

News Release

Rosetta Provides Update on Performance Data and Launch of RosettaGX Reveal™ (Thyroid microRNA Classifier)

Sensitivity and Negative Predictive Value in key Sub-Classes Establishes New Standard in Industry

Beginning to Receive and Process Commercial Samples

PHILADELPHIA and REHOVOT, Israel (November 12, 2015) – Rosetta Genomics Ltd. (NASDAQ: ROSG), a leading developer and provider of microRNA-based and other molecular diagnostics, announces additional performance data from the recently-completed, blinded validation study of RosettaGX Reveal™, its microRNA-based diagnostic assay for the classification of indeterminate thyroid nodules.

The “gold standard” for diagnosis is agreement among the three pathologists involved in the study. When compared to this “gold standard,” new data demonstrate particularly strong performance in Bethesda classes III and IV of the Bethesda System for Reporting Thyroid Cytopathology (TBSRTC), where the risk of malignancy is low, yet many of these patients are still sent to surgery. The Company expects these data to be published in a peer-reviewed journal in the coming months.

The high sensitivity, specificity and Negative Predictive Value, as presented at the recent International Thyroid Congress (ITC), along with the strong performance data in Bethesda classes III and IV, are important because patients with indeterminate nodules often have their thyroid surgically removed despite the fact that most of these nodules prove to be benign. Based on the results from a multi-center, blinded validation study, RosettaGX Reveal could prevent more than 70% of these unnecessary surgeries.

The strong performance demonstrated by the RosettaGX Reveal validation study provides physicians with a high level of confidence when considering whether to forego surgery in cases where a patient has an indeterminate thyroid nodule.

RosettaGX Reveal™ was launched at the ITC. It is a simple and reliable diagnostic assay that offers a valuable tool for the classification of pre-operative thyroid samples, including those that are presently indeterminate according to cytological evaluation, and is the only assay that can utilize cytology smears. This assay is the first commercial test that interrogates the same thyroid cells that the cytopathologist viewed for the initial indeterminate diagnosis, which provides a significant level of convenience versus other tests as it eliminates the risks, morbidity and unnecessary pain associated with a second fine needle passage into the patient's neck.

“As we continue to analyze and parse the data from our multi-center, blinded validation study for RosettaGX Reveal, our confidence grows in its exceptional performance and in our belief that it will be a very competitive assay,” said Kenneth A. Berlin, President and Chief Executive Officer of Rosetta Genomics.

"We were particularly pleased to receive our first commercial orders for RosettaGX Reveal at our laboratory in Philadelphia last week and again this week. This early response to our initial launch, underscores our confidence that RosettaGX Reveal will be an important driver of revenue growth over the next several years. We are excited about the potential for this assay to benefit patients with thyroid nodules as it can help ensure that their condition is handled most appropriately and in a most convenient manner for the patient and the practitioner."

About Rosetta Cancer Testing Service

Rosetta Cancer Tests are a series of microRNA-based diagnostic testing services offered by Rosetta Genomics. RosettaGX Cancer Origin™ can accurately identify the primary tumor type in primary and metastatic cancer including cancer of unknown or uncertain primary (CUP). The mi-LUNG™ assay accurately identifies the four main subtypes of lung cancer using small amounts of tumor cells. The mi-Kidney™ assay accurately classifies the four most common kidney tumors: clear cell renal cell carcinoma (RCC), papillary RCC, chromophobe RCC and oncocytoma. Rosetta's assays are designed to provide objective diagnostic data. In the U.S. alone, Rosetta Genomics estimates that 150,000 patients a year may benefit from the RosettaGX Cancer Origin, 62,000 patients a year from the mi-Kidney assay, 222,000 patients a year from the mi-Lung assay and 150,000 patients a year from RosettaGX Reveal™ for indeterminate thyroid FNAs. The Company's assays are offered directly by Rosetta Genomics in the U.S., and through distributors around the world. In addition to its proprietary products, the Company markets the RosettaGX OncoGxOne, OncoGxLung, PGxOne™ and EGFR and KRAS tests for Admera Health. With the acquisition of PersonalizeDx in April 2015, the Company now offers a broader menu of molecular and other assays for bladder, lung, prostate and breast cancer patients. For more information, please visit www.rosettagenomics.com. Parties interested in ordering any of these tests can contact Rosetta Genomics at (215) 382-9000 ext. 309.

About Rosetta Genomics

Rosetta develops and commercializes a full range of microRNA-based and other molecular diagnostics. Rosetta's integrative research platform combining bioinformatics and state-of-the-art laboratory processes has led to the discovery of hundreds of biologically validated novel human microRNAs. Building on its strong patent position and proprietary platform technologies, Rosetta is working on the application of these technologies in the development and commercialization of a full range of microRNA-based diagnostic tools. Through the acquisition of PersonalizeDx, the Company offers core FISH, IHC and PCR-based testing capabilities and partnerships in oncology and urology that provide additional content and platforms that complement the Rosetta offerings. Rosetta's and PersonalizeDx's cancer testing services are commercially available through the Philadelphia, PA- and Lake Forest, CA-based CAP-accredited, CLIA-certified labs, respectively. For more information visit www.rosettagenomics.com.

Forward-Looking Statement Disclaimer

Various statements in this release concerning Rosetta's future expectations, plans and prospects, including but not limited to statements that data is expected to be published in a peer-reviewed journal in the coming months; that RosettaGX Reveal could prevent more than 70% of unnecessary surgeries; that RosettaGX Reveal will be very competitive assay; and that RosettaGX Reveal will be an important driver of revenue growth over the next several years, 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 important factors, including those risks more fully discussed in the "Risk Factors" section of Rosetta's Annual Report on Form 20-F for the year ended December 31, 2014 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.

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