

Rosetta Genomics' Patent on Therapeutic Use of miR-34a Upheld by European Patent Office in Opposition Proceedings

PRINCETON, N.J. and REHOVOT, Israel (April 29, 2015) – Rosetta Genomics Ltd. (NASDAQ: ROSG), a leading developer and provider of microRNA-based molecular and other diagnostics, announces that the European Patent Office (EPO) has upheld the validity of the Company's European Patent No. 2126078, following the oral proceedings in the Opposition Proceedings against Rosetta's patent held on April 23, 2015 in Munich, Germany.

Since the grant of Rosetta's patent in April 2012, two opposition requests were filed by anonymous parties. Rosetta was able to overcome the grounds for revocation presented by the parties and maintain the patent on the therapeutic use of miR-34a, which has been proven to have significant effects in cancer therapy.

The European patent, which claims the use of miR-34a or its variants for treating p53-negative cancers, covers a core element of Rosetta Genomics' microRNA technology in the development of cancer therapeutics associated with p53-negative cancers, including lymphoma, breast cancer, ovarian cancer, liver cancer, skin cancer, certain types of lung cancer, and others. The patent is jointly owned with Yeda R&D Co. Ltd., the technology transfer company of the Weizmann Institute of Science in Rehovot, Israel.

"We are gratified that the EPO has upheld these important claims for the therapeutic use of miR-34a to treat a variety of p53-negative cancers. This affirms our belief in the validity of these claims and the groundbreaking nature of our microRNA technology to serve as a potential treatment for these various cancer indications," said Kenneth A. Berlin, President and Chief Executive Officer of Rosetta Genomics. "The successful examination and defense of this therapeutic patent highlights that this invention is seminal for the use of microRNAs in the development of cancer therapeutics and underscores the importance of the work performed by our researchers and their co-inventors at the Weizmann Institute of Science."

In February 2015, the Company announced receipt of a Notice of Allowance from the United States Patent and Trademark Office for U.S. Patent Application No. 14/280,822 (now U.S. Patent No. 9,006,206), a patent claiming the use of miR-34a for the treatment of p53-associated cancers. This U.S. patent complements the European patent in that it covers the treatment of any p53-associated cancer using miR-34a.

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). 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. In the U.S. alone, Rosetta Genomics estimates that 200,000 patients a year may

benefit from the Rosetta Cancer Origin Test™, 62,000 from the Rosetta Kidney Cancer Test™ and 222,000 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. In addition to its proprietary products, the Company markets the Rosetta Genomics PGxOne™ and EGFR and KRAS tests for Admera Health. With the recent acquisition of PersonalizeDx, the company now offers a broader menu of molecular and other assays for lung, bladder, 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 molecular diagnostics. 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. PersonalizeDx's core FISH, IHC and PCR-based testing capabilities and partnerships in oncology and urology 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.

Forward-Looking Statement Disclaimer

Various statements in this release concerning Rosetta's future expectations, plans and prospects, including without limitation, statements relating to the commercial potential and patentability of the aforementioned patent, Rosetta's monetization of said patent, as well as the ability of said patent to withstand continuous appeals and the possibilities for Rosetta's expanding its commercial offerings and/or clinical pipeline, 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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