

Rosetta Genomics to Receive Important U.S. Patent for Oncology Therapeutic

Will seek to monetize this important allowed patent in the near term

PRINCETON, N.J. and REHOVOT, Israel (February 26, 2014) – Rosetta Genomics Ltd. (NASDAQ: ROSG), a leading developer and provider of microRNA-based molecular diagnostics, today announced that the Company received a Notice of Allowance from the United States Patent and Trademark Office (USPTO) for a patent claiming Mp53-negative cancer patients. The allowed claims for U.S. Patent Application No. 12/528,690 entitled “Composition and Methods for Modulating Cell Proliferation and Cell Death,” cover a core element of Rosetta Genomics’ microRNA technology in the development of cancer therapeutics associated with non-small cell lung cancer (NSCLC) in p53-negative patients. The allowed patent application is jointly owned with Yeda, the technology transfer company of the Weizmann Institute of Science in Rehovot, Israel.

The p53 protein is a sequence-specific transcription factor that functions as a major tumor suppressor in mammals. Inactivation of the tumor-suppressor function of p53 is one of the most frequent genetic alterations in human cancer, and close to half of all human tumors carry p53 gene mutations within their cells.

The patent discloses the finding that miR-34a, which is a direct transcriptional target of p53, possesses anti-proliferative and pro-apoptotic activities, thereby contributing to the tumor suppressor effects of activated p53. Overexpression of miR-34a exerts anti-proliferative effects and promotes cell death, whereas inactivation of miR-34a attenuates p53-mediated cell death. Thus, miR-34a is a direct transcriptional target of p53, which may mediate some of the biological effects of this tumor suppressor. Perturbation of miR-34a expression may thus contribute to tumorigenesis.

“We continue to fortify our leading intellectual property position in microRNA technology and these newly allowed patent claims expand, strengthen and complement our growing portfolio of over 35 patents worldwide,” 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 to develop oncology treatments for NSCLC in p53 negative patients and offers opportunities for monetization. With RNA-based therapeutics, including microRNA-targeting agents, continuing to progress in and towards the clinic, this patent allowance should create opportunities for us to exploit this important new piece of intellectual property. It also supports our broader oncology strategy to develop and commercialize microRNA-based diagnostics, therapeutics and biomarkers that will enhance clinicians’ ability to identify and treat cancers.”

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

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. Rosetta's cancer testing services are commercially available through its Philadelphia-based CAP-accredited, CLIA-certified lab. Frost & Sullivan recognized Rosetta Genomics with the 2012 North American Next Generation Diagnostics Entrepreneurial Company of the Year Award.

Forward-Looking Statement Disclaimer

Various statements in this release concerning Rosetta's future expectations, plans and prospects, including without limitation, the possibility of a therapeutic based on mimicking mir-34a, in p53-negative cancers, thus overcoming part of the negative effects of missing this important tumor suppressor, 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.

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