News Release

# Rosetta Genomics Announces Publication of Data Demonstrating Differentiation of Adrenocortical Carcinomas from Adenomas by microRNA Profiling

*Study shows microRNAs accurately identify malignant adrenocortical tumors with equal efficiency to histopathologic Weiss system*

**PRINCETON, N.J. and REHOVOT, Israel (November 4, 2014)** – Rosetta Genomics Ltd. (NASDAQ: ROSG), a leading developer and provider of microRNA-based molecular diagnostics, announces the publication of data relating to the Company's microRNA platform in the online edition of peer-reviewed journal, "*Applied Immunohistochemistry and Molecular Morphology*." The article entitled, "Specific MicroRNAs Differentiate Adrenocortical Adenomas from Carcinomas and Correlate with Weiss Histopathologic System," highlights the ability of microRNA profiles to differentiate adrenocortical carcinomas from adenomas with very good correlation with the histologic Weiss system for identifying malignancy in adrenocortical tumors (ACTs). This study is part of a collaborative project between Rosetta Genomics and Prof. Meora Feinmesser, M.D., Head of the Institute of Pathology at the Rabin Medical Center in Israel.

The study blindly evaluated 46 primary and two recurrent ACTs for the Weiss criteria. High-quality RNA was extracted, and microRNA expression was evaluated with microarrays and quantitative reverse-transcriptase polymerase chain reaction. On microarray analysis, over a dozen microRNAs were differentially expressed in carcinomas compared with adenomas. Up-regulation of miR-503 was shown to be the best single discriminator of malignancy. The combination of miR-34a and miR-497 under-expression discriminated carcinomas from adenomas with 100% sensitivity and 96% specificity.

The study concluded that microRNA expression can accurately identify malignant ACTs with equal efficiency to the Weiss system. microRNA analysis may have added value in tumors with borderline features that are difficult to interpret histopathologically.

Commenting on the study, Prof. Feinmesser noted, "The results of the study emphasize the close correlation between molecular pathology and time proven histopathologic analysis. In borderline and difficult cases the microRNA profile may contribute to accurate diagnosis and patient treatment decisions."

"We are pleased to have published studies, such as this one, that confirm the accuracy of microRNA profiling to differentiate malignant from benign tumors of the adrenal gland and show correlation to the Weiss system, which is the current gold standard in histopathology. This accurate differentiation is important since most adrenal tumors are benign, and identifying

those that are malignant is critical," noted Kenneth A. Berlin, President and Chief Executive Officer of Rosetta Genomics. "Importantly, this study continues to further elucidate the key role microRNAs play in regulating gene expression, particularly those strongly associated with cancer development. With over 50 peer-reviewed articles related to our microRNA platform technology, we continue to build our leadership position in the discovery and development of microRNA-based cancer diagnostics. In addition, a test that can accurately identify malignant ACTs would be a nice complement to our other efforts in endocrinology, oncology and pathology such as our thyroid assay for indeterminate FNAs which we aim to launch in the third quarter of next year."

**About Adrenocortical Carcinomas**

A rare cancer that forms in the outer layer of tissue of the adrenal gland (a small organ on top of each kidney that makes steroid hormones, adrenaline, and noradrenaline to control heart rate, blood pressure, and other body functions). According to Cancer.net, there are approximately 300 adults in the United States diagnosed each year with adrenal cortical cancer. This type of cancer is much less common than an adrenal adenoma, a benign tumor that is more common for middle-age and older adults.

**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, statements relating to the differentiation of adrenocortical carcinomas from adenomas, the performance of Rosetta's Cancer testing services and the added value of microRNA analysis to in tumors with borderline features, 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.

**Rosetta Genomics 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

###