ROSETTAGENOMICS™
Revealing Genomic Answers

Rosetta Genomics Announces Favorable Results from Two Pilot Studies Comparing RosettaGX Reveal™ and the Afirma GEC Assay for the Classification of Indeterminate Thyroid Nodules

Data Demonstrate Reveal Can Help Patients Avoid Substantially More Unnecessary Surgeries than the Current Market Leader

PHILADELPHIA and REHOVOT, Israel (May 12, 2017) – Rosetta Genomics Ltd. (NASDAQ: ROSG), a genomic diagnostics company that improves treatment decisions by providing timely and accurate diagnostic information to physicians, announces favorable topline results from two pilot studies comparing the performance of RosettaGX Reveal™ (Reveal), a first-of-its-kind microRNA assay for the classification of indeterminate thyroid nodules, and Veracyte's Afirma GEC (Afirma), the current leader in this market segment.

These pilot studies were conducted in collaboration with two academic centers and used thyroid cytology samples from nodules that were evaluated by Afirma and then by the Reveal classifier. The accuracy of the performance of both tests was compared to the gold standard of surgical pathology. It should be noted that the vast majority of the samples used in these pilot studies had been identified as "suspicious for malignancy" by Afirma but were later determined to be benign when evaluated by surgical pathology.

Reveal's competitive advantages include its higher specificity in identifying a greater percentage of patients who do not have thyroid cancer from within a group of patients with cytologically indeterminate thyroid nodules. This is important because a test with a higher specificity, like Reveal, allows more patients with indeterminate thyroid nodules to be spared unnecessary surgery. The data from these two pilot studies show that Reveal has the ability to correctly identify patients without thyroid cancer (i.e., true benign patients) at a substantially higher rate than Afirma. Reveal correctly identified 67% of the true benign patients in these studies compared with 17% identified by Afirma. Due to these encouraging preliminary data, additional samples are being acquired for further comparative analysis. Once the studies are complete, the researchers plan to submit the full and final evaluation for publication.

The pilot studies were performed with clinical samples from two separate institutions. One is among the largest nonprofit academic medical centers in the U.S. and is a leader in the clinical care and research of cancer, among other areas. The other is a

comprehensive healthcare system comprised of hospitals, physicians and allied services dedicated to providing preeminent care throughout its region in the U.S.

"These results are extremely encouraging and are not unexpected given the substantially higher specificity of Reveal compared to Afirma as seen in the respective published validation studies for both assays. We are further gratified to see these results play out in the real world," said Kenneth A. Berlin, President and Chief Executive Officer of Rosetta Genomics. "We believe that the publication of full results will clearly demonstrate the competitive advantage provided by Reveal and will help clinicians, payers and patients make more informed decisions about the selection and reimbursement of molecular testing for indeterminate thyroid nodules."

"Our aim is to help as many patients as possible avoid unnecessary surgeries, which is good for patients, clinicians and payers alike," he added. "These data further validate the power of Rosetta's proprietary microRNA platform, which allows us to deliver timely and highly accurate data for use by clinicians, all from one powerful platform, to help avoid unnecessary surgeries."

"Given Reveal's demonstrated ability to provide highly accurate results from archived samples, we are uniquely positioned to provide comparative information for the different molecular tests being used for indeterminate thyroid cases and plan to initiate similar studies to compare Reveal's performance versus other molecular tests," noted Nicole Massoll, M.D., Lab Director of Rosetta Genomics.

About Rosetta Genomics

Rosetta is pioneering the field of molecular diagnostics by offering rapid and accurate diagnostic information that enables physicians to make more timely and informed treatment decisions to improve patient care. Rosetta has developed a portfolio of unique diagnostic solutions for oncologists, urologists, endocrinologists, cytopathologists and other specialists to help them deliver better care to their patients. RosettaGX Reveal™, a Thyroid microRNA Classifier for the diagnosis of cancer in thyroid nodules, as well as the full RosettaGX™ portfolio of cancer testing services are commercially available through the Company's Philadelphia, PA- and Lake Forest, CA-based CAP-accredited, CLIA-certified labs.

Forward-Looking Statement Disclaimer

Various statements in this release concerning Rosetta's future expectations, plans and prospects including, but not limited to avoiding unnecessary surgeries, acquiring new samples, publishing additional studies, using Reveal to help clinicians, payers and patients make more informed decisions about the selection and reimbursement of molecular testing for indeterminate thyroid nodules, delivering timely and highly accurate data for use by clinicians, all from one powerful platform, to help avoid unnecessary surgeries, providing comparative information for the different molecular tests being used for indeterminate thyroid cases and planning to initiate similar studies to compare Reveal's performance versus other molecular tests and statements containing the words "expect," "believe," "will," "may," "should," "project," "estimate," "anticipated," "scheduled," and like expressions, and the negative thereof constitute forward-looking

statements for the purposes of the safe harbor provisions under The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by these forward-looking statements as a result of various risks and uncertainties, including, but are not limited to the following: we will require substantial additional funds to continue our operations and, if additional funds are not available, we may need to significantly scale back or cease our operations; we have a history of losses and may never be profitable; if we are unable to expand sales of our diagnostic tests in the United States, it would have a material adverse effect on our business and financial condition; the intensely competitive biotechnology market could diminish demand for our tests and products; the market may not be receptive to any diagnostic tests or therapeutic products using our microRNA technology; we currently have limited sales, marketing or distribution experience and may in the future depend significantly on third parties to commercialize microRNA-based diagnostic tests or therapeutic products we may develop; we are largely dependent upon our distributors for the success of commercialization of our current diagnostic tests; health insurers and other third-party payors may decide not to cover our diagnostic products or may provide inadequate reimbursement, which could jeopardize our commercial prospects; because of Medicare billing rules, we may not receive reimbursement for all tests provided to Medicare patients; if we fail to comply with our obligations under any licenses or related agreements, we could lose license rights that may be necessary for developing microRNA-based diagnostics and therapeutics; if we fail to comply with the complex federal, state, local and foreign laws and regulations that apply to our business, we could suffer severe consequences that could materially and adversely affect our operating results and financial condition; we contract with a single manufacturer for the purchase of microarray chips for certain tests, and the failure of this manufacturer to supply sufficient quantities on a timely basis could have a material adverse effect on our business; and other risk factors discussed under the heading "Risk Factors" in Rosetta's most recently filed Annual Report on Form 20-F, as filed with the SEC. In addition, any forward-looking statements represent Rosetta's views only as of the date of this release and should not be relied upon as representing its views as of any subsequent date. Rosetta does not assume any obligation to update any forward-looking statements unless required by law.

Rosetta Genomics Contact:
Ken Berlin, President & CEO
(267) 298-1159
investors@rosettagx.com

Rosetta Genomics Investor Contact:
LHA
Anne Marie Fields
(212) 838-3777
afields@lhai.com

# # #