Rosetta Genomics Reports Second Quarter 2010 Financial Results

Test Volume Increases 170% Compared With the First Quarter
Conference Call Scheduled for Wednesday, September 8th at 10:00 a.m. Eastern Time

PHILADELPHIA and REHOVOT, Israel (September 7, 2010) – Rosetta Genomics, Ltd. (NASDAQ: ROSG), a leading developer of microRNA-based molecular diagnostics, today reported financial results for the three and six months ended June 30, 2010. Highlights of activities since the announcement of the Company's first quarter financial results on May 27, 2010 include:

- Establishment of Rosetta Green as a majority-owned subsidiary with Rosetta Genomics holding a 76% ownership position in the new company. Rosetta Genomics has signed a license agreement with Rosetta Green providing for the use of its microRNAs by Rosetta Green in agricultural and clean technology applications, with a particular focus on improving feedstocks for biofuels and crops for agriculture.
- New, interim data from a study conducted in collaboration with researchers from the University of Texas, M. D. Anderson Comprehensive Cancer Center were presented at ASCO 2010. The data demonstrated the ability of miRview™ mets to identify the most likely origin of metastases in Cancer of Unknown Primary.
- Clalit Health Services, Israel's largest and the world's second largest health maintenance organization, established a reimbursement coverage policy for Rosetta Genomics' miRview™ mets test.
- Publication of a peer-reviewed article in the online version of the *Journal of Molecular Diagnostics* demonstrated the ability of microRNAs to accurately identify four histological types of renal tumors, namely clear cell, papillary and chromophobe renal cell carcinoma, as well as oncocytoma, a benign tumor.
- Exclusive distribution agreement for three of Rosetta Genomics' diagnostic tests signed with Genekor S.A, a leading molecular diagnostic service provider in Greece.

Management Commentary

"We are encouraged by the commercial progress we made in the second quarter, with the number of tests performed up more than 170% compared with the immediately preceding quarter. This growth trend is continuing as average weekly test unit volume in the third quarter to date is more than double the average weekly test unit volume for the second quarter," said Kenneth A. Berlin, President and Chief Executive Officer of Rosetta Genomics.

"In addition to the significant percentage growth in sales of our commercially available products, we expanded our global reach with the addition of an exclusive distributor in Greece and have a reimbursement policy in place for the miRview™ mets test by Clalit Health Services for Israel. Initially, reimbursement will be provided to patients participating in a clinical study being conducted at three medical centers in Israel, with plans to expand reimbursement for the test to all Clalit members. We expect to build on these successes in the coming quarters to gain further commercial traction with our microRNA-based diagnostic tests.

"We were especially pleased that a number of important clinical studies were published in peer-reviewed journals and presented at annual medical meetings during the quarter, as this expanding body of data continues to validate the clinical utility of our microRNA platform in diagnostics.

"We continued to advance our robust development pipeline during the quarter and we are delighted to announce that we are on or ahead of schedule in preparing for the launch of the first two of these diagnostics, namely our next generation miRview™ mets assay and miRview™ lung. Compelling clinical data validating each of these two tests will be highlighted at the American Academy of Cancer Research's upcoming Molecular Diagnostics in Cancer Therapeutic Development Conference, taking place in Denver in late September. Our next generation miRview™ mets test will be launched outside the United States by the end of this year and miRview™ lung will be ready for commercialization in the first half of 2011, six months earlier than initially projected. In addition, miRview™ bladder remains on track to launch in the second half of 2011.

"We are especially pleased to unveil our latest two tests under development, namely, miRview™ kidney, which is being developed to accurately identify four histological types of renal tumors, and miRview™ meso prognostic, which we are developing to sub-classify mesothelioma patients based on their prognosis. In each case these diagnostic tests are being developed to provide valuable clinical information that can help guide physicians in determining the most effective treatment protocols for their patients. We look forward to continuing our development work and to launching these promising products in 2011. As with all of our products in development, our projected launch dates assume no changes to the current regulations for Laboratory Developed Tests by the U.S. Food and Drug Administration. Any changes to those regulations could impact our launch dates.

"Biomarkers and companion diagnostics continue to enjoy heightened interest within the clinical and medical communities. This was particularly evident at this year's American Society for Clinical Oncology Annual Meeting where biomarkers and companion diagnostics were a key topic of discussion. Because of their high tissue specificity, microRNAs are ideally suited as biomarkers and, thus, are particularly valuable to the pharmaceutical industry. Rosetta plans to build on its commercially available diagnostic tests for cancer and its robust and diverse microRNA-based product pipeline, to lead the development of clinically relevant response biomarkers that harness the power of microRNAs to advance patient care worldwide," concluded Mr. Berlin.

Second Quarter Results

The Company recorded revenues from continuing operations of $70,000 and $14,000 for the second quarters of 2010 and 2009, respectively.

Research and development expenses for the second quarter of 2010 were $1.9 million, compared with $1.4 million for the second quarter of 2009, mainly due to an increase in expenses related to compensation.

Marketing and business development expenses for the second quarter of 2010 were $1.6 million compared with $1.4 million for the second quarter of 2009, primarily the result of an increase in expenses related to compensation.

General and administrative expenses were $854,000 in the second quarter of 2010 compared with $749,000 in the second quarter of 2009.

The operating loss for the second quarter of 2010 was $4.4 million, including $898,000 of non-cash stock compensation expense, which in turn included $700,000 in non-cash stock compensation expense associated with the establishment of the Company's Rosetta Green subsidiary and compensation for its chief executive officer. These expenses were recorded as Research and Development, General and Administrative and Business Development costs. This compares with an operating loss of $3.8 million, including $268,000 of non-cash stock compensation expense, for the corresponding quarter of 2009.

The Company's net loss from continuing operations for the second quarter of 2010 was $4.2 million or $0.25 per ordinary share, compared with a net loss from continuing operations of $3.8 million or $0.28 per ordinary share, in the same period of 2009.

On a non-GAAP basis, excluding stock-compensation expense, the net loss from continuing operations for the 2010 second quarter was $3.3 million or $0.20 per ordinary share. This compares with a non-GAAP net loss from continuing operations for the 2009 second quarter of $3.5 million or $0.26 per ordinary share.

For the six months ended June 30, 2010 the Company reported revenues from continuing operations of $97,000, compared with revenues from continuing operations of $31,000 in the comparable prior year period. The Company's net loss from continuing operations in the first half of 2010 was $7.8 million or $0.48 per ordinary share, compared with a net loss from continuing operations of $7.2 million or $0.56 per ordinary share in the same period of 2009.

On a non-GAAP basis, excluding stock-compensation expense, the net loss from continuing operations for the first half of 2010 was $6.7 million or $0.40 per ordinary share. This compares with a non-GAAP net loss from continuing operations for the first half of 2009 of $6.7 million or $0.52 per ordinary share.

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

Rosetta Genomics ended the second quarter of 2010 with $7.7 million in cash and cash equivalents, short-term bank deposit and marketable securities, compared with $10.3 million as of December 31, 2009.

Conference Call

Rosetta Genomics management will host a conference call on Wednesday, September 8, 2010 beginning at 10:00 a.m. Eastern time to discuss second 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 89504316.

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 89504316. The replay will be available through 12 midnight Eastern time on September 10, 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. 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, including statements relating to the timing of the launch of our diagnostic tests under development, 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 the potential for increased FDA regulation of tests such as the ones

we are developing, and 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.

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[Tables to follow]

CONSOLIDATED BALANCE SHEETS
U.S. dollars in thousands

	June 30, 2010	June 30, 2009	December 31, 2009
	Unaudited		
ASSETS			
CURRENT ASSETS:			
Cash and cash equivalents	$ 2,903	$ 5,984	$ 3,329
Restricted cash	993	1,178	1,076
Short-term bank deposits	1,144	8,326	3,143
Marketable securities	2,649	1,194	2,756
Trade receivables, net	131	31	72
Other accounts receivable and prepaid expenses	551	736	557
Total current assets	8,371	17,449	10,933
SEVERANCE PAY FUND	103	75	92
PROPERTY AND EQUIPMENT, NET	1,376	1,275	1,216
LONG-TERM ACCOUNTS RECEIVABLES	260	606	502
Total long term assets	1,739	1,956	1,810
Total assets	$ 10,110	$ 19,405	$ 12,743
LIABILITIES AND SHAREHOLDERS' EQUITY			
CURRENT LIABILITIES:			
Short-term bank loan, current maturities of capital lease and of long-term bank loan	108	94	125
Trade payables	849	983	654
Other accounts payable and accruals	1,495	1,390	1,526
Total current liabilities	2,452	2,467	2,305
LONG-TERM LIABILITIES:			
Long-term bank loan and capital lease	2	70	46
Convertible loan	-	1,500	1,500
Deferred revenue	1,928	1,928	1,928
Accrued severance pay	135	107	122
Total Long-term Liabilities	2,065	3,605	3,596
EQUITY:			
Rosetta Genomics Shareholders equity:			
Share capital:	39	32	32
Additional paid-in capital	74,485	67,295	68,174
Other comprehensive income	2	-	96
Deficit accumulated during the development stage	(69,662)	(53,994)	(61,460)
Total Rosetta Genomics shareholders' equity	4,864	13,333	6,842
Non-controlling interest	729	-	-
Total Equity	$ 5,593	$ 13,333	$ 6,842
Total liabilities and shareholders' equity	$ 10,110	$ 19,405	$ 12,743

CONSOLIDATED STATEMENTS OF OPERATIONS

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

	Three months ended June 30,		Six months ended June 30,	
	2010	2009	2010	2009
	Unaudited		Unaudited	
Revenues	$ 70	$ 14	$ 97	$ 31
Cost of revenues:	140	167	298	305
Gross loss	70	153	201	274
Operating expenses:				
Research and development, net	1,941	1,432	3,561	3,117
Marketing and business development	1,569	1,435	2,745	2,299
General and administrative	854	749	1,583	1,499
Total operating expenses	4,364	3,616	7,889	6,915
Operating loss	4,434	3,769	8,090	7,189
Financial expenses(income) net	(9)	30	(50)	18
Net loss	4,425	3,799	8,040	7,207
Attributable to non controlling interest	(198)	-	(219)	-
Net loss attributable to Rosetta Genomics before discontinued operation	4,227	3,799	7,821	7,207
Net loss attributable to Rosetta Genomics from discontinued operation	381	1,621	381	1,832
Net loss attributable to Rosetta Genomics after discontinued operation	$ 4,608	$ 5,420	$ 8,202	$ 9,039
Basic and diluted net loss per Ordinary share of continuing operation attributable to Rosetta Genomics' shareholders	$ 0.25	$ 0.28	$ 0.48	$ 0.56
Basic and diluted net loss per Ordinary share of discontinuing operation attributable to Rosetta Genomics' shareholders	$ 0.02	$ 0.12	$ 0.02	$ 0.14
Basic and diluted net loss per Ordinary share attributable to Rosetta Genomics' shareholders	$ 0.27	$ 0.40	$ 0.50	$ 0.70
Weighted average number of Ordinary shares used to computed basic and diluted net loss per Ordinary share	16,778,127	13,581,036	16,508,281	12,880,557

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

	Six Months ended June 30,		Three Months ended June 30,	
	2010	**2009**	**2010**	**2009**
GAAP net loss as reported	$ 7,821	$ 7,207	$ 4,227	$ 3,799
NON-GAAP Adjustment:				
Expenses reported for stock-based compensation				
Cost of revenues	(3)	-	(3)	-
Research and development, net	(302)	(164)	(234)	(88)
Marketing and business development	(524)	(162)	(446)	(60)
General and administrative	(288)	(219)	(215)	(120)
Total Adjustment	(1,117)	(545)	(898)	(268)
NON-GAAP net loss	6,704	6,662	3,329	3,531
NON-GAAP Basic net loss (income) per Ordinary share	$ 0.41	$ 0.52	$ 0.20	0.26

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