News Release

Clinician Survey Supporting Value Proposition of the Rosetta Kidney Cancer Test™ Published in the *Journal of Kidney Cancer*

Article Highlights Receptivity to a novel microRNA Diagnostic to Reduce Unnecessary Surgery for Kidney Tumors

PRINCETON, N.J. and REHOVOT, Israel (January 20, 2015) – Rosetta Genomics Ltd. (NASDAQ: ROSG), a leading developer and provider of microRNA-based molecular diagnostics, announces the publication of an article in the *Journal of Kidney Cancer* in support of the use of the Rosetta Kidney Cancer Test™. Titled "Clinicians' Real World Perceptions of Pre-Nephrectomy Diagnostic Biopsy Performance as a Driver of Reduction in Unnecessary Surgeries in Renal Tumors," the article appeared in the online edition on January 18, 2015 and can be accessed <u>here</u>.

MedPanel, LLC, a research organization based in Cambridge, Mass. with extensive reach among healthcare professionals within community and academic medical centers, developed and conducted a survey of 102 practicing urologists and pathologists. The study was designed to understand the perceived needs for better diagnosis in renal tumors and the potential impact of a new biomarker test developed by Rosetta Genomics with previously demonstrated performance characteristics. Participating physicians were blinded throughout the research as to the identity and source of the specific test, and to the study sponsor.

According to the study results, treatment decisions today are clearly influenced by histological subtype, which too often is not available prior to surgery or is inaccurate. Nearly all surveyed urologists (94%) believe it is important to avoid resecting a benign tumor. In un-typed tumors, later determined to be renal oncocytoma (RO) after resection, they would not have resected the tumor in 59% of cases if they had an accurate diagnosis in advance. Urologists also reported they would use a tool that could more accurately classify tumor subtype in 62% of cases, and 73% believe the performance characteristics matching the Rosetta Kidney Cancer Test's performance provide sufficiently meaningful results to change treatment of RO patients. They specifically expect cases where they would not perform a resection due to diagnosis of RO to increase by nearly two-thirds, and cases where they would perform a partial instead of a total nephrectomy to increase by approximately 50%.

The Rosetta Kidney Cancer Test™ is able to differentiate between renal cell carcinoma (RCC) and RO, which are two of the four most common kidney tumors. The test also accurately classifies papillary RCC and chromophobe RCC.

RO, which is the most common benign tumor of the kidney, should be managed by monitoring and expectant treatment rather than by total nephrectomy. Unfortunately, because of the similarity in radiological and histological appearance, RO is oftentimes misdiagnosed as RCC, which is a malignant tumor. The infrequent use of pre-nephrectomy biopsies is a function of

historical limitations of histopathological differential diagnosis in this setting.

The impact of the limitation of diagnostic capability in RO was highlighted by a recent health economics outcome review of the management of kidney masses¹. This study clearly demonstrated the adverse economic and health outcomes impact of poor pre-operative diagnosis, and confirmed the reported very low rates of biopsy. In their analysis of the IMS LifeLink database, covering more than 60 million commercially insured patients in the U.S., the authors found that approximately 1 in 6 who underwent a nephrectomy for suspected RCC were subsequently identified as having benign disease with an economic impact of approximately \$26,500 per patient. This is in contrast to total expenditures of approximately \$1,300 pre-operatively today, most commonly for one or more CT examinations. They projected that this represents more than 10,000 unnecessary surgeries annually in the U.S. alone.

"We are very pleased with the publication of this survey in a peer-reviewed journal that is specifically tailored to kidney cancer specialists," noted Kenneth A. Berlin, President and Chief Executive Officer of Rosetta Genomics. "Clinician receptivity to improved diagnostic technology to change their practice and increase use of pre-nephrectomy biopsy to reduce unnecessary surgery is a critical first step to improve care and lower healthcare costs. The results of this survey should significantly enhance our efforts to make pre-nephrectomy biopsy and differential diagnosis with the Rosetta Kidney Cancer Test™ a standard practice in kidney cancer diagnosis and treatment, and should resonate in important ways with payers in support of coverage for our test."

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; 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™, 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.

About Rosetta Genomics

Founded in 2000, Rosetta's integrative research platform combining bioinformatics and state-ofthe-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

¹ Asnis-Alibozek AG, Fine MJ, Russo P, McLaughlin T, Farrelly EM, LaFrance N, Lowrance W. Cost of care for malignant and benign renal masses. AJMC 2013: 19(8) 617-24. [PMID: 24304211]

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 that improved diagnostic technology can change clinician's practice and increase use of pre-nephrectomy biopsy, Rosetta Kidney Cancer TestTM becoming a standard practice in kidney cancer diagnosis and treatment and Rosetta receiving coverage for the Rosetta Kidney Cancer TestTM, 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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