

Rosetta Genomics and Moffitt Cancer Center Enter into Strategic Alliance to Develop microRNA-based Cancer Diagnostics

Leverages strengths of both organizations to develop diagnostic assays for important, unmet needs in cancer

PRINCETON, N.J., REHOVOT, Israel and TAMPA, Fla. (September 2, 2014) – Rosetta Genomics Ltd. (NASDAQ: ROSG), announces that the company has entered into a strategic alliance with Moffitt Cancer Center to discover, develop and commercialize a variety of microRNA-based cancer diagnostics.

The three-year alliance brings together the resources and talents of Moffitt, a National Cancer Institute-designated Comprehensive Cancer Center, with those of Rosetta Genomics, an industry-leading developer of microRNA-based diagnostics, to stimulate new projects and collaborations for the development of diagnostics in areas of unmet medical need. Rosetta will provide funding for Moffitt investigator-initiated projects that align with Rosetta’s strategic priorities.

Rosetta has a proprietary discovery microarray platform with over 2,500 human microRNAs, along with a proprietary RT-PCR platform. Additionally, Rosetta has bioinformatics and microRNA wet lab expertise, with approximately 50 peer-reviewed publications across multiple cancers and other disease states and on many tissue types and body fluids. This strategic alliance will leverage Rosetta’s capabilities and expertise.

Moffitt has internationally-renowned researchers including medical oncologists and pathologists who have first-hand knowledge of unmet medical needs in cancer patient management. The research enterprise at Moffitt is composed of multidisciplinary research programs with more than 160 faculty members focused on basic, population, clinical, and translational research.

“We are excited about the opportunity to develop novel cancer diagnostics for important, unmet medical needs based on our proprietary microRNA platform technologies with Moffitt’s world-class team of oncologists and pathologists who have dedicated their careers to advancing cancer patient care,” noted Kenneth A. Berlin, president and chief executive officer of Rosetta Genomics. “New molecularly targeted therapies continue to drive the need for more accurate classification of tumor types, which helps to guide treatment decisions, monitor therapy, predict outcomes and more. Responding to these unmet medical needs, the overall purpose of this alliance is to advance the care of cancer patients through the development of diagnostic assays

based on Rosetta's microRNA technology, which with its high reproducibility, robustness and accuracy is well suited to provide this valuable clinical information."

"Moffitt is committed to bringing innovative oncology diagnostics to patients in order to optimize clinical outcomes. This goal is particularly well aligned with Rosetta's expertise, and we are pleased to partner with a known leader in microRNA technology," said Anthony Magliocco, M.D., chair of the Anatomical Pathology Program and executive director of the Morsani Molecular Diagnostics Laboratory at Moffitt. "We look forward to working with the Rosetta team on research collaborations for the development of new, effective diagnostic assays and novel tests. This alliance should produce cutting-edge research and data that can be the subject of scientific publications and presentations. Importantly, the development of such tests will benefit patients, who are the ultimate focus of our work at Moffitt."

About Moffitt Cancer Center

Located in Tampa, Florida, Moffitt is one of only 41 National Cancer Institute-designated Comprehensive Cancer Centers, a distinction that recognizes Moffitt's excellence in research, its contributions to clinical trials, prevention and cancer control. Moffitt is the top-ranked cancer hospital in the Southeast and has been listed in U.S. News & World Report's "Best Hospitals" for cancer since 1999. With more than 4,500 employees, Moffitt has an economic impact on the state of nearly \$1.6 billion. For more information, please visit www.moffitt.org.

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, any expectation that the alliance with Moffitt will result in the development and commercialization of any diagnostic assays for cancer, 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, 2013 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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