

Rosetta Genomics to Receive U.S. Patent for Cancer Origin Assay

Covers Method of Identifying Tumor of Origin in Cancer of Unknown Primary or Metastatic Cancer

Expands Company's Leading IP Position in the Growing Area of microRNA Biomarkers

PRINCETON, N.J. and REHOVOT, Israel (April 4, 2014) – Rosetta Genomics Ltd. (NASDAQ: ROSG), a leading developer and provider of microRNA-based molecular diagnostics and therapeutics, today announced that the Company received a Notice of Allowance from the United States Patent and Trademark Office (USPTO) for a patent covering the method of use of a core element of Rosetta Genomics' microRNA technology in the identification of the tumor of origin in cancer of unknown or uncertain primary and metastatic cancer. The issued claims for U.S. Patent Application No. 13/167,489 is entitled "Gene Expression Signature for Classification of Tissue of Origin of Tumor Samples."

The invention covered by this patent relates to the methods for determining an expression profile with a primer sequence and the comparison of the expression profile that quantitates 48 microRNAs and assigns one of 25 tumor diagnoses using a biologically motivated binary decision tree and a K-Nearest Neighbors classifier to identify the tumor of origin. This patent protects the intellectual property of the Company's first generation Cancer Origin Test, which utilizes a polymerase chain reaction (PCR) technology for sequencing.

"We are pleased to expand our intellectual property portfolio with this new U.S. patent. While this patent covers our first generation assay, it is still critical to our patent strategy as it creates a barrier to entry for would-be competitors and solidifies our position as the leader in microRNA biomarker technology and microRNA-based diagnostics," noted Kenneth A. Berlin, President and Chief Executive Officer of Rosetta Genomics. "This patent is important as it protects key elements of our microRNA technology and could be indicative of the future receipt of patent protection for our other existing and future assays. We continue to build a strong intellectual property position to protect our expanding portfolio of microRNA-based diagnostics and therapeutics."

About Rosetta Cancer Testing Services

Rosetta Cancer Tests are a series of microRNA-based diagnostic testing services offered by Rosetta Genomics. The Rosetta Cancer Origin Test™ can accurately identify the primary tumor type in primary and metastatic cancer including cancer of unknown or uncertain primary (CUP). Rosetta Mesothelioma Test™ diagnoses mesothelioma, a cancer connected to asbestos exposure. The Rosetta Lung Cancer Test™ accurately identifies the four main subtypes of lung cancer using small amounts of tumor cells. The Rosetta Kidney Cancer Test™ 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; it is the treating physician's responsibility to diagnose and administer the appropriate treatment. In the U.S. alone, Rosetta Genomics estimates that 200,000 patients a year may benefit from the Rosetta Cancer Origin Test™, 60,000 from the Rosetta Mesothelioma Test™, 65,000 from the Rosetta Kidney Cancer Test™ and 226,000 patients from the Rosetta Lung Cancer Test™. The Company's assays are offered directly by Rosetta Genomics in the U.S., and through distributors around the world. For more information, please visit www.rosettagenomics.com. Parties interested in ordering the test can contact Rosetta Genomics at (215) 382-9000 ext. 309.

About Rosetta Genomics

Founded in 2000, 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 and therapeutics. Rosetta currently commercializes a full range of microRNA-based molecular diagnostics. Rosetta's cancer testing services are commercially available through its Philadelphia-based CAP-accredited, CLIA-certified lab. For more information, please visit www.rosettagenomics.com.

Forward-Looking Statement Disclaimer

Various statements in this release concerning Rosetta's future expectations, plans and prospects, including without limitation, Rosetta's Cancer of Origin Test™, Rosetta's development or commercialization of molecular diagnostics, the market acceptance of Rosetta's cancer testing services, particularly the Rosetta Cancer Origin Test™, Rosetta's development of personalized medicine products and services, Rosetta achieving further patent protection for its existing and future assays and Rosetta building a strong intellectual property position, 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, 2012 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.

Company Contact:

Rosetta Genomics
Ken Berlin, President & CEO
(609) 419-9003
investors@rosettagenomics.com

Investor Contacts:

LHA
Anne Marie Fields
(212) 838-3777

afields@lhai.com

or

Bruce Voss

(310) 691-7100

bvoss@lhai.com

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