

News Release

Rosetta Genomics and Ramot at Tel Aviv University Awarded Grant from Israeli Office of the Chief Scientist to Support Development of microRNA Oncology Therapeutics

PHILADELPHIA, REHOVOT and TEL AVIV, Israel (August 8, 2013) – Rosetta Genomics Ltd. (NASDAQ: ROSG), a leading developer and provider of microRNA-based molecular diagnostics, and Ramot, the technology transfer company of Tel Aviv University, announces that the Israeli Office of the Chief Scientist (OCS) has awarded both companies a grant in the amount of 650,000 NIS (~200,000 USD) to support the first year development of oncology therapeutics utilizing Rosetta Genomics' novel microRNA technology combined with Tel Aviv University's novel delivery system.

The grant will be used to fund collaborative work between Rosetta Genomics and Prof. Ronit Satchi-Fainaro, Department of Physiology and Pharmacology, Sackler School of Medicine, Tel Aviv University (TAU), for the development of a duplex RNA molecule that mimics the sequence and activity of miR-34a in combination with a polymeric delivery system for the treatment of cancer.

miR-34a is a tumor suppressor microRNA that is down-regulated in many cancers, and it is believed that replacing miR-34a holds great therapeutic potential. TAU has developed a novel polymeric delivery system that is a water-soluble hyperbranched polymer that accumulates in the tumor environment due to the enhanced permeability and retention effect, a hallmark of angiogenic blood vessels. As such, it represents an attractive delivery vehicle for antitumor biological agents.

The Company plans to work with TAU on the preparation and characterization of miR-34a polyplex as well as *in vitro* and *in vivo* efficacy studies in the second year.

“We are pleased the OCS is funding this important therapeutic program and are delighted to be working with Prof. Satchi-Fainaro, a leading expert in her field. We believe the combination of a known microRNA with TAU’s novel carrier system may provide a new and more effective approach to treating cancer,” stated Kenneth A. Berlin, President and Chief Executive Officer of Rosetta Genomics.

“The growing understanding of the importance of microRNAs has generated intense activity in the biomedical research community. Rosetta has been at the forefront of this scientific revolution and holds the leading intellectual property position in the field. Our goal is to leverage our broad-based patent position in microRNA technology to bring innovative new

diagnostics and therapies to patients in need, while creating new revenue sources for the Company. In addition to oncology, we are pursuing this strategy in infectious, autoimmune-mediated and cardiovascular diseases," concluded Mr. Berlin.

"This polymeric carrier system, as well as other drug delivery technologies, are the fruits of innovative life science and medical research performed at TAU. We believe that our collaboration with Rosetta Genomics will lead to the development of long sought-after effective treatment for some of the most devastating cancers known to date," commented Dr. Tamar Raz, VP Marketing and Strategy of Ramot. "The OCS' support in translational research is leading growth engine and we are pleased to have the opportunity to further develop this important research in cooperation with a pioneering leading company in this field."

About The Office of the Chief Scientist

The OCS is the arm of the Israeli government tasked with cultivating the development of industrial R&D within the State of Israel. The mission of the OCS, as defined by the "Law for the Encouragement of Industrial Research and Development-1984," is to assist the advancement of Israel's knowledge-based science and technology industries in order to encourage entrepreneurship and innovative technology development. This support plays a role in stimulating economic growth within Israel and in keeping Israel on the competitive edge of the global hi-tech industry.

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.

About Ramot at Tel Aviv University

Ramot is the technology transfer company of Tel Aviv University. Ramot fosters, initiates, leads and manages the transfer of new technologies from university laboratories to the marketplace by performing all activities relating to the protection and commercialization of inventions and discoveries made by faculty, students and other researchers. Ramot provides a dynamic interface connecting industry to leading-edge science and innovation, offering new business opportunities in a broad range of emerging markets. For more information, visit www.ramot.org.

Forward-Looking Statement Disclaimer

Various statements in this release concerning Rosetta's future expectations, plans and prospects, including without limitation, the potential execution of a licensing agreement between Rosetta and Tel Aviv University,] the potential for collaborative work between Rosetta and Tel Aviv University, Rosetta's development of a duplex RNA molecule that mimics the sequent and activity of miR-34a in combination with a polymeric delivery system for the treatment of cancer in general and GBM in particular, Rosetta's development of personalized medicine products

and services 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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