



Rosetta Genomics Reports First Quarter 2010 Financial Results

Conference Call Scheduled for Thursday, May 27th at 10:00 a.m. Eastern Time

PHILADELPHIA and REHOVOT, Israel (May 26, 2010) - Rosetta Genomics, Ltd. (NASDAQ: ROSG), a leading developer of microRNA-based molecular diagnostics, today reported financial results for the three months ended March 31, 2010. Highlights of the first quarter of 2010 and subsequent weeks include:

- The Company strengthened its balance sheet with the completion of a registered direct offering in January 2010 of 2,530,000 ordinary shares and warrants to purchase 1,265,000 ordinary shares at an exercise price of \$2.50 per share, with net proceeds to the Company of approximately \$4.65 million.
- The Company's patent estate was fortified with the issuance of four additional U.S. patents covering composition of matter of human microRNAs, and the allowance of claims of three additional U.S. patent applications. Rosetta Genomics' IP portfolio now includes 10 issued U.S. patents, 10 allowed U.S. patent applications and one allowed patent application in Australia. In addition, Rosetta Genomics has 95 patent applications, 35 of which are filed in the U.S. and 60 are filed outside the U.S.
- The Company began processing Fine Needle Aspirate (FNA) cell block samples for lung cancer sub-classification at its laboratory in Philadelphia for analysis using the Company's miRview squamous test.
- Four posters were presented at the Annual Meeting of the American Association for Cancer Research (AACR) providing further validation of Rosetta Genomics' unique microRNA-based technologies and demonstrating their powerful potential as diagnostic and prognostic markers in a variety of cancer indications.
- The oral presentation of a study demonstrating the ability of miRview™ squamous to reliably classify Non Small Cell Lung Cancer was presented at the 2nd European Lung Conference by the study's lead investigator, Dr. William Westra, Professor of Pathology, Oncology, and Otolaryngology/Head & Neck Surgery at The Johns Hopkins Medical Institutions.
- The publication of a study showing microRNA expression differentiates between primary lung tumors and metastases to the lung was published in the online edition of *Pathology Research and Practice*.
- A study identifying 49 microRNAs with potential to provide novel molecular biomarkers and drug target candidates was published in *Nucleic Acid Research*. These discoveries provide Rosetta Genomics with direct and exclusive access to the 49 novel microRNAs, and patent applications were filed on each of these newly discovered microRNAs.
- A study by Rosetta Genomics and NYU Langone Medical Center demonstrating the potential of miR-31 to be used for the development of new therapies against mesothelioma and other cancers was published in *The Journal of Biological Chemistry*.

Management Commentary

“Rosetta Genomics got off to a great start this year as we made significant progress on a number of fronts important to building a sustainable business. We strengthened our IP position with the addition of several significant U.S. patents, we had a number of important clinical studies published in peer-reviewed journals and presented at annual medical meetings, we received CAP accreditation for our already CLIA-certified laboratory in Philadelphia and we raised nearly \$5 million to fund our business plan,” commented Kenneth A. Berlin, President and CEO of Rosetta Genomics.

“We continue to be diligent in protecting our leadership position in microRNA technology as we view our leading position in microRNA IP as one of the Company’s core strengths. microRNAs are well established as sensitive biomarkers and potential drug targets, as well as key players in a wide range of cellular processes. We are proud that Rosetta’s early discoveries in this field are now materializing into a robust portfolio of issued and allowed patents. We will continue to leverage these core assets to advance our overall business operations.”

“Recently, our U.S. licensee, Prometheus Laboratories, initiated an arbitration process to reconcile some differences of opinion on several matters relating to our License Agreement with them. We are working to negotiate a resolution regarding Prometheus’ request for deviations to the agreed upon development program provided for in the License Agreement and responsibility for funding the development costs related to the development plan, as well as the level and extent of Prometheus’ promotion of the diagnostic products in the U.S. We hope to resolve these issues through negotiation but may have to resolve them through the arbitration process.”

“Over the past several years, microRNAs have been hailed as one of the most significant scientific and medical discoveries. They have been described as the body's 'master switches,' holding significant potential for therapeutic applications, and have been shown to be highly sensitive and specific biomarkers. The growing body of scientific and clinical data being published and presented further validates the potential role of microRNAs in cancer diagnostics and therapeutics, and details the significant impact a single microRNA can have on disease course. Through our commercially available diagnostic tests for cancer, as well as through a robust and diverse microRNA-based product pipeline, we aim to continue to lead in this field by harnessing the power of microRNAs to advance patient care worldwide,” concluded Mr. Berlin.

First Quarter Results

The company recorded revenues of \$27,000 and \$17,000 for the first quarters of 2010 and 2009, respectively.

Research and development expenses for the first quarter of 2010 were \$1.6 million, compared with \$1.7 million for the first quarter of 2009, mainly due to lower IP costs in 2010.

Marketing and business development expenses for the first quarter of 2010 increased to \$1.2 million from \$864,000 for the first quarter of 2009, primarily the result of an increase in expenses related to salaries.

General and administrative expenses of \$729,000 in the first quarter of 2010 compare with \$750,000 in the first quarter of 2009.

The operating loss for the first quarter of 2010 was \$3.7 million, including \$219,000 of non-cash stock compensation expense. This compares with an operating loss of \$3.4 million, including \$277,000 of non-cash stock compensation expense, for the corresponding quarter of 2009.

The Company's net loss for the first quarter of 2010 was \$3.6 million or \$0.22 per ordinary share, compared with a net loss of \$3.6 million or \$0.30 per ordinary share, in the same period of 2009.

On a non-GAAP basis, excluding stock-compensation expense, the net loss for the 2010 first quarter was \$3.4 million or \$0.21 per ordinary share. This compares with a non-GAAP net loss for the 2009 first quarter of \$3.3 million or \$0.27 per ordinary share.

Details reconciling non-GAAP amounts with GAAP amounts are provided in the table below.

Rosetta Genomics ended the first quarter of 2010 with \$11.1 million in cash and cash equivalents, short-term bank deposit and marketable securities, compared with \$10.3 million as of December 31, 2009.

2010 Financial Guidance

Given the current situation with Prometheus Laboratories, Inc., the Company is suspending its previous 2010 revenue guidance.

Conference Call

Rosetta Genomics management will host a conference call on Thursday, May 27, 2010 beginning at 10:00 a.m. Eastern time to discuss first quarter 2010 financial results and recent corporate developments, and answer questions. To access the live conference call, U.S. and Canadian participants may dial (866) 239-5859; international participants may dial (702) 495-1913. The access code for the call is 77058473.

To access the audio replay, beginning two hours after the event U.S. and Canadian participants may dial (800) 642-1687; international participants may dial (706) 645-9291. The access code for the replay is 77058473. The replay will be available through 12 midnight Eastern time on May 29, 2010.

A live audio webcast of the call will also be available in the "Investors" section of the Company's website at www.rosettagenomics.com. An archived webcast will be available on the Company's website for 30 days beginning approximately two hours after the event.

About microRNAs

MicroRNAs (miRNAs) are recently discovered, small RNAs that act as master regulators of protein synthesis, and have been shown to be highly effective biomarkers. The unique advantage of microRNAs as biomarkers lies in their high tissue specificity, and their exceptional stability in the most routine preservation methods for biopsies, including Formalin Fixed Paraffin Embedded (FFPE) block tissue and fine needle aspirate (FNA) cell blocks. It has been suggested that their small size (19 to 21 nucleotides) enables them to remain intact in FFPE blocks, as opposed to messenger RNA (mRNA), which tends to degrade rapidly. In addition, early preclinical data has shown that by controlling the levels of specific microRNAs, cancer cell growth may be reduced. To learn more about microRNAs, please visit www.rosettagenomics.com.

About Rosetta Genomics

Rosetta Genomics is a leading developer of microRNA-based molecular diagnostics. Founded in 2000, the company'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 Genomics is working on the application of these technologies in the development of a full range of microRNA-based diagnostic tools. The company's first three microRNA-based tests, miRview™ squamous, miRview™ mets and miRview™ meso, are commercially available through its Philadelphia-based CAP-accredited, CLIA-certified lab. Rosetta Genomics is the 2008 winner of the *Wall Street Journal's* Technology Innovation Awards in the medical/biotech category. To learn more, please visit www.rosettagenomics.com.

Forward-Looking Statements

Various statements in this news release concerning Rosetta's future expectations, plans and prospects 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 under "Key Information - Risk Factors" in Rosetta's Annual Report on Form 20-F for the year ended December 31, 2009 on file with the Securities and Exchange Commission. In addition, any forward-looking statements represent Rosetta's views only as of today 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.

Use of Non-GAAP Financial Measures

This press release contains certain non-GAAP financial measures. A "non-GAAP financial measure" refers to a numerical measure of historical or future financial performance, financial position, or cash flows that excludes (or includes) amounts that are included in (or excluded from) the most directly comparable measure calculated and presented in accordance with GAAP in the financial statements. In this release, Rosetta provides non-GAAP net loss and non-GAAP net loss per share data as additional information relating to its operating results. The presentation of this additional information is not meant to be considered in isolation or as a substitute for net loss or net loss per share prepared in accordance with GAAP.

Pursuant to the requirements of Regulation G promulgated by the SEC, the Company has provided a reconciliation of each non-GAAP financial measure used in this earnings release and related conference call or webcast to the most directly comparable financial measure prepared in accordance with GAAP. This reconciliation is presented in a table below under the heading "Reconciliation of GAAP to Non-GAAP Consolidated Statement of Operation." Investors are encouraged to review these reconciliations to ensure they have a thorough understanding of the reported non-GAAP financial measures and their most directly comparable GAAP financial measures.

Management uses these non-GAAP measures for internal reporting and forecasting purposes. The Company has provided these non-GAAP financial measures in addition to GAAP financial results because it believes that these non-GAAP financial measures provide useful information to certain investors and financial analysts for comparison across accounting periods not influenced by certain non-cash items that are not used by management when evaluating the Company's historical and prospective financial performance.

Company Contact:
Rosetta Genomics
Ron Kamienchick
(646) 509-1893
investors@rosettagenomics.com

Investor Contacts:
Lippert/Heilshorn & Associates
Anne Marie Fields
(212) 838-3777
afields@lhai.com
or
Bruce Voss
(310) 691-7100
bvoss@lhai.com

[Tables to follow]

ROSETTA GENOMICS LTD. AND ITS SUBSIDIARY (A development stage company)
CONSOLIDATED STATEMENTS OF OPERATIONS

U.S. dollars in thousands (except share and per share data)

	Three months ended March 31,	
	2010	2009
	Unaudited	
Revenues	\$ 27	\$ 17
Cost of revenues	158	138
Gross loss	131	121
Operating expenses:		
Research and development, net	1,620	1,685
Marketing and business development	1,176	864
General and administrative	729	750
Total operating expenses	3,525	3,299
Operating loss	3,656	3,420
Financial income, net	(41)	(12)
Net loss	3,615	3,408
Attributable to non controlling interest	(21)	-
Net loss attributable to Rosetta Genomics before discontinued operation	3,594	3,408
Net loss attributable to Rosetta Genomics from discontinued operation	-	211
Net loss attributable to Rosetta Genomics after discontinued operation	\$ 3,594	\$ 3,619
Basic and diluted net loss per Ordinary share of continuing operation attributable to Rosetta Genomics' shareholders	\$ 0.22	\$ 0.28
Basic and diluted net loss per Ordinary share of discontinuing operation attributable to Rosetta Genomics' shareholders	\$ -	\$ 0.02
Basic and diluted net loss per Ordinary share attributable to Rosetta Genomics' shareholders	\$ 0.22	\$ 0.30
Weighted average number of Ordinary shares used to computed basic and diluted net loss per Ordinary share	16,235,437	12,172,295

RECONCILIATION OF GAAP TO NON-GAAP CONSOLIDATED STATEMENT OF OPERATION:

U.S. dollars in thousands in thousands (except share and per share data)

	Three Months ended	
	March 31,	
	2010	2009
GAAP net loss as reported	\$ 3,594	\$ 3,619
NON-GAAP Adjustment:		
Expenses reported for stock-based compensation		
Research and development, net	(68)	(98)
Marketing and business development	(129)	(76)
General and administrative	(22)	(103)
Total Adjustment	(219)	(277)
NON-GAAP net loss	<u>3,375</u>	<u>3,342</u>
NON-GAAP Basic net loss (income) per Ordinary share	<u>\$ 0.21</u>	<u>\$ 0.27</u>

ROSETTA GENOMICS LTD. AND ITS SUBSIDIARY (A development stage company)

CONSOLIDATED BALANCE SHEETS

U.S. dollars in thousands

	<u>March 31,</u> <u>2010</u> <u>Unaudited</u>	<u>December 31,</u> <u>2009</u>
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 2,087	\$ 3,329
Restricted cash	1,056	1,076
Short-term bank deposits	5,186	3,143
Marketable securities	2,808	2,756
Trade receivables	44	72
Other accounts receivable and prepaid expenses	811	557
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<u>Total current assets</u>	<u>11,992</u>	<u>10,933</u>
SEVERANCE PAY FUND	98	92
PROPERTY AND EQUIPMENT, NET	1,398	1,216
LONG-TERM ACCOUNTS RECEIVABLE	479	502
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<u>Total long term assets</u>	<u>1,975</u>	<u>1,810</u>
<u>Total assets</u>	<u>\$ 13,967</u>	<u>\$ 12,743</u>
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Short-term bank loan, current maturities of capital lease and of long-term bank loan	118	125
Trade payables	848	654
Other accounts payable and accruals	1,268	1,526
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<u>Total current liabilities</u>	<u>2,234</u>	<u>2,305</u>
LONG-TERM LIABILITIES:		
Long-term bank loan and capital lease	20	46
Convertible loan	-	1,500
Deferred revenue	1,928	1,928
Accrued severance pay	134	122
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<u>Total Long-term Liabilities</u>	<u>2,082</u>	<u>3,596</u>
EQUITY:		
Rosetta Genomics Shareholders equity:		
Share capital	39	32
Additional paid-in capital	74,287	68,174
Other comprehensive income	152	96
Deficit accumulated during the development stage	(65,054)	(61,460)
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<u>Total Rosetta Genomics shareholders' equity</u>	<u>9,424</u>	<u>6,842</u>
<u>Non-controlling interest</u>	<u>227</u>	<u>-</u>
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<u>Total equity</u>	<u>9,651</u>	<u>6,842</u>
<u>Total liabilities and shareholders' equity</u>	<u>\$ 13,967</u>	<u>\$ 12,743</u>