.785E+01 | 9.817E-01 | -1.843E-02 | 7.641E-01 | 8.899E-01 | 8.438E-01 | 9.427E-01 |
| 742 | hsa-miR-302b | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 7.664E-01 | 8.912E-01 | 5.490E-01 | 8.015E-01 |
| 743 | hsa-miR-1277 | 5.339E+01 | 5.868E+01 | 9.099E-01 | -9.444E-02 | 7.672E-01 | 8.912E-01 | 6.517E-01 | 8.645E-01 |
| 744 | hsa-miR-1207-3p | 3.466E+01 | 4.697E+01 | 7.379E-01 | -3.040E-01 | 7.697E-01 | 8.929E-01 | 7.213E-01 | 8.841E-01 |
| 745 | hsa-miR-186 | 3.227E+01 | 4.168E+01 | 7.743E-01 | -2.558E-01 | 7.713E-01 | 8.935E-01 | 2.832E-01 | 6.220E-01 |
| 746 | hsa-miR-626 | 3.440E+01 | 4.271E+01 | 8.053E-01 | -2.165E-01 | 7.730E-01 | 8.942E-01 | 4.597E-01 | 7.498E-01 |
| 747 | hsa-miR-554 | 8.815E+01 | 8.761E+01 | 1.006E-00 | 6.096E-03 | 7.742E-01 | 8.944E-01 | 6.739E-01 | 8.693E-01 |
| 748 | hsa-miR-99a* | 3.526E+01 | 3.927E+01 | 8.980E-01 | -1.076E-01 | 7.771E-01 | 8.965E-01 | 2.400E-01 | 5.711E-01 |
| 749 | hsa-miR-497* | 1.027E+02 | 1.032E+02 | 9.949E-01 | -5.156E-03 | 7.789E-01 | 8.965E-01 | 6.268E-01 | 8.496E-01 |
| 750 | hsa-miR-487a | 6.487E+01 | 8.023E+01 | 8.085E-01 | -2.126E-01 | 7.791E-01 | 8.965E-01 | 6.127E-01 | 8.406E-01 |
| 751 | hsa-miR-199a-5p | 2.352E+02 | 2.056E+02 | 1.144E-00 | 1.342E-01 | 7.802E-01 | 8.966E-01 | 6.964E-01 | 8.773E-01 |
| 752 | hsa-miR-454 | 1.154E+02 | 8.415E+01 | 1.371E-00 | 3.154E-01 | 7.832E-01 | 8.976E-01 | 6.326E-01 | 8.504E-01 |
| 753 | hsa-miR-492 | 7.192E+01 | 5.959E+01 | 1.207E-00 | 1.881E-01 | 7.831E-01 | 8.976E-01 | 3.575E-01 | 6.760E-01 |
| 754 | hsa-miR-338-5p | 3.200E+01 | 3.587E+01 | 8.922E-01 | -1.141E-01 | 7.843E-01 | 8.977E-01 | 9.989E-01 | 9.999E-01 |
| 755 | hsa-miR-125a-3p | 1.523E+01 | 3.315E+01 | 4.593E-01 | -7.781E-01 | 7.860E-01 | 8.983E-01 | 5.766E-01 | 8.170E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|-----------------|-----------|-----------|-----------|-------------|-------------|------------|-------------|-------------|
| 756 | hsa-miR-20a | 3.623E+03 | 3.143E+03 | 1.153E-00 | 1.420E-01 | 7.869E-01 | 8.983E-01 | 4.118E-01 | 7.106E-01 |
| 757 | hsa-miR-518d-3p | 7.874E+01 | 8.399E+01 | 9.374E-01 | -6.461E-02 | 7.943E-01 | 9.055E-01 | 7.452E-01 | 8.883E-01 |
| 758 | hsa-miR-664* | 5.424E+01 | 4.949E+01 | 1.096E-00 | 9.159E-02 | 8.005E-01 | 9.072E-01 | 5.569E-01 | 8.023E-01 |
| 759 | hsa-miR-520c-3p | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 7.979E-01 | 9.072E-01 | 7.261E-01 | 8.851E-01 |
| 760 | hsa-miR-1303 | 3.010E+01 | 2.743E+01 | 1.097E-00 | 9.294E-02 | 7.991E-01 | 9.072E-01 | 1.572E-01 | 4.881E-01 |
| 761 | hsa-miR-26b | 3.229E+02 | 1.911E+02 | 1.690E-00 | 5.244E-01 | 8.009E-01 | 9.072E-01 | 8.868E-01 | 9.626E-01 |
| 762 | hsa-miR-1256 | 6.665E+01 | 7.584E+01 | 8.788E-01 | -1.292E-01 | 8.010E-01 | 9.072E-01 | 9.247E-01 | 9.719E-01 |
| 763 | hsa-miR-361-3p | 1.886E+02 | 1.986E+02 | 9.497E-01 | -5.162E-02 | 8.035E-01 | 9.077E-01 | 6.684E-01 | 8.661E-01 |
| 764 | hsa-miR-22* | 4.639E+01 | 5.046E+01 | 9.192E-01 | -8.429E-02 | 8.056E-01 | 9.077E-01 | 9.722E-01 | 9.882E-01 |
| 765 | hsa-miR-103 | 6.927E+03 | 6.228E+03 | 1.112E-00 | 1.065E-01 | 8.056E-01 | 9.077E-01 | 5.652E-01 | 8.076E-01 |
| 766 | hsa-miR-888* | 4.708E+01 | 5.116E+01 | 9.201E-01 | -8.323E-02 | 8.053E-01 | 9.077E-01 | 2.038E-01 | 5.254E-01 |
| 767 | hsa-miR-1180 | 6.116E+01 | 5.529E+01 | 1.106E-00 | 1.009E-01 | 8.085E-01 | 9.097E-01 | 3.020E-01 | 6.403E-01 |
| 768 | hsa-miR-432* | 4.471E+01 | 5.092E+01 | 8.781E-01 | -1.300E-01 | 8.096E-01 | 9.098E-01 | 5.261E-01 | 7.972E-01 |
| 769 | hsa-miR-126 | 1.620E+03 | 1.262E+03 | 1.284E-00 | 2.498E-01 | 8.129E-01 | 9.098E-01 | 7.705E-01 | 8.986E-01 |
| 770 | hsa-miR-200a | 9.031E+01 | 9.775E+01 | 9.239E-01 | -7.920E-02 | 8.125E-01 | 9.098E-01 | 6.402E-01 | 8.553E-01 |
| 771 | hsa-miR-1285 | 2.644E+02 | 3.515E+02 | 7.522E-01 | -2.848E-01 | 8.121E-01 | 9.098E-01 | 1.450E-01 | 4.686E-01 |
| 772 | hsa-miR-154* | 4.482E+01 | 4.315E+01 | 1.039E-00 | 3.788E-02 | 8.202E-01 | 9.168E-01 | 3.951E-01 | 7.046E-01 |
| 773 | hsa-miR-371-3p | 3.466E+01 | 2.530E+01 | 1.370E-00 | 3.147E-01 | 8.233E-01 | 9.175E-01 | 1.970E-01 | 5.254E-01 |
| 774 | hsa-miR-193a-3p | 1.234E+02 | 1.385E+02 | 8.910E-01 | -1.154E-01 | 8.229E-01 | 9.175E-01 | 3.141E-01 | 6.438E-01 |
| 775 | hsa-miR-1244 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 8.239E-01 | 9.175E-01 | 1.579E-01 | 4.883E-01 | |
| 776 | hsa-miR-200c | 9.283E+01 | 8.531E+01 | 1.088E-00 | 8.443E-02 | 8.254E-01 | 9.180E-01 | 6.185E-01 | 8.432E-01 |
| 777 | hsa-miR-125b-1* | 7.413E-00 | 1.000E-00 | 7.413E-00 | 2.003E-00 | 8.299E-01 | 9.182E-01 | 5.355E-01 | 7.996E-01 |
| 778 | hsa-miR-517* | 1.661E+02 | 1.664E+02 | 9.979E-01 | -2.082E-03 | 8.281E-01 | 9.182E-01 | 3.675E-01 | 6.763E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad jp |
|-----|-----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 779 | hsa-miR-216a | 1.420E+02 | 1.364E+02 | 1.042E-00 | 4.069E-02 | 8.288E-01 | 9.182E-01 | 3.487E-01 | 6.732E-01 |
| 780 | hsa-miR-586 | 3.200E+01 | 3.087E+01 | 1.036E-00 | 3.580E-02 | 8.276E-01 | 9.182E-01 | 7.288E-01 | 8.857E-01 |
| 781 | hsa-miR-375 | 8.713E-00 | 1.000E-00 | 8.713E-00 | 2.165E-00 | 8.418E-01 | 9.301E-01 | 5.046E-01 | 7.779E-01 |
| 782 | hsa-let-7a | 9.830E+02 | 1.096E+03 | 8.968E-01 | 1.089E-01 | 8.494E-01 | 9.360E-01 | 5.455E-01 | 8.015E-01 |
| 783 | hsa-miR-1827 | 3.648E+01 | 3.753E+01 | 9.721E-01 | -2.833E-02 | 8.499E-01 | 9.360E-01 | 5.476E-01 | 8.015E-01 |
| 784 | hsa-miR-518e* | 1.407E+02 | 1.300E+02 | 1.082E-00 | 7.909E-02 | 8.503E-01 | 9.360E-01 | 3.992E-01 | 7.060E-01 |
| 785 | hsa-miR-513b | 4.708E+01 | 5.380E+01 | 8.750E-01 | -1.335E-01 | 8.539E-01 | 9.378E-01 | 8.062E-01 | 9.228E-01 |
| 786 | hsa-miR-196a | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 8.541E-01 | 9.378E-01 | 7.953E-01 | 9.130E-01 |
| 787 | hsa-miR-1915 | 6.883E+02 | 8.284E+02 | 8.309E-01 | -1.852E-01 | 8.571E-01 | 9.399E-01 | 4.008E-01 | 7.073E-01 |
| 788 | hsa-miR-1204 | 1.935E+01 | 1.756E+01 | 1.101E-00 | 9.666E-02 | 8.592E-01 | 9.410E-01 | 9.456E-01 | 9.820E-01 |
| 789 | hsa-miR-15b* | 6.281E+01 | 7.320E+01 | 8.582E-01 | -1.530E-01 | 8.619E-01 | 9.428E-01 | 4.899E-01 | 7.673E-01 |
| 790 | hsa-miR-516b | 3.581E+01 | 4.111E+01 | 8.710E-01 | -1.381E-01 | 8.634E-01 | 9.432E-01 | 4.326E-01 | 7.246E-01 |
| 791 | hsa-miR-1912 | 1.539E+02 | 1.862E+02 | 8.265E-01 | -1.905E-01 | 8.661E-01 | 9.450E-01 | 6.582E-01 | 8.645E-01 |
| 792 | hsa-miR-550r* | 6.883E+02 | 6.607E+02 | 1.042E-00 | 4.090E-02 | 8.693E-01 | 9.472E-01 | 8.667E-01 | 9.528E-01 |
| 793 | hsa-miR-632 | 2.066E+01 | 2.485E+01 | 8.315E-01 | -1.845E-01 | 8.706E-01 | 9.474E-01 | 7.407E-01 | 8.878E-01 |
| 794 | hsa-miR-24 | 1.760E+03 | 1.830E+03 | 9.619E-01 | -3.882E-02 | 8.745E-01 | 9.505E-01 | 3.536E-01 | 6.760E-01 |
| 795 | hsa-miR-561 | 3.994E+01 | 3.753E+01 | 1.064E-00 | 6.221E-02 | 8.776E-01 | 9.512E-01 | 9.713E-01 | 9.882E-01 |
| 796 | hsa-miR-219-5p | 5.025E+01 | 5.092E+01 | 9.870E-01 | -1.310E-02 | 8.784E-01 | 9.512E-01 | 5.623E-01 | 8.047E-01 |
| 797 | hsa-miR-20b | 2.877E+03 | 2.515E+03 | 1.144E-00 | 1.345E-01 | 8.764E-01 | 9.512E-01 | 5.531E-01 | 8.015E-01 |
| 798 | hsa-miR-220a | 6.127E+01 | 6.719E+01 | 9.119E-01 | -9.218E-02 | 8.799E-01 | 9.515E-01 | 2.613E-01 | 5.971E-01 |
| 799 | hsa-miR-199a-3p | 9.671E+01 | 9.048E+01 | 1.069E-00 | 6.663E-02 | 8.849E-01 | 9.558E-01 | 8.111E-01 | 9.246E-01 |
| 800 | hsa-miR-665 | 9.565E+01 | 1.008E+02 | 9.493E-01 | -5.201E-02 | 8.891E-01 | 9.579E-01 | 2.557E-01 | 5.917E-01 |
| 801 | hsa-miR-519a | 3.200E+01 | 1.953E+01 | 1.638E-00 | 4.937E-01 | 8.885E-01 | 9.579E-01 | 7.015E-01 | 8.807E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjp | limma_ra wp | limma_ad ip |
|-----|-----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 802 | hsa-miR-488* | 7.382E+01 | 7.714E+01 | 9.570E-01 | -4.400E-02 | 8.916E-01 | 9.594E-01 | 7.307E-01 | 8.857E-01 |
| 803 | hsa-miR-449b | 3.406E+01 | 3.289E+01 | 1.036E-00 | 3.494E-02 | 9.055E-01 | 9.636E-01 | 4.837E-01 | 7.617E-01 |
| 804 | hsa-miR-151-5p | 4.401E+03 | 4.640E+03 | 9.485E-01 | -5.288E-02 | 8.976E-01 | 9.636E-01 | 7.524E-01 | 8.926E-01 |
| 805 | hsa-miR-567 | 5.339E+01 | 3.315E+01 | 1.610E-00 | 4.764E-01 | 9.045E-01 | 9.636E-01 | 4.137E-01 | 7.106E-01 |
| 806 | hsa-miR-522 | 1.000E-00 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 9.009E-01 | 9.636E-01 | 2.780E-02 | 3.110E-01 |
| 807 | hsa-miR-1267 | 4.271E+01 | 3.029E+01 | 1.410E-00 | 3.436E-01 | 9.038E-01 | 9.636E-01 | 9.981E-01 | 9.999E-01 |
| 808 | hsa-miR-874 | 1.547E+02 | 1.454E+02 | 1.064E-00 | 6.165E-02 | 9.038E-01 | 9.636E-01 | 5.404E-01 | 8.006E-01 |
| 809 | hsa-miR-376c | 6.788E+01 | 5.868E+01 | 1.157E-00 | 1.458E-01 | 9.021E-01 | 9.636E-01 | 9.999E-01 | 9.999E-01 |
| 810 | hsa-miR-510 | 6.030E+01 | 7.037E+01 | 8.568E-01 | -1.545E-01 | 8.986E-01 | 9.636E-01 | 9.625E-01 | 9.865E-01 |
| 811 | hsa-miR-374b | 4.953E+02 | 4.905E+02 | 1.010E-00 | 9.630E-03 | 9.055E-01 | 9.636E-01 | 6.005E-01 | 8.318E-01 |
| 812 | hsa-miR-29c | 5.591E+02 | 5.224E+02 | 1.070E-00 | 6.791E-02 | 9.070E-01 | 9.640E-01 | 8.393E-01 | 9.407E-01 |
| 813 | hsa-miR-137 | 7.689E+01 | 7.773E+01 | 9.891E-01 | -1.092E-02 | 9.084E-01 | 9.642E-01 | 4.343E-01 | 7.249E-01 |
| 814 | hsa-miR-337-5p | 4.433E+01 | 4.697E+01 | 9.438E-01 | -5.786E-02 | 9.165E-01 | 9.647E-01 | 8.969E-01 | 9.671E-01 |
| 815 | hsa-miR-1254 | 1.129E+02 | 1.264E+02 | 8.929E-01 | -1.133E-01 | 9.143E-01 | 9.647E-01 | 4.113E-01 | 7.106E-01 |
| 816 | hsa-miR-193b | 5.703E+01 | 6.327E+01 | 9.014E-01 | -1.038E-01 | 9.106E-01 | 9.647E-01 | 7.983E-01 | 9.149E-01 |
| 817 | hsa-miR-520d-5p | 5.975E+01 | 5.752E+01 | 1.039E-00 | 3.801E-02 | 9.149E-01 | 9.647E-01 | 5.284E-01 | 7.986E-01 |
| 818 | hsa-miR-1179 | 2.715E+01 | 2.530E+01 | 1.073E-00 | 7.032E-02 | 9.143E-01 | 9.647E-01 | 3.385E-01 | 6.638E-01 |
| 819 | hsa-miR-181b | 4.708E+01 | 4.534E+01 | 1.038E-00 | 3.748E-02 | 9.167E-01 | 9.647E-01 | 3.174E-01 | 6.490E-01 |
| 820 | hsa-miR-30b | 7.310E+03 | 8.166E+03 | 8.952E-01 | -1.107E-01 | 9.147E-01 | 9.647E-01 | 5.527E-01 | 8.015E-01 |
| 821 | hsa-miR-532-5p | 2.127E+02 | 1.678E+02 | 1.268E-00 | 2.371E-01 | 9.203E-01 | 9.674E-01 | 6.873E-01 | 8.759E-01 |
| 822 | hsa-miR-369-5p | 3.037E+01 | 3.753E+01 | 8.093E-01 | -2.116E-01 | 9.295E-01 | 9.735E-01 | 7.401E-01 | 8.878E-01 |
| 823 | hsa-miR-631 | 1.300E+02 | 1.259E+02 | 1.032E-00 | 3.190E-02 | 9.290E-01 | 9.735E-01 | 7.187E-01 | 8.841E-01 |
| 824 | hsa-miR-130b | 1.492E+03 | 1.326E+03 | 1.125E-00 | 1.176E-01 | 9.285E-01 | 9.735E-01 | 5.593E-01 | 8.031E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw P | ttest_adjp | limma_ra wp | limma_ad ip |
|-----|----------------|--------------|--------------|-----------|----------------|----------------|------------|----------------|----------------|
| 825 | hsa-miR-551a | 5.092E+01 | 6.084E+01 | 8.369E-01 | -1.780E-01 | 9.324E-01 | 9.754E-01 | 5.795E-01 | 8.185E-01 |
| 826 | hsa-miR-551b | 7.370E+01 | 9.048E+01 | 8.146E-01 | -2.051E-01 | 9.355E-01 | 9.774E-01 | 4.440E-01 | 7.313E-01 |
| 827 | hsa-miR-593 | 1.071E+01 | 5.416E-00 | 1.978E-00 | 6.820E-01 | 9.372E-01 | 9.780E-01 | 8.624E-01 | 9.528E-01 |
| 828 | hsa-miR-886-5p | 7.170E+01 | 6.177E+01 | 1.161E-00 | 1.489E-01 | 9.387E-01 | 9.783E-01 | 7.576E-01 | 8.928E-01 |
| 829 | hsa-miR-184 | 1.322E+01 | 1.995E+01 | 6.623E-01 | -4.120E-01 | 9.443E-01 | 9.819E-01 | 3.369E-01 | 6.638E-01 |
| 830 | hsa-miR-624 | 5.144E+01 | 5.015E+01 | 1.026E-00 | 2.540E-02 | 9.442E-01 | 9.819E-01 | 7.245E-01 | 8.844E-01 |
| 831 | hsa-miR-5480 | 9.997E+01 | 9.810E+01 | 1.019E-00 | 1.889E-02 | 9.494E-01 | 9.824E-01 | 3.060E-01 | 6.412E-01 |
| 832 | hsa-miR-223 | 2.206E+03 | 2.254E+03 | 9.784E-01 | -2.184E-02 | 9.461E-01 | 9.824E-01 | 9.624E-01 | 9.865E-01 |
| 833 | hsa-miR-1231 | 8.373E+01 | 1.072E+02 | 7.809E-01 | -2.473E-01 | 9.494E-01 | 9.824E-01 | 3.031E-01 | 6.411E-01 |
| 834 | hsa-miR-1276 | 3.985E+01 | 3.499E+01 | 1.139E-00 | 1.300E-01 | 9.486E-01 | 9.824E-01 | 7.444E-01 | 8.883E-01 |
| 835 | hsa-miR-29b-2* | 3.526E+01 | 2.942E+01 | 1.199E-00 | 1.812E-01 | 9.565E-01 | 9.850E-01 | 9.826E-01 | 9.964E-01 |
| 836 | hsa-miR-346 | 5.397E+01 | 5.778E+01 | 9.340E-01 | -6.823E-02 | 9.541E-01 | 9.850E-01 | 9.083E-01 | 9.671E-01 |
| 837 | hsa-miR-141* | 8.857E+01 | 9.334E+01 | 9.489E-01 | -5.240E-02 | 9.552E-01 | 9.850E-01 | 8.245E-01 | 9.338E-01 |
| 838 | hsa-miR-181d | 3.010E+01 | 2.530E+01 | 1.190E-00 | 1.736E-01 | 9.559E-01 | 9.850E-01 | 8.659E-01 | 9.528E-01 |
| 839 | hsa-miR-615-5p | 4.835E+01 | 5.015E+01 | 9.641E-01 | -3.660E-02 | 9.671E-01 | 9.864E-01 | 5.527E-01 | 8.015E-01 |
| 840 | hsa-miR-1185 | 1.187E+01 | 1.502E+01 | 7.905E-01 | -2.351E-01 | 9.637E-01 | 9.864E-01 | 9.506E-01 | 9.850E-01 |
| 841 | hsa-miR-141 | 3.902E+01 | 3.701E+01 | 1.054E-00 | 5.303E-02 | 9.654E-01 | 9.864E-01 | 8.330E-01 | 9.385E-01 |
| 842 | hsa-miR-885-5p | 2.515E+01 | 3.581E+01 | 7.024E-01 | -3.533E-01 | 9.656E-01 | 9.864E-01 | 2.318E-01 | 5.594E-01 |
| 843 | hsa-miR-18a | 1.203E+03 | 1.281E+03 | 9.392E-01 | -6.276E-02 | 9.637E-01 | 9.864E-01 | 4.764E-01 | 7.581E-01 |
| 844 | hsa-let-7g | 2.694E+02 | 1.649E+02 | 1.634E-00 | 4.909E-01 | 9.668E-01 | 9.864E-01 | 5.350E-01 | 7.996E-01 |
| 845 | hsa-miR-130a | 1.431E+03 | 1.326E+03 | 1.079E-00 | 7.624E-02 | 9.648E-01 | 9.864E-01 | 5.794E-01 | 8.185E-01 |
| 846 | hsa-miR-744 | 6.104E+02 | 6.222E+02 | 9.810E-01 | -1.914E-02 | 9.681E-01 | 9.864E-01 | 6.656E-01 | 8.661E-01 |
| 847 | hsa-miR-221 | 8.143E+01 | 8.490E+01 | 9.591E-01 | -4.177E-02 | 9.644E-01 | 9.864E-01 | 8.900E-01 | 9.637E-01 |

FIG 2 (continued)

| No. | miRNA, miRNA* | median g1 | median g2 | qmedian | logqmedi an | ttest_raw p | ttest_adjip | limma_ra wp | limma_ad jp |
|-----|----------------|--------------|--------------|-----------|----------------|----------------|-------------|----------------|----------------|
| 848 | hsa-miR-1255b | 7.515E+01 | 6.116E+01 | 1.229E-00 | 2.061E-01 | 9.704E-01 | 9.876E-01 | 8.939E-01 | 9.655E-01 |
| 849 | hsa-miR-378* | 5.106E+01 | 5.860E+01 | 8.712E-01 | -1.378E-01 | 9.758E-01 | 9.893E-01 | 2.120E-01 | 5.302E-01 |
| 850 | hsa-miR-629 | 5.447E+01 | 2.462E+01 | 2.212E-00 | 7.941E-01 | 9.766E-01 | 9.893E-01 | 3.614E-01 | 6.763E-01 |
| 851 | hsa-miR-526b | 4.271E+01 | 4.271E+01 | 1.000E-00 | 0.000E+01 | 9.764E-01 | 9.893E-01 | 6.638E-01 | 8.661E-01 |
| 852 | hsa-miR-373 | 1.000E-00 | 6.601E-00 | 1.515E-01 | -1.887E-00 | 9.755E-01 | 9.893E-01 | 2.604E-01 | 5.971E-01 |
| 853 | hsa-miR-515-5p | 1.609E+02 | 1.784E+02 | 9.019E-01 | -1.033E-01 | 9.779E-01 | 9.893E-01 | 4.356E-01 | 7.256E-01 |
| 854 | hsa-miR-592 | 4.546E+01 | 4.339E+01 | 1.048E-00 | 4.651E-02 | 9.822E-01 | 9.926E-01 | 3.829E-01 | 6.917E-01 |
| 855 | hsa-miR-16-1* | 7.396E+01 | 7.160E+01 | 1.033E-00 | 3.234E-02 | 9.885E-01 | 9.959E-01 | 5.249E-01 | 7.972E-01 |
| 856 | hsa-miR-30e* | 3.940E+01 | 3.499E+01 | 1.126E-00 | 1.187E-01 | 9.890E-01 | 9.959E-01 | 9.186E-01 | 9.703E-01 |
| 857 | hsa-let-7e | 1.385E+02 | 8.174E+01 | 1.695E-00 | 5.277E-01 | 9.881E-01 | 9.959E-01 | 3.657E-01 | 6.763E-01 |
| 858 | hsa-miR-550 | 1.137E+02 | 1.103E+02 | 1.031E-00 | 3.040E-02 | 9.937E-01 | 9.984E-01 | 5.304E-01 | 7.996E-01 |
| 859 | hsa-miR-1294 | 9.057E-00 | 1.000E-00 | 9.057E-00 | 2.204E-00 | 9.927E-01 | 9.984E-01 | 6.027E-01 | 8.336E-01 |
| 860 | hsa-miR-144 | 1.687E+03 | 2.008E+03 | 8.401E-01 | -1.742E-01 | 9.952E-01 | 9.987E-01 | 3.254E-01 | 6.562E-01 |
| 861 | hsa-miR-939 | 4.938E+01 | 5.200E+01 | 9.496E-01 | -5.169E-02 | 9.996E-01 | 9.998E-01 | 9.947E-01 | 9.982E-01 |
| 862 | hsa-miR-384 | 5.900E+01 | 6.629E+01 | 8.900E-01 | -1.165E-01 | 9.977E-01 | 9.998E-01 | 9.650E-01 | 9.875E-01 |
| 863 | hsa-miR-598 | 5.144E+01 | 3.927E+01 | 1.310E-00 | 2.700E-01 | 9.998E-01 | 9.998E-01 | 8.154E-01 | 9.283E-01 |

FIG 3

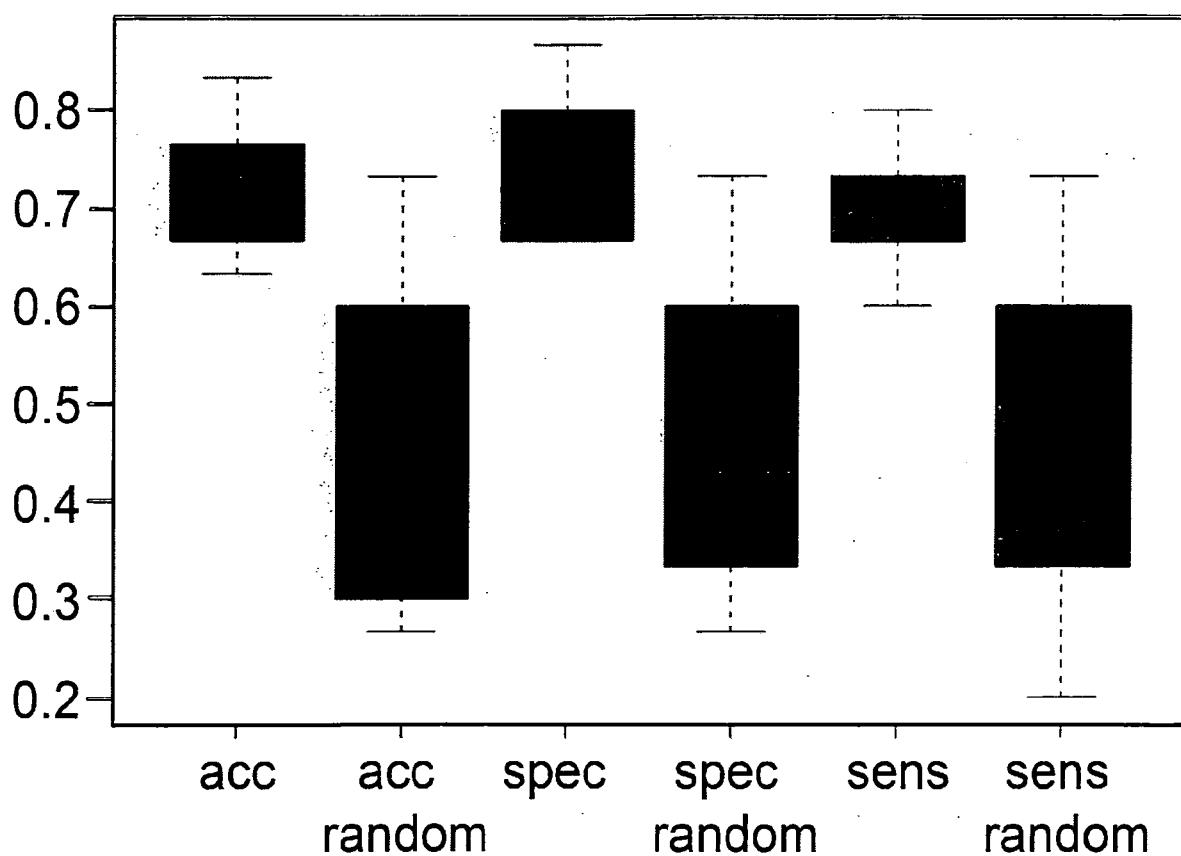


FIG 4

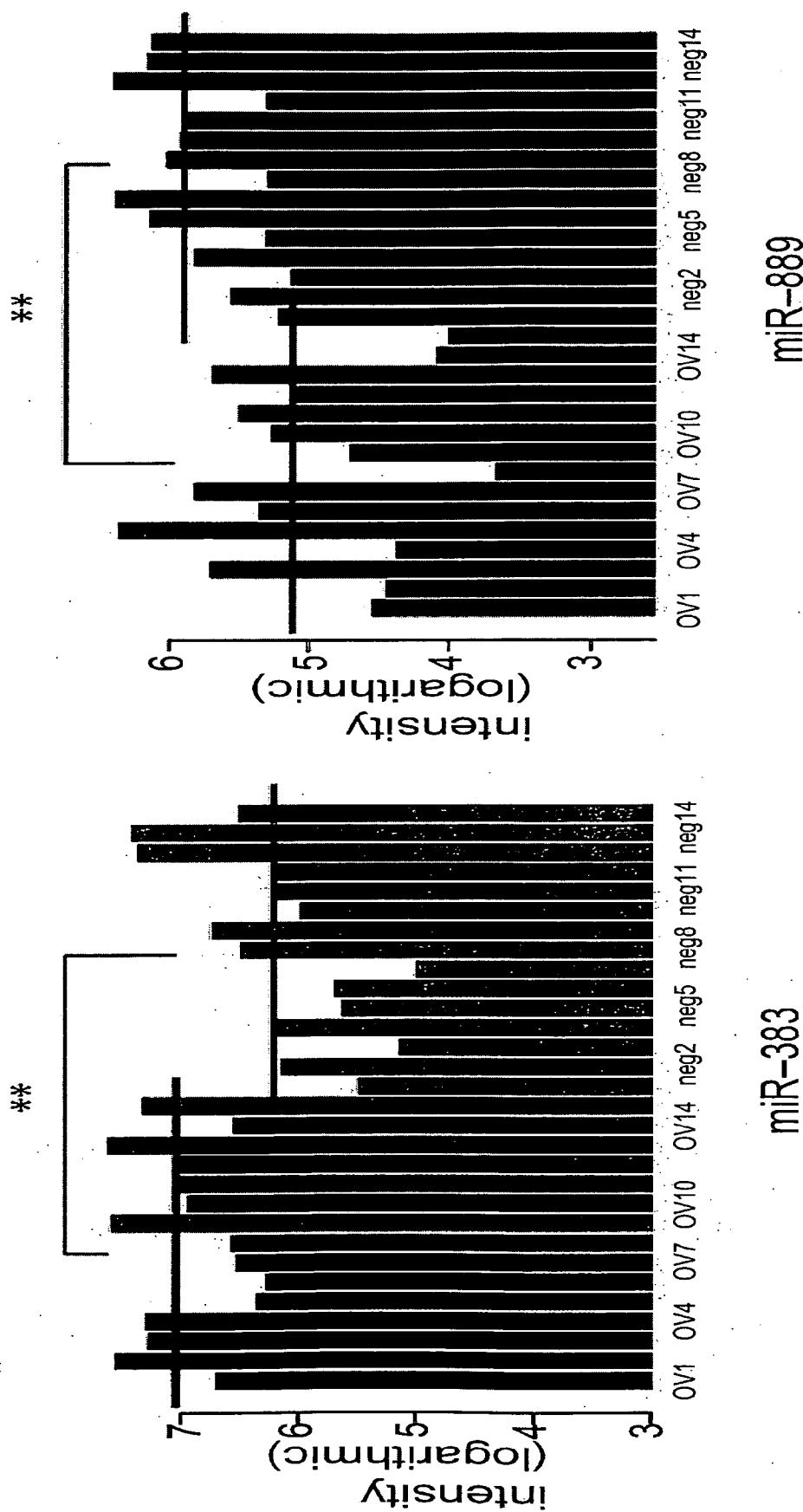


FIG 5

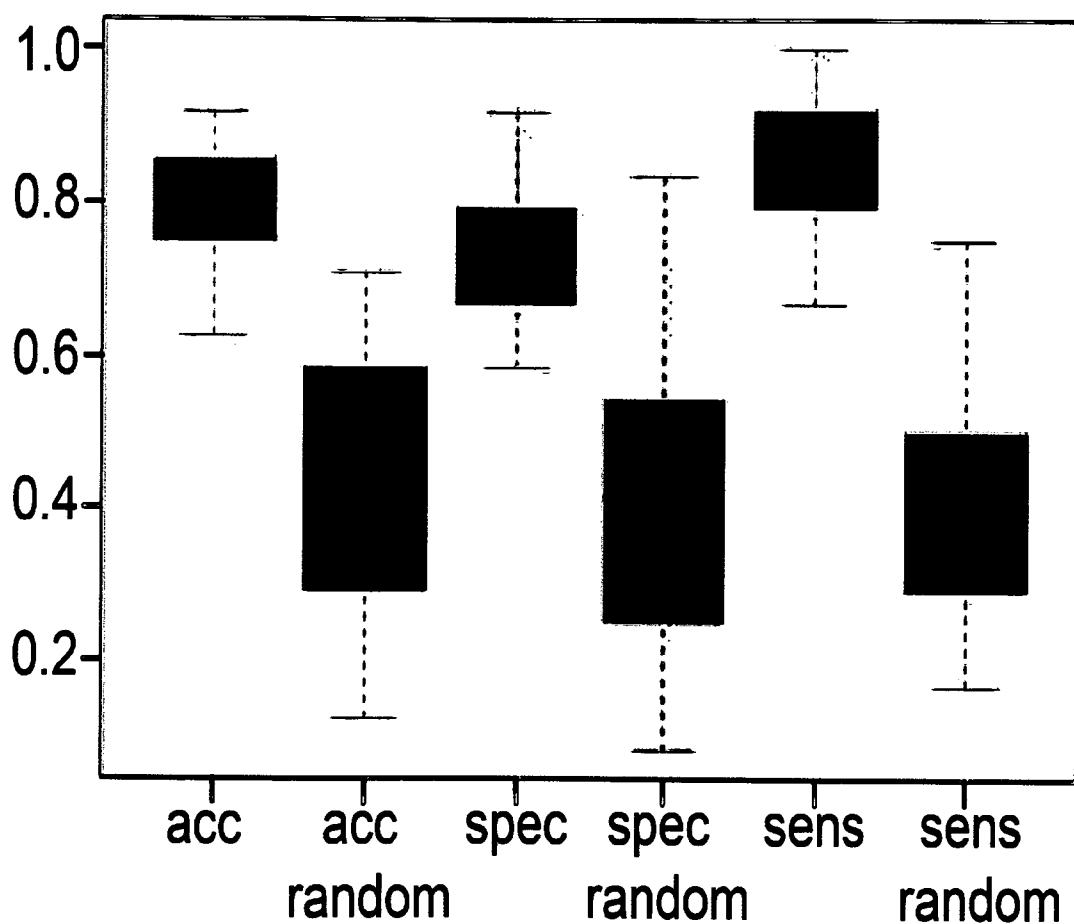


FIG 6

| Number | year of birth | histology | current therapy | pre-therapies | tumor load |
|--------|---------------------|---|---------------------------------------|---|---------------|
| 1 | 1980 | serous | pegylated liposomal Doxorubicin | Paclitaxel/Carboplatin; | ++ |
| 2 | 1938 | serous | Topotecan | Paclitaxel/Carboplatin; Carboplatin mono; | ++ |
| 3 | 1951 | serous | Gemcitabine | Paclitaxel/Carboplatin; pegylated liposomal Doxorubicin; Topotecan, Treosulfan | ++ |
| 4 | 1931 | serous | Topotecan | Carboplatin mono | + |
| 5 | 1937 | serous OvCA or uterine carcinoma | Treosulfan | Paclitaxel/Carboplatin; Epirubicin; Carboplatin mono; | + |
| 6 | 1937 | solid | Topotecan | Cyclophosphamid/Carboplatin; Carboplatin mono; Paclitaxel/Carboplatin; | + |

FIG. 6 (continued)

| | | | | | |
|----|------|--------|---------------------------------------|--|-----|
| 7 | 1947 | serous | Topotecan | Paclitaxel/Carboplatin; | ++ |
| 8 | 1939 | serous | Topotecan | Paclitaxel/Carboplatin; | +++ |
| 9 | 1955 | serous | pegylated liposomal Doxorubicin | Paclitaxel/Carboplatin; Topotecan; | + |
| 10 | 1931 | serous | Paclitaxel | Carboplatin mono; Topotecan; pegylated liposomal Doxorubicin; Treosulfan; | + |
| 11 | 1954 | serous | Treosulfan | Paclitaxel/Carboplatin; Topotecan; Carboplatin mono; pegylated liposomal Doxorubicin; | +++ |
| 12 | 1954 | serous | Topotecan | Paclitaxel/Carboplatin; pegylated liposomal Doxorubicin; HIPEC with Mitomycin; | ++ |
| 13 | 1943 | serous | Gemcitabine | Paclitaxel/Carboplatin; peg.-lip. Doxorubicin; Topotecan; Vinorelbine; Treosulfan; Carboplatin mono; Paclitaxel; | ++ |

FIG 6 (continued)

| | | | | | |
|----|------|--------------|------------------|---|---|
| 14 | 1960 | serous | Carboplatin mono | Paclitaxel/Carboplatin; Topotecan; | + |
| 15 | 1929 | endometrioid | Carboplatin mono | Carboplatin mono; Topotecan; pegylated liposomal Doxorubicin; Treosulfan; | + |

FIG 7

| No. | miRNA | median_g1 | median_g2 | qmedian | Logq median | ttest_rawp | ttest_adjp | Limma_ rawp | Limma_ adjp |
|-----|-----------------|-----------|-----------|-----------|----------------|------------|------------|----------------|----------------|
| 1 | hsa-miR-1224-3p | 1.834E+02 | 5.332E+01 | 3.439E-00 | 1.235E-00 | 1.369E-06 | 2.418E-04 | 9.054E-07 | 3.907E-04 |
| 2 | hsa-miR-610 | 3.285E+01 | 1.137E+02 | 2.890E-01 | -1.241E-00 | 1.401E-06 | 2.418E-04 | 1.338E-04 | 6.592E-03 |
| 3 | hsa-miR-668 | 5.874E+01 | 1.125E+01 | 5.221E-00 | 1.653E-00 | 1.339E-06 | 2.418E-04 | 7.246E-08 | 6.253E-05 |
| 4 | hsa-miR-328 | 1.231E+02 | 2.530E+01 | 4.865E-00 | 1.582E-00 | 7.944E-07 | 2.418E-04 | 1.607E-04 | 7.300E-03 |
| 5 | hsa-miR-942 | 7.305E+01 | 1.000E-00 | 7.305E+01 | 4.291E-00 | 1.167E-06 | 2.418E-04 | 5.287E-05 | 4.002E-03 |
| 6 | hsa-miR-500 | 4.451E+02 | 1.141E+02 | 3.900E-00 | 1.361E-00 | 2.262E-06 | 2.913E-04 | 1.307E-05 | 2.553E-03 |
| 7 | hsa-miR-423-5p | 4.132E+02 | 1.962E+03 | 2.106E-00 | 7.446E-01 | 2.363E-06 | 2.913E-04 | 3.278E-05 | 2.888E-03 |
| 8 | hsa-miR-1248 | 2.331E+01 | 1.000E-00 | 2.331E+01 | 3.149E-00 | 4.071E-06 | 4.391E-04 | 2.418E-05 | 2.888E-03 |
| 9 | hsa-miR-324-3p | 1.056E+03 | 5.331E+02 | 1.980E-00 | 6.833E-01 | 6.926E-06 | 6.642E-04 | 2.352E-05 | 2.888E-03 |
| 10 | hsa-miR-1281 | 1.491E+02 | 1.756E+01 | 8.491E-00 | 2.139E-00 | 1.020E-05 | 8.003E-04 | 5.131E-06 | 1.476E-03 |
| 11 | hsa-miR-193a-5p | 1.251E+02 | 5.868E+01 | 2.133E-00 | 7.573E-01 | 9.625E-06 | 8.003E-04 | 4.210E-04 | 1.397E-02 |
| 12 | hsa-miR-1825 | 9.320E+01 | 3.136E+01 | 2.972E-00 | 1.089E-00 | 1.511E-05 | 1.086E-03 | 1.542E-02 | 8.933E-02 |
| 13 | hsa-miR-605 | 1.780E+01 | 1.000E-00 | 1.780E+01 | 2.879E-00 | 2.247E-05 | 1.492E-03 | 4.474E-04 | 1.430E-02 |
| 14 | hsa-miR-383 | 4.355E+01 | 9.810E+01 | 4.439E-01 | -8.121E-01 | 2.616E-05 | 1.613E-03 | 1.917E-03 | 2.954E-02 |
| 15 | hsa-miR-485-3p | 1.028E+02 | 3.733E+01 | 2.754E-00 | 1.013E-00 | 2.955E-05 | 1.700E-03 | 3.859E-04 | 1.350E-02 |
| 16 | hsa-miR-148a* | 4.038E+01 | 4.674E-00 | 8.640E-00 | 2.156E-00 | 4.232E-05 | 2.283E-03 | 2.533E-04 | 1.041E-02 |
| 17 | hsa-miR-877* | 1.188E+02 | 1.734E+01 | 6.852E-00 | 1.925E-00 | 4.626E-05 | 2.348E-03 | 4.871E-04 | 1.446E-02 |
| 18 | hsa-miR-130a* | 7.695E+01 | 3.526E+01 | 2.182E-00 | 7.802E-01 | 5.468E-05 | 2.442E-03 | 1.827E-03 | 2.954E-02 |
| 19 | hsa-let-7d* | 1.661E+02 | 6.719E+01 | 2.472E-00 | 9.051E-01 | 5.943E-05 | 2.442E-03 | 1.608E-02 | 9.025E-02 |

FIG 7 (continued)

| | | | | | | | | | |
|----|------------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|
| 20 | hsa-miR-337-3p | 1.739E+01 | 1.000E-00 | 1.739E+01 | 2.856E-00 | 5.155E-05 | 2.442E-03 | 1.479E-05 | 2.553E-03 |
| 21 | hsa-miR-1226 | 8.481E+01 | 3.581E+01 | 2.369E-00 | 8.623E-01 | 5.892E-05 | 2.442E-03 | 5.492E-02 | 1.810E-01 |
| 22 | hsa-miR-148a | 6.814E+02 | 1.431E+03 | 4.761E-01 | -7.422E-01 | 8.042E-05 | 3.155E-03 | 1.295E-04 | 6.592E-03 |
| 23 | hsa-miR-219-1-3p | 2.026E+01 | 1.000E-00 | 2.026E+01 | 3.009E-00 | 8.581E-05 | 3.220E-03 | 3.347E-05 | 2.888E-03 |
| 24 | hsa-miR-29c* | 2.456E+01 | 1.000E-00 | 2.456E+01 | 3.201E-00 | 1.113E-04 | 4.002E-03 | 8.181E-03 | 6.139E-02 |
| 25 | hsa-miR-483-3p | 5.069E+01 | 1.000E-00 | 5.069E+01 | 3.926E-00 | 1.476E-04 | 5.095E-03 | 1.077E-03 | 2.324E-02 |
| 26 | hsa-miR-133a | 8.744E+01 | 2.704E+01 | 3.234E-00 | 1.174E-00 | 1.556E-04 | 5.165E-03 | 6.857E-03 | 5.476E-02 |
| 27 | hsa-miR-323-3p | 5.378E+01 | 8.612E-00 | 6.245E-00 | 1.832E-00 | 1.671E-04 | 5.300E-03 | 4.320E-03 | 4.608E-02 |
| 28 | hsa-miR-125a-5p | 4.177E+02 | 1.122E+02 | 3.722E-00 | 1.314E-00 | 1.781E-04 | 5.300E-03 | 6.980E-03 | 5.476E-02 |
| 29 | hsa-miR-130b* | 2.031E+01 | 1.000E-00 | 2.031E+01 | 3.011E-00 | 1.761E-04 | 5.300E-03 | 1.895E-03 | 2.954E-02 |
| 30 | hsa-miR-133b | 1.760E+01 | 1.000E-00 | 1.760E+01 | 2.868E-00 | 1.997E-04 | 5.696E-03 | 7.368E-04 | 1.829E-02 |
| 31 | hsa-miR-186* | 7.367E+01 | 1.325E+02 | 5.559E-01 | -5.871E-01 | 2.142E-04 | 5.696E-03 | 4.622E-03 | 4.652E-02 |
| 32 | hsa-miR-576-3p | 9.768E-00 | 1.000E-00 | 9.768E-00 | 2.279E-00 | 2.104E-04 | 5.696E-03 | 1.348E-04 | 6.592E-03 |
| 33 | hsa-miR-150 | 1.919E+03 | 6.288E+02 | 3.051E-00 | 1.116E-00 | 2.178E-04 | 5.696E-03 | 3.136E-04 | 1.184E-02 |
| 34 | hsa-miR-26b* | 1.118E+01 | 1.000E-00 | 1.118E+01 | 2.414E-00 | 2.356E-04 | 5.981E-03 | 2.208E-04 | 9.528E-03 |
| 35 | hsa-miR-302d | 1.095E+01 | 1.000E-00 | 1.095E+01 | 2.394E-00 | 2.438E-04 | 6.011E-03 | 1.375E-04 | 6.592E-03 |
| 36 | hsa-miR-299-5p | 2.402E+01 | 1.000E-00 | 2.402E+01 | 3.179E-00 | 2.616E-04 | 6.042E-03 | 3.171E-03 | 3.966E-02 |
| 37 | hsa-miR-361-5p | 6.290E+02 | 3.138E+02 | 2.005E-00 | 6.954E-01 | 2.624E-04 | 6.042E-03 | 8.445E-04 | 2.025E-02 |
| 38 | hsa-miR-770-5p | 4.400E+01 | 9.611E+01 | 4.578E-01 | -7.813E-01 | 2.661E-04 | 6.042E-03 | 6.917E-03 | 5.476E-02 |
| 39 | hsa-miR-1303 | 5.650E+01 | 2.743E+01 | 2.060E-00 | 7.227E-01 | 3.004E-04 | 6.482E-03 | 1.636E-01 | 3.511E-01 |
| 40 | hsa-miR-576-5p | 1.189E+01 | 1.000E-00 | 1.189E+01 | 2.476E-00 | 2.938E-04 | 6.482E-03 | 4.733E-04 | 1.446E-02 |
| 41 | hsa-miR-636 | 1.733E+02 | 1.131E+02 | 1.533E-00 | 4.270E-01 | 3.286E-04 | 6.501E-03 | 1.369E-01 | 3.150E-01 |

FIG 7 (continued)

| | | | | | | | | | |
|----|-----------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|
| 42 | hsa-miR-1237 | 1.164E+02 | 6.762E+01 | 1.721E-00 | 5.428E-01 | 3.242E-04 | 6.501E-03 | 4.741E-02 | 1.635E-01 |
| 43 | hsa-miR-15a | 3.143E+03 | 5.379E+03 | 5.844E-01 | -5.372E-01 | 3.390E-04 | 6.501E-03 | 7.419E-04 | 1.829E-02 |
| 44 | hsa-miR-15b | 1.198E+04 | 1.763E+04 | 6.792E-01 | -3.868E-01 | 3.314E-04 | 6.501E-03 | 2.475E-03 | 3.288E-02 |
| 45 | hsa-miR-720 | 5.784E+03 | 2.998E+03 | 1.929E-00 | 6.571E-01 | 3.386E-04 | 6.501E-03 | 2.346E-03 | 3.265E-02 |
| 46 | hsa-miR-409-3p | 4.765E+01 | 1.000E-00 | 4.765E+01 | 3.864E-00 | 3.578E-04 | 6.713E-03 | 6.098E-03 | 5.316E-02 |
| 47 | hsa-miR-659 | 1.096E+02 | 6.629E+01 | 1.654E-00 | 5.030E-01 | 4.080E-04 | 7.335E-03 | 6.850E-02 | 2.089E-01 |
| 48 | hsa-miR-664 | 4.128E+02 | 1.385E+02 | 2.980E-00 | 1.092E-00 | 4.015E-04 | 7.335E-03 | 1.906E-03 | 2.954E-02 |
| 49 | hsa-miR-21* | 7.883E+01 | 1.288E+02 | 6.120E-01 | -4.911E-01 | 4.238E-04 | 7.465E-03 | 4.756E-03 | 4.652E-02 |
| 50 | hsa-miR-199a-5p | 5.730E+02 | 2.056E+02 | 2.786E-00 | 1.025E-00 | 4.413E-04 | 7.617E-03 | 3.155E-04 | 1.184E-02 |
| 51 | hsa-miR-518f* | 8.323E+01 | 1.684E+02 | 4.943E-01 | -7.046E-01 | 4.590E-04 | 7.617E-03 | 9.386E-04 | 2.132E-02 |
| 52 | hsa-miR-146b-3p | 3.417E+01 | 8.415E+01 | 4.061E-01 | -9.012E-01 | 4.549E-04 | 7.617E-03 | 1.731E-03 | 2.929E-02 |
| 53 | hsa-miR-23b* | 1.880E+01 | 1.000E-00 | 1.880E+01 | 2.934E-00 | 4.857E-04 | 7.835E-03 | 5.565E-05 | 4.002E-03 |
| 54 | hsa-miR-331-3p | 1.620E+03 | 7.902E+02 | 2.050E-00 | 7.176E-01 | 4.949E-04 | 7.835E-03 | 1.408E-03 | 2.683E-02 |
| 55 | hsa-miR-708* | 4.430E+01 | 8.373E+01 | 5.291E-01 | -6.366E-01 | 4.993E-04 | 7.835E-03 | 2.039E-03 | 2.956E-02 |
| 56 | hsa-miR-329 | 8.301E+01 | 4.534E+01 | 1.831E-00 | 6.047E-01 | 5.354E-04 | 7.994E-03 | 9.177E-02 | 2.545E-01 |
| 57 | hsa-miR-564 | 1.260E+02 | 2.008E+02 | 6.274E-01 | -4.661E-01 | 5.373E-04 | 7.994E-03 | 8.707E-03 | 6.315E-02 |
| 58 | hsa-miR-744* | 4.643E+01 | 9.746E-00 | 4.764E-00 | 1.561E-00 | 5.252E-04 | 7.994E-03 | 2.681E-05 | 2.888E-03 |
| 59 | hsa-miR-1282 | 1.000E-00 | 1.000E-00 | 0.000E+00 | 0.000E+01 | 5.647E-04 | 8.260E-03 | 3.985E-03 | 4.585E-02 |
| 60 | hsa-miR-454* | 1.323E+01 | 1.000E-00 | 1.323E+01 | 2.583E-00 | 5.978E-04 | 8.599E-03 | 4.811E-03 | 4.652E-02 |
| 61 | hsa-miR-302d* | 6.675E+01 | 3.029E+01 | 2.203E-00 | 7.900E-01 | 6.107E-04 | 8.640E-03 | 1.544E-01 | 3.402E-01 |
| 62 | hsa-miR-197 | 8.391E+02 | 4.526E+02 | 1.854E-00 | 6.173E-01 | 7.366E-04 | 1.025E-02 | 1.284E-03 | 2.577E-02 |
| 63 | hsa-miR-1538 | 6.564E+01 | 9.539E+01 | 6.881E-01 | -3.739E-01 | 8.092E-04 | 1.091E-02 | 6.257E-03 | 5.400E-02 |

FIG 7 (continued)

| | | | | | | | | | |
|----|---------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|
| 64 | hsa-miR-877 | 1.021E+02 | 4.737E+01 | 2.155E-00 | 7.679E-01 | 8.063E-04 | 1.091E-02 | 2.921E-03 | 3.707E-02 |
| 65 | hsa-miR-652 | 1.462E+03 | 1.127E+03 | 1.296E-00 | 2.597E-01 | 8.520E-04 | 1.131E-02 | 1.258E-02 | 7.754E-02 |
| 66 | hsa-miR-573 | 4.304E+01 | 7.302E+01 | 5.894E-01 | -5.286E-01 | 9.046E-04 | 1.148E-02 | 4.328E-03 | 4.608E-02 |
| 67 | hsa-miR-18b* | 5.817E+01 | 9.249E+01 | 6.289E-01 | -4.637E-01 | 9.037E-04 | 1.148E-02 | 9.006E-03 | 6.363E-02 |
| 68 | hsa-miR-494 | 7.704E+01 | 3.701E+01 | 2.082E-00 | 7.332E-01 | 9.012E-04 | 1.148E-02 | 2.940E-02 | 1.233E-01 |
| 69 | hsa-miR-220b | 2.544E+01 | 6.233E+01 | 4.082E-01 | -8.959E-01 | 9.936E-04 | 1.225E-02 | 1.430E-03 | 2.683E-02 |
| 70 | hsa-miR-1274a | 2.748E+02 | 1.066E+02 | 2.579E-00 | 9.473E-01 | 9.930E-04 | 1.225E-02 | 3.494E-02 | 1.371E-01 |

FIG 8

| No. | miRNA | median_g1 | median_g2 | qmedian median | Logq median | ttest_rawp | ttest_adjp | Limma_ rawp | Limma_ adjp |
|-----|-----------------|-----------|-----------|-------------------|----------------|------------|------------|----------------|----------------|
| 1 | hsa-miR-328 | 1.804E+02 | 2.530E+01 | 7.128E-00 | 1.964E-00 | 1.202E-12 | 1.037E-09 | 2.677E-09 | 2.566E-07 |
| 2 | hsa-miR-500 | 4.595E+02 | 1.141E+02 | 4.026E-00 | 1.393E-00 | 4.802E-12 | 1.382E-09 | 2.103E-09 | 2.269E-07 |
| 3 | hsa-miR-424* | 2.078E+02 | 9.232E+01 | 2.250E-00 | 8.111E-01 | 3.656E-12 | 1.382E-09 | 2.895E-10 | 4.997E-08 |
| 4 | hsa-miR-1281 | 1.876E+02 | 1.756E+01 | 1.068E+01 | 2.369E-00 | 5.858E-11 | 1.011E-08 | 6.398E-11 | 2.761E-08 |
| 5 | hsa-miR-186 | 2.094E+02 | 4.168E+01 | 5.024E-00 | 1.614E-00 | 4.876E-11 | 1.011E-08 | 3.656E-09 | 2.868E-07 |
| 6 | hsa-miR-1224-3p | 1.952E+02 | 5.332E+01 | 3.661E-00 | 1.298E-00 | 9.155E-11 | 1.317E-08 | 9.177E-10 | 1.320E-07 |
| 7 | hsa-miR-1248 | 5.728E+01 | 1.000E-00 | 5.728E+01 | 4.048E-00 | 1.359E-10 | 1.676E-08 | 3.592E-11 | 2.761E-08 |
| 8 | hsa-mir-483-3p | 8.635E+01 | 1.000E-00 | 8.635E+01 | 4.458E-00 | 4.171E-10 | 4.475E-08 | 1.345E-10 | 3.870E-08 |
| 9 | hsa-miR-1295 | 5.507E+01 | 1.493E+02 | 3.687E-01 | -9.977E-01 | 4.667E-10 | 4.475E-08 | 4.123E-04 | 2.427E-03 |
| 10 | hsa-miR-130a* | 1.064E+02 | 3.526E+01 | 3.016E-00 | 1.104E-00 | 1.944E-09 | 1.620E-07 | 9.344E-07 | 1.875E-05 |
| 11 | hsa-miR-409-3p | 1.189E+02 | 1.000E-00 | 1.189E+02 | 4.779E-00 | 2.201E-09 | 1.620E-07 | 8.651E-08 | 3.246E-06 |
| 12 | hsa-miR-664 | 5.176E+02 | 1.385E+02 | 3.736E-00 | 1.318E-00 | 2.252E-09 | 1.620E-07 | 1.325E-07 | 4.500E-06 |
| 13 | hsa-miR-146a | 3.160E+02 | 1.218E+02 | 2.595E-00 | 9.535E-01 | 2.483E-09 | 1.648E-07 | 2.629E-10 | 4.997E-08 |
| 14 | hsa-miR-155 | 1.695E+02 | 4.958E+01 | 3.418E-00 | 1.229E-00 | 5.959E-09 | 3.673E-07 | 1.899E-03 | 7.880E-03 |
| 15 | hsa-miR-1249 | 1.502E+02 | 4.048E+01 | 3.710E-00 | 1.311E-00 | 6.399E-09 | 3.681E-07 | 4.414E-07 | 1.120E-05 |
| 16 | hsa-miR-629* | 1.604E+02 | 8.596E+01 | 1.865E-00 | 6.235E-01 | 7.716E-09 | 4.162E-07 | 3.272E-06 | 4.706E-05 |
| 17 | hsa-miR-148a* | 5.845E+01 | 4.674E-00 | 1.251E+01 | 2.526E-00 | 1.326E-08 | 6.581E-07 | 8.909E-07 | 1.836E-05 |
| 18 | hsa-miR-193a-5p | 1.378E+02 | 5.868E+01 | 2.348E-00 | 8.535E-01 | 1.373E-08 | 6.581E-07 | 2.541E-06 | 4.081E-05 |
| 19 | hsa-miR-1226 | 1.025E+02 | 3.581E+01 | 2.862E-00 | 1.052E-00 | 4.538E-08 | 2.061E-06 | 1.038E-05 | 1.208E-04 |

FIG 8 (continued)

| | | | | | | | | | |
|----|-----------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|
| 20 | hsa-miR-29c* | 6.063E+01 | 1.000E-00 | 6.063E+01 | 4.105E-00 | 5.141E-08 | 2.218E-06 | 4.196E-06 | 5.658E-05 |
| 21 | hsa-let-7d* | 1.834E+02 | 6.719E+01 | 2.729E-00 | 1.004E-00 | 6.194E-08 | 2.545E-06 | 1.088E-06 | 2.069E-05 |
| 22 | hsa-miR-99a | 2.194E+02 | 9.862E+01 | 2.225E-00 | 7.998E-01 | 6.556E-08 | 2.572E-06 | 8.175E-06 | 1.008E-04 |
| 23 | hsa-miR-1237 | 1.306E+02 | 6.762E+01 | 1.931E-00 | 6.580E-01 | 8.388E-08 | 3.147E-06 | 7.175E-08 | 2.949E-06 |
| 24 | hsa-miR-361-5p | 7.558E+02 | 3.138E+02 | 2.409E-00 | 8.791E-01 | 8.936E-08 | 3.152E-06 | 1.117E-08 | 7.415E-07 |
| 25 | hsa-miR-30a | 6.353E+02 | 2.185E+02 | 2.908E-00 | 1.068E-00 | 9.130E-08 | 3.152E-06 | 1.223E-09 | 1.507E-07 |
| 26 | hsa-miR-634 | 1.393E+02 | 7.302E+01 | 1.907E-00 | 6.458E-01 | 1.389E-07 | 4.610E-06 | 9.823E-04 | 4.840E-03 |
| 27 | hsa-miR-877* | 1.212E+02 | 1.734E+01 | 6.987E-00 | 1.944E-00 | 1.663E-07 | 5.316E-06 | 1.050E-05 | 1.208E-04 |
| 28 | hsa-miR-133a | 9.452E+01 | 2.704E+01 | 3.496E-00 | 1.252E-00 | 1.784E-07 | 5.498E-06 | 3.875E-07 | 1.079E-05 |
| 29 | hsa-miR-454* | 4.367E+01 | 1.000E-00 | 4.367E+01 | 3.777E-00 | 1.851E-07 | 5.508E-06 | 1.114E-05 | 1.265E-04 |
| 30 | hsa-miR-133b | 5.200E+01 | 1.000E-00 | 5.200E+01 | 3.951E-00 | 2.253E-07 | 6.482E-06 | 2.915E-06 | 4.414E-05 |
| 31 | hsa-miR-30e* | 1.053E+02 | 3.499E+01 | 3.009E-00 | 1.102E-00 | 3.038E-07 | 7.945E-06 | 1.748E-06 | 3.079E-05 |
| 32 | hsa-miR-501-5p | 1.107E+02 | 1.555E+01 | 7.118E-00 | 1.963E-00 | 3.034E-07 | 7.945E-06 | 4.363E-07 | 1.120E-05 |
| 33 | hsa-miR-150 | 2.303E+03 | 6.288E+02 | 3.663E-00 | 1.298E-00 | 3.015E-07 | 7.945E-06 | 6.094E-06 | 7.968E-05 |
| 34 | hsa-miR-181a-2* | 1.604E+02 | 7.727E+01 | 2.075E-00 | 7.301E-01 | 3.156E-07 | 8.010E-06 | 1.248E-04 | 9.532E-04 |
| 35 | hsa-miR-1825 | 1.020E+02 | 3.136E+01 | 3.252E-00 | 1.179E-00 | 3.371E-07 | 8.312E-06 | 3.225E-04 | 2.031E-03 |
| 36 | hsa-miR-135b | 3.547E+01 | 1.000E-00 | 3.547E+01 | 3.569E-00 | 3.574E-07 | 8.567E-06 | 6.831E-07 | 1.512E-05 |
| 37 | hsa-miR-337-3p | 3.427E+01 | 1.000E-00 | 3.427E+01 | 3.534E-00 | 3.738E-07 | 8.719E-06 | 1.304E-06 | 2.344E-05 |
| 38 | hsa-miR-383 | 3.200E+01 | 9.810E+01 | 3.262E-01 | -1.120E-00 | 3.960E-07 | 8.763E-06 | 4.802E-05 | 4.456E-04 |
| 39 | hsa-miR-26b* | 4.546E+01 | 1.000E-00 | 4.546E+01 | 3.817E-00 | 3.928E-07 | 8.763E-06 | 1.338E-07 | 4.500E-06 |
| 40 | hsa-miR-365 | 1.657E+02 | 3.753E+01 | 4.416E-00 | 1.485E-00 | 4.478E-07 | 9.425E-06 | 5.193E-08 | 2.359E-06 |
| 41 | hsa-miR-942 | 5.025E+01 | 1.000E-00 | 5.025E+01 | 3.917E-00 | 4.409E-07 | 9.425E-06 | 7.553E-07 | 1.630E-05 |

FIG 8 (continued)

| | | | | | | | | | |
|----|-----------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|
| 42 | hsa-miR-342-5p | 2.001E+02 | 7.844E+01 | 2.551E-00 | 9.366E-01 | 4.684E-07 | 9.624E-06 | 3.101E-06 | 4.536E-05 |
| 43 | hsa-miR-146b-3p | 1.457E+01 | 8.415E+01 | 1.732E-01 | -1.753E-00 | 5.651E-07 | 1.134E-05 | 3.939E-06 | 5.422E-05 |
| 44 | hsa-miR-363* | 4.664E+01 | 9.794E+01 | 4.762E-01 | -7.420E-01 | 8.580E-07 | 1.683E-05 | 2.332E-03 | 9.317E-03 |
| 45 | hsa-miR-636 | 1.979E+02 | 1.131E+02 | 1.750E-00 | 5.594E-01 | 1.083E-06 | 2.077E-05 | 1.012E-05 | 1.208E-04 |
| 46 | hsa-miR-605 | 3.000E+01 | 1.000E-00 | 3.000E+01 | 3.401E-00 | 1.127E-06 | 2.115E-05 | 2.554E-06 | 4.081E-05 |
| 47 | hsa-miR-610 | 4.299E+01 | 1.137E+02 | 3.781E-01 | -9.726E-01 | 1.250E-06 | 2.286E-05 | 2.045E-04 | 1.368E-03 |
| 48 | hsa-miR-1289 | 7.358E+01 | 1.244E+02 | 5.915E-01 | -5.251E-01 | 1.271E-06 | 2.286E-05 | 4.636E-05 | 4.349E-04 |
| 49 | hsa-miR-519c-5p | 6.884E+01 | 2.042E+02 | 3.371E-01 | -1.087E-00 | 1.831E-06 | 3.226E-05 | 2.490E-04 | 1.616E-03 |
| 50 | hsa-miR-220a | 1.512E+01 | 6.719E+01 | 2.250E-01 | -1.492E-00 | 2.007E-06 | 3.465E-05 | 1.854E-04 | 1.270E-03 |
| 51 | hsa-miR-1324 | 8.102E+01 | 1.498E+02 | 5.410E-01 | -6.144E-01 | 2.272E-06 | 3.844E-05 | 1.883E-03 | 7.848E-03 |
| 52 | hsa-miR-125a-5p | 3.543E+02 | 1.122E+02 | 3.157E-00 | 1.150E-00 | 2.657E-06 | 4.409E-05 | 1.338E-08 | 8.247E-07 |
| 53 | hsa-miR-1274a | 2.581E+02 | 1.066E+02 | 2.422E-00 | 8.846E-01 | 3.274E-06 | 5.332E-05 | 1.356E-07 | 4.500E-06 |
| 54 | hsa-miR-1259 | 3.081E+01 | 1.000E-00 | 3.081E+01 | 3.428E-00 | 3.780E-06 | 6.042E-05 | 5.059E-05 | 4.636E-04 |
| 55 | hsa-miR-378 | 3.607E+02 | 1.645E+02 | 2.193E-00 | 7.852E-01 | 4.394E-06 | 6.894E-05 | 2.439E-07 | 7.259E-06 |
| 56 | hsa-let-7d | 2.998E+03 | 1.687E+03 | 1.778E-00 | 5.753E-01 | 4.590E-06 | 7.074E-05 | 6.175E-05 | 5.225E-04 |
| 57 | hsa-miR-421 | 1.931E+02 | 8.307E+01 | 2.324E-00 | 8.433E-01 | 5.253E-06 | 7.953E-05 | 6.400E-06 | 8.123E-05 |
| 58 | hsa-miR-148a | 5.224E+02 | 1.431E+03 | 3.649E-01 | -1.008E-00 | 5.532E-06 | 8.232E-05 | 5.213E-09 | 3.749E-07 |
| 59 | hsa-miR-224 | 2.335E-00 | 5.917E+01 | 3.946E-02 | -3.232E-00 | 5.977E-06 | 8.742E-05 | 1.478E-05 | 1.615E-04 |
| 60 | hsa-miR-541 | 5.116E+01 | 1.030E+02 | 4.966E-01 | -7.000E-01 | 6.169E-06 | 8.873E-05 | 8.338E-04 | 4.258E-03 |
| 61 | hsa-miR-15b | 1.198E+04 | 1.763E+04 | 6.792E-01 | -3.868E-01 | 6.784E-06 | 9.598E-05 | 1.810E-06 | 3.124E-05 |
| 62 | hsa-miR-490-3p | 5.820E+01 | 1.283E+02 | 4.537E-01 | -7.904E-01 | 7.629E-06 | 1.045E-04 | 1.080E-03 | 5.178E-03 |
| 63 | hsa-miR-485-3p | 8.606E+01 | 3.733E+01 | 2.305E-00 | 8.351E-01 | 7.546E-06 | 1.045E-04 | 2.944E-03 | 1.115E-02 |

FIG 8 (continued)

| | | | | | | | | | |
|----|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 64 | hsa-miR-299-5p | 4.708E+01 | 1.000E-00 | 4.708E+01 | 3.852E-00 | 1.012E-05 | 1.365E-04 | 1.696E-03 | 7.284E-03 |
| 65 | hsa-miR-1288 | 8.704E+01 | 3.753E+01 | 2.319E-00 | 8.413E-01 | 1.398E-05 | 1.857E-04 | 1.544E-04 | 1.110E-03 |
| 66 | hsa-miR-494 | 9.088E+01 | 3.701E+01 | 2.456E-00 | 8.984E-01 | 1.427E-05 | 1.866E-04 | 1.364E-02 | 3.656E-02 |
| 67 | hsa-miR-1228 | 2.986E+02 | 1.820E+02 | 1.640E-00 | 4.948E-01 | 1.507E-05 | 1.941E-04 | 1.279E-05 | 1.415E-04 |
| 68 | hsa-miR-744* | 7.037E+01 | 9.746E-00 | 7.221E-00 | 1.977E-00 | 1.605E-05 | 2.036E-04 | 5.799E-05 | 5.005E-04 |
| 69 | hsa-miR-668 | 5.495E+01 | 1.125E+01 | 4.885E-00 | 1.586E-00 | 1.740E-05 | 2.145E-04 | 2.354E-04 | 1.539E-03 |
| 70 | hsa-miR-92a | 1.574E+04 | 1.198E+04 | 1.314E-00 | 2.733E-01 | 1.728E-05 | 2.145E-04 | 1.364E-03 | 6.326E-03 |

FIG 9

| No. | miRNA | median g1 | median g2 | qmedian | Logq median | ttest_rawp | ttest_adjp | Limma_rawp | Limma_adjp |
|-----|-----------------|-----------|-----------|-----------|-------------|------------|------------|------------|------------|
| 1 | hsa-let-7d | 1.687E+03 | 3.220E+03 | 5.237E-01 | -6.468E-01 | 3.535E-06 | 1.758E-03 | 1.467E-04 | 8.443E-03 |
| 2 | hsa-miR-146b-3p | 8.415E+01 | 1.868E+01 | 4.504E-00 | 1.505E-00 | 4.074E-06 | 1.758E-03 | 4.169E-05 | 3.998E-03 |
| 3 | hsa-miR-150 | 6.288E+02 | 2.206E+03 | 2.851E-01 | -1.255E-00 | 6.918E-06 | 1.990E-03 | 1.820E-04 | 9.027E-03 |
| 4 | hsa-miR-454* | 1.000E-00 | 4.217E+01 | 2.371E-02 | -3.742E-00 | 2.952E-05 | 6.370E-03 | 3.718E-06 | 5.348E-04 |
| 5 | hsa-miR-1248 | 1.000E-00 | 2.888E+01 | 3.463E-02 | -3.363E-00 | 6.025E-05 | 6.500E-03 | 9.000E-07 | 2.589E-04 |
| 6 | hsa-miR-133b | 1.000E-00 | 2.821E+01 | 3.545E-02 | -3.340E-00 | 4.399E-05 | 6.500E-03 | 1.052E-04 | 6.982E-03 |
| 7 | hsa-miR-610 | 1.137E+02 | 4.843E+01 | 2.348E-00 | 8.534E-01 | 4.578E-05 | 6.500E-03 | 1.607E-03 | 2.877E-02 |
| 8 | hsa-miR-148a | 1.431E+03 | 6.967E+02 | 2.054E-00 | 7.200E-01 | 5.770E-05 | 6.500E-03 | 4.069E-04 | 1.350E-02 |
| 9 | hsa-miR-888 | 1.060E+01 | 6.012E+01 | 1.764E-01 | -1.735E-00 | 7.858E-05 | 6.781E-03 | 1.566E-04 | 8.445E-03 |
| 10 | hsa-miR-519e* | 8.761E+01 | 1.354E+01 | 6.472E-00 | 1.868E-00 | 7.826E-05 | 6.781E-03 | 7.104E-05 | 5.109E-03 |
| 11 | hsa-miR-1288 | 3.753E+01 | 9.917E+01 | 3.784E-01 | -9.718E-01 | 8.788E-05 | 6.895E-03 | 2.053E-04 | 9.027E-03 |
| 12 | hsa-miR-655 | 1.000E-00 | 4.493E+01 | 2.226E-02 | -3.805E-00 | 1.338E-04 | 8.566E-03 | 1.086E-03 | 2.351E-02 |
| 13 | hsa-miR-302d* | 3.029E+01 | 8.086E+01 | 3.746E-01 | -9.818E-01 | 1.221E-04 | 8.566E-03 | 3.965E-03 | 4.819E-02 |
| 14 | hsa-miR-942 | 1.000E-00 | 4.447E+01 | 2.249E-02 | -3.795E-00 | 1.390E-04 | 8.566E-03 | 8.544E-06 | 1.053E-03 |
| 15 | hsa-miR-374b* | 1.596E+01 | 5.005E+01 | 3.189E-01 | -1.143E-00 | 1.612E-04 | 9.273E-03 | 4.713E-04 | 1.453E-02 |
| 16 | hsa-miR-605 | 1.000E-00 | 3.692E+01 | 2.709E-02 | -3.609E-00 | 1.743E-04 | 9.401E-03 | 2.501E-06 | 4.319E-04 |
| 17 | hsa-miR-10a* | 1.502E+01 | 5.222E+01 | 2.877E-01 | -1.246E-00 | 2.020E-04 | 1.026E-02 | 1.438E-02 | 9.399E-02 |
| 18 | hsa-miR-182 | 7.310E+03 | 3.790E+03 | 1.929E-00 | 6.570E-01 | 2.268E-04 | 1.088E-02 | 2.197E-04 | 9.027E-03 |
| 19 | hsa-miR-148a* | 4.674E-00 | 3.499E+01 | 1.336E-01 | -2.013E-00 | 2.836E-04 | 1.224E-02 | 9.424E-04 | 2.140E-02 |

FIG 9 (continued)

| | | | | | | | | | |
|----|----------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|
| 20 | hsa-miR-656 | 1.964E+01 | 6.702E+01 | 2.930E-01 | -1.228E-00 | 2.791E-04 | 1.224E-02 | 2.632E-03 | 3.850E-02 |
| 21 | hsa-miR-374a | 2.119E+02 | 6.288E+02 | 3.370E-01 | -1.088E-00 | 3.358E-04 | 1.380E-02 | 8.373E-02 | 2.503E-01 |
| 22 | hsa-miR-744* | 9.746E-00 | 6.719E+01 | 1.451E-01 | -1.931E-00 | 3.538E-04 | 1.388E-02 | 1.908E-03 | 3.107E-02 |
| 23 | hsa-miR-429 | 1.071E+01 | 5.350E+01 | 2.003E-01 | -1.608E-00 | 4.250E-04 | 1.431E-02 | 2.494E-04 | 9.785E-03 |
| 24 | hsa-miR-144* | 3.352E+02 | 9.970E+02 | 3.362E-01 | -1.090E-00 | 4.479E-04 | 1.431E-02 | 1.297E-02 | 9.330E-02 |
| 25 | hsa-miR-144 | 2.008E+03 | 3.623E+03 | 5.541E-01 | -5.904E-01 | 3.828E-04 | 1.431E-02 | 7.290E-03 | 6.707E-02 |
| 26 | hsa-miR-668 | 1.125E+01 | 6.074E+01 | 1.852E-01 | -1.686E-00 | 4.046E-04 | 1.431E-02 | 8.764E-03 | 7.504E-02 |
| 27 | hsa-miR-888* | 5.116E+01 | 1.336E+01 | 3.829E-00 | 1.343E-00 | 4.424E-04 | 1.431E-02 | 4.315E-04 | 1.379E-02 |
| 28 | hsa-miR-1259 | 1.000E-00 | 3.927E+01 | 2.547E-02 | -3.670E-00 | 5.824E-04 | 1.620E-02 | 1.276E-03 | 2.623E-02 |
| 29 | hsa-miR-29a | 9.970E+02 | 6.222E+02 | 1.602E-00 | 4.715E-01 | 6.005E-04 | 1.620E-02 | 5.468E-03 | 5.826E-02 |
| 30 | hsa-miR-194 | 6.927E+03 | 4.640E+03 | 1.493E-00 | 4.007E-01 | 5.684E-04 | 1.620E-02 | 6.637E-04 | 1.831E-02 |
| 31 | hsa-miR-1205 | 1.309E+02 | 6.629E+01 | 1.974E-00 | 6.802E-01 | 5.376E-04 | 1.620E-02 | 3.218E-03 | 4.230E-02 |
| 32 | hsa-miR-149* | 1.127E+03 | 3.543E+02 | 3.182E-00 | 1.157E-00 | 5.663E-04 | 1.620E-02 | 1.436E-03 | 2.754E-02 |
| 33 | hsa-miR-221* | 1.268E+02 | 7.329E+01 | 1.730E-00 | 5.484E-01 | 6.609E-04 | 1.728E-02 | 1.004E-02 | 8.098E-02 |
| 34 | hsa-miR-302d | 1.000E-00 | 1.429E+01 | 6.996E-02 | -2.660E-00 | 7.042E-04 | 1.787E-02 | 7.906E-04 | 1.949E-02 |
| 35 | hsa-miR-299-5p | 1.000E-00 | 3.208E+01 | 3.117E-02 | -3.468E-00 | 8.960E-04 | 1.837E-02 | 7.468E-04 | 1.895E-02 |
| 36 | hsa-miR-1908 | 1.326E+03 | 6.745E+02 | 1.966E-00 | 6.761E-01 | 9.343E-04 | 1.837E-02 | 8.863E-04 | 2.067E-02 |
| 37 | hsa-miR-573 | 7.302E+01 | 4.555E+01 | 1.603E-00 | 4.718E-01 | 7.994E-04 | 1.837E-02 | 1.199E-02 | 8.997E-02 |
| 38 | hsa-miR-877 | 4.737E+01 | 1.100E+02 | 4.305E-01 | -8.428E-01 | 9.158E-04 | 1.837E-02 | 4.395E-03 | 5.266E-02 |
| 39 | hsa-miR-212 | 5.577E+01 | 1.680E+01 | 3.320E-00 | 1.200E-00 | 9.364E-04 | 1.837E-02 | 6.341E-04 | 1.824E-02 |
| 40 | hsa-miR-130a* | 3.526E+01 | 1.074E+02 | 3.282E-01 | -1.114E-00 | 9.059E-04 | 1.837E-02 | 2.108E-04 | 9.027E-03 |
| 41 | hsa-miR-551a | 6.084E+01 | 3.215E-00 | 1.892E+01 | 2.940E-00 | 8.983E-04 | 1.837E-02 | 3.529E-04 | 1.218E-02 |

FIG 9 (continued)

| | | | | | | | | | |
|----|----------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|
| 42 | hsa-miR-936 | 8.307E+01 | 4.199E+01 | 1.978E-00 | 6.822E-01 | 7.493E-04 | 1.837E-02 | 3.025E-03 | 4.158E-02 |
| 43 | hsa-miR-1226 | 3.581E+01 | 9.452E+01 | 3.788E-01 | -9.707E-01 | 8.793E-04 | 1.837E-02 | 1.426E-01 | 3.487E-01 |
| 44 | hsa-miR-892b | 1.252E+01 | 4.199E+01 | 2.980E-01 | -1.211E-00 | 9.209E-04 | 1.837E-02 | 3.050E-04 | 1.144E-02 |
| 45 | hsa-miR-200a* | 4.471E+01 | 8.257E+01 | 5.415E-01 | -6.135E-01 | 9.955E-04 | 1.868E-02 | 3.240E-03 | 4.230E-02 |
| 46 | hsa-miR-519a* | 1.852E+02 | 1.032E+02 | 1.795E-00 | 5.849E-01 | 9.766E-04 | 1.868E-02 | 6.402E-03 | 6.424E-02 |
| 47 | hsa-miR-891a | 1.857E+02 | 6.864E+01 | 2.705E-00 | 9.953E-01 | 1.024E-03 | 1.880E-02 | 1.361E-03 | 2.670E-02 |
| 48 | hsa-miR-1287 | 5.860E+01 | 8.268E+01 | 7.087E-01 | -3.443E-01 | 1.250E-03 | 2.074E-02 | 9.029E-03 | 7.565E-02 |
| 49 | hsa-miR-770-5p | 9.611E+01 | 4.032E+01 | 2.384E-00 | 8.687E-01 | 1.249E-03 | 2.074E-02 | 3.333E-03 | 4.230E-02 |
| 50 | hsa-miR-363* | 9.794E+01 | 5.887E+01 | 1.664E-00 | 5.090E-01 | 1.230E-03 | 2.074E-02 | 1.923E-02 | 1.129E-01 |
| 51 | hsa-miR-302c | 1.000E-00 | 1.125E+01 | 8.889E-02 | -2.420E-00 | 1.208E-03 | 2.074E-02 | 2.196E-05 | 2.369E-03 |
| 52 | hsa-miR-218-1* | 4.995E+01 | 8.937E+01 | 5.589E-01 | -5.817E-01 | 1.196E-03 | 2.074E-02 | 2.017E-01 | 4.278E-01 |
| 53 | hsa-miR-541 | 1.030E+02 | 6.340E+01 | 1.625E-00 | 4.855E-01 | 1.357E-03 | 2.209E-02 | 1.482E-02 | 9.471E-02 |
| 54 | hsa-miR-500* | 3.254E+02 | 2.014E+02 | 1.616E-00 | 4.801E-01 | 1.497E-03 | 2.343E-02 | 2.648E-02 | 1.302E-01 |
| 55 | hsa-miR-485-3p | 3.733E+01 | 7.409E+01 | 5.039E-01 | -6.854E-01 | 1.521E-03 | 2.343E-02 | 8.068E-03 | 7.105E-02 |
| 56 | hsa-miR-21* | 1.288E+02 | 7.727E+01 | 1.667E-00 | 5.111E-01 | 1.520E-03 | 2.343E-02 | 1.064E-02 | 8.422E-02 |
| 57 | hsa-miR-662 | 4.639E+01 | 7.469E+01 | 6.210E-01 | -4.764E-01 | 1.582E-03 | 2.395E-02 | 3.655E-02 | 1.550E-01 |
| 58 | hsa-miR-506 | 1.479E+01 | 5.162E+01 | 2.865E-01 | -1.250E-00 | 1.663E-03 | 2.444E-02 | 5.210E-03 | 5.620E-02 |
| 59 | hsa-miR-1200 | 9.487E+01 | 5.350E+01 | 1.773E-00 | 5.729E-01 | 1.671E-03 | 2.444E-02 | 1.449E-02 | 9.399E-02 |
| 60 | hsa-miR-22 | 9.808E+03 | 6.927E+03 | 1.416E-00 | 3.477E-01 | 1.735E-03 | 2.496E-02 | 1.589E-02 | 9.857E-02 |
| 61 | hsa-miR-101 | 4.561E+02 | 8.001E+02 | 5.700E-01 | -5.621E-01 | 1.774E-03 | 2.510E-02 | 3.233E-03 | 4.230E-02 |
| 62 | hsa-miR-129* | 3.081E+01 | 5.162E+01 | 5.969E-01 | -5.160E-01 | 1.855E-03 | 2.550E-02 | 1.175E-02 | 8.892E-02 |
| 63 | hsa-miR-224 | 5.917E+01 | 6.685E-00 | 8.852E-00 | 2.181E-00 | 1.862E-03 | 2.550E-02 | 6.293E-05 | 4.937E-03 |

FIG 9 (continued)

| | | | | | | | | | |
|----|------------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|
| 64 | hsa-miR-371-5p | 5.518E+01 | 2.251E+01 | 2.452E-00 | 8.968E-01 | 2.064E-03 | 2.783E-02 | 1.377E-02 | 9.342E-02 |
| 65 | hsa-miR-106a | 6.228E+03 | 9.808E+03 | 6.350E-01 | -4.542E-01 | 2.203E-03 | 2.908E-02 | 7.360E-03 | 6.707E-02 |
| 66 | hsa-miR-647 | 8.586E+01 | 2.162E+01 | 3.972E-00 | 1.379E-00 | 2.224E-03 | 2.908E-02 | 1.647E-03 | 2.877E-02 |
| 67 | hsa-miR-219-1-3p | 1.000E-00 | 2.329E+01 | 4.293E-02 | -3.148E-00 | 2.279E-03 | 2.935E-02 | 6.971E-04 | 1.831E-02 |
| 68 | hsa-miR-519c-5p | 2.042E+02 | 9.468E+01 | 2.157E-00 | 7.686E-01 | 2.449E-03 | 2.935E-02 | 1.355E-02 | 9.342E-02 |
| 69 | hsa-miR-330-5p | 9.198E-00 | 2.868E+01 | 3.207E-01 | -1.137E-00 | 2.389E-03 | 2.935E-02 | 1.640E-02 | 9.909E-02 |
| 70 | hsa-miR-450a | 6.601E-00 | 3.339E+01 | 1.977E-01 | -1.621E-00 | 2.437E-03 | 2.935E-02 | 1.703E-03 | 2.881E-02 |

FIG 10

| No. | miRNA | median g1 | median g2 | qmedian | Log ₂ median | Ttest_ rawp | ttest_ adjp | Limma_ rawp | Limma_ adjp |
|-----|-----------------|-----------|-----------|----------|----------------------------|----------------|----------------|----------------|----------------|
| 1 | hsa-miR-500 | 1.14E+02 | 4.99E+02 | 2.29E-01 | -1.48E-00 | 2.72E-08 | 9.08E-06 | 3.30E-06 | 2.38E-04 |
| 2 | hsa-miR-342-3p | 2.36E+03 | 5.13E+03 | 4.60E-01 | -7.77E-01 | 3.16E-08 | 9.08E-06 | 9.21E-07 | 1.06E-04 |
| 3 | hsa-miR-744* | 9.75E-00 | 1.12E+02 | 8.70E-02 | -2.44E-00 | 1.72E-08 | 9.08E-06 | 1.47E-07 | 3.17E-05 |
| 4 | hsa-miR-363* | 9.79E+01 | 3.69E+01 | 2.65E-00 | 9.76E-01 | 9.97E-08 | 2.15E-05 | 1.23E-04 | 2.58E-03 |
| 5 | hsa-miR-1295 | 1.49E+02 | 6.85E+01 | 2.18E-00 | 7.79E-01 | 2.26E-07 | 3.90E-05 | 7.64E-04 | 7.09E-03 |
| 6 | hsa-miR-361-5p | 3.14E+02 | 7.31E+02 | 4.30E-01 | -8.45E-01 | 3.15E-07 | 4.53E-05 | 9.86E-07 | 1.06E-04 |
| 7 | hsa-miR-519b-5p | 1.49E+02 | 1.45E+01 | 1.03E+01 | 2.33E-00 | 4.89E-07 | 6.03E-05 | 5.93E-06 | 3.41E-04 |
| 8 | hsa-miR-1324 | 1.50E+02 | 7.16E+01 | 2.09E-00 | 7.38E-01 | 5.89E-07 | 6.35E-05 | 7.78E-04 | 7.14E-03 |
| 9 | hsa-miR-519c-5p | 2.04E+02 | 4.55E+01 | 4.49E-00 | 1.50E-00 | 6.93E-07 | 6.65E-05 | 4.42E-05 | 1.47E-03 |
| 10 | hsa-miR-942 | 1.00E-00 | 6.17E+01 | 1.62E-02 | -4.12E-00 | 9.06E-07 | 7.82E-05 | 1.52E-08 | 4.38E-06 |
| 11 | hsa-miR-15b | 1.76E+04 | 1.04E+04 | 1.69E-00 | 5.27E-01 | 2.00E-06 | 1.23E-04 | 8.18E-05 | 2.01E-03 |
| 12 | hsa-miR-148a | 1.43E+03 | 4.60E+02 | 3.11E-00 | 1.14E-00 | 1.73E-06 | 1.22E-04 | 5.78E-07 | 9.97E-05 |
| 13 | hsa-miR-335* | 1.00E-00 | 4.30E+01 | 2.33E-02 | -3.76E-00 | 1.90E-06 | 1.23E-04 | 6.97E-09 | 3.01E-06 |
| 14 | hsa-miR-20a* | 1.74E+02 | 6.40E+01 | 2.72E-00 | 9.99E-01 | 1.85E-06 | 1.23E-04 | 3.82E-04 | 4.52E-03 |
| 15 | hsa-miR-1289 | 1.24E+02 | 7.24E+01 | 1.72E-00 | 5.41E-01 | 2.35E-06 | 1.35E-04 | 3.19E-04 | 3.99E-03 |
| 16 | hsa-miR-133b | 1.00E-00 | 5.58E+01 | 1.79E-02 | -4.02E-00 | 4.08E-06 | 2.20E-04 | 2.62E-12 | 2.27E-09 |
| 17 | hsa-miR-423-5p | 1.96E+03 | 4.40E+03 | 4.46E-03 | -8.08E-01 | 4.65E-06 | 2.36E-04 | 2.29E-06 | 1.98E-04 |
| 18 | hsa-miR-708* | 8.37E+01 | 1.72E+01 | 4.86E-00 | 1.58E-00 | 5.80E-06 | 2.78E-04 | 1.62E-04 | 2.85E-03 |
| 19 | hsa-miR-490-3p | 1.28E+02 | 5.40E+01 | 2.38E-00 | 8.66E-01 | 9.97E-06 | 4.29E-04 | 2.27E-03 | 1.49E-02 |

FIG 10 (continued)

| | | | | | | | | | |
|----|-----------------|----------|----------|----------|-----------|----------|----------|----------|----------|
| 20 | hsa-miR-383 | 9.81E+01 | 1.24E+01 | 7.94E-00 | 2.07E-00 | 1.00E-05 | 4.29E-04 | 4.02E-05 | 1.39E-03 |
| 21 | hsa-miR-877* | 1.73E+01 | 1.83E+02 | 9.49E-02 | -2.35E-00 | 1.09E-05 | 4.29E-04 | 3.11E-04 | 3.95E-03 |
| 22 | hsa-miR-1226 | 3.58E+01 | 1.06E+02 | 3.38E-01 | -1.08E-00 | 1.06E-05 | 4.29E-04 | 6.02E-05 | 1.68E-03 |
| 23 | hsa-miR-629* | 8.60E+01 | 2.21E+02 | 3.88E-01 | -9.46E-01 | 1.29E-05 | 4.47E-04 | 1.40E-01 | 2.63E-01 |
| 24 | hsa-miR-1281 | 1.76E+01 | 2.09E+02 | 8.42E-02 | -2.47E-00 | 1.28E-05 | 4.47E-04 | 1.06E-05 | 5.38E-04 |
| 25 | hsa-miR-664 | 1.39E+02 | 4.31E+02 | 3.22E-01 | -1.13E-00 | 1.29E-05 | 4.47E-04 | 7.20E-05 | 1.87E-03 |
| 26 | hsa-miR-338-3p | 1.74E+02 | 4.97E+01 | 3.51E-00 | 1.26E-00 | 1.44E-05 | 4.77E-04 | 2.60E-04 | 3.68E-03 |
| 27 | hsa-miR-378 | 1.64E+02 | 3.51E+02 | 4.68E-01 | -7.59E-01 | 1.66E-05 | 5.23E-04 | 8.61E-05 | 2.01E-03 |
| 28 | hsa-miR-137 | 7.77E+01 | 3.00E+01 | 2.59E-00 | 9.52E-01 | 1.76E-05 | 5.23E-04 | 6.42E-04 | 6.09E-03 |
| 29 | hsa-miR-328 | 2.53E+01 | 1.62E+02 | 1.56E-01 | -1.86E-00 | 1.75E-05 | 5.23E-04 | 7.35E-05 | 1.87E-03 |
| 30 | hsa-miR-1225-5p | 5.58E+01 | 1.36E+02 | 4.11E-01 | -8.88E-01 | 1.96E-05 | 5.39E-04 | 1.78E-03 | 1.26E-02 |
| 31 | hsa-miR-668 | 1.12E+01 | 8.22E+01 | 1.37E-01 | -1.99E-00 | 1.92E-05 | 5.39E-04 | 1.71E-04 | 2.90E-03 |
| 32 | hsa-miR-320a | 9.81E+03 | 2.05E+04 | 4.79E-01 | -7.36E-01 | 2.00E-05 | 5.39E-04 | 1.53E-04 | 2.82E-03 |
| 33 | hsa-miR-27a* | 3.29E+01 | 7.04E+01 | 4.67E-01 | -7.61E-01 | 2.08E-05 | 5.44E-04 | 5.33E-03 | 2.72E-02 |
| 34 | hsa-miR-135a* | 1.00E-00 | 6.86E+01 | 1.46E-02 | -4.23E-00 | 2.35E-05 | 5.96E-04 | 1.53E-05 | 6.76E-04 |
| 35 | hsa-miR-1825 | 3.14E+01 | 1.36E+02 | 2.31E-01 | -1.47E-00 | 2.59E-05 | 6.04E-04 | 9.72E-04 | 8.30E-03 |
| 36 | hsa-miR-483-3p | 1.00E-00 | 8.47E+01 | 1.18E-02 | -4.44E-00 | 2.46E-05 | 6.04E-04 | 2.61E-05 | 1.02E-03 |
| 37 | hsa-miR-522* | 2.06E+02 | 4.55E+01 | 4.54E-00 | 1.51E-00 | 2.55E-05 | 6.04E-04 | 5.79E-05 | 1.68E-03 |
| 38 | hsa-miR-15a | 5.38E+03 | 2.76E+03 | 1.95E-00 | 6.69E-01 | 2.68E-05 | 6.08E-04 | 3.39E-04 | 4.12E-03 |
| 39 | hsa-miR-193a-5p | 5.87E+01 | 1.22E+02 | 4.81E-01 | -7.32E-01 | 2.83E-05 | 6.14E-04 | 8.05E-02 | 1.75E-01 |
| 40 | hsa-miR-424* | 9.23E+01 | 1.81E+02 | 5.10E-01 | -6.72E-01 | 2.85E-05 | 6.14E-04 | 1.69E-01 | 2.99E-01 |
| 41 | hsa-miR-21* | 1.29E+02 | 4.06E+01 | 3.17E-00 | 1.15E-00 | 2.94E-05 | 6.19E-04 | 2.08E-04 | 3.30E-03 |

FIG 10 (continued)

| | | | | | | | | | |
|----|----------------|----------|----------|----------|-----------|----------|----------|----------|----------|
| 42 | hsa-miR-494 | 3.70E+01 | 9.32E+01 | 3.97E-01 | -9.24E-01 | 3.20E-05 | 6.57E-04 | 3.28E-04 | 4.04E-03 |
| 43 | hsa-miR-1237 | 6.76E+01 | 1.53E+02 | 4.41E-01 | -8.20E-01 | 3.89E-05 | 7.81E-04 | 3.70E-02 | 1.01E-01 |
| 44 | hsa-miR-578 | 1.00E-00 | 3.83E+01 | 2.61E-02 | -3.64E-00 | 4.03E-05 | 7.91E-04 | 7.15E-05 | 1.87E-03 |
| 45 | hsa-miR-635 | 1.27E+02 | 5.54E+01 | 2.29E-00 | 8.28E-01 | 4.92E-05 | 9.43E-04 | 1.09E-04 | 2.34E-03 |
| 46 | hsa-miR-33b | 1.78E+02 | 1.02E+02 | 1.75E-00 | 5.58E-01 | 5.19E-05 | 9.74E-04 | 2.84E-03 | 1.74E-02 |
| 47 | hsa-miR-541 | 1.03E+02 | 4.87E+01 | 2.12E-00 | 7.50E-01 | 5.87E-05 | 1.05E-03 | 2.10E-04 | 3.30E-03 |
| 48 | hsa-miR-526a | 2.31E+02 | 1.69E+01 | 1.36E+01 | 2.61E-00 | 5.96E-05 | 1.05E-03 | 1.71E-06 | 1.64E-04 |
| 49 | hsa-miR-519a* | 1.85E+02 | 4.91E+01 | 3.77E-00 | 1.33E-00 | 5.76E-05 | 1.05E-03 | 4.39E-06 | 2.92E-04 |
| 50 | hsa-miR-573 | 7.30E+01 | 2.32E+01 | 3.15E-00 | 1.15E-00 | 6.36E-05 | 1.10E-03 | 8.41E-05 | 2.01E-03 |
| 51 | hsa-miR-888 | 1.06E+01 | 7.33E+01 | 1.45E-01 | -1.93E-00 | 6.70E-05 | 1.13E-03 | 4.23E-04 | 4.84E-03 |
| 52 | hsa-miR-33a | 9.86E+01 | 4.64E+01 | 2.13E-00 | 7.54E-01 | 6.82E-05 | 1.13E-03 | 1.03E-03 | 8.73E-03 |
| 53 | hsa-miR-1229 | 1.17E+02 | 4.34E+02 | 2.70E-01 | -1.31E-00 | 7.36E-05 | 1.20E-03 | 9.04E-02 | 1.92E-01 |
| 54 | hsa-miR-103-as | 1.50E+02 | 9.27E+01 | 1.62E-00 | 4.83E-01 | 8.03E-05 | 1.22E-03 | 9.79E-03 | 3.99E-02 |
| 55 | hsa-miR-197 | 4.53E+02 | 1.03E+03 | 4.40E-01 | -8.21E-01 | 8.09E-05 | 1.22E-03 | 1.55E-05 | 6.76E-04 |
| 56 | hsa-miR-324-3p | 5.33E+02 | 8.95E+02 | 5.96E-01 | -5.18E-01 | 7.74E-05 | 1.22E-03 | 4.06E-04 | 4.73E-03 |
| 57 | hsa-miR-433 | 1.22E+02 | 3.90E+01 | 3.12E-00 | 1.14E-00 | 8.16E-05 | 1.22E-03 | 2.37E-04 | 3.50E-03 |
| 58 | hsa-miR-671-3p | 3.15E+01 | 7.19E+01 | 4.38E-01 | -8.26E-01 | 8.21E-05 | 1.22E-03 | 6.25E-03 | 3.05E-02 |
| 59 | hsa-miR-211 | 1.00E-00 | 4.91E+01 | 2.04E-02 | -3.89E-00 | 8.84E-05 | 1.29E-03 | 5.63E-06 | 3.41E-04 |
| 60 | hsa-miR-150 | 6.29E+02 | 2.01E+03 | 3.13E-01 | -1.16E-00 | 9.19E-05 | 1.32E-03 | 5.35E-04 | 5.43E-03 |
| 61 | hsa-miR-885-5p | 3.58E+01 | 7.17E+01 | 4.99E-01 | -6.94E-01 | 9.41E-05 | 1.33E-03 | 6.70E-03 | 3.21E-02 |
| 62 | hsa-miR-34b | 1.78E+01 | 7.13E+01 | 2.50E-01 | -1.39E-00 | 1.00E-04 | 1.35E-03 | 3.74E-04 | 4.48E-03 |
| 63 | hsa-miR-551b* | 4.27E+01 | 1.22E+02 | 3.51E-01 | -1.05E-00 | 9.89E-05 | 1.35E-03 | 6.34E-03 | 3.07E-02 |

FIG 10 (continued)

| | | | | | | | | | |
|----|-----------------|----------|----------|----------|-----------|----------|----------|----------|----------|
| 64 | hsa-miR-362-5p | 1.10E+02 | 2.27E+02 | 4.82E-01 | -7.29E-01 | 9.89E-05 | 1.35E-03 | 1.53E-03 | 1.11E-02 |
| 65 | hsa-miR-409-3p | 1.00E-00 | 7.79E+01 | 1.28E-02 | -4.35E-00 | 1.09E-04 | 1.44E-03 | 2.65E-06 | 2.08E-04 |
| 66 | hsa-miR-186* | 1.33E+02 | 5.28E+01 | 2.51E-00 | 9.20E-01 | 1.23E-04 | 1.56E-03 | 8.41E-04 | 7.48E-03 |
| 67 | hsa-miR-216a | 1.36E+02 | 6.93E+01 | 1.97E-00 | 6.78E-01 | 1.22E-04 | 1.56E-03 | 1.20E-03 | 9.28E-03 |
| 68 | hsa-miR-516b* | 2.23E-00 | 5.63E+01 | 3.97E-02 | -3.23E-00 | 1.21E-04 | 1.56E-03 | 1.32E-04 | 2.61E-03 |
| 69 | hsa-miR-1205 | 1.31E+02 | 4.09E+01 | 3.20E-00 | 1.16E-00 | 1.29E-04 | 1.62E-03 | 1.93E-04 | 3.14E-03 |
| 70 | hsa-miR-1224-3p | 5.33E+01 | 2.24E+02 | 2.38E-01 | -1.44E-00 | 1.31E-04 | 1.62E-03 | 1.67E-04 | 2.88E-03 |

FIG 11

| No. | miRNA | median g1 | median g2 | qmedian median | Log q median | ttest_rawp | ttest_adjp | Limma_ rawp | Limma_ adjp |
|-----|----------------|-----------|-----------|-------------------|-----------------|------------|------------|----------------|----------------|
| 1 | hsa-miR-363 | 3.998E+03 | 1.620E+03 | 2.468E-00 | 9.035E-01 | 1.141E-05 | 9.847E-03 | 4.456E-05 | 1.227E-02 |
| 2 | hsa-miR-144 | 2.008E+03 | 3.090E+02 | 6.498E-00 | 1.871E-00 | 2.866E-05 | 1.018E-02 | 5.689E-05 | 1.227E-02 |
| 3 | hsa-miR-139-5p | 1.266E+02 | 1.986E+02 | 6.375E-01 | -4.502E-01 | 3.539E-05 | 1.018E-02 | 3.059E-02 | 3.734E-01 |
| 4 | hsa-miR-639 | 5.529E+01 | 1.056E+02 | 5.235E-01 | -6.473E-01 | 5.323E-05 | 1.148E-02 | 6.196E-03 | 2.235E-01 |
| 5 | hsa-miR-662 | 4.639E+01 | 8.399E+01 | 5.523E-01 | -5.937E-01 | 4.082E-04 | 7.045E-02 | 6.721E-02 | 4.285E-01 |
| 6 | hsa-miR-886-3p | 1.125E+01 | 3.765E+01 | 2.988E-01 | -1.208E-00 | 8.131E-04 | 7.797E-02 | 7.250E-03 | 2.235E-01 |
| 7 | hsa-miR-342-3p | 2.357E+03 | 8.166E+03 | 2.887E-01 | -1.242E-00 | 5.485E-04 | 7.797E-02 | 1.235E-05 | 5.328E-03 |
| 8 | hsa-miR-218 | 3.289E+01 | 1.099E+01 | 2.991E-00 | 1.096E-00 | 6.606E-04 | 7.797E-02 | 4.817E-02 | 3.922E-01 |
| 9 | hsa-miR-22 | 9.808E+03 | 5.922E+03 | 1.656E-00 | 5.045E-01 | 8.126E-04 | 7.797E-02 | 1.470E-02 | 3.300E-01 |
| 10 | hsa-miR-140-5p | 4.088E+01 | 8.181E-00 | 4.997E-00 | 1.609E-00 | 1.222E-03 | 9.025E-02 | 4.710E-03 | 1.944E-01 |
| 11 | hsa-miR-590-5p | 1.565E+02 | 1.139E+02 | 1.374E-00 | 3.179E-01 | 1.062E-03 | 9.025E-02 | 6.754E-03 | 2.235E-01 |
| 12 | hsa-miR-20b | 2.515E+03 | 1.162E+03 | 2.164E-00 | 7.718E-01 | 1.255E-03 | 9.025E-02 | 7.189E-03 | 2.235E-01 |
| 13 | hsa-miR-206 | 4.315E+01 | 1.000E-00 | 4.315E+01 | 3.765E-00 | 1.432E-03 | 9.510E-02 | 9.914E-05 | 1.711E-02 |
| 14 | hsa-miR-614 | 1.995E+01 | 3.857E+01 | 5.172E-01 | -6.592E-01 | 2.121E-03 | 1.307E-01 | 5.181E-02 | 3.981E-01 |
| 15 | hsa-miR-103 | 6.228E+03 | 3.623E+03 | 1.719E-00 | 5.417E-01 | 3.286E-03 | 1.772E-01 | 9.801E-03 | 2.728E-01 |
| 16 | hsa-miR-720 | 2.998E+03 | 1.574E+04 | 1.905E-01 | -1.658E-00 | 3.191E-03 | 1.772E-01 | 7.625E-06 | 5.328E-03 |
| 17 | hsa-miR-181d | 2.530E+01 | 4.937E-00 | 5.125E-00 | 1.634E-00 | 3.607E-03 | 1.831E-01 | 3.786E-02 | 3.813E-01 |
| 18 | hsa-miR-17 | 5.922E+03 | 3.143E+03 | 1.884E-00 | 6.334E-01 | 4.254E-03 | 2.040E-01 | 1.230E-02 | 3.036E-01 |
| 19 | hsa-miR-20a | 3.143E+03 | 1.550E+03 | 2.028E-00 | 7.070E-01 | 4.534E-03 | 2.060E-01 | 4.846E-03 | 1.944E-01 |

FIG 11 (continued)

| | | | | | | | | | |
|----|----------------|-----------|------------|-----------|------------|-----------|-----------|-----------|-----------|
| 20 | hsa-miR-580 | 2.566E+01 | 7.452E+01 | 3.443E-01 | -1.066E-00 | 5.848E-03 | 2.403E-01 | 3.619E-02 | 3.809E-01 |
| 21 | hsa-miR-96 | 1.543E+02 | 9.975E+01 | 1.547E-00 | 4.361E-01 | 5.832E-03 | 2.403E-01 | 7.110E-02 | 4.352E-01 |
| 22 | hsa-miR-425 | 1.198E+04 | 7.714E+03 | 1.553E-00 | 4.400E-01 | 6.447E-03 | 2.419E-01 | 2.354E-02 | 3.471E-01 |
| 23 | hsa-miR-144* | 3.352E+02 | 1.788E+02 | 1.874E-00 | 6.283E-01 | 6.261E-03 | 2.419E-01 | 3.112E-02 | 3.734E-01 |
| 24 | hsa-miR-875-5p | 9.746E-00 | 1.0000E-00 | 9.746E-00 | 2.277E-00 | 6.732E-03 | 2.421E-01 | 2.788E-02 | 3.701E-01 |
| 25 | hsa-miR-92a-1* | 9.746E-00 | 1.0000E-00 | 9.746E-00 | 2.277E-00 | 8.131E-03 | 2.599E-01 | 4.310E-02 | 3.883E-01 |
| 26 | hsa-miR-15a | 5.379E+03 | 2.303E+03 | 2.336E-00 | 8.483E-01 | 7.737E-03 | 2.599E-01 | 4.079E-03 | 1.944E-01 |
| 27 | hsa-miR-16 | 1.763E+04 | 1.415E+04 | 1.246E-00 | 2.201E-01 | 8.073E-03 | 2.599E-01 | 5.446E-02 | 4.069E-01 |
| 28 | hsa-miR-21 | 9.187E+02 | 4.595E+02 | 1.999E-00 | 6.928E-01 | 8.500E-03 | 2.620E-01 | 2.313E-02 | 3.471E-01 |
| 29 | hsa-miR-323-5p | 5.868E+01 | 3.123E+01 | 1.879E-00 | 6.305E-01 | 9.314E-03 | 2.741E-01 | 2.057E-02 | 3.439E-01 |
| 30 | hsa-miR-105* | 7.252E-00 | 1.0000E-00 | 7.252E-00 | 1.981E-00 | 9.530E-03 | 2.741E-01 | 5.841E-02 | 4.132E-01 |
| 31 | hsa-miR-30b* | 3.701E+01 | 1.0000E-00 | 3.701E+01 | 3.611E-00 | 1.004E-02 | 2.794E-01 | 2.016E-02 | 3.439E-01 |
| 32 | hsa-miR-324-3p | 5.331E+02 | 1.376E+03 | 3.875E-01 | -9.480E-01 | 1.062E-02 | 2.795E-01 | 4.062E-03 | 1.944E-01 |
| 33 | hsa-miR-665 | 1.008E+02 | 1.340E+02 | 7.522E-01 | -2.848E-01 | 1.069E-02 | 2.795E-01 | 5.004E-02 | 3.955E-01 |
| 34 | hsa-miR-384 | 6.629E+01 | 2.624E+01 | 2.526E-00 | 9.265E-01 | 1.254E-02 | 3.093E-01 | 2.094E-01 | 6.502E-01 |
| 35 | hsa-miR-1276 | 3.499E+01 | 5.693E+01 | 6.146E-01 | -4.868E-01 | 1.248E-02 | 3.093E-01 | 1.137E-01 | 5.273E-01 |
| 36 | hsa-miR-19a | 2.998E+03 | 2.515E+03 | 1.192E-00 | 1.758E-01 | 1.309E-02 | 3.138E-01 | 7.681E-02 | 4.416E-01 |
| 37 | hsa-miR-106a | 6.228E+03 | 3.998E+03 | 1.558E-00 | 4.433E-01 | 1.485E-02 | 3.287E-01 | 1.566E-02 | 3.300E-01 |
| 38 | hsa-miR-182 | 7.310E+03 | 3.790E+03 | 1.929E-00 | 6.570E-01 | 1.459E-02 | 3.287E-01 | 2.754E-02 | 3.701E-01 |
| 39 | hsa-miR-632 | 2.485E+01 | 8.181E-00 | 3.037E-00 | 1.111E-00 | 1.432E-02 | 3.287E-01 | 5.206E-01 | 8.510E-01 |
| 40 | hsa-miR-141* | 9.334E+01 | 5.693E+01 | 1.639E-00 | 4.944E-01 | 1.550E-02 | 3.344E-01 | 5.609E-02 | 4.069E-01 |
| 41 | hsa-miR-1288 | 3.753E+01 | 1.234E+02 | 3.040E-01 | -1.191E-00 | 1.607E-02 | 3.382E-01 | 4.375E-02 | 3.883E-01 |

FIG 11 (continued)

| | | | | | | | | | |
|----|---------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|
| 42 | hsa-miR-16-1* | 7.160E+01 | 4.835E+01 | 1.481E-00 | 3.927E-01 | 1.671E-02 | 3.433E-01 | 1.025E-02 | 2.763E-01 |
| 43 | hsa-miR-1268 | 5.176E+02 | 2.909E+02 | 1.780E-00 | 5.764E-01 | 1.894E-02 | 3.470E-01 | 9.759E-02 | 4.996E-01 |
| 44 | hsa-miR-550 | 1.103E+02 | 1.788E+02 | 6.167E-01 | -4.833E-01 | 2.075E-02 | 3.470E-01 | 5.572E-02 | 4.069E-01 |
| 45 | hsa-miR-517b | 1.252E+01 | 3.857E+01 | 3.244E-01 | -1.126E-00 | 2.155E-02 | 3.470E-01 | 3.235E-02 | 3.770E-01 |
| 46 | hsa-miR-545 | 1.358E+02 | 9.775E+01 | 1.390E-00 | 3.290E-01 | 2.030E-02 | 3.470E-01 | 2.947E-02 | 3.734E-01 |
| 47 | hsa-miR-668 | 1.125E+01 | 5.464E+01 | 2.059E-01 | -1.580E-00 | 2.121E-02 | 3.470E-01 | 2.291E-02 | 3.471E-01 |
| 48 | hsa-miR-374b | 4.905E+02 | 1.792E+02 | 2.737E-00 | 1.007E-00 | 2.165E-02 | 3.470E-01 | 5.611E-02 | 4.069E-01 |
| 49 | hsa-miR-10b* | 5.046E+01 | 8.159E+01 | 6.185E-01 | -4.804E-01 | 2.172E-02 | 3.470E-01 | 1.494E-01 | 5.838E-01 |
| 50 | hsa-miR-320a | 9.808E+03 | 2.473E+04 | 3.966E-01 | -9.247E-01 | 1.903E-02 | 3.470E-01 | 6.272E-03 | 2.235E-01 |
| 51 | hsa-miR-30b | 8.166E+03 | 3.998E+03 | 2.043E-00 | 7.143E-01 | 1.905E-02 | 3.470E-01 | 4.090E-02 | 3.813E-01 |
| 52 | hsa-miR-526b | 4.271E+01 | 5.959E+01 | 7.168E-01 | -3.330E-01 | 2.137E-02 | 3.470E-01 | 1.253E-01 | 5.605E-01 |
| 53 | hsa-miR-302d* | 3.029E+01 | 4.697E+01 | 6.449E-01 | -4.387E-01 | 2.142E-02 | 3.470E-01 | 6.637E-02 | 4.284E-01 |
| 54 | hsa-miR-187 | 3.289E+01 | 1.000E-00 | 3.289E+01 | 3.493E-00 | 2.211E-02 | 3.470E-01 | 1.224E-01 | 5.556E-01 |
| 55 | hsa-miR-382 | 5.529E+01 | 1.000E-00 | 5.529E+01 | 4.013E-00 | 1.734E-02 | 3.470E-01 | 6.530E-02 | 4.284E-01 |
| 56 | hsa-miR-453 | 4.534E+01 | 1.000E-00 | 4.534E+01 | 3.814E-00 | 2.264E-02 | 3.489E-01 | 6.341E-02 | 4.275E-01 |
| 57 | hsa-miR-1250 | 7.661E+01 | 2.624E+01 | 2.919E-00 | 1.071E-00 | 2.448E-02 | 3.706E-01 | 4.795E-01 | 8.360E-01 |
| 58 | hsa-miR-30c | 2.630E+03 | 1.917E+03 | 1.372E-00 | 3.164E-01 | 2.618E-02 | 3.895E-01 | 1.646E-02 | 3.300E-01 |
| 59 | hsa-miR-943 | 3.029E+01 | 6.041E+01 | 5.014E-01 | -6.903E-01 | 2.691E-02 | 3.936E-01 | 3.451E-02 | 3.770E-01 |
| 60 | hsa-miR-636 | 1.131E+02 | 2.071E+02 | 5.462E-01 | -6.047E-01 | 2.763E-02 | 3.974E-01 | 1.528E-02 | 3.300E-01 |
| 61 | hsa-miR-107 | 1.687E+03 | 9.187E+02 | 1.836E-00 | 6.075E-01 | 2.875E-02 | 4.002E-01 | 3.077E-02 | 3.734E-01 |
| 62 | hsa-miR-744* | 9.746E-00 | 4.697E+01 | 2.075E-01 | -1.573E-00 | 2.839E-02 | 4.002E-01 | 2.152E-02 | 3.439E-01 |
| 63 | hsa-miR-1294 | 1.000E-00 | 1.000E-00 | 0.000E+01 | 2.983E-02 | 4.086E-01 | 1.866E-01 | 6.405E-01 | |

FIG 11 (continued)

| | | | | | | | | | |
|----|-----------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|
| 64 | hsa-miR-802 | 5.728E+01 | 3.618E+01 | 1.583E-00 | 4.594E-01 | 3.090E-02 | 4.103E-01 | 3.006E-03 | 1.944E-01 |
| 65 | hsa-miR-181a-2* | 7.727E+01 | 1.343E+02 | 5.752E-01 | -5.530E-01 | 3.060E-02 | 4.103E-01 | 1.273E-01 | 5.605E-01 |
| 66 | hsa-miR-572 | 4.111E+01 | 6.746E+01 | 6.093E-01 | -4.954E-01 | 3.275E-02 | 4.283E-01 | 3.704E-02 | 3.813E-01 |
| 67 | hsa-miR-93 | 3.374E+03 | 2.206E+03 | 1.530E-00 | 4.250E-01 | 3.418E-02 | 4.398E-01 | 2.742E-02 | 3.701E-01 |
| 68 | hsa-miR-595 | 1.325E+02 | 5.679E+01 | 2.334E-00 | 8.474E-01 | 3.469E-02 | 4.398E-01 | 2.689E-01 | 6.843E-01 |
| 69 | hsa-miR-195* | 9.249E+01 | 4.697E+01 | 1.969E-00 | 6.775E-01 | 3.517E-02 | 4.398E-01 | 4.955E-02 | 3.955E-01 |
| 70 | hsa-miR-126 | 1.262E+03 | 3.692E+02 | 3.417E-00 | 1.229E-00 | 3.826E-02 | 4.650E-01 | 1.037E-01 | 5.112E-01 |

FIG 12

| N o. | miRNA | median g1 | median g2 | qmedian | logqmedian | ttest_rawp | ttest_adjp | Limma_ rawp | Limma_ adjp |
|---------|----------------|-----------|-----------|----------|------------|------------|------------|----------------|----------------|
| 1 | hsa-miR-1248 | 3.93E+01 | 1.00E-00 | 3.93E+01 | 3.67E-00 | 6.39E-08 | 2.76E-05 | 8.98E-06 | 8.61E-04 |
| 2 | hsa-miR-1295 | 6.68E+01 | 1.49E+02 | 4.47E-01 | -8.05E-01 | 4.55E-08 | 2.76E-05 | 2.38E-03 | 3.16E-02 |
| 3 | hsa-miR-454* | 3.71E+01 | 1.00E-00 | 3.71E+01 | 3.61E-00 | 1.43E-07 | 4.10E-05 | 1.54E-09 | 1.33E-06 |
| 4 | hsa-miR-942 | 4.35E+01 | 1.00E-00 | 4.35E+01 | 3.77E-00 | 3.11E-07 | 6.70E-05 | 2.54E-06 | 3.13E-04 |
| 5 | hsa-miR-1228 | 5.06E+02 | 1.82E+02 | 2.78E-00 | 1.02E-00 | 5.96E-07 | 7.35E-05 | 4.31E-02 | 1.64E-01 |
| 6 | hsa-miR-337-3p | 2.80E+01 | 1.00E-00 | 2.80E+01 | 3.33E-00 | 5.61E-07 | 7.35E-05 | 2.14E-08 | 5.94E-06 |
| 7 | hsa-miR-605 | 2.35E+01 | 1.00E-00 | 2.35E+01 | 3.16E-00 | 5.44E-07 | 7.35E-05 | 1.78E-05 | 1.47E-03 |
| 8 | hsa-miR-363* | 4.00E+01 | 9.79E+01 | 4.08E-01 | -8.96E-01 | 9.05E-07 | 8.68E-05 | 1.05E-03 | 1.80E-02 |
| 9 | hsa-let-7d | 3.00E+03 | 1.69E+03 | 1.78E-00 | 5.75E-01 | 8.23E-07 | 8.68E-05 | 4.64E-02 | 1.68E-01 |
| 10 | hsa-miR-135b | 2.07E+01 | 1.00E-00 | 2.07E+01 | 3.03E-00 | 1.09E-06 | 9.41E-05 | 3.42E-06 | 3.69E-04 |
| 11 | hsa-miR-133b | 3.52E+01 | 1.00E-00 | 3.52E+01 | 3.56E-00 | 1.60E-06 | 1.26E-04 | 7.02E-05 | 3.35E-03 |
| 12 | hsa-miR-130a* | 8.83E+01 | 3.53E+01 | 2.50E-00 | 9.18E-01 | 3.06E-06 | 2.03E-04 | 2.86E-03 | 3.57E-02 |
| 13 | hsa-miR-589 | 5.25E+01 | 1.00E+02 | 5.24E-01 | -6.47E-01 | 2.91E-06 | 2.03E-04 | 3.10E-03 | 3.77E-02 |
| 14 | hsa-miR-610 | 2.77E+01 | 1.14E+02 | 2.43E-01 | -1.41E-00 | 3.68E-06 | 2.27E-04 | 1.17E-04 | 4.41E-03 |
| 15 | hsa-miR-150 | 2.23E+03 | 6.29E+02 | 3.55E-00 | 1.27E-00 | 4.21E-06 | 2.42E-04 | 2.00E-05 | 1.47E-03 |
| 16 | hsa-miR-655 | 3.97E+01 | 1.00E-00 | 3.97E+01 | 3.68E-00 | 6.89E-06 | 3.72E-04 | 2.32E-04 | 6.67E-03 |
| 17 | hsa-miR-409-3p | 6.02E+01 | 1.00E-00 | 6.02E+01 | 4.10E-00 | 7.51E-06 | 3.81E-04 | 1.84E-04 | 5.76E-03 |
| 18 | hsa-miR-1259 | 2.76E+01 | 1.00E-00 | 2.76E+01 | 3.32E-00 | 8.33E-06 | 4.00E-04 | 5.99E-04 | 1.20E-02 |
| 19 | hsa-miR-573 | 3.34E+01 | 7.30E+01 | 4.57E-01 | -7.83E-01 | 1.14E-05 | 4.83E-04 | 8.71E-04 | 1.57E-02 |

FIG 12 (continued)

| | | | | | | | | | |
|----|-----------------|----------|----------|----------|-----------|----------|----------|----------|----------|
| 20 | hsa-miR-539 | 1.81E+01 | 1.00E-00 | 1.81E+01 | 2.90E-00 | 1.10E-05 | 4.83E-04 | 4.05E-04 | 9.21E-03 |
| 21 | hsa-miR-578 | 2.09E+01 | 1.00E-00 | 2.09E+01 | 3.04E-00 | 1.18E-05 | 4.83E-04 | 6.80E-04 | 1.30E-02 |
| 22 | hsa-miR-668 | 5.19E+01 | 1.12E+01 | 4.61E-00 | 1.53E-00 | 1.27E-05 | 4.99E-04 | 6.15E-08 | 1.06E-05 |
| 23 | hsa-miR-576-5p | 1.92E+01 | 1.00E-00 | 1.92E+01 | 2.95E-00 | 1.56E-05 | 5.87E-04 | 2.78E-05 | 1.85E-03 |
| 24 | hsa-miR-651 | 1.87E+01 | 1.00E-00 | 1.87E+01 | 2.93E-00 | 1.77E-05 | 6.36E-04 | 5.70E-04 | 1.17E-02 |
| 25 | hsa-miR-335* | 1.65E+01 | 1.00E-00 | 1.65E+01 | 2.80E-00 | 2.13E-05 | 7.36E-04 | 3.68E-05 | 2.02E-03 |
| 26 | hsa-miR-744* | 5.28E+01 | 9.75E-00 | 5.42E-00 | 1.69E-00 | 2.29E-05 | 7.61E-04 | 3.21E-05 | 1.98E-03 |
| 27 | hsa-miR-148a | 6.42E+02 | 1.43E+03 | 4.48E-01 | -8.02E-01 | 2.59E-05 | 7.99E-04 | 1.09E-04 | 4.29E-03 |
| 28 | hsa-miR-516b* | 4.35E+01 | 2.23E-00 | 1.95E+01 | 2.97E-00 | 2.55E-05 | 7.99E-04 | 3.75E-05 | 2.02E-03 |
| 29 | hsa-miR-302c | 1.58E+01 | 1.00E-00 | 1.58E+01 | 2.76E-00 | 2.90E-05 | 8.62E-04 | 1.81E-04 | 5.76E-03 |
| 30 | hsa-miR-892b | 4.16E+01 | 1.25E+01 | 3.32E-00 | 1.20E-00 | 3.04E-05 | 8.75E-04 | 1.67E-03 | 2.54E-02 |
| 31 | hsa-miR-26b* | 1.94E+01 | 1.00E-00 | 1.94E+01 | 2.96E-00 | 3.68E-05 | 1.01E-03 | 2.04E-05 | 1.47E-03 |
| 32 | hsa-miR-520a-3p | 9.77E-00 | 1.00E-00 | 9.77E-00 | 2.28E-00 | 3.76E-05 | 1.01E-03 | 7.08E-05 | 3.35E-03 |
| 33 | hsa-miR-146b-3p | 2.11E+01 | 8.41E+01 | 2.51E-01 | -1.38E-00 | 4.21E-05 | 1.10E-03 | 2.70E-04 | 7.51E-03 |
| 34 | hsa-miR-877* | 1.01E+02 | 1.73E+01 | 5.81E-00 | 1.76E-00 | 4.75E-05 | 1.17E-03 | 1.85E-04 | 5.76E-03 |
| 35 | hsa-miR-522* | 5.63E+01 | 2.06E+02 | 2.73E-01 | -1.30E-00 | 4.67E-05 | 1.17E-03 | 2.79E-04 | 7.52E-03 |
| 36 | hsa-miR-582-5p | 4.11E+01 | 1.00E-00 | 4.11E+01 | 3.72E-00 | 5.15E-05 | 1.23E-03 | 2.05E-04 | 6.10E-03 |
| 37 | hsa-miR-9 | 2.50E+01 | 1.00E-00 | 2.50E+01 | 3.22E-00 | 5.36E-05 | 1.25E-03 | 7.19E-04 | 1.35E-02 |
| 38 | hsa-miR-133a | 7.67E+01 | 2.70E+01 | 2.84E-00 | 1.04E-00 | 6.09E-05 | 1.38E-03 | 9.26E-05 | 3.81E-03 |
| 39 | hsa-miR-599 | 4.43E+01 | 1.69E+01 | 2.62E-00 | 9.62E-01 | 6.47E-05 | 1.43E-03 | 1.10E-01 | 2.73E-01 |
| 40 | hsa-miR-299-5p | 2.18E+01 | 1.00E-00 | 2.18E+01 | 3.08E-00 | 7.03E-05 | 1.52E-03 | 9.88E-03 | 6.93E-02 |

FIG 12 (continued)

| | | | | | | | | | |
|----|-----------------|----------|----------|----------|-----------|----------|----------|----------|----------|
| 41 | hsa-miR-302d | 6.61E-00 | 1.00E-00 | 6.61E-00 | 1.89E-00 | 7.29E-05 | 1.53E-03 | 1.33E-03 | 2.12E-02 |
| 42 | hsa-miR-374a | 5.62E+02 | 2.12E+02 | 2.65E-00 | 9.75E-01 | 9.58E-05 | 1.97E-03 | 5.47E-02 | 1.84E-01 |
| 43 | hsa-miR-576-3p | 7.38E-00 | 1.00E-00 | 7.38E-00 | 2.00E-00 | 1.08E-04 | 2.16E-03 | 4.77E-04 | 1.04E-02 |
| 44 | hsa-miR-383 | 4.98E+01 | 9.81E+01 | 5.08E-01 | -6.77E-01 | 1.17E-04 | 2.30E-03 | 1.99E-03 | 2.82E-02 |
| 45 | hsa-miR-374b* | 4.87E+01 | 1.60E+01 | 3.05E-00 | 1.11E-00 | 1.25E-04 | 2.40E-03 | 4.84E-03 | 4.75E-02 |
| 46 | hsa-miR-1911 | 4.30E+01 | 1.73E+01 | 2.48E-00 | 9.08E-01 | 1.37E-04 | 2.47E-03 | 3.46E-03 | 3.94E-02 |
| 47 | hsa-miR-182 | 3.62E+03 | 7.31E+03 | 4.96E-01 | -7.02E-01 | 1.40E-04 | 2.47E-03 | 1.87E-04 | 5.76E-03 |
| 48 | hsa-miR-564 | 1.06E+02 | 2.01E+02 | 5.27E-01 | -6.41E-01 | 1.39E-04 | 2.47E-03 | 4.39E-03 | 4.68E-02 |
| 49 | hsa-miR-223* | 5.21E+01 | 2.57E+01 | 2.03E-00 | 7.08E-01 | 1.39E-04 | 2.47E-03 | 1.35E-01 | 3.06E-01 |
| 50 | hsa-miR-1226 | 7.62E+01 | 3.58E+01 | 2.13E-00 | 7.55E-01 | 1.50E-04 | 2.59E-03 | 9.82E-02 | 2.54E-01 |
| 51 | hsa-miR-302d* | 5.91E+01 | 3.03E+01 | 1.95E-00 | 6.68E-01 | 1.55E-04 | 2.62E-03 | 6.67E-03 | 5.75E-02 |
| 52 | hsa-miR-92a | 1.57E+04 | 1.20E+04 | 1.31E-00 | 2.73E-01 | 1.69E-04 | 2.74E-03 | 4.61E-02 | 1.67E-01 |
| 53 | hsa-miR-548b-5p | 1.57E-00 | 1.00E-00 | 1.57E-00 | 4.49E-01 | 1.66E-04 | 2.74E-03 | 4.72E-03 | 4.75E-02 |
| 54 | hsa-miR-551a | 1.42E+01 | 6.08E+01 | 2.33E-01 | -1.46E-00 | 2.10E-04 | 3.32E-03 | 3.52E-04 | 8.62E-03 |
| 55 | hsa-miR-205 | 6.34E+01 | 2.90E+01 | 2.18E-00 | 7.80E-01 | 2.11E-04 | 3.32E-03 | 6.26E-02 | 1.96E-01 |
| 56 | hsa-miR-1249 | 1.05E+02 | 4.05E+01 | 2.59E-00 | 9.51E-01 | 2.42E-04 | 3.73E-03 | 2.00E-03 | 2.82E-02 |
| 57 | hsa-miR-496 | 8.75E+01 | 4.70E+01 | 1.86E-00 | 6.22E-01 | 2.76E-04 | 4.17E-03 | 1.66E-02 | 9.20E-02 |
| 58 | hsa-miR-130b* | 1.10E+01 | 1.00E-00 | 1.10E+01 | 2.40E-00 | 2.89E-04 | 4.29E-03 | 1.12E-02 | 7.74E-02 |
| 59 | hsa-miR-618 | 1.76E+01 | 1.00E-00 | 1.76E+01 | 2.87E-00 | 2.98E-04 | 4.35E-03 | 8.07E-05 | 3.48E-03 |
| 60 | hsa-miR-23b* | 2.86E+01 | 1.00E-00 | 2.86E+01 | 3.35E-00 | 3.06E-04 | 4.40E-03 | 5.35E-04 | 1.13E-02 |
| 61 | hsa-miR-211 | 1.57E-00 | 1.00E-00 | 1.57E-00 | 4.49E-01 | 3.18E-04 | 4.50E-03 | 3.98E-03 | 4.40E-02 |
| 62 | hsa-miR-500* | 1.85E+02 | 3.25E+02 | 5.67E-01 | -5.67E-01 | 3.32E-04 | 4.62E-03 | 8.61E-03 | 6.54E-02 |

FIG 12 (continued)

| | | | | | | | | | |
|----|----------------|----------|----------|----------|-----------|----------|----------|----------|----------|
| 63 | hsa-miR-204 | 3.95E-00 | 1.00E-00 | 3.95E-00 | 1.37E-00 | 3.83E-04 | 5.25E-03 | 4.84E-04 | 1.04E-02 |
| 64 | hsa-miR-1288 | 7.59E+01 | 3.75E+01 | 2.02E-00 | 7.04E-01 | 3.95E-04 | 5.32E-03 | 4.38E-02 | 1.66E-01 |
| 65 | hsa-miR-19b-1* | 7.89E+01 | 4.47E+01 | 1.76E-00 | 5.68E-01 | 4.12E-04 | 5.47E-03 | 1.44E-01 | 3.22E-01 |
| 66 | hsa-miR-126* | 2.83E+01 | 1.72E-00 | 1.65E+01 | 2.80E-00 | 4.23E-04 | 5.54E-03 | 1.02E-02 | 7.10E-02 |
| 67 | hsa-miR-888 | 5.02E+01 | 1.06E+01 | 4.73E-00 | 1.55E-00 | 4.44E-04 | 5.59E-03 | 3.59E-04 | 8.62E-03 |
| 68 | hsa-miR-526a | 8.24E+01 | 2.31E+02 | 3.57E-01 | -1.03E-00 | 4.46E-04 | 5.59E-03 | 3.11E-04 | 8.14E-03 |
| 69 | hsa-miR-26a-1* | 1.96E+01 | 1.00E-00 | 1.96E+01 | 2.97E-00 | 4.47E-04 | 5.59E-03 | 5.68E-03 | 5.33E-02 |
| 70 | hsa-miR-26a-2* | 1.00E-00 | 1.00E-00 | 1.00E-00 | 0.00E+01 | 4.74E-04 | 5.84E-03 | 1.52E-03 | 2.38E-02 |

FIG 13

| N o. | miRNA | median g1 | median g2 | qmedian | logqmedian | ttest_raw | ttest_adjp | limma_rawp | limma_adjp |
|---------|-----------------|-----------|-----------|----------|------------|-----------|------------|------------|------------|
| 1 | hsa-let-7d | 1.69E+03 | 3.22E+03 | 5.24E-01 | -6.47E-01 | 3.54E-06 | 1.76E-03 | 1.47E-04 | 8.44E-03 |
| 2 | hsa-miR-146b-3p | 8.41E+01 | 1.87E+01 | 4.50E-00 | 1.51E-00 | 4.07E-06 | 1.76E-03 | 4.17E-05 | 4.00E-03 |
| 3 | hsa-miR-150 | 6.29E+02 | 2.21E+03 | 2.85E-01 | -1.25E-00 | 6.92E-06 | 1.99E-03 | 1.82E-04 | 9.03E-03 |
| 4 | hsa-miR-454* | 1.00E-00 | 4.22E+01 | 2.37E-02 | -3.74E-00 | 2.95E-05 | 6.37E-03 | 3.72E-06 | 5.35E-04 |
| 5 | hsa-miR-1248 | 1.00E-00 | 2.89E+01 | 3.46E-02 | -3.36E-00 | 6.03E-05 | 6.50E-03 | 9.00E-07 | 2.59E-04 |
| 6 | hsa-miR-133b | 1.00E-00 | 2.82E+01 | 3.54E-02 | -3.34E-00 | 4.40E-05 | 6.50E-03 | 1.05E-04 | 6.98E-03 |
| 7 | hsa-miR-610 | 1.14E+02 | 4.84E+01 | 2.35E-00 | 8.53E-01 | 4.58E-05 | 6.50E-03 | 1.61E-03 | 2.88E-02 |
| 8 | hsa-miR-148a | 1.43E+03 | 6.97E+02 | 2.05E-00 | 7.20E-01 | 5.77E-05 | 6.50E-03 | 4.07E-04 | 1.35E-02 |
| 9 | hsa-miR-888 | 1.06E+01 | 6.01E+01 | 1.76E-01 | -1.74E-00 | 7.86E-05 | 6.78E-03 | 1.57E-04 | 8.45E-03 |
| 10 | hsa-miR-519e* | 8.76E+01 | 1.35E+01 | 6.47E-00 | 1.87E-00 | 7.83E-05 | 6.78E-03 | 7.10E-05 | 5.11E-03 |
| 11 | hsa-miR-1288 | 3.75E+01 | 9.92E+01 | 3.78E-01 | -9.72E-01 | 8.79E-05 | 6.89E-03 | 2.05E-04 | 9.03E-03 |
| 12 | hsa-miR-655 | 1.00E-00 | 4.49E+01 | 2.23E-02 | -3.81E-00 | 1.34E-04 | 8.57E-03 | 1.09E-03 | 2.35E-02 |
| 13 | hsa-miR-302d* | 3.03E+01 | 8.09E+01 | 3.75E-01 | -9.82E-01 | 1.22E-04 | 8.57E-03 | 3.96E-03 | 4.82E-02 |
| 14 | hsa-miR-942 | 1.00E-00 | 4.45E+01 | 2.25E-02 | -3.79E-00 | 1.39E-04 | 8.57E-03 | 8.54E-06 | 1.05E-03 |
| 15 | hsa-miR-374b* | 1.60E+01 | 5.01E+01 | 3.19E-01 | -1.14E-00 | 1.61E-04 | 9.27E-03 | 4.71E-04 | 1.45E-02 |
| 16 | hsa-miR-605 | 1.00E-00 | 3.69E+01 | 2.71E-02 | -3.61E-00 | 1.74E-04 | 9.40E-03 | 2.50E-06 | 4.32E-04 |
| 17 | hsa-miR-10a* | 1.50E+01 | 5.22E+01 | 2.88E-01 | -1.25E-00 | 2.02E-04 | 1.03E-02 | 1.44E-02 | 9.40E-02 |
| 18 | hsa-miR-182 | 7.31E+03 | 3.79E+03 | 1.93E-00 | 6.57E-01 | 2.27E-04 | 1.09E-02 | 2.20E-04 | 9.03E-03 |

FIG 13 (continued)

| | | | | | | | | | |
|----|----------------|----------|----------|----------|-----------|----------|----------|----------|----------|
| 19 | hsa-miR-148a* | 4.67E-00 | 3.50E+01 | 1.34E-01 | -2.01E-00 | 2.84E-04 | 1.22E-02 | 9.42E-04 | 2.14E-02 |
| 20 | hsa-miR-656 | 1.96E+01 | 6.70E+01 | 2.93E-01 | -1.23E-00 | 2.79E-04 | 1.22E-02 | 2.63E-03 | 3.85E-02 |
| 21 | hsa-miR-374a | 2.12E+02 | 6.29E+02 | 3.37E-01 | -1.09E-00 | 3.36E-04 | 1.38E-02 | 8.37E-02 | 2.50E-01 |
| 22 | hsa-miR-744* | 9.75E-00 | 6.72E+01 | 1.45E-01 | -1.93E-00 | 3.54E-04 | 1.39E-02 | 1.91E-03 | 3.11E-02 |
| 23 | hsa-miR-429 | 1.07E+01 | 5.35E+01 | 2.00E-01 | -1.61E-00 | 4.25E-04 | 1.43E-02 | 2.49E-04 | 9.78E-03 |
| 24 | hsa-miR-144* | 3.35E+02 | 9.97E+02 | 3.36E-01 | -1.09E-00 | 4.48E-04 | 1.43E-02 | 1.30E-02 | 9.33E-02 |
| 25 | hsa-miR-144 | 2.01E+03 | 3.62E+03 | 5.54E-01 | -5.90E-01 | 3.83E-04 | 1.43E-02 | 7.29E-03 | 6.71E-02 |
| 26 | hsa-miR-668 | 1.12E+01 | 6.07E+01 | 1.85E-01 | -1.69E-00 | 4.05E-04 | 1.43E-02 | 8.76E-03 | 7.50E-02 |
| 27 | hsa-miR-888* | 5.12E+01 | 1.34E+01 | 3.83E-00 | 1.34E-00 | 4.42E-04 | 1.43E-02 | 4.32E-04 | 1.38E-02 |
| 28 | hsa-miR-1259 | 1.00E-00 | 3.93E+01 | 2.55E-02 | -3.67E-00 | 5.82E-04 | 1.62E-02 | 1.28E-03 | 2.62E-02 |
| 29 | hsa-miR-29a | 9.97E+02 | 6.22E+02 | 1.60E-00 | 4.71E-01 | 6.01E-04 | 1.62E-02 | 5.47E-03 | 5.83E-02 |
| 30 | hsa-miR-194 | 6.93E+03 | 4.64E+03 | 1.49E-00 | 4.01E-01 | 5.68E-04 | 1.62E-02 | 6.64E-04 | 1.83E-02 |
| 31 | hsa-miR-1205 | 1.31E+02 | 6.63E+01 | 1.97E-00 | 6.80E-01 | 5.38E-04 | 1.62E-02 | 3.22E-03 | 4.23E-02 |
| 32 | hsa-miR-149* | 1.13E+03 | 3.54E+02 | 3.18E-00 | 1.16E-00 | 5.66E-04 | 1.62E-02 | 1.44E-03 | 2.75E-02 |
| 33 | hsa-miR-221* | 1.27E+02 | 7.33E+01 | 1.73E-00 | 5.48E-01 | 6.61E-04 | 1.73E-02 | 1.00E-02 | 8.10E-02 |
| 34 | hsa-miR-302d | 1.00E-00 | 1.43E+01 | 7.00E-02 | -2.66E-00 | 7.04E-04 | 1.79E-02 | 7.91E-04 | 1.95E-02 |
| 35 | hsa-miR-299-5p | 1.00E-00 | 3.21E+01 | 3.12E-02 | -3.47E-00 | 8.96E-04 | 1.84E-02 | 7.47E-04 | 1.90E-02 |
| 36 | hsa-miR-1908 | 1.33E+03 | 6.75E+02 | 1.97E-00 | 6.76E-01 | 9.34E-04 | 1.84E-02 | 8.86E-04 | 2.07E-02 |
| 37 | hsa-miR-573 | 7.30E+01 | 4.56E+01 | 1.60E-00 | 4.72E-01 | 7.99E-04 | 1.84E-02 | 1.20E-02 | 9.00E-02 |
| 38 | hsa-miR-877 | 4.74E+01 | 1.10E+02 | 4.31E-01 | -8.43E-01 | 9.16E-04 | 1.84E-02 | 4.40E-03 | 5.27E-02 |
| 39 | hsa-miR-212 | 5.58E+01 | 1.68E+01 | 3.32E-00 | 1.20E-00 | 9.36E-04 | 1.84E-02 | 6.34E-04 | 1.82E-02 |
| 40 | hsa-miR-130a* | 3.53E+01 | 1.07E+02 | 3.28E-01 | -1.11E-00 | 9.06E-04 | 1.84E-02 | 2.11E-04 | 9.03E-03 |

FIG 13 (continued)

| | | | | | | | | | |
|----|----------------|----------|----------|----------|-----------|----------|----------|----------|----------|
| 41 | hsa-miR-551a | 6.08E+01 | 3.22E-00 | 1.89E+01 | 2.94E-00 | 8.98E-04 | 1.84E-02 | 3.53E-04 | 1.22E-02 |
| 42 | hsa-miR-936 | 8.31E+01 | 4.20E+01 | 1.98E-00 | 6.82E-01 | 7.49E-04 | 1.84E-02 | 3.02E-03 | 4.16E-02 |
| 43 | hsa-miR-1226 | 3.58E+01 | 9.45E+01 | 3.79E-01 | -9.71E-01 | 8.79E-04 | 1.84E-02 | 1.43E-01 | 3.49E-01 |
| 44 | hsa-miR-892b | 1.25E+01 | 4.20E+01 | 2.98E-01 | -1.21E-00 | 9.21E-04 | 1.84E-02 | 3.05E-04 | 1.14E-02 |
| 45 | hsa-miR-200a* | 4.47E+01 | 8.26E+01 | 5.41E-01 | -6.13E-01 | 9.95E-04 | 1.87E-02 | 3.24E-03 | 4.23E-02 |
| 46 | hsa-miR-519a* | 1.85E+02 | 1.03E+02 | 1.79E-00 | 5.85E-01 | 9.77E-04 | 1.87E-02 | 6.40E-03 | 6.42E-02 |
| 47 | hsa-miR-891a | 1.86E+02 | 6.86E+01 | 2.71E-00 | 9.95E-01 | 1.02E-03 | 1.88E-02 | 1.36E-03 | 2.67E-02 |
| 48 | hsa-miR-1287 | 5.86E+01 | 8.27E+01 | 7.09E-01 | -3.44E-01 | 1.25E-03 | 2.07E-02 | 9.03E-03 | 7.57E-02 |
| 49 | hsa-miR-770-5p | 9.61E+01 | 4.03E+01 | 2.38E-00 | 8.69E-01 | 1.25E-03 | 2.07E-02 | 3.33E-03 | 4.23E-02 |
| 50 | hsa-miR-363* | 9.79E+01 | 5.89E+01 | 1.66E-00 | 5.09E-01 | 1.23E-03 | 2.07E-02 | 1.92E-02 | 1.13E-01 |
| 51 | hsa-miR-302c | 1.00E-00 | 1.12E+01 | 8.89E-02 | -2.42E-00 | 1.21E-03 | 2.07E-02 | 2.20E-05 | 2.37E-03 |
| 52 | hsa-miR-218-1* | 5.00E+01 | 8.94E+01 | 5.59E-01 | -5.82E-01 | 1.20E-03 | 2.07E-02 | 2.02E-01 | 4.28E-01 |
| 53 | hsa-miR-541 | 1.03E+02 | 6.34E+01 | 1.62E-00 | 4.85E-01 | 1.36E-03 | 2.21E-02 | 1.48E-02 | 9.47E-02 |
| 54 | hsa-miR-500* | 3.25E+02 | 2.01E+02 | 1.62E-00 | 4.80E-01 | 1.50E-03 | 2.34E-02 | 2.65E-02 | 1.30E-01 |
| 55 | hsa-miR-485-3p | 3.73E+01 | 7.41E+01 | 5.04E-01 | -6.85E-01 | 1.52E-03 | 2.34E-02 | 8.07E-03 | 7.10E-02 |
| 56 | hsa-miR-21* | 1.29E+02 | 7.73E+01 | 1.67E-00 | 5.11E-01 | 1.52E-03 | 2.34E-02 | 1.06E-02 | 8.42E-02 |
| 57 | hsa-miR-662 | 4.64E+01 | 7.47E+01 | 6.21E-01 | -4.76E-01 | 1.58E-03 | 2.40E-02 | 3.65E-02 | 1.55E-01 |
| 58 | hsa-miR-506 | 1.48E+01 | 5.16E+01 | 2.86E-01 | -1.25E-00 | 1.66E-03 | 2.44E-02 | 5.21E-03 | 5.62E-02 |
| 59 | hsa-miR-1200 | 9.49E+01 | 5.35E+01 | 1.77E-00 | 5.73E-01 | 1.67E-03 | 2.44E-02 | 1.45E-02 | 9.40E-02 |
| 60 | hsa-miR-22 | 9.81E+03 | 6.93E+03 | 1.42E-00 | 3.48E-01 | 1.74E-03 | 2.50E-02 | 1.59E-02 | 9.86E-02 |

FIG 13 (continued)

| | | | | | | | | | |
|----|------------------|----------|----------|----------|-----------|----------|----------|----------|----------|
| 61 | hsa-miR-101 | 4.56E+02 | 8.00E+02 | 5.70E-01 | -5.62E-01 | 1.77E-03 | 2.51E-02 | 3.23E-03 | 4.23E-02 |
| 62 | hsa-miR-129* | 3.08E+01 | 5.16E+01 | 5.97E-01 | -5.16E-01 | 1.86E-03 | 2.55E-02 | 1.17E-02 | 8.89E-02 |
| 63 | hsa-miR-224 | 5.92E+01 | 6.68E-00 | 8.85E-00 | 2.18E-00 | 1.86E-03 | 2.55E-02 | 6.29E-05 | 4.94E-03 |
| 64 | hsa-miR-371-5p | 5.52E+01 | 2.25E+01 | 2.45E-00 | 8.97E-01 | 2.06E-03 | 2.78E-02 | 1.38E-02 | 9.34E-02 |
| 65 | hsa-miR-106a | 6.23E+03 | 9.81E+03 | 6.35E-01 | -4.54E-01 | 2.20E-03 | 2.91E-02 | 7.36E-03 | 6.71E-02 |
| 66 | hsa-miR-647 | 8.59E+01 | 2.16E+01 | 3.97E-00 | 1.38E-00 | 2.22E-03 | 2.91E-02 | 1.65E-03 | 2.88E-02 |
| 67 | hsa-miR-219-1-3p | 1.00E-00 | 2.33E+01 | 4.29E-02 | -3.15E-00 | 2.28E-03 | 2.94E-02 | 6.97E-04 | 1.83E-02 |
| 68 | hsa-miR-519c-5p | 2.04E+02 | 9.47E+01 | 2.16E-00 | 7.69E-01 | 2.45E-03 | 2.94E-02 | 1.35E-02 | 9.34E-02 |
| 69 | hsa-miR-330-5p | 9.20E-00 | 2.87E+01 | 3.21E-01 | -1.14E-00 | 2.39E-03 | 2.94E-02 | 1.64E-02 | 9.91E-02 |
| 70 | hsa-miR-450a | 6.60E-00 | 3.34E+01 | 1.98E-01 | -1.62E-00 | 2.44E-03 | 2.94E-02 | 1.70E-03 | 2.88E-02 |

FIG 14

| SEQ ID NO | miRNA | median g1 | median g2 | qmedia n | logqmedia n | Wmw_rawp | Wmw_adjp | Ttest_rawp | Ttest_adjp | AUC |
|----------------|----------------|-----------|-----------|----------|-------------|----------|----------|------------|------------|------|
| SEQ ID NO: 714 | hsa-miR-144* | 784 | 236 | 3.32 | 1.20 | 6.98E-07 | 3.08E-04 | 1.53E-08 | 1.30E-05 | 0.84 |
| SEQ ID NO: 709 | hsa-miR-146a | 189 | 83 | 2.28 | 0.82 | 1.76E-06 | 4.86E-04 | 4.12E-08 | 1.75E-05 | 0.83 |
| SEQ ID NO: 684 | hsa-miR-155 | 85 | 45 | 1.89 | 0.64 | 2.70E-05 | 1.64E-03 | 2.44E-07 | 6.89E-05 | 0.79 |
| SEQ ID NO: 530 | hsa-miR-23b* | 18 | 1 | 18.17 | 2.90 | 1.23E-04 | 3.51E-03 | 3.30E-07 | 7.00E-05 | 0.75 |
| SEQ ID NO: 442 | hsa-miR-342-3p | 3920 | 2168 | 1.81 | 0.59 | 3.46E-05 | 1.87E-03 | 1.57E-06 | 2.21E-04 | 0.78 |
| SEQ ID NO: 92 | hsa-miR-660 | 457 | 181 | 2.53 | 0.93 | 3.61E-05 | 1.87E-03 | 1.57E-06 | 2.21E-04 | 0.78 |
| SEQ ID NO: 874 | hsa-miR-106b | 11866 | 6240 | 1.90 | 0.64 | 2.00E-05 | 1.64E-03 | 1.83E-06 | 2.21E-04 | 0.79 |
| SEQ ID NO: 403 | hsa-miR-378 | 235 | 129 | 1.82 | 0.60 | 1.60E-04 | 3.98E-03 | 2.62E-06 | 2.77E-04 | 0.76 |
| SEQ ID NO: 127 | hsa-miR-628-3p | 173 | 111 | 1.56 | 0.45 | 2.61E-04 | 5.82E-03 | 3.65E-06 | 3.42E-04 | 0.75 |
| SEQ ID NO: 897 | hsaa-let-7d | 2332 | 1410 | 1.65 | 0.50 | 1.04E-04 | 3.28E-03 | 4.04E-06 | 3.42E-04 | 0.76 |
| SEQ ID NO: 395 | hsa-miR-383 | 56 | 90 | 0.63 | -0.47 | 6.71E-06 | 1.14E-03 | 5.34E-06 | 4.12E-04 | 0.19 |
| SEQ ID NO: 573 | hsa-miR-210 | 751 | 390 | 1.92 | 0.65 | 5.15E-05 | 2.19E-03 | 9.50E-06 | 6.71E-04 | 0.78 |
| SEQ ID NO: 393 | hsa-miR-409-3p | 28 | 1 | 28.29 | 3.34 | 2.12E-04 | 5.14E-03 | 1.04E-05 | 6.78E-04 | 0.75 |

FIG 14 (continued)

| | | | | | | | | | | |
|------------|------------------------|-------|-------|-------|------|----------|----------|----------|----------|------|
| SEQ ID NO: | hsa-miR-342-5p 441 | 123 | 31 | 3.98 | 1.38 | 2.16E-05 | 1.64E-03 | 1.44E-05 | 8.15E-04 | 0.79 |
| SEQ ID NO: | hsa-miR-424* 382 | 127 | 87 | 1.47 | 0.38 | 1.84E-03 | 2.21E-02 | 1.44E-05 | 8.15E-04 | 0.71 |
| SEQ ID NO: | hsa-miR-26b* 520 | 3 | 1 | 2.85 | 1.05 | 6.37E-04 | 1.15E-02 | 1.84E-05 | 9.74E-04 | 0.71 |
| SEQ ID NO: | hsa-miR-655 97 | 22 | 3 | 6.96 | 1.94 | 8.28E-03 | 5.05E-02 | 2.96E-05 | 1.48E-03 | 0.68 |
| SEQ ID NO: | hsa-miR-222 542 | 489 | 261 | 1.87 | 0.63 | 3.74E-05 | 1.87E-03 | 3.63E-05 | 1.71E-03 | 0.78 |
| SEQ ID NO: | hsa-miR-942 11 | 7 | 1 | 6.65 | 1.89 | 1.10E-02 | 6.08E-02 | 4.54E-05 | 2.03E-03 | 0.66 |
| SEQ ID NO: | hsa-miR-664 87 | 262 | 118 | 2.22 | 0.80 | 1.27E-03 | 1.74E-02 | 6.13E-05 | 2.60E-03 | 0.72 |
| SEQ ID NO: | hsa-miR-101 883 | 666 | 359 | 1.86 | 0.62 | 1.28E-05 | 1.47E-03 | 6.47E-05 | 2.61E-03 | 0.80 |
| SEQ ID NO: | hsa-let-7f-1* 892 | 28 | 12 | 2.33 | 0.85 | 3.44E-03 | 3.02E-02 | 8.41E-05 | 2.89E-03 | 0.70 |
| SEQ ID NO: | hsa-miR-486-5p 350 | 38028 | 38028 | 1.00 | 0.00 | 1.38E-02 | 6.89E-02 | 8.37E-05 | 2.89E-03 | 0.39 |
| SEQ ID NO: | hsa-miR-605 154 | 14 | 1 | 14.45 | 2.67 | 1.20E-03 | 1.69E-02 | 7.62E-05 | 2.89E-03 | 0.71 |
| SEQ ID NO: | hsa-miR-181a-2* 671 | 96 | 66 | 1.46 | 0.38 | 3.06E-03 | 2.85E-02 | 8.53E-05 | 2.89E-03 | 0.70 |
| SEQ ID NO: | hsa-miR-185 658 | 28729 | 19766 | 1.45 | 0.37 | 7.39E-04 | 1.21E-02 | 1.09E-04 | 3.31E-03 | 0.73 |

FIG 14 (continued)

| | | | | | | | | | | |
|------------|----------------------------|------|------|------|-------|----------|----------|----------|----------|------|
| SEQ ID NO: | hsa-miR-518f 284 | 58 | 73 | 0.79 | -0.24 | 7.23E-04 | 1.21E-02 | 1.06E-04 | 3.31E-03 | 0.27 |
| SEQ ID NO: | hsa-miR-324- 3p 466 | 682 | 482 | 1.42 | 0.35 | 1.29E-03 | 1.74E-02 | 1.09E-04 | 3.31E-03 | 0.72 |
| SEQ ID NO: | hsa-miR-335* 455 | 1 | 1 | 1.00 | 0.00 | 2.54E-03 | 2.56E-02 | 1.68E-04 | 4.90E-03 | 0.67 |
| SEQ ID NO: | hsa-miR- 146b-5p 706 | 115 | 77 | 1.50 | 0.40 | 1.35E-03 | 1.79E-02 | 2.28E-04 | 6.44E-03 | 0.72 |
| SEQ ID NO: | hsa-miR- 1295 762 | 104 | 145 | 0.72 | -0.33 | 6.05E-05 | 2.33E-03 | 2.53E-04 | 6.92E-03 | 0.23 |
| SEQ ID NO: | hsa-miR-34b 436 | 36 | 21 | 1.72 | 0.54 | 6.11E-03 | 4.18E-02 | 2.62E-04 | 6.95E-03 | 0.69 |
| SEQ ID NO: | hsa-miR-590- 3p 170 | 5 | 1 | 4.61 | 1.53 | 1.87E-03 | 2.21E-02 | 2.72E-04 | 6.99E-03 | 0.70 |
| SEQ ID NO: | hsa-miR-495 336 | 72 | 47 | 1.53 | 0.43 | 1.92E-03 | 2.21E-02 | 3.28E-04 | 7.94E-03 | 0.71 |
| SEQ ID NO: | hsa-miR-431 378 | 151 | 213 | 0.71 | -0.34 | 7.32E-05 | 2.59E-03 | 3.29E-04 | 7.94E-03 | 0.23 |
| SEQ ID NO: | hsa-miR- 450b-3p 366 | 28 | 10 | 2.68 | 0.99 | 4.71E-03 | 3.57E-02 | 3.37E-04 | 7.94E-03 | 0.69 |
| SEQ ID NO: | hsa-miR-576- 3p 187 | 1 | 1 | 1.00 | 0.00 | 2.53E-02 | 1.01E-01 | 4.08E-04 | 9.36E-03 | 0.63 |
| SEQ ID NO: | hsa-miR- 548c-3p 234 | 35 | 20 | 1.75 | 0.56 | 4.96E-03 | 3.63E-02 | 4.85E-04 | 9.44E-03 | 0.69 |
| SEQ ID NO: | hsa-miR- 1228* 838 | 1082 | 2148 | 0.50 | -0.69 | 7.27E-07 | 3.08E-04 | 4.56E-04 | 9.44E-03 | 0.16 |

FIG 14 (continued)

| | | | | | | | | | | |
|------------|----------------------------|------|------|------|-------|----------|----------|----------|----------|------|
| SEQ ID NO: | hsa-miR-564 199 | 146 | 212 | 0.69 | -0.37 | 1.39E-05 | 1.47E-03 | 4.77E-04 | 9.44E-03 | 0.20 |
| SEQ ID NO: | hsa-miR-361- 5p 431 | 400 | 273 | 1.46 | 0.38 | 3.31E-03 | 2.99E-02 | 4.71E-04 | 9.44E-03 | 0.70 |
| SEQ ID NO: | hsa-miR-335 456 | 419 | 291 | 1.44 | 0.36 | 4.89E-04 | 1.01E-02 | 4.90E-04 | 9.44E-03 | 0.74 |
| SEQ ID NO: | hsa-miR-190 646 | 1 | 1 | 1.00 | 0.00 | 5.04E-03 | 3.66E-02 | 4.38E-04 | 9.44E-03 | 0.66 |
| SEQ ID NO: | hsa-miR-144 715 | 2387 | 1304 | 1.83 | 0.60 | 1.97E-03 | 2.21E-02 | 4.61E-04 | 9.44E-03 | 0.71 |
| SEQ ID NO: | hsa-miR-221 544 | 96 | 64 | 1.51 | 0.42 | 7.96E-04 | 1.25E-02 | 5.04E-04 | 9.50E-03 | 0.73 |
| SEQ ID NO: | hsa-miR- 519c-5p 277 | 115 | 176 | 0.65 | -0.43 | 8.57E-04 | 1.30E-02 | 5.37E-04 | 9.90E-03 | 0.27 |
| SEQ ID NO: | hsa-miR-7-1* 75 | 293 | 158 | 1.86 | 0.62 | 6.65E-04 | 1.17E-02 | 5.56E-04 | 1.00E-02 | 0.73 |
| SEQ ID NO: | hsa-miR-485- 3p 353 | 62 | 40 | 1.55 | 0.44 | 1.40E-02 | 6.89E-02 | 6.08E-04 | 1.07E-02 | 0.67 |
| SEQ ID NO: | hsa-miR- 1261 802 | 1 | 1 | 1.00 | 0.00 | 1.33E-01 | 3.06E-01 | 7.14E-04 | 1.24E-02 | 0.59 |
| SEQ ID NO: | hsa-miR-340 444 | 164 | 107 | 1.53 | 0.42 | 3.83E-03 | 3.22E-02 | 7.63E-04 | 1.25E-02 | 0.70 |
| SEQ ID NO: | hsa-miR- 1908 645 | 867 | 1640 | 0.53 | -0.64 | 2.46E-05 | 1.64E-03 | 7.60E-04 | 1.25E-02 | 0.21 |
| SEQ ID NO: | hsa-miR-663 89 | 272 | 491 | 0.55 | -0.59 | 9.80E-05 | 3.20E-03 | 7.66E-04 | 1.25E-02 | 0.23 |

FIG 14 (continued)

| | | | | | | | | | | |
|------------|---------------|-------|-------|------|-------|----------|----------|----------|----------|------|
| SEQ ID NO: | hsa-miR-526a | 140 | 206 | 0.68 | -0.39 | 8.70E-05 | 2.95E-03 | 8.17E-04 | 1.28E-02 | 0.23 |
| SEQ ID NO: | hsa-miR-708* | 65 | 81 | 0.81 | -0.22 | 3.27E-03 | 2.98E-02 | 8.12E-04 | 1.28E-02 | 0.30 |
| SEQ ID NO: | hsa-miR-181c | 127 | 69 | 1.85 | 0.61 | 1.24E-04 | 3.51E-03 | 8.74E-04 | 1.35E-02 | 0.76 |
| SEQ ID NO: | hsa-miR-135b | 1 | 1 | 1.00 | 0.00 | 8.26E-03 | 5.05E-02 | 9.28E-04 | 1.41E-02 | 0.63 |
| SEQ ID NO: | hsa-miR-148b* | 28 | 15 | 1.88 | 0.63 | 2.12E-02 | 8.97E-02 | 9.93E-04 | 1.48E-02 | 0.66 |
| SEQ ID NO: | hsa-miR-1289 | 92 | 124 | 0.74 | -0.31 | 4.40E-05 | 1.96E-03 | 1.10E-03 | 1.61E-02 | 0.22 |
| SEQ ID NO: | hsa-miR-181a | 516 | 151 | 3.43 | 1.23 | 2.29E-06 | 4.86E-04 | 1.21E-03 | 1.63E-02 | 0.82 |
| SEQ ID NO: | hsa-miR-520g | 42 | 21 | 2.02 | 0.71 | 4.93E-03 | 3.63E-02 | 1.15E-03 | 1.63E-02 | 0.69 |
| SEQ ID NO: | hsa-miR-9 | 1 | 1 | 1.00 | 0.00 | 1.08E-01 | 2.69E-01 | 1.13E-03 | 1.63E-02 | 0.60 |
| SEQ ID NO: | hsa-miR-1286 | 118 | 200 | 0.59 | -0.53 | 4.53E-04 | 9.85E-03 | 1.20E-03 | 1.63E-02 | 0.26 |
| SEQ ID NO: | hsa-miR-1280 | 3117 | 6387 | 0.49 | -0.72 | 1.82E-05 | 1.64E-03 | 1.21E-03 | 1.63E-02 | 0.21 |
| SEQ ID NO: | hsa-miR-548i | 1 | 1 | 1.00 | 0.00 | 2.17E-02 | 9.07E-02 | 1.41E-03 | 1.87E-02 | 0.63 |
| SEQ ID NO: | hsa-miR-191 | 10739 | 15660 | 0.69 | -0.38 | 7.63E-04 | 1.22E-02 | 1.52E-03 | 1.92E-02 | 0.27 |

FIG 14 (continued)

| | | | | | | | | | |
|------------|-----------------|-------|-------|-------|----------|----------|----------|----------|----------|
| SEQ ID NO: | hsa-miR-576-5p | 1 | 1.00 | 0.00 | 4.58E-02 | 1.54E-01 | 1.50E-03 | 1.92E-02 | 0.59 |
| SEQ ID NO: | hsa-miR-1915 | 560 | 0.59 | -0.54 | 4.39E-05 | 1.96E-03 | 1.50E-03 | 1.92E-02 | 0.22 |
| SEQ ID NO: | hsa-miR-936 | 66 | 90 | 0.73 | -0.31 | 2.36E-03 | 2.47E-02 | 1.69E-03 | 2.10E-02 |
| SEQ ID NO: | hsa-miR-578 | 1 | 1 | 1.00 | 0.00 | 2.25E-02 | 9.26E-02 | 1.71E-03 | 2.10E-02 |
| SEQ ID NO: | hsa-miR-412 | 40 | 30 | 1.30 | 0.26 | 4.13E-02 | 1.42E-01 | 1.80E-03 | 2.13E-02 |
| SEQ ID NO: | hsa-miR-16 | 17346 | 19766 | 0.88 | -0.13 | 2.66E-03 | 2.59E-02 | 1.84E-03 | 2.13E-02 |
| SEQ ID NO: | hsa-miR-574-5p | 682 | 2137 | 0.32 | -1.14 | 8.79E-06 | 1.24E-03 | 1.82E-03 | 2.13E-02 |
| SEQ ID NO: | hsa-miR-519a* | 131 | 171 | 0.77 | -0.27 | 8.57E-04 | 1.30E-02 | 1.83E-03 | 2.13E-02 |
| SEQ ID NO: | hsa-miR-93 | 3723 | 2693 | 1.38 | 0.32 | 2.02E-03 | 2.21E-02 | 1.86E-03 | 2.13E-02 |
| SEQ ID NO: | hsa-miR-369-3p | 12 | 1 | 12.18 | 2.50 | 2.43E-03 | 2.48E-02 | 1.95E-03 | 2.15E-02 |
| SEQ ID NO: | hsa-miR-211 | 1 | 1 | 1.00 | 0.00 | 1.91E-02 | 8.35E-02 | 1.91E-03 | 2.15E-02 |
| SEQ ID NO: | hsa-miR-623 | 48 | 73 | 0.66 | -0.42 | 1.02E-03 | 1.47E-02 | 1.92E-03 | 2.15E-02 |
| SEQ ID NO: | hsa-miR-548d-3p | 45 | 33 | 1.38 | 0.32 | 4.72E-02 | 1.57E-01 | 2.00E-03 | 2.18E-02 |
| SEQ ID NO: | hsa-miR-1224-3p | 94 | 55 | 1.71 | 0.54 | 3.62E-03 | 3.07E-02 | 2.09E-03 | 2.22E-02 |

FIG 14 (continued)

| | | | | | | | | | | |
|------------|-----------------|------|------|------|-------|----------|----------|----------|----------|------|
| SEQ ID NO: | hsa-miR-611 | 100 | 126 | 0.79 | -0.24 | 1.41E-03 | 1.81E-02 | 2.09E-03 | 2.22E-02 | 0.28 |
| SEQ ID NO: | hsa-miR-520a-3p | 1 | 1 | 1.00 | 0.00 | 1.42E-02 | 6.89E-02 | 2.24E-03 | 2.35E-02 | 0.64 |
| SEQ ID NO: | hsa-miR-28-5p | 362 | 219 | 1.65 | 0.50 | 5.05E-04 | 1.02E-02 | 2.28E-03 | 2.36E-02 | 0.74 |
| SEQ ID NO: | hsa-miR-24-2* | 147 | 117 | 1.25 | 0.23 | 5.85E-02 | 1.78E-01 | 2.33E-03 | 2.39E-02 | 0.63 |
| SEQ ID NO: | hsa-miR-892b | 27 | 14 | 1.87 | 0.63 | 3.15E-02 | 1.18E-01 | 2.60E-03 | 2.43E-02 | 0.65 |
| SEQ ID NO: | hsa-miR-1270 | 27 | 5 | 4.84 | 1.58 | 2.06E-02 | 8.76E-02 | 2.60E-03 | 2.43E-02 | 0.66 |
| SEQ ID NO: | hsa-miR-28-3p | 164 | 111 | 1.48 | 0.39 | 6.57E-03 | 4.35E-02 | 2.52E-03 | 2.43E-02 | 0.69 |
| SEQ ID NO: | hsa-miR-1469 | 145 | 215 | 0.68 | -0.39 | 2.66E-05 | 1.64E-03 | 2.53E-03 | 2.43E-02 | 0.21 |
| SEQ ID NO: | hsa-miR-126 | 1983 | 652 | 3.04 | 1.11 | 1.39E-04 | 3.59E-03 | 2.59E-03 | 2.43E-02 | 0.76 |
| SEQ ID NO: | hsa-miR-671-5p | 57 | 68 | 0.85 | -0.17 | 1.55E-02 | 7.34E-02 | 2.60E-03 | 2.43E-02 | 0.33 |
| SEQ ID NO: | hsa-miR-148a* | 22 | 10 | 2.16 | 0.77 | 2.38E-02 | 9.53E-02 | 2.55E-03 | 2.43E-02 | 0.65 |
| SEQ ID NO: | hsa-miR-520d-5p | 46 | 64 | 0.72 | -0.33 | 7.70E-03 | 4.84E-02 | 2.50E-03 | 2.43E-02 | 0.32 |
| SEQ ID NO: | hsa-miR-214 | 264 | 498 | 0.53 | -0.64 | 2.22E-04 | 5.22E-03 | 2.75E-03 | 2.53E-02 | 0.25 |
| SEQ ID NO: | hsa-miR-1260 | 2277 | 3544 | 0.64 | -0.44 | 4.79E-04 | 1.01E-02 | 2.83E-03 | 2.58E-02 | 0.26 |
| | 803 | | | | | | | | | |

FIG 14 (continued)

| | | | | | | | | | | |
|-------------------|---------------------|-----|-----|------|-------|----------|----------|----------|----------|------|
| SEQ ID NO: 901 | hsa-let-7b | 861 | 600 | 1.43 | 0.36 | 2.28E-02 | 9.26E-02 | 2.88E-03 | 2.60E-02 | 0.66 |
| SEQ ID NO: 647 | hsa-miR-18b* | 72 | 93 | 0.77 | -0.26 | 1.69E-03 | 2.14E-02 | 2.91E-03 | 2.60E-02 | 0.29 |
| SEQ ID NO: 157 | hsa-miR-602 | 100 | 145 | 0.69 | -0.37 | 1.29E-03 | 1.74E-02 | 2.99E-03 | 2.62E-02 | 0.28 |
| SEQ ID NO: 888 | hsa-let-7i | 578 | 221 | 2.62 | 0.96 | 2.60E-03 | 2.56E-02 | 2.99E-03 | 2.62E-02 | 0.71 |
| SEQ ID NO: 56 | hsa-miR-770- 5p | 51 | 72 | 0.71 | -0.34 | 4.72E-03 | 3.57E-02 | 3.30E-03 | 2.83E-02 | 0.31 |
| SEQ ID NO: 227 | hsa-miR- 548h | 2 | 1 | 1.65 | 0.50 | 3.73E-02 | 1.35E-01 | 3.30E-03 | 2.83E-02 | 0.63 |
| SEQ ID NO: 841 | hsa-miR- 1226* | 162 | 260 | 0.62 | -0.48 | 1.40E-04 | 3.59E-03 | 3.48E-03 | 2.95E-02 | 0.24 |
| SEQ ID NO: 598 | hsa-miR-19b- 2* | 1 | 1 | 1.00 | 0.00 | 1.15E-01 | 2.81E-01 | 3.53E-03 | 2.96E-02 | 0.60 |
| SEQ ID NO: 347 | hsa-miR-488 | 1 | 1 | 1.00 | 0.00 | 3.87E-01 | 5.69E-01 | 3.72E-03 | 3.07E-02 | 0.55 |
| SEQ ID NO: 816 | hsa-miR- 1255a | 45 | 77 | 0.59 | -0.53 | 3.46E-03 | 3.02E-02 | 3.73E-03 | 3.07E-02 | 0.30 |
| SEQ ID NO: 231 | hsa-miR- 548d-5p | 1 | 1 | 1.00 | 0.00 | 4.02E-02 | 1.40E-01 | 3.79E-03 | 3.09E-02 | 0.61 |
| SEQ ID NO: 352 | hsa-miR-485- 5p | 39 | 65 | 0.60 | -0.51 | 2.14E-03 | 2.27E-02 | 3.83E-03 | 3.09E-02 | 0.29 |
| SEQ ID NO: 498 | hsa-miR- 301b | 180 | 261 | 0.69 | -0.37 | 2.40E-04 | 5.51E-03 | 3.90E-03 | 3.12E-02 | 0.25 |

FIG 14 (continued)

| | | | | | | | | | | |
|------------|------------------|-----|------|------|-------|----------|----------|----------|----------|------|
| SEQ ID NO: | hsa-miR-744* | 33 | 18 | 1.83 | 0.60 | 1.63E-02 | 7.49E-02 | 3.93E-03 | 3.12E-02 | 0.66 |
| SEQ ID NO: | hsa-miR-329 | 59 | 39 | 1.51 | 0.41 | 7.62E-03 | 4.82E-02 | 4.13E-03 | 3.25E-02 | 0.68 |
| SEQ ID NO: | hsa-miR-149* | 526 | 1178 | 0.45 | -0.81 | 5.88E-04 | 1.11E-02 | 4.25E-03 | 3.30E-02 | 0.27 |
| SEQ ID NO: | hsa-miR-889 | 30 | 23 | 1.27 | 0.24 | 4.86E-02 | 1.60E-01 | 4.32E-03 | 3.33E-02 | 0.63 |
| SEQ ID NO: | hsa-miR-607 | 73 | 64 | 1.15 | 0.14 | 2.89E-02 | 1.11E-01 | 4.53E-03 | 3.46E-02 | 0.65 |
| SEQ ID NO: | hsa-miR-18b | 195 | 117 | 1.66 | 0.51 | 4.43E-03 | 3.46E-02 | 4.75E-03 | 3.59E-02 | 0.69 |
| SEQ ID NO: | hsa-miR-155* | 50 | 39 | 1.29 | 0.25 | 7.77E-02 | 2.19E-01 | 4.78E-03 | 3.59E-02 | 0.62 |
| SEQ ID NO: | hsa-miR-509-3-5p | 211 | 424 | 0.50 | -0.70 | 6.95E-04 | 1.20E-02 | 4.83E-03 | 3.60E-02 | 0.27 |
| SEQ ID NO: | hsa-miR-190b | 1 | 1 | 1.00 | 0.00 | 2.56E-02 | 1.01E-01 | 4.96E-03 | 3.66E-02 | 0.63 |
| SEQ ID NO: | hsa-miR-381 | 82 | 101 | 0.81 | -0.21 | 6.17E-03 | 4.18E-02 | 5.16E-03 | 3.77E-02 | 0.31 |
| SEQ ID NO: | hsa-miR-30a | 298 | 162 | 1.84 | 0.61 | 8.71E-03 | 5.10E-02 | 5.31E-03 | 3.85E-02 | 0.68 |
| SEQ ID NO: | hsa-miR-1471 | 110 | 133 | 0.82 | -0.20 | 2.39E-03 | 2.48E-02 | 5.44E-03 | 3.91E-02 | 0.29 |
| SEQ ID NO: | hsa-miR-374a | 262 | 119 | 2.21 | 0.79 | 5.37E-04 | 1.05E-02 | 5.50E-03 | 3.92E-02 | 0.74 |

FIG 14 (continued)

| | | | | | | | | | | |
|-------------------|-----------------|------|------|------|-------|----------|----------|----------|----------|------|
| SEQ ID NO: 483 | hsa-miR-30c | 1807 | 2824 | 0.64 | -0.45 | 9.59E-04 | 1.40E-02 | 5.57E-03 | 3.94E-02 | 0.27 |
| SEQ ID NO: 529 | hsa-miR-24 | 1807 | 1177 | 1.54 | 0.43 | 7.14E-03 | 4.55E-02 | 5.83E-03 | 4.09E-02 | 0.68 |
| SEQ ID NO: 864 | hsa-miR-1181 | 169 | 205 | 0.82 | -0.19 | 2.16E-02 | 9.07E-02 | 6.28E-03 | 4.37E-02 | 0.34 |
| SEQ ID NO: 183 | hsa-miR-579 | 25 | 12 | 2.05 | 0.72 | 1.80E-02 | 8.06E-02 | 6.35E-03 | 4.37E-02 | 0.66 |
| SEQ ID NO: 4 | hsa-miR-99a | 108 | 76 | 1.42 | 0.35 | 1.94E-02 | 8.35E-02 | 6.56E-03 | 4.48E-02 | 0.66 |
| SEQ ID NO: 850 | hsa-miR-1207-5p | 377 | 764 | 0.49 | -0.71 | 6.25E-04 | 1.15E-02 | 7.05E-03 | 4.60E-02 | 0.27 |
| SEQ ID NO: 740 | hsa-miR-1323 | 33 | 10 | 3.45 | 1.24 | 6.16E-03 | 4.18E-02 | 6.81E-03 | 4.60E-02 | 0.69 |
| SEQ ID NO: 146 | hsa-miR-613 | 1 | 1 | 1.00 | 0.00 | 1.90E-01 | 3.75E-01 | 7.05E-03 | 4.60E-02 | 0.58 |
| SEQ ID NO: 588 | hsa-miR-204 | 1 | 1 | 1.00 | 0.00 | 5.58E-02 | 1.75E-01 | 7.05E-03 | 4.60E-02 | 0.58 |
| SEQ ID NO: 523 | hsa-miR-26a-1* | 4 | 1 | 4.10 | 1.41 | 9.09E-02 | 2.41E-01 | 7.05E-03 | 4.60E-02 | 0.61 |
| SEQ ID NO: 246 | hsa-miR-541 | 96 | 121 | 0.79 | -0.23 | 1.12E-02 | 6.13E-02 | 7.03E-03 | 4.60E-02 | 0.33 |
| SEQ ID NO: 478 | hsa-miR-30e | 242 | 62 | 3.90 | 1.36 | 5.83E-05 | 2.33E-03 | 7.37E-03 | 4.77E-02 | 0.77 |
| SEQ ID NO: 165 | hsa-miR-593* | 259 | 451 | 0.58 | -0.55 | 1.33E-04 | 3.59E-03 | 7.84E-03 | 4.93E-02 | 0.24 |
| SEQ ID NO: 699 | hsa-miR-148b | 596 | 451 | 1.32 | 0.28 | 1.66E-02 | 7.55E-02 | 7.83E-03 | 4.93E-02 | 0.66 |

FIG 14 (continued)

| | | | | | | | | | | |
|-------------------|--------------------|-----|-----|------|-------|----------|----------|----------|----------|------|
| SEQ ID NO: 41 | hsa-miR-888 | 46 | 17 | 2.75 | 1.01 | 1.05E-01 | 2.66E-01 | 7.84E-03 | 4.93E-02 | 0.61 |
| SEQ ID NO: 430 | hsa-miR-362- 3p | 197 | 113 | 1.75 | 0.56 | 2.00E-03 | 2.21E-02 | 7.82E-03 | 4.93E-02 | 0.71 |
| SEQ ID NO: 861 | hsa-miR- 1184 | 209 | 432 | 0.48 | -0.73 | 3.88E-03 | 3.23E-02 | 7.91E-03 | 4.93E-02 | 0.30 |

FIG 15

| Signature | SEQ-ID NOS | miRNA -identifiers | Acc | Spec | Sens |
|------------------|--------------------------------|--------------------------------|------------|-------------|-------------|
| SNO-1 | SEQ ID NO: 714, SEQ ID NO: 709 | hsa-miR-144*, hsa-miR-146a | 78.8% | 79.3% | 78.3% |
| SNO-2 | SEQ ID NO: 709, SEQ ID NO: 684 | hsa-miR-146a, hsa-miR-155 | 63.8% | 61.3% | 66.2% |
| SNO-3 | SEQ ID NO: 684, SEQ ID NO: 530 | hsa-miR-155, hsa-miR-23b* | 73.5% | 69.2% | 77.8% |
| SNO-4 | SEQ ID NO: 530, SEQ ID NO: 442 | hsa-miR-23b*, hsa-miR-342-3p | 74.2% | 65.2% | 83.2% |
| SNO-5 | SEQ ID NO: 442, SEQ ID NO: 92 | hsa-miR-342-3p, hsa-miR-660 | 76.5% | 71.2% | 81.8% |
| SNO-6 | SEQ ID NO: 92, SEQ ID NO: 874 | hsa-miR-660, hsa-miR-106b | 62.8% | 66.5% | 59.2% |
| SNO-7 | SEQ ID NO: 874, SEQ ID NO: 403 | hsa-miR-106b, hsa-miR-378 | 65.2% | 64.8% | 65.5% |
| SNO-8 | SEQ ID NO: 403, SEQ ID NO: 127 | hsa-miR-378, hsa-miR-628-3p | 68.2% | 54.2% | 82.2% |
| SNO-9 | SEQ ID NO: 127, SEQ ID NO: 897 | hsa-miR-628-3p, hsa-let-7d | 73.0% | 63.5% | 82.5% |
| SNO-10 | SEQ ID NO: 897, SEQ ID NO: 395 | hsa-let-7d, hsa-miR-383 | 75.3% | 76.2% | 74.5% |
| SNO-11 | SEQ ID NO: 395, SEQ ID NO: 573 | hsa-miR-383, hsa-miR-210 | 74.6% | 72.7% | 76.5% |
| SNO-12 | SEQ ID NO: 573, SEQ ID NO: 393 | hsa-miR-210, hsa-miR-409-3p | 70.5% | 62.7% | 78.3% |
| SNO-13 | SEQ ID NO: 393, SEQ ID NO: 441 | hsa-miR-409-3p, hsa-miR-342-5p | 65.9% | 62.8% | 69.0% |
| SNO-14 | SEQ ID NO: 441, SEQ ID NO: 382 | hsa-miR-342-5p, hsa-miR-424* | 66.0% | 57.5% | 74.5% |
| SNO-15 | SEQ ID NO: 382, SEQ ID NO: 520 | hsa-miR-424*, hsa-miR-26b* | 68.6% | 54.0% | 83.2% |
| SNO-16 | SEQ ID NO: 520, SEQ ID NO: 97 | hsa-miR-26b*, hsa-miR-655 | 73.7% | 56.3% | 91.0% |
| SNO-17 | SEQ ID NO: 97, SEQ ID NO: 542 | hsa-miR-655, hsa-miR-222 | 74.0% | 64.2% | 83.8% |
| SNO-18 | SEQ ID NO: 542, SEQ ID NO: 11 | hsa-miR-222, hsa-miR-942 | 69.6% | 71.2% | 68.0% |
| SNO-19 | SEQ ID NO: 11, SEQ ID NO: 87 | hsa-miR-942, hsa-miR-664 | 65.8% | 46.5% | 85.0% |
| SNO-20 | SEQ ID NO: 87, SEQ ID NO: 883 | hsa-miR-664, hsa-miR-101 | 77.7% | 74.7% | 80.7% |
| SNO-21 | SEQ ID NO: 883, SEQ ID NO: 892 | hsa-miR-101, hsa-let-7f-1* | 70.0% | 66.0% | 74.0% |
| SNO-22 | SEQ ID NO: 892, SEQ ID NO: 350 | hsa-let-7f-1*, hsa-miR-486-5p | 75.4% | 60.0% | 90.8% |
| SNO-23 | SEQ ID NO: 350, SEQ ID NO: 154 | hsa-miR-486-5p, hsa-miR-605 | 73.9% | 57.2% | 90.7% |
| SNO-24 | SEQ ID NO: 154, SEQ ID NO: 671 | hsa-miR-605, hsa-miR-181a-2* | 71.0% | 61.3% | 80.7% |

FIG 15 (continued)

| | | | | | |
|--------|--------------------------------|------------------------------|-------|-------|-------|
| SNO-25 | SEQ ID NO: 671, SEQ ID NO: 658 | hsa-miR-181a-2*, hsa-miR-185 | 68.3% | 56.0% | 80.7% |
| SNO-26 | SEQ ID NO: 658, SEQ ID NO: 284 | hsa-miR-185, hsa-miR-518f | 70.4% | 55.0% | 85.8% |
| SNO-27 | SEQ ID NO: 284, SEQ ID NO: 466 | hsa-miR-518f, hsa-miR-324-3p | 71.2% | 59.8% | 82.5% |
| SNO-28 | SEQ ID NO: 714, SEQ ID NO: 684 | hsa-miR-144*, hsa-miR-155 | 75.7% | 79.7% | 71.7% |
| SNO-29 | SEQ ID NO: 709, SEQ ID NO: 530 | hsa-miR-146a, hsa-miR-23b* | 72.8% | 64.5% | 81.2% |
| SNO-30 | SEQ ID NO: 684, SEQ ID NO: 442 | hsa-miR-155, hsa-miR-342-3p | 77.1% | 71.3% | 82.8% |
| SNO-31 | SEQ ID NO: 530, SEQ ID NO: 92 | hsa-miR-23b*, hsa-miR-660 | 68.0% | 59.5% | 76.5% |
| SNO-32 | SEQ ID NO: 442, SEQ ID NO: 874 | hsa-miR-342-3p, hsa-miR-106b | 71.3% | 64.8% | 77.7% |
| SNO-33 | SEQ ID NO: 92, SEQ ID NO: 403 | hsa-miR-660, hsa-miR-378 | 69.4% | 61.8% | 77.0% |
| SNO-34 | SEQ ID NO: 874, SEQ ID NO: 127 | hsa-miR-106b, hsa-miR-628-3p | 69.8% | 64.8% | 74.8% |
| SNO-35 | SEQ ID NO: 403, SEQ ID NO: 897 | hsa-miR-378, hsa-let-7d | 73.3% | 66.7% | 80.0% |
| SNO-36 | SEQ ID NO: 127, SEQ ID NO: 395 | hsa-miR-628-3p, hsa-miR-383 | 75.0% | 68.7% | 81.3% |
| SNO-37 | SEQ ID NO: 897, SEQ ID NO: 573 | hsa-let-7d, hsa-miR-210 | 70.2% | 61.8% | 78.5% |
| SNO-38 | SEQ ID NO: 395, SEQ ID NO: 393 | hsa-miR-383, hsa-miR-409-3p | 73.8% | 73.0% | 74.5% |
| SNO-39 | SEQ ID NO: 573, SEQ ID NO: 441 | hsa-miR-210, hsa-miR-342-5p | 65.4% | 63.7% | 67.2% |
| SNO-40 | SEQ ID NO: 393, SEQ ID NO: 382 | hsa-miR-409-3p, hsa-miR-424* | 70.0% | 58.0% | 82.0% |
| SNO-41 | SEQ ID NO: 441, SEQ ID NO: 520 | hsa-miR-342-5p, hsa-miR-26b* | 64.6% | 58.5% | 70.7% |
| SNO-42 | SEQ ID NO: 382, SEQ ID NO: 97 | hsa-miR-424*, hsa-miR-655 | 68.9% | 54.3% | 83.5% |
| SNO-43 | SEQ ID NO: 520, SEQ ID NO: 542 | hsa-miR-26b*, hsa-miR-222 | 63.8% | 62.5% | 65.0% |
| SNO-44 | SEQ ID NO: 97, SEQ ID NO: 11 | hsa-miR-655, hsa-miR-942 | 72.4% | 57.8% | 87.0% |
| SNO-45 | SEQ ID NO: 542, SEQ ID NO: 87 | hsa-miR-222, hsa-miR-664 | 66.0% | 62.2% | 69.8% |
| SNO-46 | SEQ ID NO: 11, SEQ ID NO: 883 | hsa-miR-942, hsa-miR-101 | 73.9% | 67.3% | 80.5% |
| SNO-47 | SEQ ID NO: 87, SEQ ID NO: 892 | hsa-miR-664, hsa-let-7f-1* | 68.9% | 56.0% | 81.8% |
| SNO-48 | SEQ ID NO: 883, SEQ ID NO: 350 | hsa-miR-101, hsa-miR-486-5p | 69.8% | 59.2% | 80.3% |
| SNO-49 | SEQ ID NO: 892, SEQ ID NO: 154 | hsa-let-7f-1*, hsa-miR-605 | 71.0% | 60.0% | 82.0% |

FIG 15 (continued)

| | | | | | |
|--------|--------------------------------|---------------------------------|-------|-------|-------|
| SNO-50 | SEQ ID NO: 350, SEQ ID NO: 671 | hsa-miR-486-5p, hsa-miR-181a-2* | 70.2% | 48.3% | 92.0% |
| SNO-51 | SEQ ID NO: 154, SEQ ID NO: 658 | hsa-miR-605, hsa-miR-185 | 72.5% | 61.0% | 84.0% |
| SNO-52 | SEQ ID NO: 671, SEQ ID NO: 284 | hsa-miR-181a-2*, hsa-miR-518f | 69.8% | 59.8% | 79.8% |
| SNO-53 | SEQ ID NO: 658, SEQ ID NO: 466 | hsa-miR-185, hsa-miR-324-3p | 74.8% | 67.5% | 82.0% |
| SNO-54 | SEQ ID NO: 714, SEQ ID NO: 530 | hsa-miR-144*, hsa-miR-23b* | 74.3% | 74.0% | 74.7% |
| SNO-55 | SEQ ID NO: 709, SEQ ID NO: 442 | hsa-miR-146a, hsa-miR-342-3p | 75.7% | 71.0% | 80.3% |
| SNO-56 | SEQ ID NO: 684, SEQ ID NO: 92 | hsa-miR-155, hsa-miR-660 | 65.9% | 56.8% | 75.0% |
| SNO-57 | SEQ ID NO: 530, SEQ ID NO: 874 | hsa-miR-23b*, hsa-miR-106b | 70.4% | 63.8% | 77.0% |
| SNO-58 | SEQ ID NO: 442, SEQ ID NO: 403 | hsa-miR-342-3p, hsa-miR-378 | 76.3% | 70.2% | 82.3% |
| SNO-59 | SEQ ID NO: 92, SEQ ID NO: 127 | hsa-miR-660, hsa-miR-628-3p | 68.0% | 54.5% | 81.5% |
| SNO-60 | SEQ ID NO: 874, SEQ ID NO: 897 | hsa-miR-106b, hsa-let-7d | 66.1% | 59.2% | 73.0% |
| SNO-61 | SEQ ID NO: 403, SEQ ID NO: 395 | hsa-miR-378, hsa-miR-383 | 72.7% | 68.5% | 76.8% |
| SNO-62 | SEQ ID NO: 127, SEQ ID NO: 573 | hsa-miR-628-3p, hsa-miR-210 | 71.8% | 63.3% | 80.3% |
| SNO-63 | SEQ ID NO: 897, SEQ ID NO: 393 | hsa-let-7d, hsa-miR-409-3p | 76.9% | 73.7% | 80.2% |
| SNO-64 | SEQ ID NO: 395, SEQ ID NO: 441 | hsa-miR-383, hsa-miR-342-5p | 73.8% | 68.5% | 79.0% |
| SNO-65 | SEQ ID NO: 573, SEQ ID NO: 382 | hsa-miR-210, hsa-miR-424* | 72.0% | 60.7% | 83.3% |
| SNO-66 | SEQ ID NO: 393, SEQ ID NO: 520 | hsa-miR-409-3p, hsa-miR-26b* | 70.4% | 56.8% | 84.0% |
| SNO-67 | SEQ ID NO: 441, SEQ ID NO: 97 | hsa-miR-342-5p, hsa-miR-655 | 72.6% | 64.0% | 81.2% |
| SNO-68 | SEQ ID NO: 382, SEQ ID NO: 542 | hsa-miR-424*, hsa-miR-222 | 63.8% | 56.2% | 71.3% |
| SNO-69 | SEQ ID NO: 520, SEQ ID NO: 11 | hsa-miR-26b*, hsa-miR-942 | 68.7% | 47.5% | 89.8% |
| SNO-70 | SEQ ID NO: 97, SEQ ID NO: 87 | hsa-miR-655, hsa-miR-664 | 71.1% | 58.0% | 84.2% |
| SNO-71 | SEQ ID NO: 542, SEQ ID NO: 883 | hsa-miR-222, hsa-miR-101 | 70.5% | 77.0% | 64.0% |
| SNO-72 | SEQ ID NO: 11, SEQ ID NO: 892 | hsa-miR-942, hsa-let-7f-1* | 64.5% | 44.5% | 84.5% |
| SNO-73 | SEQ ID NO: 87, SEQ ID NO: 350 | hsa-miR-664, hsa-miR-486-5p | 68.9% | 51.7% | 86.2% |
| SNO-74 | SEQ ID NO: 883, SEQ ID NO: 154 | hsa-miR-101, hsa-miR-605 | 70.1% | 68.8% | 71.3% |

FIG 15 (continued)

| | | | | | |
|--------|--|---|-------|-------|-------|
| SNO-75 | SEQ ID NO: 892, SEQ ID NO: 671 | hsa-let-7f-1*, hsa-miR-181a-2* | 68.3% | 58.5% | 78.2% |
| SNO-76 | SEQ ID NO: 350, SEQ ID NO: 658 | hsa-miR-486-5p, hsa-miR-185 | 72.8% | 53.8% | 91.8% |
| SNO-77 | SEQ ID NO: 154, SEQ ID NO: 284 | hsa-miR-605, hsa-miR-518f | 69.8% | 55.2% | 84.5% |
| SNO-78 | SEQ ID NO: 671, SEQ ID NO: 466 | hsa-miR-181a-2*, hsa-miR-324-3p | 72.7% | 64.3% | 81.0% |
| SNO-79 | SEQ ID NO: 714, SEQ ID NO: 709, SEQ ID NO: 684 | hsa-miR-144*, hsa-miR-146a, hsa-miR-155 | 76.7% | 78.3% | 75.0% |
| SNO-80 | SEQ ID NO: 709, SEQ ID NO: 684, SEQ ID NO: 530 | hsa-miR-146a, hsa-miR-155, hsa-miR-23b* | 73.7% | 68.2% | 79.2% |
| SNO-81 | SEQ ID NO: 684, SEQ ID NO: 530, SEQ ID NO: 442 | hsa-miR-155, hsa-miR-23b*, hsa-miR-342-3p | 80.3% | 79.2% | 81.3% |
| SNO-82 | SEQ ID NO: 530, SEQ ID NO: 442, SEQ ID NO: 92 | hsa-miR-23b*, hsa-miR-342-3p, hsa-miR-660 | 73.5% | 71.5% | 75.5% |
| SNO-83 | SEQ ID NO: 442, SEQ ID NO: 92, SEQ ID NO: 874 | hsa-miR-342-3p, hsa-miR-660, hsa-miR-106b | 75.9% | 73.0% | 78.8% |
| SNO-84 | SEQ ID NO: 92, SEQ ID NO: 874, SEQ ID NO: 403 | hsa-miR-660, hsa-miR-106b, hsa-miR-378 | 67.8% | 67.2% | 68.3% |
| SNO-85 | SEQ ID NO: 874, SEQ ID NO: 403, SEQ ID NO: 127 | hsa-miR-106b, hsa-miR-378, hsa-miR-628-3p | 72.3% | 70.7% | 74.0% |
| SNO-86 | SEQ ID NO: 403, SEQ ID NO: 127, SEQ ID NO: 897 | hsa-miR-378, hsa-miR-628-3p, hsa-let-7d | 72.3% | 65.7% | 78.8% |
| SNO-87 | SEQ ID NO: 127, SEQ ID NO: 897, SEQ ID NO: 395 | hsa-miR-628-3p, hsa-let-7d, hsa-miR-383 | 79.5% | 79.2% | 79.8% |
| SNO-88 | SEQ ID NO: 897, SEQ ID NO: 395, SEQ ID NO: 573 | hsa-let-7d, hsa-miR-383, hsa-miR-210 | 76.7% | 77.0% | 76.3% |
| SNO-89 | SEQ ID NO: 395, SEQ ID NO: 573, SEQ ID NO: 393 | hsa-miR-383, hsa-miR-210, hsa-miR-409-3p | 75.9% | 76.8% | 75.0% |
| SNO-90 | SEQ ID NO: 573, SEQ ID NO: 393, | hsa-miR-210, hsa-miR-409-3p, hsa- | 71.6% | 68.7% | 74.5% |

FIG 15 (continued)

| | | | | |
|---------|---|--|-------|-------|
| | SEQ ID NO: 441 | miR-342-5p | 63.2% | 76.2% |
| SNO-91 | SEQ ID NO: 393, SEQ ID NO: 441, SEQ ID NO: 382 | hsa-miR-409-3p, hsa-miR-342-5p, hsa-miR-424* | 69.7% | 63.2% |
| SNO-92 | SEQ ID NO: 441, SEQ ID NO: 382, SEQ ID NO: 520 | hsa-miR-342-5p, hsa-miR-424*, hsa-miR-26b* | 66.3% | 58.3% |
| SNO-93 | SEQ ID NO: 382, SEQ ID NO: 520, SEQ ID NO: 97 | hsa-miR-424*, hsa-miR-26b*, hsa-miR-655 | 75.3% | 63.8% |
| SNO-94 | SEQ ID NO: 520, SEQ ID NO: 97, SEQ ID NO: 542 | hsa-miR-26b*, hsa-miR-655, hsa-miR-222 | 79.6% | 68.8% |
| SNO-95 | SEQ ID NO: 97, SEQ ID NO: 542, SEQ ID NO: 11 | hsa-miR-655, hsa-miR-222, hsa-miR-942 | 79.0% | 73.0% |
| SNO-96 | SEQ ID NO: 542, SEQ ID NO: 11, SEQ ID NO: 87 | hsa-miR-222, hsa-miR-942, hsa-miR-664 | 71.2% | 67.5% |
| SNO-97 | SEQ ID NO: 11, SEQ ID NO: 87, SEQ ID NO: 883 | hsa-miR-942, hsa-miR-664, hsa-miR-101 | 78.2% | 75.8% |
| SNO-98 | SEQ ID NO: 87, SEQ ID NO: 883, SEQ ID NO: 892 | hsa-miR-664, hsa-miR-101, hsa-let-7f-1* | 78.3% | 77.0% |
| SNO-99 | SEQ ID NO: 883, SEQ ID NO: 892, SEQ ID NO: 350 | hsa-miR-101, hsa-let-7f-1*, hsa-miR-486-5p | 76.2% | 71.7% |
| SNO-100 | SEQ ID NO: 892, SEQ ID NO: 350, SEQ ID NO: 154 | hsa-let-7f-1*, hsa-miR-486-5p, hsa-miR-605 | 76.2% | 67.0% |
| SNO-101 | SEQ ID NO: 350, SEQ ID NO: 154, SEQ ID NO: 671 | hsa-miR-486-5p, hsa-miR-605, hsa-miR-181a-2* | 79.2% | 68.5% |
| SNO-102 | SEQ ID NO: 154, SEQ ID NO: 671, SEQ ID NO: 658 | hsa-miR-605, hsa-miR-181a-2*, hsa-miR-185 | 76.2% | 69.2% |
| SNO-103 | SEQ ID NO: 671, SEQ ID NO: 658, SEQ ID NO: 284 | hsa-miR-181a-2*, hsa-miR-185, hsa-miR-518f | 73.9% | 61.7% |

FIG 15 (continued)

| | | | | | |
|---------|--|--|-------|-------|-------|
| SNO-104 | SEQ ID NO: 658, SEQ ID NO: 284, SEQ ID NO: 466 | hsa-miR-185, hsa-miR-518f, hsa-miR-324-3p | 79.3% | 69.7% | 88.8% |
| SNO-105 | SEQ ID NO: 714, SEQ ID NO: 709, SEQ ID NO: 530 | hsa-miR-144*, hsa-miR-146a, hsa-miR-23b* | 75.7% | 72.5% | 78.8% |
| SNO-106 | SEQ ID NO: 709, SEQ ID NO: 684, SEQ ID NO: 442 | hsa-miR-146a, hsa-miR-155, hsa-miR-342-3p | 74.8% | 70.8% | 78.7% |
| SNO-107 | SEQ ID NO: 684, SEQ ID NO: 530, SEQ ID NO: 92 | hsa-miR-155, hsa-miR-23b*, hsa-miR-660 | 72.9% | 67.0% | 78.8% |
| SNO-108 | SEQ ID NO: 530, SEQ ID NO: 442, SEQ ID NO: 874 | hsa-miR-23b*, hsa-miR-342-3p, hsa-miR-106b | 76.5% | 69.5% | 83.5% |
| SNO-109 | SEQ ID NO: 442, SEQ ID NO: 92, SEQ ID NO: 403 | hsa-miR-342-3p, hsa-miR-660, hsa-miR-378 | 78.8% | 75.5% | 82.2% |
| SNO-110 | SEQ ID NO: 92, SEQ ID NO: 874, SEQ ID NO: 127 | hsa-miR-660, hsa-miR-106b, hsa-miR-628-3p | 72.3% | 67.7% | 76.8% |
| SNO-111 | SEQ ID NO: 874, SEQ ID NO: 403, SEQ ID NO: 897 | hsa-miR-106b, hsa-miR-378, hsa-let-7d | 69.1% | 67.0% | 71.2% |
| SNO-112 | SEQ ID NO: 403, SEQ ID NO: 127, SEQ ID NO: 395 | hsa-miR-378, hsa-miR-628-3p, hsa-miR-383 | 75.8% | 69.2% | 82.5% |
| SNO-113 | SEQ ID NO: 127, SEQ ID NO: 897, SEQ ID NO: 573 | hsa-miR-628-3p, hsa-let-7d, hsa-miR-210 | 72.8% | 64.8% | 80.7% |
| SNO-114 | SEQ ID NO: 897, SEQ ID NO: 395, SEQ ID NO: 393, SEQ ID NO: 441 | hsa-miR-383, hsa-miR-383, hsa-miR-409-3p | 76.2% | 80.8% | 71.5% |
| SNO-115 | SEQ ID NO: 395, SEQ ID NO: 573, SEQ ID NO: 441 | hsa-miR-383, hsa-miR-210, hsa-miR-342-5p | 75.7% | 74.3% | 77.0% |
| SNO-116 | SEQ ID NO: 573, SEQ ID NO: 393, SEQ ID NO: 382 | hsa-miR-210, hsa-miR-409-3p, hsa-miR-424* | 76.3% | 67.3% | 85.2% |
| SNO-117 | SEQ ID NO: 393, SEQ ID NO: 441, | hsa-miR-409-3p, hsa-miR-342-5p, hsa- | 68.3% | 57.3% | 79.2% |

FIG 15 (continued)

| | SEQ ID NO: 520 | hsa-miR-342-5p, hsa-miR-424*, hsa-miR-26b* | miR-26b* |
|---------|--|--|-------------------|
| SNO-118 | SEQ ID NO: 441, SEQ ID NO: 382, SEQ ID NO: 97 | hsa-miR-424*, hsa-miR-655 | 75.5% 65.0% 86.0% |
| SNO-119 | SEQ ID NO: 382, SEQ ID NO: 520, SEQ ID NO: 542 | hsa-miR-424*, hsa-miR-26b*, hsa-miR-222 | 69.3% 59.2% 79.5% |
| SNO-120 | SEQ ID NO: 520, SEQ ID NO: 97, SEQ ID NO: 11 | hsa-miR-26b*, hsa-miR-655, hsa-miR-942 | 77.1% 64.3% 89.8% |
| SNO-121 | SEQ ID NO: 97, SEQ ID NO: 542, SEQ ID NO: 87 | hsa-miR-655, hsa-miR-222, hsa-miR-664 | 76.1% 66.7% 85.5% |
| SNO-122 | SEQ ID NO: 542, SEQ ID NO: 11, SEQ ID NO: 883 | hsa-miR-222, hsa-miR-942, hsa-miR-101 | 73.9% 75.8% 72.0% |
| SNO-123 | SEQ ID NO: 11, SEQ ID NO: 87, SEQ ID NO: 892 | hsa-miR-942, hsa-miR-664, hsa-let-7f-1* | 66.4% 51.0% 81.8% |
| SNO-124 | SEQ ID NO: 87, SEQ ID NO: 883, SEQ ID NO: 350 | hsa-miR-664, hsa-miR-101, hsa-miR-486-5p | 80.7% 77.2% 84.2% |
| SNO-125 | SEQ ID NO: 883, SEQ ID NO: 892, SEQ ID NO: 154 | hsa-miR-101, hsa-let-7f-1*, hsa-miR-605 | 71.8% 69.5% 74.0% |
| SNO-126 | SEQ ID NO: 892, SEQ ID NO: 350, SEQ ID NO: 671 | hsa-let-7f-1*, hsa-miR-486-5p, hsa-miR-181a-2* | 76.1% 63.7% 88.5% |
| SNO-127 | SEQ ID NO: 350, SEQ ID NO: 154, SEQ ID NO: 658 | hsa-miR-486-5p, hsa-miR-605, hsa-miR-185 | 75.6% 64.7% 86.5% |
| SNO-128 | SEQ ID NO: 154, SEQ ID NO: 671, SEQ ID NO: 284 | hsa-miR-605, hsa-miR-181a-2*, hsa-miR-518f | 72.6% 62.0% 83.2% |
| SNO-129 | SEQ ID NO: 671, SEQ ID NO: 658, SEQ ID NO: 466 | hsa-miR-181a-2*, hsa-miR-185, hsa-miR-324-3p | 75.5% 69.5% 81.5% |
| SNO-130 | SEQ ID NO: 714, SEQ ID NO: 684, SEQ ID NO: 530 | hsa-miR-144*, hsa-miR-155, hsa-miR-23b* | 73.1% 74.5% 71.7% |

FIG 15 (continued)

| | | | | | |
|---------|--|---|-------|-------|-------|
| SNO-131 | SEQ ID NO: 709, SEQ ID NO: 530, SEQ ID NO: 442 | hsa-miR-146a, hsa-miR-23b*, hsa-miR-342-3p | 76.8% | 72.3% | 81.2% |
| SNO-132 | SEQ ID NO: 684, SEQ ID NO: 442, SEQ ID NO: 92 | hsa-miR-155, hsa-miR-342-3p, hsa-miR-660 | 75.6% | 72.3% | 78.8% |
| SNO-133 | SEQ ID NO: 530, SEQ ID NO: 92, SEQ ID NO: 874 | hsa-miR-23b*, hsa-miR-660, hsa-miR-106b | 69.8% | 66.2% | 73.5% |
| SNO-134 | SEQ ID NO: 442, SEQ ID NO: 874, SEQ ID NO: 403 | hsa-miR-342-3p, hsa-miR-106b, hsa-miR-378 | 75.3% | 69.3% | 81.2% |
| SNO-135 | SEQ ID NO: 92, SEQ ID NO: 403, SEQ ID NO: 127 | hsa-miR-660, hsa-miR-378, hsa-miR-628-3p | 71.3% | 61.7% | 80.8% |
| SNO-136 | SEQ ID NO: 874, SEQ ID NO: 127, SEQ ID NO: 897 | hsa-miR-106b, hsa-miR-628-3p, hsa-let-7d | 73.3% | 69.0% | 77.7% |
| SNO-137 | SEQ ID NO: 403, SEQ ID NO: 897, SEQ ID NO: 395 | hsa-miR-378, hsa-let-7d, hsa-miR-383 | 75.1% | 74.0% | 76.2% |
| SNO-138 | SEQ ID NO: 127, SEQ ID NO: 395, SEQ ID NO: 573 | hsa-miR-628-3p, hsa-miR-383, hsa-miR-210 | 76.3% | 72.3% | 80.2% |
| SNO-139 | SEQ ID NO: 897, SEQ ID NO: 573, SEQ ID NO: 393 | hsa-let-7d, hsa-miR-210, hsa-miR-409-3p | 72.3% | 66.7% | 78.0% |
| SNO-140 | SEQ ID NO: 395, SEQ ID NO: 393, SEQ ID NO: 441 | hsa-miR-383, hsa-miR-409-3p, hsa-miR-342-5p | 76.3% | 73.0% | 79.7% |
| SNO-141 | SEQ ID NO: 573, SEQ ID NO: 441, SEQ ID NO: 382 | hsa-miR-210, hsa-miR-342-5p, hsa-miR-424* | 70.3% | 61.5% | 79.2% |
| SNO-142 | SEQ ID NO: 393, SEQ ID NO: 382, SEQ ID NO: 520 | hsa-miR-409-3p, hsa-miR-424*, hsa-miR-26b* | 72.1% | 62.2% | 82.0% |
| SNO-143 | SEQ ID NO: 441, SEQ ID NO: 520, SEQ ID NO: 97 | hsa-miR-342-5p, hsa-miR-26b*, hsa-miR-655 | 77.9% | 67.3% | 88.5% |
| SNO-144 | SEQ ID NO: 382, SEQ ID NO: 97, SEQ ID NO: 424* | hsa-miR-424*, hsa-miR-655, hsa-miR-75.3% | 67.2% | 83.3% | |

FIG 15 (continued)

| | | | | | | | |
|---------|--|--|---|-------|-------|-------|-------|
| SNO-145 | SEQ ID NO: 520, SEQ ID NO: 542, SEQ ID NO: 11 | ID NO: 542 | hsa-miR-26b*, hsa-miR-222, hsa-miR-942 | 222 | 71.3% | 67.0% | 75.7% |
| SNO-146 | SEQ ID NO: 97, SEQ ID NO: 11, SEQ ID NO: 87 | SEQ ID NO: 11, SEQ ID NO: 87 | hsa-miR-655, hsa-miR-942, hsa-miR-664 | 78.3% | 68.2% | 88.5% | |
| SNO-147 | SEQ ID NO: 542, SEQ ID NO: 87, SEQ ID NO: 883 | SEQ ID NO: 542, SEQ ID NO: 87, SEQ ID NO: 883 | hsa-miR-222, hsa-miR-664, hsa-miR-101 | 76.9% | 76.3% | 77.5% | |
| SNO-148 | SEQ ID NO: 11, SEQ ID NO: 883, SEQ ID NO: 892 | SEQ ID NO: 11, SEQ ID NO: 883, SEQ ID NO: 892 | hsa-miR-942, hsa-miR-101, hsa-let-7f-1* | 74.3% | 71.3% | 77.2% | |
| SNO-149 | SEQ ID NO: 87, SEQ ID NO: 892, SEQ ID NO: 350 | SEQ ID NO: 87, SEQ ID NO: 892, SEQ ID NO: 350 | hsa-miR-664, hsa-let-7f-1*, hsa-miR-486-5p | 75.9% | 61.5% | 90.3% | |
| SNO-150 | SEQ ID NO: 883, SEQ ID NO: 350, SEQ ID NO: 154 | SEQ ID NO: 883, SEQ ID NO: 350, SEQ ID NO: 154 | hsa-miR-101, hsa-miR-486-5p, hsa-miR-605 | 73.8% | 66.3% | 81.3% | |
| SNO-151 | SEQ ID NO: 892, SEQ ID NO: 154, SEQ ID NO: 671 | SEQ ID NO: 892, SEQ ID NO: 154, SEQ ID NO: 671 | hsa-let-7f-1*, hsa-miR-605, hsa-miR-181a-2* | 74.4% | 68.7% | 80.2% | |
| SNO-152 | SEQ ID NO: 350, SEQ ID NO: 671, SEQ ID NO: 658 | SEQ ID NO: 350, SEQ ID NO: 671, SEQ ID NO: 658 | hsa-miR-486-5p, hsa-miR-181a-2*, hsa-miR-185 | 71.5% | 58.3% | 84.7% | |
| SNO-153 | SEQ ID NO: 154, SEQ ID NO: 658, SEQ ID NO: 284 | SEQ ID NO: 154, SEQ ID NO: 658, SEQ ID NO: 284 | hsa-miR-605, hsa-miR-185, hsa-miR-518f | 73.9% | 62.3% | 85.5% | |
| SNO-154 | SEQ ID NO: 671, SEQ ID NO: 284, SEQ ID NO: 466 | SEQ ID NO: 671, SEQ ID NO: 284, SEQ ID NO: 466 | hsa-miR-181a-2*, hsa-miR-518f, hsa-miR-324-3p | 76.1% | 68.0% | 84.2% | |
| SNO-155 | SEQ ID NO: 714, SEQ ID NO: 684, SEQ ID NO: 442 | SEQ ID NO: 714, SEQ ID NO: 684, SEQ ID NO: 442 | hsa-miR-144*, hsa-miR-155, hsa-miR-342-3p | 74.0% | 74.5% | 73.5% | |
| SNO-156 | SEQ ID NO: 709, SEQ ID NO: 530, SEQ ID NO: 92 | SEQ ID NO: 709, SEQ ID NO: 530, SEQ ID NO: 92 | hsa-miR-146a, hsa-miR-23b*, hsa-miR-660 | 71.4% | 61.2% | 81.7% | |
| SNO-157 | SEQ ID NO: 684, SEQ ID NO: 442, SEQ ID NO: 874 | SEQ ID NO: 684, SEQ ID NO: 442, SEQ ID NO: 874 | hsa-miR-155, hsa-miR-342-3p, hsa-miR-106b | 77.2% | 71.3% | 83.0% | |

FIG 15 (continued)

| | | | | | |
|---------|--|---|-------|-------|-------|
| SNO-158 | SEQ ID NO: 530, SEQ ID NO: 92, SEQ ID NO: 403 | hsa-miR-23b*, hsa-miR-660, hsa-miR-378 | 72.7% | 66.7% | 78.7% |
| SNO-159 | SEQ ID NO: 442, SEQ ID NO: 874, SEQ ID NO: 127 | hsa-miR-342-3p, hsa-miR-106b, hsa-miR-628-3p | 80.2% | 72.3% | 88.0% |
| SNO-160 | SEQ ID NO: 92, SEQ ID NO: 403, SEQ ID NO: 897 | hsa-miR-660, hsa-miR-378, hsa-let-7d | 73.2% | 65.3% | 81.0% |
| SNO-161 | SEQ ID NO: 874, SEQ ID NO: 127, SEQ ID NO: 395 | hsa-miR-106b, hsa-miR-628-3p, hsa-miR-383 | 78.3% | 80.2% | 76.3% |
| SNO-162 | SEQ ID NO: 403, SEQ ID NO: 897, SEQ ID NO: 573 | hsa-miR-378, hsa-let-7d, hsa-miR-210 | 74.2% | 65.8% | 82.5% |
| SNO-163 | SEQ ID NO: 127, SEQ ID NO: 395, SEQ ID NO: 393 | hsa-miR-628-3p, hsa-miR-383, hsa-miR-409-3p | 73.8% | 69.5% | 78.2% |
| SNO-164 | SEQ ID NO: 897, SEQ ID NO: 573, SEQ ID NO: 441 | hsa-let-7d, hsa-miR-210, hsa-miR-342-5p | 73.8% | 74.0% | 73.7% |
| SNO-165 | SEQ ID NO: 395, SEQ ID NO: 393, SEQ ID NO: 382 | hsa-miR-383, hsa-miR-409-3p, hsa-miR-424* | 73.8% | 68.8% | 78.8% |
| SNO-166 | SEQ ID NO: 573, SEQ ID NO: 441, SEQ ID NO: 520 | hsa-miR-210, hsa-miR-342-5p, hsa-miR-26b* | 69.5% | 66.5% | 72.5% |
| SNO-167 | SEQ ID NO: 393, SEQ ID NO: 382, SEQ ID NO: 97 | hsa-miR-409-3p, hsa-miR-424*, hsa-miR-655 | 74.5% | 67.5% | 81.5% |
| SNO-168 | SEQ ID NO: 441, SEQ ID NO: 520, SEQ ID NO: 542 | hsa-miR-342-5p, hsa-miR-26b*, hsa-miR-222 | 62.1% | 61.3% | 62.8% |
| SNO-169 | SEQ ID NO: 382, SEQ ID NO: 97, SEQ ID NO: 11 | hsa-miR-424*, hsa-miR-655, hsa-miR-942, hsa-miR-664 | 75.8% | 64.3% | 87.2% |
| SNO-170 | SEQ ID NO: 520, SEQ ID NO: 542, SEQ ID NO: 87 | hsa-miR-26b*, hsa-miR-222, hsa-miR-664 | 70.0% | 62.3% | 77.7% |
| SNO-171 | SEQ ID NO: 97, SEQ ID NO: 11, SEQ ID NO: 11 | hsa-miR-655, hsa-miR-942, hsa-miR-78.3% | 68.5% | 88.2% | |

FIG 15 (continued)

| | | | | |
|---------|--|---|-------|-------------|
| | ID NO: 883 | 101 | | |
| SNO-172 | SEQ ID NO: 542, SEQ ID NO: 87, SEQ ID NO: 892 | hsa-miR-222, hsa-miR-664, hsa-let-7f-1* | 67.2% | 61.7% 72.7% |
| SNO-173 | SEQ ID NO: 11, SEQ ID NO: 883, SEQ ID NO: 350 | hsa-miR-942, hsa-miR-101, hsa-miR-486-5p | 77.1% | 70.0% 84.2% |
| SNO-174 | SEQ ID NO: 87, SEQ ID NO: 892, SEQ ID NO: 154 | hsa-miR-664, hsa-let-7f-1*, hsa-miR-605 | 71.1% | 60.5% 81.7% |
| SNO-175 | SEQ ID NO: 883, SEQ ID NO: 350, SEQ ID NO: 671 | hsa-miR-101, hsa-miR-486-5p, hsa-miR-181a-2* | 76.2% | 71.3% 81.0% |
| SNO-176 | SEQ ID NO: 892, SEQ ID NO: 154, SEQ ID NO: 658 | hsa-let-7f-1*, hsa-miR-605, hsa-miR-185 | 74.8% | 65.2% 84.3% |
| SNO-177 | SEQ ID NO: 350, SEQ ID NO: 671, SEQ ID NO: 284 | hsa-miR-486-5p, hsa-miR-181a-2*, hsa-miR-518f | 78.9% | 66.5% 91.3% |
| SNO-178 | SEQ ID NO: 154, SEQ ID NO: 658, SEQ ID NO: 466 | hsa-miR-605, hsa-miR-185, hsa-miR-324-3p | 75.7% | 69.3% 82.0% |
| SNO-179 | SEQ ID NO: 714, SEQ ID NO: 709, SEQ ID NO: 442 | hsa-miR-144*, hsa-miR-146a, hsa-miR-342-3p | 77.4% | 78.2% 76.7% |
| SNO-180 | SEQ ID NO: 709, SEQ ID NO: 684, SEQ ID NO: 92 | hsa-miR-146a, hsa-miR-155, hsa-miR-660 | 69.8% | 63.0% 76.5% |
| SNO-181 | SEQ ID NO: 684, SEQ ID NO: 530, SEQ ID NO: 874 | hsa-miR-155, hsa-miR-23b*, hsa-miR-106b | 77.5% | 76.3% 78.7% |
| SNO-182 | SEQ ID NO: 530, SEQ ID NO: 442, SEQ ID NO: 403 | hsa-miR-23b*, hsa-miR-342-3p, hsa-miR-378 | 76.4% | 74.5% 78.3% |
| SNO-183 | SEQ ID NO: 442, SEQ ID NO: 92, SEQ ID NO: 127 | hsa-miR-342-3p, hsa-miR-660, hsa-miR-628-3p | 76.8% | 68.7% 84.8% |
| SNO-184 | SEQ ID NO: 92, SEQ ID NO: 874, SEQ ID NO: 897 | hsa-miR-660, hsa-miR-106b, hsa-let-7d | 70.8% | 67.3% 74.3% |

FIG 15 (continued)

| | | | | | |
|---------|--|---|-------|-------|-------|
| SNO-185 | SEQ ID NO: 874, SEQ ID NO: 403, SEQ ID NO: 395 | hsa-miR-106b, hsa-miR-378, hsa-miR-383 | 74.4% | 76.0% | 72.8% |
| SNO-186 | SEQ ID NO: 403, SEQ ID NO: 127, SEQ ID NO: 573 | hsa-miR-378, hsa-miR-628-3p, hsa-miR-210 | 69.9% | 59.5% | 80.3% |
| SNO-187 | SEQ ID NO: 127, SEQ ID NO: 897, SEQ ID NO: 393 | hsa-miR-628-3p, hsa-let-7d, hsa-miR-409-3p | 74.0% | 67.3% | 80.7% |
| SNO-188 | SEQ ID NO: 897, SEQ ID NO: 395, SEQ ID NO: 441 | hsa-let-7d, hsa-miR-383, hsa-miR-342-5p | 78.7% | 78.3% | 79.0% |
| SNO-189 | SEQ ID NO: 395, SEQ ID NO: 573, SEQ ID NO: 382 | hsa-miR-383, hsa-miR-210, hsa-miR-424* | 77.8% | 72.2% | 83.5% |
| SNO-190 | SEQ ID NO: 573, SEQ ID NO: 393, SEQ ID NO: 520 | hsa-miR-210, hsa-miR-409-3p, hsa-miR-26b* | 71.9% | 63.7% | 80.2% |
| SNO-191 | SEQ ID NO: 393, SEQ ID NO: 441, SEQ ID NO: 97 | hsa-miR-409-3p, hsa-miR-342-5p, hsa-miR-655 | 74.7% | 66.0% | 83.3% |
| SNO-192 | SEQ ID NO: 441, SEQ ID NO: 382, SEQ ID NO: 542 | hsa-miR-342-5p, hsa-miR-424*, hsa-miR-222 | 65.3% | 66.3% | 64.2% |
| SNO-193 | SEQ ID NO: 382, SEQ ID NO: 520, SEQ ID NO: 11 | hsa-miR-424*, hsa-miR-26b*, hsa-miR-942 | 71.3% | 56.0% | 86.5% |
| SNO-194 | SEQ ID NO: 520, SEQ ID NO: 97, SEQ ID NO: 87 | hsa-miR-26b*, hsa-miR-655, hsa-miR-664 | 75.4% | 61.0% | 89.8% |
| SNO-195 | SEQ ID NO: 97, SEQ ID NO: 542, SEQ ID NO: 883 | hsa-miR-655, hsa-miR-222, hsa-miR-101 | 71.4% | 69.3% | 73.5% |
| SNO-196 | SEQ ID NO: 542, SEQ ID NO: 11, SEQ ID NO: 892 | hsa-miR-222, hsa-miR-942, hsa-let-7f-1* | 69.8% | 67.0% | 72.5% |
| SNO-197 | SEQ ID NO: 11, SEQ ID NO: 87, SEQ ID NO: 350 | hsa-miR-942, hsa-miR-664, hsa-miR-486-5p | 73.2% | 53.3% | 93.0% |
| SNO-198 | SEQ ID NO: 87, SEQ ID NO: 883, SEQ ID NO: 101 | hsa-miR-664, hsa-miR-101, hsa-miR-76.4% | 74.7% | 78.2% | |

FIG 15 (continued)

| | | | | |
|---------|---|--|-------|-------------|
| | ID NO: 154 | 605 | 70.5% | 75.2% |
| SNO-199 | SEQ ID NO: 883, SEQ ID NO: 892, SEQ ID NO: 671 | hsa-miR-101, hsa-let-7f-1*, hsa-miR-181a-2* | 72.8% | 70.5% |
| SNO-200 | SEQ ID NO: 892, SEQ ID NO: 350, SEQ ID NO: 658 | hsa-let-7f-1*, hsa-miR-486-5p, hsa-miR-185 | 74.2% | 62.8% 85.5% |
| SNO-201 | SEQ ID NO: 350, SEQ ID NO: 154, SEQ ID NO: 284 | hsa-miR-486-5p, hsa-miR-605, hsa-miR-518f | 79.4% | 66.8% 92.0% |
| SNO-202 | SEQ ID NO: 154, SEQ ID NO: 671, SEQ ID NO: 466 | hsa-miR-605, hsa-miR-181a-2*, hsa-miR-324-3p | 75.7% | 70.5% 80.8% |
| SNO-203 | SEQ ID NO: 714, SEQ ID NO: 530, SEQ ID NO: 442 | hsa-miR-144*, hsa-miR-23b*, hsa-miR-342-3p | 76.1% | 75.5% 76.7% |
| SNO-204 | SEQ ID NO: 709, SEQ ID NO: 442, SEQ ID NO: 92 | hsa-miR-146a, hsa-miR-342-3p, hsa-miR-660 | 78.3% | 73.2% 83.5% |
| SNO-205 | SEQ ID NO: 684, SEQ ID NO: 92, SEQ ID NO: 874 | hsa-miR-155, hsa-miR-660, hsa-miR-106b | 74.6% | 72.2% 77.0% |
| SNO-206 | SEQ ID NO: 530, SEQ ID NO: 874, SEQ ID NO: 403 | hsa-miR-23b*, hsa-miR-106b, hsa-miR-378 | 72.2% | 66.7% 77.7% |
| SNO-207 | SEQ ID NO: 442, SEQ ID NO: 403, SEQ ID NO: 127 | hsa-miR-342-3p, hsa-miR-378, hsa-miR-628-3p | 75.7% | 67.8% 83.5% |
| SNO-208 | SEQ ID NO: 92, SEQ ID NO: 127, SEQ ID NO: 897 | hsa-miR-660, hsa-miR-628-3p, hsa-let-7d | 74.1% | 67.0% 81.2% |
| SNO-209 | SEQ ID NO: 874, SEQ ID NO: 897, SEQ ID NO: 395 | hsa-miR-106b, hsa-let-7d, hsa-miR-383 | 75.7% | 77.8% 73.5% |
| SNO-210 | SEQ ID NO: 403, SEQ ID NO: 395, SEQ ID NO: 573 | hsa-miR-378, hsa-miR-383, hsa-miR-210 | 74.6% | 73.3% 75.8% |
| SNO-211 | SEQ ID NO: 127, SEQ ID NO: 573, SEQ ID NO: 393 | hsa-miR-628-3p, hsa-miR-210, hsa-miR-409-3p | 70.0% | 62.3% 77.7% |

FIG 15 (continued)

| | | | | | |
|---------|---|---|-------|-------|-------|
| SNO-212 | SEQ ID NO: 897, SEQ ID NO: 393, SEQ ID NO: 441 | hsa-let-7d, hsa-miR-409-3p, hsa-miR-342-5p | 74.4% | 72.8% | 76.0% |
| SNO-213 | SEQ ID NO: 395, SEQ ID NO: 441, SEQ ID NO: 382 | hsa-miR-383, hsa-miR-342-5p, hsa-miR-424* | 76.6% | 72.2% | 81.0% |
| SNO-214 | SEQ ID NO: 573, SEQ ID NO: 382, SEQ ID NO: 520 | hsa-miR-210, hsa-miR-424*, hsa-miR-26b* | 73.7% | 63.0% | 84.3% |
| SNO-215 | SEQ ID NO: 393, SEQ ID NO: 520, SEQ ID NO: 97 | hsa-miR-409-3p, hsa-miR-26b*, hsa-miR-655 | 73.8% | 65.2% | 82.5% |
| SNO-216 | SEQ ID NO: 441, SEQ ID NO: 97, SEQ ID NO: 542 | hsa-miR-342-5p, hsa-miR-655, hsa-miR-222 | 74.2% | 68.3% | 80.0% |
| SNO-217 | SEQ ID NO: 382, SEQ ID NO: 542, SEQ ID NO: 11 | hsa-miR-424*, hsa-miR-222, hsa-miR-942 | 68.9% | 62.7% | 75.2% |
| SNO-218 | SEQ ID NO: 520, SEQ ID NO: 11, SEQ ID NO: 87 | hsa-miR-26b*, hsa-miR-942, hsa-miR-664 | 70.2% | 51.2% | 89.2% |
| SNO-219 | SEQ ID NO: 97, SEQ ID NO: 87, SEQ ID NO: 883 | hsa-miR-655, hsa-miR-664, hsa-miR-101 | 80.0% | 74.8% | 85.2% |
| SNO-220 | SEQ ID NO: 542, SEQ ID NO: 883, SEQ ID NO: 892 | hsa-miR-222, hsa-miR-101, hsa-let-7f-1* | 71.7% | 72.8% | 70.5% |
| SNO-221 | SEQ ID NO: 11, SEQ ID NO: 892, SEQ ID NO: 350 | hsa-miR-942, hsa-let-7f-1*, hsa-miR-486-5p | 75.2% | 60.5% | 89.8% |
| SNO-222 | SEQ ID NO: 87, SEQ ID NO: 350, SEQ ID NO: 154 | hsa-miR-664, hsa-miR-486-5p, hsa-miR-605 | 74.9% | 62.7% | 87.2% |
| SNO-223 | SEQ ID NO: 883, SEQ ID NO: 154, SEQ ID NO: 671 | hsa-miR-101, hsa-miR-605, hsa-miR-181a-2* | 72.7% | 70.7% | 74.7% |
| SNO-224 | SEQ ID NO: 892, SEQ ID NO: 671, SEQ ID NO: 658 | hsa-let-7f-1*, hsa-miR-181a-2*, hsa-miR-185 | 72.7% | 65.3% | 80.0% |
| SNO-225 | SEQ ID NO: 350, SEQ ID NO: 658, | hsa-miR-486-5p, hsa-miR-185, hsa- | 74.8% | 59.0% | 90.7% |

FIG 15 (continued)

| | SEQ ID NO: 284 | miR-518f |
|---------|---|---|
| SNO-226 | SEQ ID NO: 154, SEQ ID NO: 284, SEQ ID NO: 466 | hsa-miR-605, hsa-miR-518f, hsa-miR-324-3p |
| SNO-227 | SEQ ID NO: 714, SEQ ID NO: 673 | hsa-miR-144*, hsa-miR-181a |
| SNO-228 | SEQ ID NO: 673, SEQ ID NO: 189 | hsa-miR-181a, hsa-miR-574-5p |
| SNO-229 | SEQ ID NO: 189, SEQ ID NO: 779 | hsa-miR-574-5p, hsa-miR-1280 |
| SNO-230 | SEQ ID NO: 779, SEQ ID NO: 92 | hsa-miR-1280, hsa-miR-660 |
| SNO-231 | SEQ ID NO: 92, SEQ ID NO: 805 | hsa-miR-660, hsa-miR-126 |
| SNO-232 | SEQ ID NO: 805, SEQ ID NO: 414 | hsa-miR-126, hsa-miR-374a |
| SNO-233 | SEQ ID NO: 414, SEQ ID NO: 696 | hsa-miR-374a, hsa-miR-149* |
| SNO-234 | SEQ ID NO: 696, SEQ ID NO: 850 | hsa-miR-149*, hsa-miR-1207-5p |
| SNO-235 | SEQ ID NO: 850, SEQ ID NO: 315 | hsa-miR-1207-5p, hsa-miR-509-3-5p |
| SNO-236 | SEQ ID NO: 315, SEQ ID NO: 87 | hsa-miR-509-3-5p, hsa-miR-664 |
| SNO-237 | SEQ ID NO: 87, SEQ ID NO: 888 | hsa-miR-664, hsa-let-7i |
| SNO-238 | SEQ ID NO: 888, SEQ ID NO: 861 | hsa-let-7i, hsa-miR-1184 |
| SNO-239 | SEQ ID NO: 861, SEQ ID NO: 838 | hsa-miR-1184, hsa-miR-1228* |
| SNO-240 | SEQ ID NO: 838, SEQ ID NO: 883 | hsa-miR-1228*, hsa-miR-101 |
| SNO-241 | SEQ ID NO: 883, SEQ ID NO: 199 | hsa-miR-101, hsa-miR-564 |
| SNO-242 | SEQ ID NO: 199, SEQ ID NO: 874 | hsa-miR-564, hsa-miR-106b |
| SNO-243 | SEQ ID NO: 874, SEQ ID NO: 645 | hsa-miR-106b, hsa-miR-1908 |
| SNO-244 | SEQ ID NO: 645, SEQ ID NO: 710 | hsa-miR-1908, hsa-miR-1469 |
| SNO-245 | SEQ ID NO: 710, SEQ ID NO: 442 | hsa-miR-1469, hsa-miR-342-3p |
| SNO-246 | SEQ ID NO: 442, SEQ ID NO: 542 | hsa-miR-342-3p, hsa-miR-222 |
| SNO-247 | SEQ ID NO: 542, SEQ ID NO: 632 | hsa-miR-222, hsa-miR-1915 |
| SNO-248 | SEQ ID NO: 632, SEQ ID NO: 573 | hsa-miR-1915, hsa-miR-210 |
| SNO-249 | SEQ ID NO: 573, SEQ ID NO: 762 | hsa-miR-210, hsa-miR-1295 |

FIG 15 (continued)

| | | | | | |
|---------|--------------------------------|--------------------------------|-------|-------|-------|
| SNO-250 | SEQ ID NO: 762, SEQ ID NO: 378 | hsa-miR-1295, hsa-miR-431 | 65.3% | 66.2% | 64.5% |
| SNO-251 | SEQ ID NO: 378, SEQ ID NO: 253 | hsa-miR-431, hsa-miR-526a | 64.4% | 77.0% | 51.8% |
| SNO-252 | SEQ ID NO: 253, SEQ ID NO: 89 | hsa-miR-526a, hsa-miR-663 | 68.8% | 81.0% | 56.7% |
| SNO-253 | SEQ ID NO: 89, SEQ ID NO: 897 | hsa-miR-663, hsa-let-7d | 70.3% | 69.0% | 71.5% |
| SNO-254 | SEQ ID NO: 714, SEQ ID NO: 189 | hsa-miR-144*, hsa-miR-574-5p | 72.8% | 73.7% | 72.0% |
| SNO-255 | SEQ ID NO: 673, SEQ ID NO: 779 | hsa-miR-181a, hsa-miR-1280 | 78.6% | 80.8% | 76.3% |
| SNO-256 | SEQ ID NO: 189, SEQ ID NO: 92 | hsa-miR-574-5p, hsa-miR-660 | 61.5% | 71.5% | 51.5% |
| SNO-257 | SEQ ID NO: 779, SEQ ID NO: 805 | hsa-miR-1280, hsa-miR-126 | 69.2% | 76.3% | 62.0% |
| SNO-258 | SEQ ID NO: 92, SEQ ID NO: 414 | hsa-miR-660, hsa-miR-374a | 63.9% | 57.5% | 70.3% |
| SNO-259 | SEQ ID NO: 805, SEQ ID NO: 696 | hsa-miR-126, hsa-miR-149* | 65.3% | 69.8% | 60.7% |
| SNO-260 | SEQ ID NO: 414, SEQ ID NO: 850 | hsa-miR-374a, hsa-miR-1207-5p | 63.7% | 57.5% | 69.8% |
| SNO-261 | SEQ ID NO: 696, SEQ ID NO: 315 | hsa-miR-149*, hsa-miR-509-3-5p | 72.0% | 71.7% | 72.3% |
| SNO-262 | SEQ ID NO: 850, SEQ ID NO: 87 | hsa-miR-1207-5p, hsa-miR-664 | 61.3% | 68.3% | 54.2% |
| SNO-263 | SEQ ID NO: 315, SEQ ID NO: 888 | hsa-miR-509-3-5p, hsa-let-7i | 64.4% | 77.2% | 51.7% |
| SNO-264 | SEQ ID NO: 87, SEQ ID NO: 861 | hsa-miR-664, hsa-miR-1184 | 57.8% | 64.5% | 51.2% |
| SNO-265 | SEQ ID NO: 888, SEQ ID NO: 838 | hsa-let-7i, hsa-miR-1228* | 69.9% | 74.3% | 65.5% |
| SNO-266 | SEQ ID NO: 861, SEQ ID NO: 883 | hsa-miR-1184, hsa-miR-101 | 63.3% | 66.2% | 60.3% |
| SNO-267 | SEQ ID NO: 838, SEQ ID NO: 199 | hsa-miR-1228*, hsa-miR-564 | 70.3% | 72.2% | 68.5% |
| SNO-268 | SEQ ID NO: 883, SEQ ID NO: 874 | hsa-miR-101, hsa-miR-106b | 70.1% | 73.3% | 66.8% |
| SNO-269 | SEQ ID NO: 199, SEQ ID NO: 645 | hsa-miR-564, hsa-miR-1908 | 60.2% | 68.0% | 52.3% |
| SNO-270 | SEQ ID NO: 874, SEQ ID NO: 710 | hsa-miR-106b, hsa-miR-1469 | 63.5% | 67.2% | 59.8% |
| SNO-271 | SEQ ID NO: 645, SEQ ID NO: 442 | hsa-miR-1908, hsa-miR-342-3p | 64.3% | 56.5% | 72.0% |
| SNO-272 | SEQ ID NO: 710, SEQ ID NO: 542 | hsa-miR-1469, hsa-miR-222 | 66.2% | 73.3% | 59.0% |
| SNO-273 | SEQ ID NO: 442, SEQ ID NO: 632 | hsa-miR-342-3p, hsa-miR-1915 | 68.4% | 58.3% | 78.5% |
| SNO-274 | SEQ ID NO: 542, SEQ ID NO: 573 | hsa-miR-222, hsa-miR-210 | 72.1% | 67.8% | 76.3% |

FIG 15 (continued)

| | | | | | |
|---------|--------------------------------|--------------------------------|-------|-------|-------|
| SNO-275 | SEQ ID NO: 632, SEQ ID NO: 762 | hsa-miR-1915, hsa-miR-1295 | 67.0% | 61.2% | 72.8% |
| SNO-276 | SEQ ID NO: 573, SEQ ID NO: 378 | hsa-miR-210, hsa-miR-431 | 67.4% | 73.2% | 61.7% |
| SNO-277 | SEQ ID NO: 762, SEQ ID NO: 253 | hsa-miR-1295, hsa-miR-526a | 63.8% | 61.3% | 66.2% |
| SNO-278 | SEQ ID NO: 378, SEQ ID NO: 89 | hsa-miR-431, hsa-miR-663 | 61.3% | 70.8% | 51.8% |
| SNO-279 | SEQ ID NO: 253, SEQ ID NO: 897 | hsa-miR-526a, hsa-let-7d | 72.2% | 72.0% | 72.3% |
| SNO-280 | SEQ ID NO: 714, SEQ ID NO: 779 | hsa-miR-144*, hsa-miR-1280 | 73.3% | 71.0% | 75.5% |
| SNO-281 | SEQ ID NO: 673, SEQ ID NO: 92 | hsa-miR-181a, hsa-miR-660 | 71.1% | 65.8% | 76.3% |
| SNO-282 | SEQ ID NO: 189, SEQ ID NO: 805 | hsa-miR-574-5p, hsa-miR-126 | 65.3% | 70.0% | 60.7% |
| SNO-283 | SEQ ID NO: 779, SEQ ID NO: 414 | hsa-miR-1280, hsa-miR-374a | 75.3% | 75.2% | 75.3% |
| SNO-284 | SEQ ID NO: 92, SEQ ID NO: 696 | hsa-miR-660, hsa-miR-149* | 62.4% | 66.0% | 58.8% |
| SNO-285 | SEQ ID NO: 805, SEQ ID NO: 850 | hsa-miR-126, hsa-miR-1207-5p | 66.3% | 65.7% | 66.8% |
| SNO-286 | SEQ ID NO: 414, SEQ ID NO: 315 | hsa-miR-374a, hsa-miR-509-3-5p | 65.7% | 76.8% | 54.5% |
| SNO-287 | SEQ ID NO: 696, SEQ ID NO: 87 | hsa-miR-149*, hsa-miR-664 | 63.8% | 66.0% | 61.7% |
| SNO-288 | SEQ ID NO: 850, SEQ ID NO: 888 | hsa-miR-1207-5p, hsa-let-7i | 60.3% | 66.2% | 54.5% |
| SNO-289 | SEQ ID NO: 315, SEQ ID NO: 861 | hsa-miR-509-3-5p, hsa-miR-1184 | 62.3% | 80.7% | 43.8% |
| SNO-290 | SEQ ID NO: 87, SEQ ID NO: 838 | hsa-miR-664, hsa-miR-1228* | 72.7% | 72.8% | 72.5% |
| SNO-291 | SEQ ID NO: 888, SEQ ID NO: 883 | hsa-let-7i, hsa-miR-101 | 69.3% | 63.0% | 75.7% |
| SNO-292 | SEQ ID NO: 861, SEQ ID NO: 199 | hsa-miR-1184, hsa-miR-564 | 62.8% | 69.5% | 56.0% |
| SNO-293 | SEQ ID NO: 838, SEQ ID NO: 874 | hsa-miR-1228*, hsa-miR-106b | 71.3% | 76.5% | 66.0% |
| SNO-294 | SEQ ID NO: 883, SEQ ID NO: 645 | hsa-miR-101, hsa-miR-1908 | 62.5% | 62.3% | 62.7% |
| SNO-295 | SEQ ID NO: 199, SEQ ID NO: 710 | hsa-miR-564, hsa-miR-1469 | 60.7% | 63.5% | 57.8% |
| SNO-296 | SEQ ID NO: 874, SEQ ID NO: 442 | hsa-miR-106b, hsa-miR-342-3p | 69.2% | 63.2% | 75.2% |
| SNO-297 | SEQ ID NO: 645, SEQ ID NO: 542 | hsa-miR-1908, hsa-miR-222 | 63.3% | 82.7% | 43.8% |
| SNO-298 | SEQ ID NO: 710, SEQ ID NO: 632 | hsa-miR-1469, hsa-miR-1915 | 64.0% | 65.2% | 62.8% |
| SNO-299 | SEQ ID NO: 442, SEQ ID NO: 573 | hsa-miR-342-3p, hsa-miR-210 | 78.1% | 79.0% | 77.2% |

FIG 15 (continued)

| | | | | | |
|---------|--|---|-------|-------|-------|
| SNO-300 | SEQ ID NO: 542, SEQ ID NO: 762 | hsa-miR-222, hsa-miR-1295 | 70.7% | 68.2% | 73.2% |
| SNO-301 | SEQ ID NO: 632, SEQ ID NO: 378 | hsa-miR-1915, hsa-miR-431 | 62.8% | 70.8% | 54.8% |
| SNO-302 | SEQ ID NO: 573, SEQ ID NO: 253 | hsa-miR-210, hsa-miR-526a | 61.1% | 66.7% | 55.5% |
| SNO-303 | SEQ ID NO: 762, SEQ ID NO: 89 | hsa-miR-1295, hsa-miR-663 | 63.9% | 65.0% | 62.8% |
| SNO-304 | SEQ ID NO: 378, SEQ ID NO: 897 | hsa-miR-431, hsa-let-7d | 63.8% | 59.8% | 67.8% |
| SNO-305 | SEQ ID NO: 714, SEQ ID NO: 673, SEQ ID NO: 189 | hsa-miR-144*, hsa-miR-181a, hsa-miR-574-5p | 75.5% | 75.8% | 75.2% |
| SNO-306 | SEQ ID NO: 673, SEQ ID NO: 189, SEQ ID NO: 779 | hsa-miR-181a, hsa-miR-574-5p, hsa-miR-1280 | 76.9% | 78.7% | 75.2% |
| SNO-307 | SEQ ID NO: 189, SEQ ID NO: 779, SEQ ID NO: 92 | hsa-miR-574-5p, hsa-miR-1280, hsa-miR-660 | 70.9% | 80.3% | 61.5% |
| SNO-308 | SEQ ID NO: 779, SEQ ID NO: 92, SEQ ID NO: 805 | hsa-miR-1280, hsa-miR-660, hsa-miR-126 | 72.3% | 81.5% | 63.0% |
| SNO-309 | SEQ ID NO: 92, SEQ ID NO: 805, SEQ ID NO: 414 | hsa-miR-660, hsa-miR-126, hsa-miR-374a | 66.3% | 62.7% | 69.8% |
| SNO-310 | SEQ ID NO: 805, SEQ ID NO: 414, SEQ ID NO: 696 | hsa-miR-126, hsa-miR-374a, hsa-miR-149* | 69.3% | 67.8% | 70.8% |
| SNO-311 | SEQ ID NO: 414, SEQ ID NO: 696, SEQ ID NO: 850 | hsa-miR-374a, hsa-miR-149*, hsa-miR-1207-5p | 66.3% | 62.0% | 70.5% |
| SNO-312 | SEQ ID NO: 696, SEQ ID NO: 850, SEQ ID NO: 315 | hsa-miR-149*, hsa-miR-1207-5p, hsa-miR-509-3-5p | 71.5% | 72.7% | 70.3% |
| SNO-313 | SEQ ID NO: 850, SEQ ID NO: 315, SEQ ID NO: 87 | hsa-miR-1207-5p, hsa-miR-509-3-5p, hsa-miR-664 | 68.1% | 71.0% | 65.2% |
| SNO-314 | SEQ ID NO: 315, SEQ ID NO: 87, SEQ ID NO: 888 | hsa-miR-509-3-5p, hsa-miR-664, hsa-let-7i | 56.6% | 55.7% | 57.5% |
| SNO-315 | SEQ ID NO: 87, SEQ ID NO: 888, SEQ ID NO: 861 | hsa-miR-664, hsa-let-7i, hsa-miR-1184 | 55.7% | 58.5% | 52.8% |

FIG 15 (continued)

| | | | | | |
|---------|--|--|-------|-------|-------|
| SNO-316 | SEQ ID NO: 888, SEQ ID NO: 861, SEQ ID NO: 838 | hsa-let-7i, hsa-miR-1184, hsa-miR-1228* | 71.3% | 76.7% | 66.0% |
| SNO-317 | SEQ ID NO: 861, SEQ ID NO: 838, SEQ ID NO: 883 | hsa-miR-1184, hsa-miR-1228*, hsa-miR-101 | 69.0% | 75.7% | 62.3% |
| SNO-318 | SEQ ID NO: 838, SEQ ID NO: 883, SEQ ID NO: 199 | hsa-miR-1228*, hsa-miR-101, hsa-miR-564 | 71.5% | 71.2% | 71.8% |
| SNO-319 | SEQ ID NO: 883, SEQ ID NO: 199, SEQ ID NO: 874 | hsa-miR-101, hsa-miR-564, hsa-miR-106b | 74.8% | 79.3% | 70.2% |
| SNO-320 | SEQ ID NO: 199, SEQ ID NO: 874, SEQ ID NO: 645 | hsa-miR-564, hsa-miR-106b, hsa-miR-1908 | 69.4% | 74.2% | 64.7% |
| SNO-321 | SEQ ID NO: 874, SEQ ID NO: 645, SEQ ID NO: 710 | hsa-miR-106b, hsa-miR-1908, hsa-miR-1469 | 63.0% | 70.0% | 56.0% |
| SNO-322 | SEQ ID NO: 645, SEQ ID NO: 710, SEQ ID NO: 442 | hsa-miR-1908, hsa-miR-1469, hsa-miR-342-3p | 68.0% | 59.2% | 76.8% |
| SNO-323 | SEQ ID NO: 710, SEQ ID NO: 442, SEQ ID NO: 542 | hsa-miR-1469, hsa-miR-342-3p, hsa-miR-222 | 76.3% | 72.5% | 80.0% |
| SNO-324 | SEQ ID NO: 442, SEQ ID NO: 542, SEQ ID NO: 632 | hsa-miR-342-3p, hsa-miR-222, hsa-miR-1915 | 76.1% | 70.3% | 81.8% |
| SNO-325 | SEQ ID NO: 542, SEQ ID NO: 632, SEQ ID NO: 573 | hsa-miR-222, hsa-miR-1915, hsa-miR-210 | 68.9% | 70.8% | 67.0% |
| SNO-326 | SEQ ID NO: 632, SEQ ID NO: 573, SEQ ID NO: 762 | hsa-miR-1915, hsa-miR-210, hsa-miR-1295 | 74.4% | 71.8% | 77.0% |
| SNO-327 | SEQ ID NO: 573, SEQ ID NO: 762, SEQ ID NO: 378 | hsa-miR-210, hsa-miR-1295, hsa-miR-431 | 72.3% | 71.0% | 73.5% |
| SNO-328 | SEQ ID NO: 762, SEQ ID NO: 378, SEQ ID NO: 253 | hsa-miR-1295, hsa-miR-431, hsa-miR-526a | 64.1% | 70.5% | 57.7% |
| SNO-329 | SEQ ID NO: 378, SEQ ID NO: 253, | hsa-miR-431, hsa-miR-526a, hsa-miR- | 63.7% | 73.5% | 53.8% |

FIG 15 (continued)

| | | | | | | | |
|---------|--|--|--|--|-------|-------|-------|
| SNO-330 | SEQ ID NO: 253, SEQ ID NO: 89, SEQ ID NO: 897 | SEQ ID NO: 89 | hsa-miR-526a, hsa-miR-663, hsa-let-7d | 663 | 69.6% | 73.3% | 65.8% |
| SNO-331 | SEQ ID NO: 714, SEQ ID NO: 673, SEQ ID NO: 779 | SEQ ID NO: 897 | hsa-miR-144*, hsa-miR-181a, hsa-miR-1280 | 7d | 79.3% | 83.5% | 75.2% |
| SNO-332 | SEQ ID NO: 673, SEQ ID NO: 189, SEQ ID NO: 92 | SEQ ID NO: 189, SEQ ID NO: 779, SEQ ID NO: 805 | hsa-miR-181a, hsa-miR-574-5p, hsa-miR-660 | hsa-miR-574-5p, hsa-miR-1280, hsa-miR-126 | 70.2% | 68.5% | 71.8% |
| SNO-333 | SEQ ID NO: 189, SEQ ID NO: 779, SEQ ID NO: 805 | SEQ ID NO: 92, SEQ ID NO: 414 | hsa-miR-1280, hsa-miR-660, hsa-miR-374a | hsa-miR-1280, hsa-miR-660, hsa-miR-126 | 70.3% | 79.8% | 60.7% |
| SNO-334 | SEQ ID NO: 779, SEQ ID NO: 92, SEQ ID NO: 414 | SEQ ID NO: 92, SEQ ID NO: 805, SEQ ID NO: 696 | hsa-miR-660, hsa-miR-126, hsa-miR-149* | hsa-miR-660, hsa-miR-126, hsa-miR-149* | 74.7% | 79.5% | 69.8% |
| SNO-335 | SEQ ID NO: 92, SEQ ID NO: 805, SEQ ID NO: 696 | SEQ ID NO: 805, SEQ ID NO: 414, SEQ ID NO: 850 | hsa-miR-126, hsa-miR-374a, hsa-miR-1207-5p | hsa-miR-126, hsa-miR-374a, hsa-miR-1207-5p | 63.2% | 66.3% | 60.0% |
| SNO-336 | SEQ ID NO: 805, SEQ ID NO: 414, SEQ ID NO: 850 | SEQ ID NO: 414, SEQ ID NO: 315 | hsa-miR-374a, hsa-miR-149*, hsa-miR-509-3-5p | hsa-miR-374a, hsa-miR-149*, hsa-miR-509-3-5p | 70.3% | 66.0% | 74.5% |
| SNO-337 | SEQ ID NO: 696, SEQ ID NO: 850, SEQ ID NO: 87 | SEQ ID NO: 696, SEQ ID NO: 315, SEQ ID NO: 87 | hsa-miR-149*, hsa-miR-1207-5p, hsa-miR-664 | hsa-miR-149*, hsa-miR-1207-5p, hsa-miR-664 | 72.2% | 68.5% | 75.8% |
| SNO-338 | SEQ ID NO: 850, SEQ ID NO: 315, SEQ ID NO: 888 | SEQ ID NO: 315, SEQ ID NO: 861 | hsa-miR-1207-5p, hsa-miR-509-3-5p, hsa-let-7i | hsa-miR-1207-5p, hsa-miR-509-3-5p, hsa-let-7i | 61.0% | 63.2% | 58.8% |
| SNO-339 | SEQ ID NO: 87, SEQ ID NO: 888, SEQ ID NO: 861 | SEQ ID NO: 87, SEQ ID NO: 888, SEQ ID NO: 838 | hsa-miR-509-3-5p, hsa-miR-664, hsa-let-7i, hsa-miR-1228* | hsa-miR-509-3-5p, hsa-miR-664, hsa-let-7i, hsa-miR-1228* | 72.2% | 73.3% | 71.0% |
| SNO-340 | SEQ ID NO: 861, SEQ ID NO: 838 | SEQ ID NO: 861, SEQ ID NO: 883 | hsa-miR-664, hsa-let-7i, hsa-miR-1228* | hsa-miR-664, hsa-let-7i, hsa-miR-1228* | 56.9% | 63.0% | 50.8% |
| SNO-341 | SEQ ID NO: 87, SEQ ID NO: 888, SEQ ID NO: 861 | SEQ ID NO: 87, SEQ ID NO: 888, SEQ ID NO: 861 | hsa-miR-664, hsa-let-7i, hsa-miR-1228* | hsa-miR-664, hsa-let-7i, hsa-miR-1228* | 68.3% | 71.3% | 65.3% |
| SNO-342 | SEQ ID NO: 888, SEQ ID NO: 861, SEQ ID NO: 883 | SEQ ID NO: 888, SEQ ID NO: 861, SEQ ID NO: 883 | hsa-miR-1184, hsa-let-7i, hsa-miR-101 | hsa-miR-1184, hsa-let-7i, hsa-miR-101 | 65.1% | 62.2% | 68.0% |

FIG 15 (continued)

| | | | | | |
|---------|--|--|-------|-------|-------|
| SNO-343 | SEQ ID NO: 861, SEQ ID NO: 838, SEQ ID NO: 199 | hsa-miR-1184, hsa-miR-1228*, hsa-miR-564 | 69.8% | 76.5% | 63.0% |
| SNO-344 | SEQ ID NO: 838, SEQ ID NO: 883, SEQ ID NO: 874 | hsa-miR-1228*, hsa-miR-101, hsa-miR-106b | 67.5% | 73.0% | 62.0% |
| SNO-345 | SEQ ID NO: 883, SEQ ID NO: 199, SEQ ID NO: 645 | hsa-miR-101, hsa-miR-564, hsa-miR-1908 | 68.4% | 71.2% | 65.7% |
| SNO-346 | SEQ ID NO: 199, SEQ ID NO: 874, SEQ ID NO: 710 | hsa-miR-564, hsa-miR-106b, hsa-miR-1469 | 68.4% | 73.7% | 63.2% |
| SNO-347 | SEQ ID NO: 874, SEQ ID NO: 645, SEQ ID NO: 442 | hsa-miR-106b, hsa-miR-1908, hsa-miR-342-3p | 72.8% | 67.5% | 78.0% |
| SNO-348 | SEQ ID NO: 645, SEQ ID NO: 710, SEQ ID NO: 542 | hsa-miR-1908, hsa-miR-1469, hsa-miR-222 | 62.1% | 74.5% | 49.7% |
| SNO-349 | SEQ ID NO: 710, SEQ ID NO: 442, SEQ ID NO: 632 | hsa-miR-1469, hsa-miR-342-3p, hsa-miR-1915 | 70.2% | 60.0% | 80.3% |
| SNO-350 | SEQ ID NO: 442, SEQ ID NO: 542, SEQ ID NO: 573 | hsa-miR-342-3p, hsa-miR-222, hsa-miR-210 | 82.9% | 84.0% | 81.8% |
| SNO-351 | SEQ ID NO: 542, SEQ ID NO: 632, SEQ ID NO: 762 | hsa-miR-222, hsa-miR-1915, hsa-miR-1295 | 69.1% | 67.2% | 71.0% |
| SNO-352 | SEQ ID NO: 632, SEQ ID NO: 573, SEQ ID NO: 378 | hsa-miR-1915, hsa-miR-210, hsa-miR-431 | 69.8% | 75.2% | 64.3% |
| SNO-353 | SEQ ID NO: 573, SEQ ID NO: 762, SEQ ID NO: 253 | hsa-miR-210, hsa-miR-1295, hsa-miR-526a | 68.7% | 64.0% | 73.3% |
| SNO-354 | SEQ ID NO: 762, SEQ ID NO: 378, SEQ ID NO: 89 | hsa-miR-1295, hsa-miR-431, hsa-miR-663 | 64.7% | 69.8% | 59.5% |
| SNO-355 | SEQ ID NO: 378, SEQ ID NO: 253, SEQ ID NO: 897 | hsa-miR-431, hsa-miR-526a, hsa-let-7d | 69.7% | 71.7% | 67.7% |
| SNO-356 | SEQ ID NO: 714, SEQ ID NO: 189, | hsa-miR-144*, hsa-miR-574-5p, hsa- | 72.0% | 71.2% | 72.8% |

FIG 15 (continued)

| | | | | | | |
|---------|---|--|--|-------|-------|-------|
| | | SEQ ID NO: 779 | hsa-miR-181a, hsa-miR-1280, hsa-miR-1280 | 78.1% | 83.0% | 73.2% |
| SNO-357 | SEQ ID NO: 673, SEQ ID NO: 779, SEQ ID NO: 92 | hsa-miR-574-5p, hsa-miR-660, hsa-miR-660 | 62.7% | 67.5% | 57.8% | |
| SNO-358 | SEQ ID NO: 189, SEQ ID NO: 92, SEQ ID NO: 805 | hsa-miR-1280, hsa-miR-126, hsa-miR-126 | 70.3% | 74.8% | 65.7% | |
| SNO-359 | SEQ ID NO: 779, SEQ ID NO: 805, SEQ ID NO: 414 | hsa-miR-660, hsa-miR-374a, hsa-miR-374a | 63.1% | 60.7% | 65.5% | |
| SNO-360 | SEQ ID NO: 92, SEQ ID NO: 414, SEQ ID NO: 696 | hsa-miR-126, hsa-miR-149*, hsa-miR-149* | 64.3% | 65.8% | 62.7% | |
| SNO-361 | SEQ ID NO: 805, SEQ ID NO: 696, SEQ ID NO: 850 | hsa-miR-374a, hsa-miR-1207-5p, hsa-miR-1207-5p | 71.3% | 74.3% | 68.3% | |
| SNO-362 | SEQ ID NO: 414, SEQ ID NO: 850, SEQ ID NO: 315 | hsa-miR-149*, hsa-miR-509-3-5p, hsa-miR-509-3-5p | 70.8% | 70.3% | 71.3% | |
| SNO-363 | SEQ ID NO: 696, SEQ ID NO: 315, SEQ ID NO: 87 | hsa-miR-664, hsa-miR-664 | 64.7% | 65.8% | 63.5% | |
| SNO-364 | SEQ ID NO: 850, SEQ ID NO: 87, SEQ ID NO: 888 | hsa-miR-1207-5p, hsa-miR-664, hsa-let-7i | 61.0% | 76.2% | 45.8% | |
| SNO-365 | SEQ ID NO: 315, SEQ ID NO: 888, SEQ ID NO: 861 | hsa-miR-509-3-5p, hsa-let-7i, hsa-miR-1184 | 71.5% | 76.8% | 66.2% | |
| SNO-366 | SEQ ID NO: 87, SEQ ID NO: 861, SEQ ID NO: 838 | hsa-miR-664, hsa-miR-1184, hsa-miR-1228* | 68.3% | 68.7% | 67.8% | |
| SNO-367 | SEQ ID NO: 888, SEQ ID NO: 838, SEQ ID NO: 883 | hsa-let-7i, hsa-miR-1228*, hsa-miR-101 | 68.5% | 68.5% | 68.5% | |
| SNO-368 | SEQ ID NO: 861, SEQ ID NO: 883, SEQ ID NO: 199 | hsa-miR-1184, hsa-miR-101, hsa-miR-564 | 73.6% | 78.5% | 68.7% | |
| SNO-369 | SEQ ID NO: 838, SEQ ID NO: 199, SEQ ID NO: 874 | hsa-miR-1228*, hsa-miR-564, hsa-miR-106b | | | | |

FIG 15 (continued)

| | | | | | |
|---------|--|--|-------|-------|-------|
| SNO-370 | SEQ ID NO: 883, SEQ ID NO: 874, SEQ ID NO: 645 | hsa-miR-101, hsa-miR-106b, hsa-miR-1908 | 64.9% | 75.2% | 54.7% |
| SNO-371 | SEQ ID NO: 199, SEQ ID NO: 645, SEQ ID NO: 710 | hsa-miR-564, hsa-miR-1908, hsa-miR-1469 | 62.1% | 67.7% | 56.5% |
| SNO-372 | SEQ ID NO: 874, SEQ ID NO: 710, SEQ ID NO: 442 | hsa-miR-106b, hsa-miR-1469, hsa-miR-342-3p | 74.3% | 66.8% | 81.7% |
| SNO-373 | SEQ ID NO: 645, SEQ ID NO: 442, SEQ ID NO: 542 | hsa-miR-1908, hsa-miR-342-3p, hsa-miR-222 | 73.7% | 69.8% | 77.5% |
| SNO-374 | SEQ ID NO: 710, SEQ ID NO: 542, SEQ ID NO: 632 | hsa-miR-1469, hsa-miR-222, hsa-miR-1915 | 63.0% | 68.3% | 57.7% |
| SNO-375 | SEQ ID NO: 442, SEQ ID NO: 632, SEQ ID NO: 573 | hsa-miR-342-3p, hsa-miR-1915, hsa-miR-210 | 79.4% | 77.3% | 81.5% |
| SNO-376 | SEQ ID NO: 542, SEQ ID NO: 573, SEQ ID NO: 762 | hsa-miR-222, hsa-miR-210, hsa-miR-1295 | 75.7% | 75.7% | 75.7% |
| SNO-377 | SEQ ID NO: 632, SEQ ID NO: 762, SEQ ID NO: 378 | hsa-miR-1915, hsa-miR-1295, hsa-miR-431 | 65.3% | 67.0% | 63.7% |
| SNO-378 | SEQ ID NO: 573, SEQ ID NO: 378, SEQ ID NO: 253 | hsa-miR-210, hsa-miR-431, hsa-miR-526a | 67.3% | 73.5% | 61.0% |
| SNO-379 | SEQ ID NO: 762, SEQ ID NO: 253, SEQ ID NO: 89 | hsa-miR-1295, hsa-miR-526a, hsa-miR-663 | 63.3% | 67.8% | 58.8% |
| SNO-380 | SEQ ID NO: 378, SEQ ID NO: 89, SEQ ID NO: 897 | hsa-miR-431, hsa-miR-663, hsa-let-7d | 68.2% | 69.2% | 67.2% |
| SNO-381 | SEQ ID NO: 714, SEQ ID NO: 189, SEQ ID NO: 92 | hsa-miR-144*, hsa-miR-574-5p, hsa-miR-660 | 73.0% | 72.7% | 73.3% |
| SNO-382 | SEQ ID NO: 673, SEQ ID NO: 779, SEQ ID NO: 805 | hsa-miR-181a, hsa-miR-1280, hsa-miR-126 | 76.5% | 83.0% | 70.0% |
| SNO-383 | SEQ ID NO: 189, SEQ ID NO: 92, SEQ | hsa-miR-574-5p, hsa-miR-660, hsa-miR-660 | 65.4% | 67.5% | 63.3% |

FIG 15 (continued)

| | | | | |
|---------|--|---|-------|-------------|
| | ID NO: 414 | miR-374a | | |
| SNO-384 | SEQ ID NO: 779, SEQ ID NO: 805, SEQ ID NO: 696 | hsa-miR-1280, hsa-miR-126, hsa-miR-149* | 68.6% | 75.7% 61.5% |
| SNO-385 | SEQ ID NO: 92, SEQ ID NO: 414, SEQ ID NO: 850 | hsa-miR-660, hsa-miR-374a, hsa-miR-1207-5p | 63.3% | 58.3% 68.3% |
| SNO-386 | SEQ ID NO: 805, SEQ ID NO: 696, SEQ ID NO: 315 | hsa-miR-126, hsa-miR-149*, hsa-miR-509-3-5p | 71.0% | 73.5% 68.5% |
| SNO-387 | SEQ ID NO: 414, SEQ ID NO: 850, SEQ ID NO: 87 | hsa-miR-374a, hsa-miR-1207-5p, hsa-miR-664 | 69.9% | 66.2% 73.7% |
| SNO-388 | SEQ ID NO: 696, SEQ ID NO: 315, SEQ ID NO: 888 | hsa-miR-149*, hsa-miR-509-3-5p, hsa-let-7i | 70.2% | 66.8% 73.5% |
| SNO-389 | SEQ ID NO: 850, SEQ ID NO: 87, SEQ ID NO: 861 | hsa-miR-1207-5p, hsa-miR-664, hsa-miR-1184 | 68.5% | 72.5% 64.5% |
| SNO-390 | SEQ ID NO: 315, SEQ ID NO: 850, SEQ ID NO: 888, SEQ ID NO: 838 | hsa-miR-509-3-5p, hsa-let-7i, hsa-miR-1228* | 74.2% | 77.5% 70.8% |
| SNO-391 | SEQ ID NO: 87, SEQ ID NO: 861, SEQ ID NO: 883 | hsa-miR-664, hsa-miR-1184, hsa-miR-101 | 74.6% | 71.8% 77.3% |
| SNO-392 | SEQ ID NO: 888, SEQ ID NO: 838, SEQ ID NO: 199 | hsa-let-7i, hsa-miR-1228*, hsa-miR-564 | 69.0% | 71.2% 66.8% |
| SNO-393 | SEQ ID NO: 861, SEQ ID NO: 883, SEQ ID NO: 874 | hsa-miR-1184, hsa-miR-101, hsa-miR-106b | 69.6% | 77.3% 61.8% |
| SNO-394 | SEQ ID NO: 838, SEQ ID NO: 199, SEQ ID NO: 645 | hsa-miR-1228*, hsa-miR-564, hsa-miR-1908 | 68.2% | 71.8% 64.5% |
| SNO-395 | SEQ ID NO: 883, SEQ ID NO: 874, SEQ ID NO: 710 | hsa-miR-101, hsa-miR-106b, hsa-miR-1469 | 69.7% | 70.5% 68.8% |
| SNO-396 | SEQ ID NO: 199, SEQ ID NO: 645, SEQ ID NO: 442 | hsa-miR-564, hsa-miR-1908, hsa-miR-342-3p | 72.8% | 68.2% 77.5% |

FIG 15 (continued)

| | | | | | |
|---------|---|--|-------|-------|-------|
| SNO-397 | SEQ ID NO: 874, SEQ ID NO: 710, SEQ ID NO: 542 | hsa-miR-106b, hsa-miR-1469, hsa- miR-222 | 63.5% | 70.2% | 56.8% |
| SNO-398 | SEQ ID NO: 645, SEQ ID NO: 442, SEQ ID NO: 632 | hsa-miR-1908, hsa-miR-342-3p, hsa- miR-1915 | 66.3% | 58.3% | 74.2% |
| SNO-399 | SEQ ID NO: 710, SEQ ID NO: 542, SEQ ID NO: 573 | hsa-miR-1469, hsa-miR-222, hsa-miR- 210 | 71.0% | 70.3% | 71.7% |
| SNO-400 | SEQ ID NO: 442, SEQ ID NO: 632, SEQ ID NO: 762 | hsa-miR-342-3p, hsa-miR-1915, hsa- miR-1295 | 73.4% | 61.2% | 85.7% |
| SNO-401 | SEQ ID NO: 542, SEQ ID NO: 573, SEQ ID NO: 378 | hsa-miR-222, hsa-miR-210, hsa-miR- 431 | 71.2% | 72.3% | 70.0% |
| SNO-402 | SEQ ID NO: 632, SEQ ID NO: 762, SEQ ID NO: 253 | hsa-miR-1915, hsa-miR-1295, hsa- miR-526a | 68.1% | 68.7% | 67.5% |
| SNO-403 | SEQ ID NO: 573, SEQ ID NO: 378, SEQ ID NO: 89 | hsa-miR-210, hsa-miR-431, hsa-miR- 663 | 69.3% | 77.7% | 60.8% |
| SNO-404 | SEQ ID NO: 762, SEQ ID NO: 253, SEQ ID NO: 897 | hsa-miR-1295, hsa-miR-526a, hsa-let- 7d | 69.9% | 66.3% | 73.5% |
| SNO-405 | SEQ ID NO: 714, SEQ ID NO: 673, SEQ ID NO: 92 | hsa-miR-144*, hsa-miR-181a, hsa- miR-660 | 74.8% | 77.0% | 72.7% |
| SNO-406 | SEQ ID NO: 673, SEQ ID NO: 189, SEQ ID NO: 805 | hsa-miR-181a, hsa-miR-574-5p, hsa- miR-126 | 70.1% | 67.7% | 72.5% |
| SNO-407 | SEQ ID NO: 189, SEQ ID NO: 779, SEQ ID NO: 414 | hsa-miR-574-5p, hsa-miR-1280, hsa- miR-374a | 68.9% | 69.0% | 68.8% |
| SNO-408 | SEQ ID NO: 779, SEQ ID NO: 92, SEQ ID NO: 696 | hsa-miR-1280, hsa-miR-660, hsa-miR- 149* | 72.8% | 75.5% | 70.0% |
| SNO-409 | SEQ ID NO: 92, SEQ ID NO: 805, SEQ ID NO: 850 | hsa-miR-660, hsa-miR-126, hsa- miR-1207-5p | 62.8% | 60.5% | 65.2% |
| SNO-410 | SEQ ID NO: 805, SEQ ID NO: 414, | hsa-miR-126, hsa-miR-374a, hsa-miR- | 66.5% | 72.5% | 60.5% |

FIG 15 (continued)

| | | | | |
|---------|---|--|-------|----------------|
| | SEQ ID NO: 315 | 509-3-5p | | |
| SNO-411 | SEQ ID NO: 414, SEQ ID NO: 696, SEQ ID NO: 87 | hsa-miR-374a, hsa-miR-149*, hsa- miR-664 | 72.8% | 64.0% 81.7% |
| SNO-412 | SEQ ID NO: 696, SEQ ID NO: 850, SEQ ID NO: 888 | hsa-miR-149*, hsa-miR-1207-5p, hsa- let-7i | 62.7% | 65.0% 60.3% |
| SNO-413 | SEQ ID NO: 850, SEQ ID NO: 315, SEQ ID NO: 861 | hsa-miR-1207-5p, hsa-miR-509-3-5p, hsa-miR-1184 | 70.7% | 72.8% 68.5% |
| SNO-414 | SEQ ID NO: 315, SEQ ID NO: 87, SEQ ID NO: 838 | hsa-miR-509-3-5p, hsa-miR-664, hsa- miR-1228* | 74.2% | 77.2% 71.2% |
| SNO-415 | SEQ ID NO: 87, SEQ ID NO: 888, SEQ ID NO: 883 | hsa-miR-664, hsa-let-7i, hsa-miR-101 | 77.1% | 71.3% 82.8% |
| SNO-416 | SEQ ID NO: 888, SEQ ID NO: 861, SEQ ID NO: 199 | hsa-let-7i, hsa-miR-1184, hsa-miR-564 | 58.9% | 62.5% 55.3% |
| SNO-417 | SEQ ID NO: 861, SEQ ID NO: 838, SEQ ID NO: 874 | hsa-miR-1184, hsa-miR-1228*, hsa- miR-106b | 72.3% | 85.0% 59.7% |
| SNO-418 | SEQ ID NO: 838, SEQ ID NO: 883, SEQ ID NO: 645 | hsa-miR-1228*, hsa-miR-101, hsa- miR-1908 | 64.9% | 63.7% 66.2% |
| SNO-419 | SEQ ID NO: 883, SEQ ID NO: 199, SEQ ID NO: 710 | hsa-miR-101, hsa-miR-564, hsa-miR- 1469 | 72.6% | 70.7% 74.5% |
| SNO-420 | SEQ ID NO: 199, SEQ ID NO: 874, SEQ ID NO: 442 | hsa-miR-564, hsa-miR-106b, hsa-miR- 342-3p | 81.3% | 72.8% 89.8% |
| SNO-421 | SEQ ID NO: 874, SEQ ID NO: 645, SEQ ID NO: 542 | hsa-miR-106b, hsa-miR-1908, hsa- miR-222 | 65.7% | 78.5% 52.8% |
| SNO-422 | SEQ ID NO: 645, SEQ ID NO: 710, SEQ ID NO: 632 | hsa-miR-1908, hsa-miR-1469, hsa- miR-1915 | 59.7% | 65.7% 53.7% |
| SNO-423 | SEQ ID NO: 710, SEQ ID NO: 442, SEQ ID NO: 573 | hsa-miR-1469, hsa-miR-342-3p, hsa- miR-210 | 75.8% | 76.2% 75.5% |

FIG 15 (continued)

| | | | | | |
|---------|--|--|-------|-------|-------|
| SNO-424 | SEQ ID NO: 442, SEQ ID NO: 542, SEQ ID NO: 762 | hsa-miR-342-3p, hsa-miR-222, hsa-miR-1295 | 77.3% | 72.3% | 82.3% |
| SNO-425 | SEQ ID NO: 542, SEQ ID NO: 632, SEQ ID NO: 378 | hsa-miR-222, hsa-miR-1915, hsa-miR-431 | 62.3% | 71.5% | 53.2% |
| SNO-426 | SEQ ID NO: 632, SEQ ID NO: 573, SEQ ID NO: 253 | hsa-miR-1915, hsa-miR-210, hsa-miR-526a | 69.5% | 75.3% | 63.7% |
| SNO-427 | SEQ ID NO: 573, SEQ ID NO: 762, SEQ ID NO: 89 | hsa-miR-210, hsa-miR-1295, hsa-miR-663 | 72.3% | 70.3% | 74.2% |
| SNO-428 | SEQ ID NO: 762, SEQ ID NO: 378, SEQ ID NO: 897 | hsa-miR-1295, hsa-miR-431, hsa-let-7d | 69.4% | 67.3% | 71.5% |
| SNO-429 | SEQ ID NO: 714, SEQ ID NO: 779, SEQ ID NO: 92 | hsa-miR-144*, hsa-miR-1280, hsa-miR-660 | 75.1% | 79.7% | 70.5% |
| SNO-430 | SEQ ID NO: 673, SEQ ID NO: 92, SEQ ID NO: 805 | hsa-miR-181a, hsa-miR-660, hsa-miR-126 | 73.2% | 74.3% | 72.0% |
| SNO-431 | SEQ ID NO: 189, SEQ ID NO: 805, SEQ ID NO: 414 | hsa-miR-574-5p, hsa-miR-126, hsa-miR-374a | 63.5% | 64.8% | 62.2% |
| SNO-432 | SEQ ID NO: 779, SEQ ID NO: 414, SEQ ID NO: 696 | hsa-miR-1280, hsa-miR-374a, hsa-miR-149* | 71.9% | 70.8% | 73.0% |
| SNO-433 | SEQ ID NO: 92, SEQ ID NO: 696, SEQ ID NO: 850 | hsa-miR-660, hsa-miR-149*, hsa-miR-1207-5p | 58.3% | 57.8% | 58.7% |
| SNO-434 | SEQ ID NO: 805, SEQ ID NO: 850, SEQ ID NO: 315 | hsa-miR-126, hsa-miR-1207-5p, hsa-miR-509-3-5p | 69.3% | 71.3% | 67.3% |
| SNO-435 | SEQ ID NO: 414, SEQ ID NO: 315, SEQ ID NO: 87 | hsa-miR-374a, hsa-miR-509-3-5p, hsa-miR-664 | 65.3% | 70.7% | 60.0% |
| SNO-436 | SEQ ID NO: 696, SEQ ID NO: 87, SEQ ID NO: 888 | hsa-miR-149*, hsa-miR-664, hsa-let-7i | 69.3% | 63.5% | 75.0% |
| SNO-437 | SEQ ID NO: 850, SEQ ID NO: 888, | hsa-miR-1207-5p, hsa-let-7i, hsa-miR- | 68.8% | 70.5% | 67.2% |

FIG 15 (continued)

| | | | | | |
|---------|--|---|-------|-------|-------|
| | | SEQ ID NO: 861 | 1184 | | |
| SNO-438 | SEQ ID NO: 315, SEQ ID NO: 861, SEQ ID NO: 838 | hsa-miR-509-3-5p, hsa-miR-1184, hsa-miR-1228* | 74.2% | 80.8% | 67.5% |
| SNO-439 | SEQ ID NO: 87, SEQ ID NO: 838, SEQ ID NO: 883 | hsa-miR-664, hsa-miR-1228*, hsa-miR-101 | 77.9% | 76.0% | 79.8% |
| SNO-440 | SEQ ID NO: 888, SEQ ID NO: 883, SEQ ID NO: 199 | hsa-let-7i, hsa-miR-101, hsa-miR-564 | 72.2% | 69.7% | 74.7% |
| SNO-441 | SEQ ID NO: 861, SEQ ID NO: 199, SEQ ID NO: 874 | hsa-miR-1184, hsa-miR-564, hsa-miR-106b | 69.4% | 71.3% | 67.5% |
| SNO-442 | SEQ ID NO: 838, SEQ ID NO: 874, SEQ ID NO: 645 | hsa-miR-1228*, hsa-miR-106b, hsa-miR-1908 | 72.2% | 79.5% | 64.8% |
| SNO-443 | SEQ ID NO: 883, SEQ ID NO: 645, SEQ ID NO: 710 | hsa-miR-101, hsa-miR-1908, hsa-miR-1469 | 63.0% | 60.2% | 65.8% |
| SNO-444 | SEQ ID NO: 199, SEQ ID NO: 710, SEQ ID NO: 442 | hsa-miR-564, hsa-miR-1469, hsa-miR-342-3p | 73.9% | 63.2% | 84.7% |
| SNO-445 | SEQ ID NO: 874, SEQ ID NO: 442, SEQ ID NO: 542 | hsa-miR-106b, hsa-miR-342-3p, hsa-miR-222 | 75.8% | 69.7% | 81.8% |
| SNO-446 | SEQ ID NO: 645, SEQ ID NO: 542, SEQ ID NO: 632 | hsa-miR-1908, hsa-miR-222, hsa-miR-1915 | 61.7% | 75.0% | 48.3% |
| SNO-447 | SEQ ID NO: 710, SEQ ID NO: 632, SEQ ID NO: 573 | hsa-miR-1469, hsa-miR-1915, hsa-miR-210 | 70.8% | 67.3% | 74.2% |
| SNO-448 | SEQ ID NO: 442, SEQ ID NO: 573, SEQ ID NO: 762 | hsa-miR-342-3p, hsa-miR-210, hsa-miR-1295 | 76.3% | 78.0% | 74.7% |
| SNO-449 | SEQ ID NO: 542, SEQ ID NO: 762, SEQ ID NO: 378 | hsa-miR-222, hsa-miR-1295, hsa-miR-431 | 69.9% | 69.8% | 70.0% |
| SNO-450 | SEQ ID NO: 632, SEQ ID NO: 378, SEQ ID NO: 253 | hsa-miR-1915, hsa-miR-431, hsa-miR-526a | 69.5% | 79.2% | 59.8% |

FIG 15 (continued)

| | | | | | |
|---------|---|--|-------|-------|-------|
| SNO-451 | SEQ ID NO: 573, SEQ ID NO: 253, SEQ ID NO: 89 | hsa-miR-210, hsa-miR-526a, hsa-miR-663 | 68.8% | 77.2% | 60.3% |
| SNO-452 | SEQ ID NO: 762, SEQ ID NO: 89, SEQ ID NO: 89 | hsa-miR-1295, hsa-miR-663, hsa-let-7d | 70.3% | 66.7% | 74.0% |
| SNO-453 | SEQ ID NO: 709, SEQ ID NO: 673 | hsa-miR-146a, hsa-miR-181a | 69.8% | 64.2% | 75.3% |
| SNO-454 | SEQ ID NO: 92, SEQ ID NO: 478 | hsa-miR-660, hsa-miR-30e | 63.5% | 62.2% | 64.8% |
| SNO-455 | SEQ ID NO: 478, SEQ ID NO: 805 | hsa-miR-30e, hsa-miR-126 | 65.4% | 71.5% | 59.3% |
| SNO-456 | SEQ ID NO: 838, SEQ ID NO: 395 | hsa-miR-1228*, hsa-miR-383 | 74.5% | 80.0% | 69.0% |
| SNO-457 | SEQ ID NO: 395, SEQ ID NO: 883 | hsa-miR-383, hsa-miR-101 | 77.1% | 81.2% | 73.0% |
| SNO-458 | SEQ ID NO: 542, SEQ ID NO: 770 | hsa-miR-222, hsa-miR-1289 | 66.6% | 68.7% | 64.5% |
| SNO-459 | SEQ ID NO: 770, SEQ ID NO: 632 | hsa-miR-1289, hsa-miR-1915 | 65.8% | 61.8% | 69.8% |
| SNO-460 | SEQ ID NO: 709, SEQ ID NO: 189 | hsa-miR-146a, hsa-miR-574-5p | 61.8% | 60.8% | 62.7% |
| SNO-461 | SEQ ID NO: 779, SEQ ID NO: 478 | hsa-miR-1280, hsa-miR-30e | 73.5% | 79.8% | 67.2% |
| SNO-462 | SEQ ID NO: 478, SEQ ID NO: 414 | hsa-miR-30e, hsa-miR-374a | 68.3% | 68.2% | 68.5% |
| SNO-463 | SEQ ID NO: 861, SEQ ID NO: 395 | hsa-miR-1184, hsa-miR-383 | 73.6% | 76.8% | 70.3% |
| SNO-464 | SEQ ID NO: 395, SEQ ID NO: 199 | hsa-miR-383, hsa-miR-564 | 73.3% | 73.7% | 72.8% |
| SNO-465 | SEQ ID NO: 442, SEQ ID NO: 770 | hsa-miR-342-3p, hsa-miR-1289 | 70.8% | 59.7% | 82.0% |
| SNO-466 | SEQ ID NO: 770, SEQ ID NO: 573 | hsa-miR-1289, hsa-miR-210 | 70.8% | 67.7% | 74.0% |
| SNO-467 | SEQ ID NO: 709, SEQ ID NO: 779 | hsa-miR-146a, hsa-miR-1280 | 80.1% | 81.7% | 78.5% |
| SNO-468 | SEQ ID NO: 189, SEQ ID NO: 478 | hsa-miR-574-5p, hsa-miR-30e | 68.9% | 67.7% | 70.2% |
| SNO-469 | SEQ ID NO: 478, SEQ ID NO: 696 | hsa-miR-30e, hsa-miR-149* | 65.2% | 64.8% | 65.5% |
| SNO-470 | SEQ ID NO: 888, SEQ ID NO: 395 | hsa-let-7i, hsa-miR-383 | 68.0% | 67.5% | 68.5% |
| SNO-471 | SEQ ID NO: 395, SEQ ID NO: 874 | hsa-miR-383, hsa-miR-106b | 73.2% | 76.2% | 70.2% |
| SNO-472 | SEQ ID NO: 710, SEQ ID NO: 770 | hsa-miR-1469, hsa-miR-1289 | 62.8% | 55.3% | 70.2% |
| SNO-473 | SEQ ID NO: 770, SEQ ID NO: 762 | hsa-miR-1289, hsa-miR-1295 | 64.8% | 57.3% | 72.2% |
| SNO-474 | SEQ ID NO: 714, SEQ ID NO: 709, | hsa-miR-144*, hsa-miR-146a, hsa- | 76.8% | 76.2% | 77.3% |

FIG 15 (continued)

| | | | |
|---------|--|---|-------------------------|
| SNO-475 | SEQ ID NO: 709, SEQ ID NO: 673, SEQ ID NO: 189 | hsa-miR-146a, hsa-miR-181a, hsa-miR-574-5p | 73.0% 67.7% 78.3% |
| SNO-476 | SEQ ID NO: 779, SEQ ID NO: 92, SEQ ID NO: 478 | hsa-miR-1280, hsa-miR-660, hsa-miR-30e, hsa-miR-126 | 75.0% 85.0% 65.0% 63.8% |
| SNO-477 | SEQ ID NO: 92, SEQ ID NO: 478, SEQ ID NO: 805 | hsa-miR-660, hsa-miR-30e, hsa-miR-126 | 65.5% 67.2% |
| SNO-478 | SEQ ID NO: 478, SEQ ID NO: 805, SEQ ID NO: 414 | hsa-miR-30e, hsa-miR-126, hsa-miR-374a | 68.8% 70.3% 67.2% |
| SNO-479 | SEQ ID NO: 861, SEQ ID NO: 838, SEQ ID NO: 395 | hsa-miR-1184, hsa-miR-1228*, hsa-miR-383 | 73.2% 76.7% 69.7% |
| SNO-480 | SEQ ID NO: 838, SEQ ID NO: 395, SEQ ID NO: 883 | hsa-miR-1228*, hsa-miR-383, hsa-miR-101 | 78.0% 86.5% 69.5% |
| SNO-481 | SEQ ID NO: 395, SEQ ID NO: 883, SEQ ID NO: 199 | hsa-miR-383, hsa-miR-101, hsa-miR-564 | 77.4% 82.5% 72.3% |
| SNO-482 | SEQ ID NO: 442, SEQ ID NO: 542, SEQ ID NO: 770 | hsa-miR-342-3p, hsa-miR-222, hsa-miR-1289 | 73.9% 69.3% 78.5% |
| SNO-483 | SEQ ID NO: 542, SEQ ID NO: 770, SEQ ID NO: 632 | hsa-miR-222, hsa-miR-1289, hsa-miR-1915 | 67.4% 72.8% 62.0% |
| SNO-484 | SEQ ID NO: 770, SEQ ID NO: 632, SEQ ID NO: 573 | hsa-miR-1289, hsa-miR-1915, hsa-miR-210 | 71.3% 67.5% 75.2% |
| SNO-485 | SEQ ID NO: 714, SEQ ID NO: 709, SEQ ID NO: 189 | hsa-miR-144*, hsa-miR-146a, hsa-miR-574-5p | 77.2% 75.5% 78.8% |
| SNO-486 | SEQ ID NO: 709, SEQ ID NO: 673, SEQ ID NO: 779 | hsa-miR-146a, hsa-miR-181a, hsa-miR-1280 | 81.3% 85.0% 77.7% |
| SNO-487 | SEQ ID NO: 189, SEQ ID NO: 779, SEQ ID NO: 478 | hsa-miR-574-5p, hsa-miR-1280, hsa-miR-30e | 74.4% 81.8% 67.0% |

FIG 15 (continued)

| | | | | | |
|---------|--|--|-------|-------|-------|
| SNO-488 | SEQ ID NO: 92, SEQ ID NO: 478, SEQ ID NO: 414 | hsa-miR-660, hsa-miR-30e, hsa-miR-374a | 65.6% | 65.2% | 66.0% |
| SNO-489 | SEQ ID NO: 478, SEQ ID NO: 805, SEQ ID NO: 696 | hsa-miR-30e, hsa-miR-126, hsa-miR-149* | 68.1% | 69.3% | 66.8% |
| SNO-490 | SEQ ID NO: 888, SEQ ID NO: 861, SEQ ID NO: 395 | hsa-let-7i, hsa-miR-1184, hsa-miR-383 | 70.4% | 76.8% | 64.0% |
| SNO-491 | SEQ ID NO: 838, SEQ ID NO: 395, SEQ ID NO: 199 | hsa-miR-1228*, hsa-miR-383, hsa-miR-564 | 74.7% | 77.0% | 72.3% |
| SNO-492 | SEQ ID NO: 395, SEQ ID NO: 883, SEQ ID NO: 874 | hsa-miR-383, hsa-miR-101, hsa-miR-106b | 79.0% | 86.0% | 72.0% |
| SNO-493 | SEQ ID NO: 710, SEQ ID NO: 442, SEQ ID NO: 770 | hsa-miR-1469, hsa-miR-342-3p, hsa-miR-1289 | 71.2% | 61.2% | 81.2% |
| SNO-494 | SEQ ID NO: 542, SEQ ID NO: 770, SEQ ID NO: 573 | hsa-miR-222, hsa-miR-1289, hsa-miR-210 | 75.4% | 75.7% | 75.2% |
| SNO-495 | SEQ ID NO: 770, SEQ ID NO: 632, SEQ ID NO: 762 | hsa-miR-1289, hsa-miR-1915, hsa-miR-1295 | 65.1% | 57.7% | 72.5% |
| SNO-496 | SEQ ID NO: 709, SEQ ID NO: 189, SEQ ID NO: 779 | hsa-miR-146a, hsa-miR-574-5p, hsa-miR-1280 | 80.4% | 83.7% | 77.2% |
| SNO-497 | SEQ ID NO: 189, SEQ ID NO: 92, SEQ ID NO: 478 | hsa-miR-574-5p, hsa-miR-660, hsa-miR-30e | 66.9% | 67.3% | 66.5% |
| SNO-498 | SEQ ID NO: 779, SEQ ID NO: 478, SEQ ID NO: 805 | hsa-miR-1280, hsa-miR-30e, hsa-miR-126 | 73.8% | 82.3% | 65.2% |
| SNO-499 | SEQ ID NO: 478, SEQ ID NO: 414, SEQ ID NO: 696 | hsa-miR-30e, hsa-miR-374a, hsa-miR-149* | 69.1% | 63.8% | 74.3% |
| SNO-500 | SEQ ID NO: 888, SEQ ID NO: 838, SEQ ID NO: 395 | hsa-let-7i, hsa-miR-1228*, hsa-miR-383 | 72.7% | 78.0% | 67.3% |
| SNO-501 | SEQ ID NO: 861, SEQ ID NO: 395, | hsa-miR-1184, hsa-miR-383, hsa-miR- | 75.4% | 81.0% | 69.8% |

FIG 15 (continued)

| | | | | | |
|---------|--|--|-------|-------|-------|
| | | SEQ ID NO: 883 | 101 | | |
| SNO-502 | SEQ ID NO: 395, SEQ ID NO: 199, SEQ ID NO: 874 | hsa-miR-383, hsa-miR-564, hsa-miR-106b | 77.7% | 81.3% | 74.0% |
| SNO-503 | SEQ ID NO: 710, SEQ ID NO: 542, SEQ ID NO: 770 | hsa-miR-1469, hsa-miR-222, hsa-miR-1289 | 67.2% | 71.7% | 62.7% |
| SNO-504 | SEQ ID NO: 442, SEQ ID NO: 770, SEQ ID NO: 632 | hsa-miR-342-3p, hsa-miR-1289, hsa-miR-1915 | 71.5% | 62.7% | 80.3% |
| SNO-505 | SEQ ID NO: 770, SEQ ID NO: 573, SEQ ID NO: 762 | hsa-miR-1289, hsa-miR-210, hsa-miR-1295 | 73.8% | 71.8% | 75.8% |
| SNO-506 | SEQ ID NO: 709, SEQ ID NO: 189, SEQ ID NO: 92 | hsa-miR-146a, hsa-miR-574-5p, hsa-miR-660 | 66.2% | 62.3% | 70.0% |
| SNO-507 | SEQ ID NO: 673, SEQ ID NO: 779, SEQ ID NO: 478 | hsa-miR-181a, hsa-miR-1280, hsa-miR-30e | 80.1% | 87.2% | 73.0% |
| SNO-508 | SEQ ID NO: 779, SEQ ID NO: 478, SEQ ID NO: 414 | hsa-miR-1280, hsa-miR-30e, hsa-miR-374a | 74.3% | 79.0% | 69.7% |
| SNO-509 | SEQ ID NO: 478, SEQ ID NO: 414, SEQ ID NO: 850 | hsa-miR-30e, hsa-miR-374a, hsa-miR-1207-5p | 62.3% | 58.5% | 66.0% |
| SNO-510 | SEQ ID NO: 87, SEQ ID NO: 861, SEQ ID NO: 395 | hsa-miR-664, hsa-miR-1184, hsa-miR-383 | 71.4% | 73.7% | 69.2% |
| SNO-511 | SEQ ID NO: 861, SEQ ID NO: 395, SEQ ID NO: 199 | hsa-miR-1184, hsa-miR-383, hsa-miR-564 | 72.8% | 71.3% | 74.2% |
| SNO-512 | SEQ ID NO: 395, SEQ ID NO: 199, SEQ ID NO: 645 | hsa-miR-383, hsa-miR-564, hsa-miR-1908 | 72.8% | 73.8% | 71.8% |
| SNO-513 | SEQ ID NO: 645, SEQ ID NO: 442, SEQ ID NO: 770 | hsa-miR-1908, hsa-miR-342-3p, hsa-miR-1289 | 68.3% | 60.0% | 76.5% |
| SNO-514 | SEQ ID NO: 442, SEQ ID NO: 770, SEQ ID NO: 573 | hsa-miR-342-3p, hsa-miR-1289, hsa-miR-210 | 76.0% | 73.7% | 78.3% |

FIG. 15 (continued)

| | | | | | |
|---------|---|---|-------|-------|-------|
| SNO-515 | SEQ ID NO: 714, SEQ ID NO: 709, SEQ ID NO: 779 | hsa-miR-144*, hsa-miR-146a, hsa- miR-1280 | 79.8% | 81.3% | 78.2% |
| SNO-516 | SEQ ID NO: 709, SEQ ID NO: 673, SEQ ID NO: 92 | hsa-miR-146a, hsa-miR-181a, hsa- miR-660 | 71.7% | 69.0% | 74.3% |
| SNO-517 | SEQ ID NO: 673, SEQ ID NO: 189, SEQ ID NO: 478 | hsa-miR-181a, hsa-miR-574-5p, hsa- miR-30e | 71.9% | 65.2% | 78.7% |
| SNO-518 | SEQ ID NO: 92, SEQ ID NO: 478, SEQ ID NO: 696 | hsa-miR-660, hsa-miR-30e, hsa-miR- 149* | 64.3% | 65.8% | 62.8% |
| SNO-519 | SEQ ID NO: 478, SEQ ID NO: 805, SEQ ID NO: 850 | hsa-miR-30e, hsa-miR-126, hsa-miR- 1207-5p | 66.7% | 67.8% | 65.5% |
| SNO-520 | SEQ ID NO: 87, SEQ ID NO: 888, SEQ ID NO: 395 | hsa-miR-664, hsa-let-7i, hsa-miR-383 | 69.2% | 64.2% | 74.2% |
| SNO-521 | SEQ ID NO: 838, SEQ ID NO: 395, SEQ ID NO: 874 | hsa-miR-1228*, hsa-miR-383, hsa- miR-106b | 76.9% | 84.8% | 69.0% |
| SNO-522 | SEQ ID NO: 395, SEQ ID NO: 883, SEQ ID NO: 645 | hsa-miR-383, hsa-miR-101, hsa-miR- 1908 | 77.8% | 83.5% | 72.2% |
| SNO-523 | SEQ ID NO: 645, SEQ ID NO: 710, SEQ ID NO: 770 | hsa-miR-1908, hsa-miR-1469, hsa- miR-1289 | 57.2% | 63.5% | 50.8% |
| SNO-524 | SEQ ID NO: 542, SEQ ID NO: 770, SEQ ID NO: 762 | hsa-miR-222, hsa-miR-1289, hsa-miR- 1295 | 70.9% | 69.5% | 72.3% |
| SNO-525 | SEQ ID NO: 709, SEQ ID NO: 779, SEQ ID NO: 92 | hsa-miR-146a, hsa-miR-1280, hsa- miR-660 | 79.7% | 84.2% | 75.2% |
| SNO-526 | SEQ ID NO: 673, SEQ ID NO: 92, SEQ ID NO: 478 | hsa-miR-181a, hsa-miR-660, hsa-miR- 30e | 70.8% | 69.3% | 72.3% |
| SNO-527 | SEQ ID NO: 189, SEQ ID NO: 478, SEQ ID NO: 805 | hsa-miR-574-5p, hsa-miR-30e, hsa- miR-126 | 68.8% | 70.8% | 66.7% |
| SNO-528 | SEQ ID NO: 478, SEQ ID NO: 696, | hsa-miR-30e, hsa-miR-149*, hsa-miR- | 64.5% | 66.0% | 63.0% |

FIG 15 (continued)

| | | | | |
|---------|--|--|---------|-------------|
| | SEQ ID NO: 850 | SEQ ID NO: 850 | 1207-5p | |
| SNO-529 | SEQ ID NO: 87, SEQ ID NO: 838, SEQ ID NO: 395 | hsa-miR-664, hsa-miR-1228*, hsa-miR-383 | 72.8% | 76.2% 69.5% |
| SNO-530 | SEQ ID NO: 888, SEQ ID NO: 395, SEQ ID NO: 883 | hsa-let-7i, hsa-miR-383, hsa-miR-101 | 74.4% | 76.0% 72.8% |
| SNO-531 | SEQ ID NO: 395, SEQ ID NO: 874, SEQ ID NO: 645 | hsa-miR-383, hsa-miR-106b, hsa-miR-1908 | 76.8% | 85.0% 68.7% |
| SNO-532 | SEQ ID NO: 645, SEQ ID NO: 542, SEQ ID NO: 770 | hsa-miR-1908, hsa-miR-222, hsa-miR-1289 | 62.3% | 70.8% 53.7% |
| SNO-533 | SEQ ID NO: 710, SEQ ID NO: 770, SEQ ID NO: 632 | hsa-miR-1469, hsa-miR-1289, hsa-miR-1915 | 61.9% | 55.5% 68.3% |
| SNO-534 | SEQ ID NO: 714, SEQ ID NO: 838 | hsa-miR-144*, hsa-miR-1228* | 73.5% | 75.7% 71.3% |
| SNO-535 | SEQ ID NO: 838, SEQ ID NO: 709 | hsa-miR-1228*, hsa-miR-146a | 75.5% | 76.8% 74.2% |
| SNO-536 | SEQ ID NO: 673, SEQ ID NO: 395 | hsa-miR-181a, hsa-miR-383 | 74.4% | 68.0% 80.8% |
| SNO-537 | SEQ ID NO: 395, SEQ ID NO: 189 | hsa-miR-383, hsa-miR-574-5p | 73.5% | 72.0% 75.0% |
| SNO-538 | SEQ ID NO: 189, SEQ ID NO: 883 | hsa-miR-574-5p, hsa-miR-101 | 64.8% | 63.5% 66.2% |
| SNO-539 | SEQ ID NO: 199, SEQ ID NO: 779 | hsa-miR-564, hsa-miR-1280 | 74.6% | 78.3% 70.8% |
| SNO-540 | SEQ ID NO: 779, SEQ ID NO: 874 | hsa-miR-1280, hsa-miR-106b | 73.1% | 73.8% 72.3% |
| SNO-541 | SEQ ID NO: 874, SEQ ID NO: 441 | hsa-miR-106b, hsa-miR-342-5p | 65.0% | 72.2% 57.8% |
| SNO-542 | SEQ ID NO: 441, SEQ ID NO: 645 | hsa-miR-342-5p, hsa-miR-1908 | 63.8% | 79.3% 48.2% |
| SNO-543 | SEQ ID NO: 710, SEQ ID NO: 684 | hsa-miR-1469, hsa-miR-155 | 64.4% | 57.3% 71.5% |
| SNO-544 | SEQ ID NO: 92, SEQ ID NO: 542 | hsa-miR-660, hsa-miR-222 | 62.7% | 64.0% 61.3% |
| SNO-545 | SEQ ID NO: 573, SEQ ID NO: 478 | hsa-miR-210, hsa-miR-30e | 69.8% | 67.5% 72.0% |
| SNO-546 | SEQ ID NO: 478, SEQ ID NO: 762 | hsa-miR-30e, hsa-miR-1295 | 63.6% | 61.8% 65.3% |
| SNO-547 | SEQ ID NO: 897, SEQ ID NO: 669 | hsa-let-7d, hsa-miR-181C | 75.1% | 73.0% 77.2% |
| SNO-548 | SEQ ID NO: 669, SEQ ID NO: 165 | hsa-miR-181C, hsa-miR-593* | 65.8% | 64.2% 67.3% |

FIG 15 (continued)

| | | | | | |
|---------|---------------------------------|---|-------|-------|-------|
| SNO-549 | SEQ ID NO: 838, SEQ ID NO: 673 | hsa-miR-1228*, hsa-miR-181a | 76.3% | 80.8% | 71.8% |
| SNO-550 | SEQ ID NO: 709, SEQ ID NO: 395 | hsa-miR-146a, hsa-miR-383 | 72.6% | 71.8% | 73.3% |
| SNO-551 | SEQ ID NO: 189, SEQ ID NO: 199 | hsa-miR-574-5p, hsa-miR-564 | 69.3% | 71.5% | 67.0% |
| SNO-552 | SEQ ID NO: 883, SEQ ID NO: 779 | hsa-miR-101, hsa-miR-1280 | 73.8% | 75.8% | 71.8% |
| SNO-553 | SEQ ID NO: 779, SEQ ID NO: 441 | hsa-miR-1280, hsa-miR-342-5p | 72.3% | 80.7% | 63.8% |
| SNO-554 | SEQ ID NO: 441, SEQ ID NO: 710 | hsa-miR-342-5p, hsa-miR-1469 | 63.1% | 63.8% | 62.3% |
| SNO-555 | SEQ ID NO: 645, SEQ ID NO: 684 | hsa-miR-1908, hsa-miR-155 | 65.5% | 60.0% | 71.0% |
| SNO-556 | SEQ ID NO: 92, SEQ ID NO: 770 | hsa-miR-660, hsa-miR-1289 | 65.5% | 56.2% | 74.8% |
| SNO-557 | SEQ ID NO: 632, SEQ ID NO: 478 | hsa-miR-1915, hsa-miR-30e | 63.0% | 68.7% | 57.3% |
| SNO-558 | SEQ ID NO: 478, SEQ ID NO: 378 | hsa-miR-30e, hsa-miR-431 | 66.2% | 67.3% | 65.0% |
| SNO-559 | SEQ ID NO: 89, SEQ ID NO: 669 | hsa-miR-663, hsa-miR-181c | 65.5% | 67.3% | 63.7% |
| SNO-560 | SEQ ID NO: 897, SEQ ID NO: 165 | hsa-let-7d, hsa-miR-593* | 64.4% | 67.0% | 61.8% |
| SNO-561 | SEQ ID NO: 673, SEQ ID NO: 883 | hsa-miR-181a, hsa-miR-101 | 74.3% | 70.3% | 78.2% |
| SNO-562 | SEQ ID NO: 199, SEQ ID NO: 441 | hsa-miR-564, hsa-miR-342-5p | 61.0% | 62.8% | 59.2% |
| SNO-563 | SEQ ID NO: 779, SEQ ID NO: 645 | hsa-miR-1280, hsa-miR-1908 | 73.0% | 73.8% | 72.2% |
| SNO-564 | SEQ ID NO: 441, SEQ ID NO: 684 | hsa-miR-342-5p, hsa-miR-155 | 63.4% | 64.7% | 62.2% |
| SNO-565 | SEQ ID NO: 710, SEQ ID NO: 92 | hsa-miR-1469, hsa-miR-660 | 59.8% | 55.8% | 63.7% |
| SNO-566 | SEQ ID NO: 684, SEQ ID NO: 542 | hsa-miR-155, hsa-miR-222 | 65.3% | 63.8% | 66.8% |
| SNO-567 | SEQ ID NO: 92, SEQ ID NO: 632 | hsa-miR-660, hsa-miR-1915 | 62.3% | 55.5% | 69.2% |
| SNO-568 | SEQ ID NO: 770, SEQ ID NO: 478 | hsa-miR-1289, hsa-miR-30e | 62.1% | 54.5% | 69.7% |
| SNO-569 | SEQ ID NO: 478, SEQ ID NO: 253 | hsa-miR-30e, hsa-miR-526a | 69.7% | 71.8% | 67.5% |
| SNO-570 | SEQ ID NO: 253, SEQ ID NO: 669 | hsa-miR-526a, hsa-miR-181c | 67.4% | 74.2% | 60.7% |
| SNO-571 | SEQ ID NO: 89, SEQ ID NO: 165 | hsa-miR-663, hsa-miR-593* | 62.8% | 68.3% | 57.3% |
| SNO-572 | SEQ ID NO: 714, SEQ ID NO: 838, | hsa-miR-1228*, hsa-miR-144*, hsa-miR-146a | 76.3% | 76.8% | 75.8% |
| SNO-573 | SEQ ID NO: 838, SEQ ID NO: 709, | hsa-miR-1228*, hsa-miR-146a, hsa- | 74.2% | 76.5% | 71.8% |

FIG 15 (continued)

| | | | | |
|---------|--|--|--|-------------------|
| SNO-574 | SEQ ID NO: 709, SEQ ID NO: 673, SEQ ID NO: 395 | SEQ ID NO: 673 | hsa-miR-146a, hsa-miR-181a, hsa-miR-383 | 76.5% 75.2% 77.8% |
| SNO-575 | SEQ ID NO: 673, SEQ ID NO: 395, SEQ ID NO: 189 | SEQ ID NO: 395, SEQ ID NO: 189 | hsa-miR-181a, hsa-miR-383, hsa-miR-574-5p | 76.7% 70.8% 82.5% |
| SNO-576 | SEQ ID NO: 395, SEQ ID NO: 189, SEQ ID NO: 883 | SEQ ID NO: 395, SEQ ID NO: 189, SEQ ID NO: 883 | hsa-miR-383, hsa-miR-574-5p, hsa-miR-101 | 79.6% 82.8% 76.3% |
| SNO-577 | SEQ ID NO: 189, SEQ ID NO: 883, SEQ ID NO: 199 | SEQ ID NO: 189, SEQ ID NO: 883, SEQ ID NO: 199 | hsa-miR-574-5p, hsa-miR-101, hsa-miR-564 | 74.9% 73.2% 76.7% |
| SNO-578 | SEQ ID NO: 883, SEQ ID NO: 199, SEQ ID NO: 779 | SEQ ID NO: 199, SEQ ID NO: 779 | hsa-miR-101, hsa-miR-564, hsa-miR-1280 | 71.3% 75.5% 67.0% |
| SNO-579 | SEQ ID NO: 199, SEQ ID NO: 779, SEQ ID NO: 874 | SEQ ID NO: 199, SEQ ID NO: 779, SEQ ID NO: 874 | hsa-miR-564, hsa-miR-1280, hsa-miR-106b | 78.0% 78.7% 77.3% |
| SNO-580 | SEQ ID NO: 779, SEQ ID NO: 874, SEQ ID NO: 441 | SEQ ID NO: 779, SEQ ID NO: 874, SEQ ID NO: 441 | hsa-miR-1280, hsa-miR-106b, hsa-miR-342-5p | 71.3% 75.8% 66.8% |
| SNO-581 | SEQ ID NO: 874, SEQ ID NO: 441, SEQ ID NO: 645 | SEQ ID NO: 441, SEQ ID NO: 645 | hsa-miR-106b, hsa-miR-342-5p, hsa-miR-1908 | 63.1% 74.3% 51.8% |
| SNO-582 | SEQ ID NO: 441, SEQ ID NO: 645, SEQ ID NO: 710 | SEQ ID NO: 441, SEQ ID NO: 645, SEQ ID NO: 710 | hsa-miR-342-5p, hsa-miR-1908, hsa-miR-1469 | 65.3% 76.2% 54.5% |
| SNO-583 | SEQ ID NO: 645, SEQ ID NO: 710, SEQ ID NO: 684 | SEQ ID NO: 645, SEQ ID NO: 710, SEQ ID NO: 684 | hsa-miR-1908, hsa-miR-1469, hsa-miR-155 | 68.3% 63.5% 73.2% |
| SNO-584 | SEQ ID NO: 710, SEQ ID NO: 684, SEQ ID NO: 442 | SEQ ID NO: 710, SEQ ID NO: 684, SEQ ID NO: 442 | hsa-miR-1469, hsa-miR-155, hsa-miR-342-3p | 76.6% 69.2% 84.0% |
| SNO-585 | SEQ ID NO: 442, SEQ ID NO: 92, SEQ ID NO: 542 | SEQ ID NO: 442, SEQ ID NO: 92, SEQ ID NO: 542 | hsa-miR-342-3p, hsa-miR-660, hsa-miR-222 | 77.3% 74.8% 79.8% |
| SNO-586 | SEQ ID NO: 92, SEQ ID NO: 542, SEQ ID NO: 770 | SEQ ID NO: 92, SEQ ID NO: 542, SEQ ID NO: 770 | hsa-miR-660, hsa-miR-222, hsa-miR-1289 | 66.3% 65.2% 67.5% |

FIG 15 (continued)

| | | | | | |
|---------|--|--|-------|-------|-------|
| SNO-587 | SEQ ID NO: 632, SEQ ID NO: 573, SEQ ID NO: 478 | hsa-miR-1915, hsa-miR-210, hsa-miR-30e | 70.8% | 74.5% | 67.2% |
| SNO-588 | SEQ ID NO: 573, SEQ ID NO: 478, SEQ ID NO: 762 | hsa-miR-210, hsa-miR-30e, hsa-miR-1295 | 68.9% | 68.7% | 69.2% |
| SNO-589 | SEQ ID NO: 478, SEQ ID NO: 762, SEQ ID NO: 378 | hsa-miR-30e, hsa-miR-1295, hsa-miR-431 | 65.3% | 67.8% | 62.7% |
| SNO-590 | SEQ ID NO: 89, SEQ ID NO: 897, SEQ ID NO: 669 | hsa-miR-663, hsa-let-7d, hsa-miR-181c | 75.0% | 74.7% | 75.3% |
| SNO-591 | SEQ ID NO: 897, SEQ ID NO: 669, SEQ ID NO: 165 | hsa-let-7d, hsa-miR-181c, hsa-miR-593* | 71.3% | 69.8% | 72.7% |
| SNO-592 | SEQ ID NO: 714, SEQ ID NO: 838, SEQ ID NO: 673 | hsa-miR-144*, hsa-miR-1228*, hsa-miR-181a | 74.4% | 76.7% | 72.2% |
| SNO-593 | SEQ ID NO: 838, SEQ ID NO: 709, SEQ ID NO: 395 | hsa-miR-1228*, hsa-miR-146a, hsa-miR-383 | 74.7% | 78.5% | 70.8% |
| SNO-594 | SEQ ID NO: 673, SEQ ID NO: 395, SEQ ID NO: 883 | hsa-miR-181a, hsa-miR-383, hsa-miR-101 | 75.8% | 75.7% | 76.0% |
| SNO-595 | SEQ ID NO: 395, SEQ ID NO: 189, SEQ ID NO: 199 | hsa-miR-383, hsa-miR-574-5p, hsa-miR-564 | 75.8% | 77.5% | 74.2% |
| SNO-596 | SEQ ID NO: 189, SEQ ID NO: 883, SEQ ID NO: 779 | hsa-miR-574-5p, hsa-miR-101, hsa-miR-1280 | 68.3% | 72.8% | 63.8% |
| SNO-597 | SEQ ID NO: 199, SEQ ID NO: 779, SEQ ID NO: 441 | hsa-miR-564, hsa-miR-1280, hsa-miR-342-5p | 72.2% | 82.8% | 61.5% |
| SNO-598 | SEQ ID NO: 779, SEQ ID NO: 874, SEQ ID NO: 645 | hsa-miR-1280, hsa-miR-106b, hsa-miR-1908 | 74.3% | 77.2% | 71.3% |
| SNO-599 | SEQ ID NO: 874, SEQ ID NO: 441, SEQ ID NO: 710 | hsa-miR-106b, hsa-miR-342-5p, hsa-miR-1469 | 68.5% | 72.2% | 64.8% |
| SNO-600 | SEQ ID NO: 441, SEQ ID NO: 645, | hsa-miR-342-5p, hsa-miR-1908, hsa- | 64.6% | 70.0% | 59.2% |

FIG 15 (continued)

| | | | | | |
|---------|--|---|----------------|----------------|----------------|
| SNO-601 | SEQ ID NO: 684 SEQ ID NO: 710, SEQ ID NO: 684, SEQ ID NO: 92 | hsa-miR-1469, hsa-miR-155, hsa-miR- 660 | 63.8% 75.2% | 58.7% 76.0% | 68.8% 74.3% |
| SNO-602 | SEQ ID NO: 684, SEQ ID NO: 442, SEQ ID NO: 542 | hsa-miR-155, hsa-miR-342-3p, hsa- miR-222 | 75.2% | 76.0% | 74.3% |
| SNO-603 | SEQ ID NO: 442, SEQ ID NO: 92, SEQ ID NO: 770 | hsa-miR-342-3p, hsa-miR-660, hsa- miR-1289 | 77.7% | 73.3% | 82.0% |
| SNO-604 | SEQ ID NO: 92, SEQ ID NO: 542, SEQ ID NO: 632 | hsa-miR-660, hsa-miR-222, hsa-miR- 1915 | 64.6% | 66.5% | 62.7% |
| SNO-605 | SEQ ID NO: 770, SEQ ID NO: 632, SEQ ID NO: 478 | hsa-miR-1289, hsa-miR-1915, hsa- miR-30e | 63.7% | 62.5% | 64.8% |
| SNO-606 | SEQ ID NO: 573, SEQ ID NO: 478, SEQ ID NO: 378 | hsa-miR-210, hsa-miR-30e, hsa-miR- 431 | 70.8% | 72.5% | 69.2% |
| SNO-607 | SEQ ID NO: 478, SEQ ID NO: 762, SEQ ID NO: 253 | hsa-miR-30e, hsa-miR-1295, hsa-miR- 526a | 63.3% | 65.0% | 61.7% |
| SNO-608 | SEQ ID NO: 253, SEQ ID NO: 89, SEQ ID NO: 669 | hsa-miR-526a, hsa-miR-663, hsa-miR- 181c | 69.9% | 76.8% | 63.0% |
| SNO-609 | SEQ ID NO: 89, SEQ ID NO: 897, SEQ ID NO: 165 | hsa-miR-663, hsa-let-7d, hsa-miR-593* | 66.5% | 72.5% | 60.5% |
| SNO-610 | SEQ ID NO: 838, SEQ ID NO: 673, SEQ ID NO: 395 | hsa-miR-1228*, hsa-miR-181a, hsa- miR-383 | 75.4% | 80.2% | 70.7% |
| SNO-611 | SEQ ID NO: 709, SEQ ID NO: 395, SEQ ID NO: 189 | hsa-miR-146a, hsa-miR-383, hsa-miR- 574-5p | 74.8% | 74.8% | 74.7% |
| SNO-612 | SEQ ID NO: 673, SEQ ID NO: 189, SEQ ID NO: 883 | hsa-miR-181a, hsa-miR-574-5p, hsa- miR-101 | 70.7% | 66.7% | 74.7% |
| SNO-613 | SEQ ID NO: 189, SEQ ID NO: 199, SEQ ID NO: 779 | hsa-miR-574-5p, hsa-miR-564, hsa- miR-1280 | 76.7% | 81.7% | 71.7% |

FIG 15 (continued)

| | | | | | |
|---------|--|---|-------------------|-------------------|-------------------|
| SNO-614 | SEQ ID NO: 883, SEQ ID NO: 779, SEQ ID NO: 874 | hsa-miR-101, hsa-miR-1280, hsa-miR-106b, hsa-miR-342-5p | 71.3% 70.1% 70.0% | 73.8% 71.7% 77.8% | 68.7% 68.5% 62.2% |
| SNO-615 | SEQ ID NO: 199, SEQ ID NO: 874, SEQ ID NO: 441 | hsa-miR-564, hsa-miR-106b, hsa-miR-342-5p | | | |
| SNO-616 | SEQ ID NO: 779, SEQ ID NO: 441, SEQ ID NO: 645 | hsa-miR-1280, hsa-miR-342-5p, hsa-miR-1908 | | | |
| SNO-617 | SEQ ID NO: 441, SEQ ID NO: 710, SEQ ID NO: 684 | hsa-miR-342-5p, hsa-miR-1469, hsa-miR-155 | | | |
| SNO-618 | SEQ ID NO: 645, SEQ ID NO: 684, SEQ ID NO: 684 | hsa-miR-1908, hsa-miR-155, hsa-miR-342-3p | | | |
| SNO-619 | SEQ ID NO: 710, SEQ ID NO: 442, SEQ ID NO: 92 | hsa-miR-1469, hsa-miR-342-3p, hsa-miR-660 | | | |
| SNO-620 | SEQ ID NO: 684, SEQ ID NO: 92, SEQ ID NO: 542 | hsa-miR-155, hsa-miR-660, hsa-miR-222 | | | |
| SNO-621 | SEQ ID NO: 92, SEQ ID NO: 770, SEQ ID NO: 632 | hsa-miR-660, hsa-miR-1289, hsa-miR-1915 | | | |
| SNO-622 | SEQ ID NO: 770, SEQ ID NO: 573, SEQ ID NO: 478 | hsa-miR-1289, hsa-miR-210, hsa-miR-30e | | | |
| SNO-623 | SEQ ID NO: 632, SEQ ID NO: 478, SEQ ID NO: 762 | hsa-miR-1915, hsa-miR-30e, hsa-miR-1295 | | | |
| SNO-624 | SEQ ID NO: 478, SEQ ID NO: 378, SEQ ID NO: 253 | hsa-miR-30e, hsa-miR-431, hsa-miR-526a | | | |
| SNO-625 | SEQ ID NO: 253, SEQ ID NO: 897, SEQ ID NO: 669 | hsa-miR-526a, hsa-let-7d, hsa-miR-181c | | | |
| SNO-626 | SEQ ID NO: 89, SEQ ID NO: 669, SEQ ID NO: 165 | hsa-miR-663, hsa-miR-181c, hsa-miR-593* | | | |
| SNO-627 | SEQ ID NO: 714, SEQ ID NO: 709, | hsa-miR-144*, hsa-miR-146a, hsa- | 78.3% | 78.3% | 78.2% |

FIG 15 (continued)

| | SEQ ID NO: 395 | hsa-miR-1228*, hsa-miR-181a, hsa-miR-383 | 73.6% | 77.0% | 70.2% |
|---------|---|--|-------|-------|-------|
| SNO-628 | SEQ ID NO: 838, SEQ ID NO: 673, SEQ ID NO: 189 | hsa-miR-146a, hsa-miR-383, hsa-miR-574-5p | 77.0% | 79.5% | 74.5% |
| SNO-629 | SEQ ID NO: 709, SEQ ID NO: 395, SEQ ID NO: 883 | hsa-miR-181a, hsa-miR-574-5p, hsa-miR-101 hsa-miR-564 | 74.9% | 69.2% | 80.7% |
| SNO-630 | SEQ ID NO: 673, SEQ ID NO: 189, SEQ ID NO: 199 | hsa-miR-383, hsa-miR-101, hsa-miR-1280 | 81.2% | 88.2% | 74.2% |
| SNO-631 | SEQ ID NO: 395, SEQ ID NO: 883, SEQ ID NO: 779 | hsa-miR-574-5p, hsa-miR-564, hsa-miR-106b | 77.2% | 78.7% | 75.7% |
| SNO-632 | SEQ ID NO: 189, SEQ ID NO: 199, SEQ ID NO: 874 | hsa-miR-101, hsa-miR-1280, hsa-miR-342-5p | 70.3% | 78.8% | 61.8% |
| SNO-633 | SEQ ID NO: 883, SEQ ID NO: 779, SEQ ID NO: 441 | hsa-miR-1280, hsa-miR-342-5p, hsa-miR-1469 | 73.8% | 81.7% | 65.8% |
| SNO-634 | SEQ ID NO: 779, SEQ ID NO: 441, SEQ ID NO: 710 | hsa-miR-106b, hsa-miR-1908, hsa-miR-155 | 71.6% | 71.3% | 71.8% |
| SNO-635 | SEQ ID NO: 874, SEQ ID NO: 645, SEQ ID NO: 684 | hsa-miR-342-5p, hsa-miR-1469, hsa-miR-342-3p | 69.6% | 63.7% | 75.5% |
| SNO-636 | SEQ ID NO: 441, SEQ ID NO: 710, SEQ ID NO: 442 | hsa-miR-1908, hsa-miR-155, hsa-miR-660 | 68.4% | 64.8% | 72.0% |
| SNO-637 | SEQ ID NO: 645, SEQ ID NO: 684, SEQ ID NO: 92 | hsa-miR-155, hsa-miR-660, hsa-miR-1289 | 72.0% | 66.5% | 77.5% |
| SNO-638 | SEQ ID NO: 684, SEQ ID NO: 92, SEQ ID NO: 770 | hsa-miR-660, hsa-miR-1289, hsa-miR-210 | 70.8% | 68.3% | 73.3% |
| SNO-639 | SEQ ID NO: 92, SEQ ID NO: 770, SEQ ID NO: 573 | hsa-miR-1915, hsa-miR-30e | 61.7% | 67.2% | 56.2% |
| SNO-640 | SEQ ID NO: 542, SEQ ID NO: 632, SEQ ID NO: 478 | | | | |

FIG 15 (continued)

| | | | | | |
|---------|--|---|-------|-------|-------|
| SNO-641 | SEQ ID NO: 632, SEQ ID NO: 478, SEQ ID NO: 378 | hsa-miR-1915, hsa-miR-30e, hsa-miR-431 | 62.6% | 70.2% | 55.0% |
| SNO-642 | SEQ ID NO: 478, SEQ ID NO: 378, SEQ ID NO: 89 | hsa-miR-30e, hsa-miR-431, hsa-miR-663 | 64.9% | 68.8% | 61.0% |
| SNO-643 | SEQ ID NO: 378, SEQ ID NO: 89, SEQ ID NO: 669 | hsa-miR-431, hsa-miR-663, hsa-miR-181c | 65.4% | 71.5% | 59.3% |
| SNO-644 | SEQ ID NO: 253, SEQ ID NO: 897, SEQ ID NO: 165 | hsa-miR-526a, hsa-miR-593* | 66.1% | 72.8% | 59.3% |
| SNO-645 | SEQ ID NO: 714, SEQ ID NO: 838, SEQ ID NO: 395 | hsa-miR-144*, hsa-miR-1228*, hsa-miR-383 | 74.3% | 80.2% | 68.3% |
| SNO-646 | SEQ ID NO: 838, SEQ ID NO: 709, SEQ ID NO: 189 | hsa-miR-1228*, hsa-miR-146a, hsa-miR-574-5p | 72.7% | 74.2% | 71.2% |
| SNO-647 | SEQ ID NO: 709, SEQ ID NO: 673, SEQ ID NO: 883 | hsa-miR-146a, hsa-miR-181a, hsa-miR-101 | 74.3% | 72.0% | 76.5% |
| SNO-648 | SEQ ID NO: 673, SEQ ID NO: 395, SEQ ID NO: 199 | hsa-miR-181a, hsa-miR-383, hsa-miR-564 | 74.8% | 70.0% | 79.5% |
| SNO-649 | SEQ ID NO: 395, SEQ ID NO: 189, SEQ ID NO: 779 | hsa-miR-383, hsa-miR-574-5p, hsa-miR-1280 | 83.6% | 86.8% | 80.3% |
| SNO-650 | SEQ ID NO: 189, SEQ ID NO: 883, SEQ ID NO: 874 | hsa-miR-574-5p, hsa-miR-101, hsa-miR-106b | 68.9% | 75.0% | 62.8% |
| SNO-651 | SEQ ID NO: 883, SEQ ID NO: 199, SEQ ID NO: 441 | hsa-miR-101, hsa-miR-564, hsa-miR-342-5p | 70.8% | 72.2% | 69.3% |
| SNO-652 | SEQ ID NO: 199, SEQ ID NO: 779, SEQ ID NO: 645 | hsa-miR-564, hsa-miR-1280, hsa-miR-1908 | 72.6% | 78.8% | 66.3% |
| SNO-653 | SEQ ID NO: 779, SEQ ID NO: 874, SEQ ID NO: 710 | hsa-miR-1280, hsa-miR-106b, hsa-miR-1469 | 76.6% | 75.2% | 78.0% |
| SNO-654 | SEQ ID NO: 874, SEQ ID NO: 441, | hsa-miR-106b, hsa-miR-342-5p, hsa- | 70.9% | 72.8% | 69.0% |

FIG 15 (continued)

| | | | | | | |
|---------|--|--|--|-------|-------|-------|
| SNO-655 | SEQ ID NO: 684 | SEQ ID NO: 684 | hsa-miR-342-5p, hsa-miR-1908, hsa-miR-342-3p | 73.2% | 67.5% | 78.8% |
| SNO-656 | SEQ ID NO: 645, SEQ ID NO: 645, SEQ ID NO: 442 | SEQ ID NO: 710, SEQ ID NO: 92 | hsa-miR-1908, hsa-miR-1469, hsa-miR-660 | 57.1% | 58.8% | 55.3% |
| SNO-657 | SEQ ID NO: 710, SEQ ID NO: 684, SEQ ID NO: 542 | hsa-miR-1469, hsa-miR-155, hsa-miR-222 | hsa-miR-155, hsa-miR-342-3p, hsa-miR-1289 | 68.1% | 65.8% | 70.3% |
| SNO-658 | SEQ ID NO: 684, SEQ ID NO: 442, SEQ ID NO: 770 | SEQ ID NO: 92, SEQ ID NO: 632 | hsa-miR-342-3p, hsa-miR-660, hsa-miR-1915 | 77.8% | 73.0% | 82.5% |
| SNO-659 | SEQ ID NO: 442, SEQ ID NO: 92, SEQ ID NO: 632 | hsa-miR-660, hsa-miR-222, hsa-miR-210 | hsa-miR-1289, hsa-miR-222, hsa-miR-30e | 77.3% | 68.8% | 85.7% |
| SNO-660 | SEQ ID NO: 92, SEQ ID NO: 542, SEQ ID NO: 573 | hsa-miR-222, hsa-miR-210 | hsa-miR-660, hsa-miR-222, hsa-miR-30e | 71.9% | 71.5% | 72.3% |
| SNO-661 | SEQ ID NO: 542, SEQ ID NO: 770, SEQ ID NO: 478 | hsa-miR-210, hsa-miR-30e, hsa-miR-526a | hsa-miR-1289, hsa-miR-30e | 65.8% | 64.2% | 67.5% |
| SNO-662 | SEQ ID NO: 573, SEQ ID NO: 478, SEQ ID NO: 253 | hsa-miR-30e, hsa-miR-1295, hsa-miR-663 | hsa-miR-210, hsa-miR-30e, hsa-miR-526a | 68.6% | 72.2% | 65.0% |
| SNO-663 | SEQ ID NO: 478, SEQ ID NO: 762, SEQ ID NO: 89 | hsa-miR-431, hsa-miR-526a, hsa-miR-181c | hsa-miR-30e, hsa-miR-1295, hsa-miR-663 | 67.4% | 72.5% | 62.3% |
| SNO-664 | SEQ ID NO: 378, SEQ ID NO: 253, SEQ ID NO: 669 | hsa-miR-526a, hsa-miR-663, hsa-miR-593* | hsa-miR-431, hsa-miR-526a, hsa-miR-181c | 68.0% | 74.5% | 61.5% |
| SNO-665 | SEQ ID NO: 253, SEQ ID NO: 89, SEQ ID NO: 165 | hsa-miR-144*, hsa-miR-181a, hsa-miR-383 | hsa-miR-526a, hsa-miR-663, hsa-miR-593* | 66.6% | 77.7% | 55.5% |
| SNO-666 | SEQ ID NO: 714, SEQ ID NO: 673, SEQ ID NO: 395 | hsa-miR-1228*, hsa-miR-383, hsa-miR-574-5p | hsa-miR-144*, hsa-miR-181a, hsa-miR-383 | 81.3% | 84.5% | 78.2% |
| SNO-667 | SEQ ID NO: 838, SEQ ID NO: 395, SEQ ID NO: 189 | | hsa-miR-1228*, hsa-miR-383, hsa-miR-574-5p | 75.6% | 79.8% | 71.3% |

FIG 15 (continued)

| | | | | | |
|---------|--|---|-------|-------|-------|
| SNO-668 | SEQ ID NO: 709, SEQ ID NO: 189, SEQ ID NO: 883 | hsa-miR-146a, hsa-miR-574-5p, hsa-miR-101 | 73.6% | 69.0% | 78.2% |
| SNO-669 | SEQ ID NO: 673, SEQ ID NO: 883, SEQ ID NO: 199 | hsa-miR-181a, hsa-miR-101, hsa-miR-564 | 74.6% | 73.3% | 75.8% |
| SNO-670 | SEQ ID NO: 395, SEQ ID NO: 199, SEQ ID NO: 779 | hsa-miR-383, hsa-miR-564, hsa-miR-1280 | 82.6% | 86.8% | 78.3% |
| SNO-671 | SEQ ID NO: 189, SEQ ID NO: 779, SEQ ID NO: 874 | hsa-miR-574-5p, hsa-miR-1280, hsa-miR-106b | 72.5% | 79.5% | 65.5% |
| SNO-672 | SEQ ID NO: 883, SEQ ID NO: 874, SEQ ID NO: 441 | hsa-miR-101, hsa-miR-106b, hsa-miR-342-5p | 73.3% | 80.3% | 66.2% |
| SNO-673 | SEQ ID NO: 199, SEQ ID NO: 441, SEQ ID NO: 645 | hsa-miR-564, hsa-miR-342-5p, hsa-miR-1908 | 61.2% | 71.2% | 51.2% |
| SNO-674 | SEQ ID NO: 779, SEQ ID NO: 645, SEQ ID NO: 710 | hsa-miR-1280, hsa-miR-1908, hsa-miR-1469 | 76.3% | 78.0% | 74.7% |
| SNO-675 | SEQ ID NO: 874, SEQ ID NO: 710, SEQ ID NO: 684 | hsa-miR-106b, hsa-miR-1469, hsa-miR-155 | 71.7% | 70.2% | 73.2% |
| SNO-676 | SEQ ID NO: 441, SEQ ID NO: 684, SEQ ID NO: 442 | hsa-miR-342-5p, hsa-miR-155, hsa-miR-342-3p | 78.2% | 75.7% | 80.7% |
| SNO-677 | SEQ ID NO: 645, SEQ ID NO: 442, SEQ ID NO: 92 | hsa-miR-1908, hsa-miR-342-3p, hsa-miR-660 | 73.2% | 68.0% | 78.3% |
| SNO-678 | SEQ ID NO: 710, SEQ ID NO: 92, SEQ ID NO: 542 | hsa-miR-1469, hsa-miR-660, hsa-miR-222 | 62.3% | 65.5% | 59.2% |
| SNO-679 | SEQ ID NO: 684, SEQ ID NO: 542, SEQ ID NO: 770 | hsa-miR-155, hsa-miR-222, hsa-miR-1289 | 70.3% | 67.2% | 73.3% |
| SNO-680 | SEQ ID NO: 92, SEQ ID NO: 632, SEQ ID NO: 573 | hsa-miR-660, hsa-miR-1915, hsa-miR-210 | 68.6% | 67.2% | 70.0% |
| SNO-681 | SEQ ID NO: 542, SEQ ID NO: 573, | hsa-miR-222, hsa-miR-210, hsa-miR-72.5% | 71.0% | 74.0% | |

FIG 15 (continued)

| | | |
|---------|---|---|
| | SEQ ID NO: 478 | 30e |
| SNO-682 | SEQ ID NO: 770, SEQ ID NO: 478, SEQ ID NO: 762 | hsa-miR-1289, hsa-miR-30e, hsa-miR-1295 |
| SNO-683 | SEQ ID NO: 478, SEQ ID NO: 253, SEQ ID NO: 89 | hsa-miR-30e, hsa-miR-526a, hsa-miR-663 |
| SNO-684 | SEQ ID NO: 378, SEQ ID NO: 897, SEQ ID NO: 669 | hsa-miR-431, hsa-let-7d, hsa-miR-181c |
| SNO-685 | SEQ ID NO: 253, SEQ ID NO: 669, SEQ ID NO: 165 | hsa-miR-526a, hsa-miR-181c, hsa-miR-593* |
| SNO-686 | SEQ ID NO: 673, SEQ ID NO: 709 | hsa-miR-181a, hsa-miR-146a |
| SNO-687 | SEQ ID NO: 710, SEQ ID NO: 441 | hsa-miR-1469, hsa-miR-342-5p |
| SNO-688 | SEQ ID NO: 92, SEQ ID NO: 442 | hsa-miR-660, hsa-miR-342-3p |
| SNO-689 | SEQ ID NO: 632, SEQ ID NO: 770 | hsa-miR-1915, hsa-miR-1289 |
| SNO-690 | SEQ ID NO: 762, SEQ ID NO: 478 | hsa-miR-1295, hsa-miR-30e |
| SNO-691 | SEQ ID NO: 669, SEQ ID NO: 530 | hsa-miR-181c, hsa-miR-23b* |
| SNO-692 | SEQ ID NO: 645, SEQ ID NO: 441 | hsa-miR-1908, hsa-miR-342-5p |
| SNO-693 | SEQ ID NO: 441, SEQ ID NO: 92 | hsa-miR-342-5p, hsa-miR-660 |
| SNO-694 | SEQ ID NO: 897, SEQ ID NO: 530 | hsa-let-7d, hsa-miR-23b* |
| SNO-695 | SEQ ID NO: 709, SEQ ID NO: 883 | hsa-miR-146a, hsa-miR-101 |
| SNO-696 | SEQ ID NO: 779, SEQ ID NO: 710 | hsa-miR-1280, hsa-miR-1469 |
| SNO-697 | SEQ ID NO: 441, SEQ ID NO: 442 | hsa-miR-342-5p, hsa-miR-342-3p |
| SNO-698 | SEQ ID NO: 478, SEQ ID NO: 89 | hsa-miR-30e, hsa-miR-663 |
| SNO-699 | SEQ ID NO: 89, SEQ ID NO: 530 | hsa-miR-663, hsa-miR-23b* |
| SNO-700 | SEQ ID NO: 838, SEQ ID NO: 673, SEQ ID NO: 709 | hsa-miR-1228*, hsa-miR-181a, hsa-miR-146a |
| SNO-701 | SEQ ID NO: 673, SEQ ID NO: 709, | hsa-miR-181a, hsa-miR-146a, hsa- |
| | | 75.2% 70.8% 79.5% |

FIG 15 (continued)

| | | |
|---------|---|--|
| | SEQ ID NO: 395 | miR-383 |
| SNO-702 | SEQ ID NO: 645, SEQ ID NO: 710, SEQ ID NO: 441 | hsa-miR-1908, hsa-miR-1469, hsa- miR-342-5p |
| SNO-703 | SEQ ID NO: 710, SEQ ID NO: 441, SEQ ID NO: 684 | hsa-miR-1469, hsa-miR-342-5p, hsa- miR-155 |
| SNO-704 | SEQ ID NO: 441, SEQ ID NO: 684, SEQ ID NO: 92 | hsa-miR-342-5p, hsa-miR-155, hsa- miR-660 |
| SNO-705 | SEQ ID NO: 684, SEQ ID NO: 92, SEQ ID NO: 442 | hsa-miR-155, hsa-miR-660, hsa-miR- 342-3p |
| SNO-706 | SEQ ID NO: 92, SEQ ID NO: 442, SEQ ID NO: 542 | hsa-miR-660, hsa-miR-342-3p, hsa- miR-222 |
| SNO-707 | SEQ ID NO: 542, SEQ ID NO: 632, SEQ ID NO: 770 | hsa-miR-222, hsa-miR-1915, hsa-miR- 1289 |
| SNO-708 | SEQ ID NO: 632, SEQ ID NO: 770, SEQ ID NO: 573 | hsa-miR-1915, hsa-miR-1289, hsa- miR-210 |
| SNO-709 | SEQ ID NO: 573, SEQ ID NO: 762, SEQ ID NO: 478 | hsa-miR-210, hsa-miR-1295, hsa-miR- 30e |
| SNO-710 | SEQ ID NO: 762, SEQ ID NO: 478, SEQ ID NO: 378 | hsa-miR-1295, hsa-miR-30e, hsa-miR- 431 |
| SNO-711 | SEQ ID NO: 897, SEQ ID NO: 669, SEQ ID NO: 530 | hsa-let-7d, hsa-miR-181c, hsa-miR- 23b* |
| SNO-712 | SEQ ID NO: 673, SEQ ID NO: 709, SEQ ID NO: 189 | hsa-miR-181a, hsa-miR-146a, hsa- miR-574-5p |
| SNO-713 | SEQ ID NO: 874, SEQ ID NO: 645, SEQ ID NO: 441 | hsa-miR-106b, hsa-miR-1908, hsa- miR-342-5p |
| SNO-714 | SEQ ID NO: 710, SEQ ID NO: 441, SEQ ID NO: 92 | hsa-miR-1469, hsa-miR-342-5p, hsa- miR-660 |

FIG 15 (continued)

| | | | | | |
|---------|--|---|-------|-------|-------|
| SNO-715 | SEQ ID NO: 92, SEQ ID NO: 442, SEQ ID NO: 632 | hsa-miR-660, hsa-miR-342-3p, hsa-miR-1915 | 75.2% | 65.5% | 84.8% |
| SNO-716 | SEQ ID NO: 632, SEQ ID NO: 770, SEQ ID NO: 762 | hsa-miR-1915, hsa-miR-1289, hsa-miR-1295 | 68.3% | 60.8% | 75.7% |
| SNO-717 | SEQ ID NO: 762, SEQ ID NO: 478, SEQ ID NO: 253 | hsa-miR-1295, hsa-miR-30e, hsa-miR-526a | 65.1% | 67.7% | 62.5% |
| SNO-718 | SEQ ID NO: 89, SEQ ID NO: 897, SEQ ID NO: 530 | hsa-miR-663, hsa-let-7d, hsa-miR-23b* | 72.7% | 66.7% | 78.7% |
| SNO-719 | SEQ ID NO: 714, SEQ ID NO: 673, SEQ ID NO: 709 | hsa-miR-144*, hsa-miR-181a, hsa-miR-146a | 76.3% | 76.5% | 76.2% |
| SNO-720 | SEQ ID NO: 874, SEQ ID NO: 710, SEQ ID NO: 441 | hsa-miR-106b, hsa-miR-1469, hsa-miR-342-5p | 66.8% | 67.5% | 66.2% |
| SNO-721 | SEQ ID NO: 645, SEQ ID NO: 441, SEQ ID NO: 684 | hsa-miR-1908, hsa-miR-342-5p, hsa-miR-155 | 63.4% | 69.0% | 57.8% |
| SNO-722 | SEQ ID NO: 441, SEQ ID NO: 92, SEQ ID NO: 442 | hsa-miR-342-5p, hsa-miR-660, hsa-miR-342-3p | 76.8% | 73.3% | 80.2% |
| SNO-723 | SEQ ID NO: 442, SEQ ID NO: 632, SEQ ID NO: 770 | hsa-miR-342-3p, hsa-miR-1915, hsa-miR-1289 | 71.4% | 61.3% | 81.5% |
| SNO-724 | SEQ ID NO: 770, SEQ ID NO: 762, SEQ ID NO: 478 | hsa-miR-1289, hsa-miR-1295, hsa-miR-30e | 66.4% | 63.0% | 69.8% |
| SNO-725 | SEQ ID NO: 89, SEQ ID NO: 669, SEQ ID NO: 530 | hsa-miR-663, hsa-miR-181c, hsa-miR-23b* | 71.8% | 71.5% | 72.2% |
| SNO-726 | SEQ ID NO: 709, SEQ ID NO: 189, SEQ ID NO: 199 | hsa-miR-146a, hsa-miR-574-5p, hsa-miR-564 | 70.8% | 72.0% | 69.7% |
| SNO-727 | SEQ ID NO: 883, SEQ ID NO: 779, SEQ ID NO: 645 | hsa-miR-101, hsa-miR-1280, hsa-miR-1908 | 69.8% | 71.7% | 67.8% |
| SNO-728 | SEQ ID NO: 779, SEQ ID NO: 645, | hsa-miR-1280, hsa-miR-1908, hsa- | 69.9% | 78.7% | 61.2% |

FIG 15 (continued)

| | SEQ ID NO: 441 | miR-342-5p | |
|---------|--|--|-------------------|
| SNO-729 | SEQ ID NO: 645, SEQ ID NO: 441, SEQ ID NO: 92 | hsa-miR-1908, hsa-miR-342-5p, hsa-miR-660 | 63.1% 72.2% 54.0% |
| SNO-730 | SEQ ID NO: 441, SEQ ID NO: 92, SEQ ID NO: 542 | hsa-miR-342-5p, hsa-miR-660, hsa-miR-222 | 64.1% 66.8% 61.3% |
| SNO-731 | SEQ ID NO: 684, SEQ ID NO: 442, SEQ ID NO: 632 | hsa-miR-155, hsa-miR-342-3p, hsa-miR-1915 | 77.5% 68.5% 86.5% |
| SNO-732 | SEQ ID NO: 770, SEQ ID NO: 762, SEQ ID NO: 378 | hsa-miR-1289, hsa-miR-1295, hsa-miR-431 | 67.1% 63.0% 71.2% |
| SNO-733 | SEQ ID NO: 478, SEQ ID NO: 253, SEQ ID NO: 897 | hsa-miR-30e, hsa-miR-526a, hsa-let-7d | 68.3% 70.2% 66.3% |
| SNO-734 | SEQ ID NO: 253, SEQ ID NO: 897, SEQ ID NO: 530 | hsa-miR-526a, hsa-let-7d, hsa-miR-23b* | 71.4% 61.3% 81.5% |
| SNO-735 | SEQ ID NO: 673, SEQ ID NO: 709, SEQ ID NO: 883 | hsa-miR-181a, hsa-miR-146a, hsa-miR-101 | 73.9% 70.0% 77.8% |
| SNO-736 | SEQ ID NO: 709, SEQ ID NO: 395, SEQ ID NO: 199 | hsa-miR-146a, hsa-miR-383, hsa-miR-564 | 72.8% 74.0% 71.5% |
| SNO-737 | SEQ ID NO: 199, SEQ ID NO: 779, SEQ ID NO: 710 | hsa-miR-564, hsa-miR-1280, hsa-miR-1469 | 74.9% 76.7% 73.2% |
| SNO-738 | SEQ ID NO: 710, SEQ ID NO: 441, SEQ ID NO: 442 | hsa-miR-1469, hsa-miR-342-5p, hsa-miR-342-3p | 73.3% 67.5% 79.2% |
| SNO-739 | SEQ ID NO: 441, SEQ ID NO: 684, SEQ ID NO: 542 | hsa-miR-342-5p, hsa-miR-155, hsa-miR-222 | 66.4% 69.5% 63.3% |
| SNO-740 | SEQ ID NO: 684, SEQ ID NO: 92, SEQ ID NO: 632 | hsa-miR-155, hsa-miR-660, hsa-miR-1915 | 67.8% 59.3% 76.3% |
| SNO-741 | SEQ ID NO: 92, SEQ ID NO: 442, SEQ ID NO: 770 | hsa-miR-660, hsa-miR-342-3p, hsa-miR-1289 | 77.2% 72.0% 82.3% |

FIG 15 (continued)

| | | | | | |
|---------|---|---|-------|-------|-------|
| SNO-742 | SEQ ID NO: 632, SEQ ID NO: 770, SEQ ID NO: 478 | hsa-miR-1915, hsa-miR-1289, hsa- miR-30e | 61.5% | 60.8% | 62.2% |
| SNO-743 | SEQ ID NO: 770, SEQ ID NO: 573, SEQ ID NO: 378 | hsa-miR-1289, hsa-miR-210, hsa-miR- 431 | 68.9% | 73.0% | 64.8% |
| SNO-744 | SEQ ID NO: 762, SEQ ID NO: 478, SEQ ID NO: 89 | hsa-miR-1295, hsa-miR-30e, hsa-miR- 663 | 66.4% | 71.0% | 61.8% |
| SNO-745 | SEQ ID NO: 478, SEQ ID NO: 378, SEQ ID NO: 897 | hsa-miR-30e, hsa-miR-431, hsa-let-7d | 70.4% | 69.3% | 71.5% |
| SNO-746 | SEQ ID NO: 253, SEQ ID NO: 89, SEQ ID NO: 530 | hsa-miR-526a, hsa-miR-663, hsa-miR- 23b* | 66.8% | 70.0% | 63.5% |
| SNO-747 | SEQ ID NO: 709, SEQ ID NO: 883, SEQ ID NO: 199 | hsa-miR-146a, hsa-miR-101, hsa-miR- 564 | 73.0% | 68.8% | 77.2% |
| SNO-748 | SEQ ID NO: 779, SEQ ID NO: 710, SEQ ID NO: 441 | hsa-miR-1280, hsa-miR-1469, hsa- miR-342-5p | 71.1% | 76.8% | 65.3% |
| SNO-749 | SEQ ID NO: 710, SEQ ID NO: 92, SEQ ID NO: 442 | hsa-miR-1469, hsa-miR-660, hsa-miR- 342-3p | 74.4% | 69.7% | 79.2% |
| SNO-750 | SEQ ID NO: 441, SEQ ID NO: 442, SEQ ID NO: 542 | hsa-miR-342-5p, hsa-miR-342-3p, hsa- miR-222 | 74.3% | 70.3% | 78.3% |
| SNO-751 | SEQ ID NO: 684, SEQ ID NO: 542, SEQ ID NO: 632 | hsa-miR-155, hsa-miR-222, hsa-miR- 1915 | 68.0% | 69.2% | 66.8% |
| SNO-752 | SEQ ID NO: 92, SEQ ID NO: 632, SEQ ID NO: 770 | hsa-miR-660, hsa-miR-1915, hsa-miR- 1289 | 67.8% | 64.5% | 71.2% |
| SNO-753 | SEQ ID NO: 632, SEQ ID NO: 762, SEQ ID NO: 478 | hsa-miR-1915, hsa-miR-1295, hsa- miR-30e | 64.5% | 63.5% | 65.5% |
| SNO-754 | SEQ ID NO: 770, SEQ ID NO: 478, SEQ ID NO: 378 | hsa-miR-1289, hsa-miR-30e, hsa-miR- 431 | 62.1% | 67.2% | 57.0% |
| SNO-755 | SEQ ID NO: 478, SEQ ID NO: 89, SEQ | hsa-miR-30e, hsa-miR-663, hsa-let-7d | 67.8% | 69.3% | 66.2% |

FIG 15 (continued)

| | | | | | |
|---------|---|-------------------------------|-------|-------|-------|
| SNO-756 | ID NO: 897 SEQ ID NO: 253, SEQ ID NO: 669, SEQ ID NO: 530 | hsa-miR-526a, hsa-miR-181c, h | 65.8% | 71.0% | 60.5% |
|---------|---|-------------------------------|-------|-------|-------|