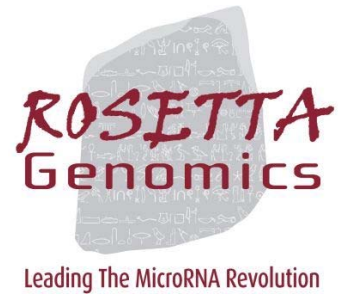


News Release



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Rosetta Genomics, a Leader in MicroRNA-based Diagnostics and Therapeutics Reports First Quarter 2007 Financial Results; Liver Cancer Therapeutics and Metastasis Classifier Diagnostic Projects Show Significant Progress

Rehovot, Israel (May 8, 2007) – Rosetta Genomics, Ltd. (Nasdaq: ROSG), a leader in microRNA-based diagnostics and therapeutics, reported today its consolidated financial results for the quarter ended March 31, 2007 and business highlights.

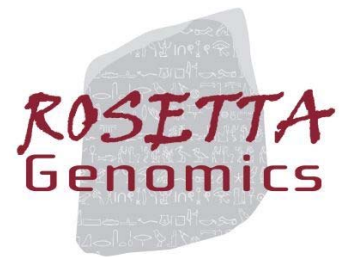
“We are seeing constant and significant progress in both our diagnostic and therapeutic programs,” said Amir Avniel, President and Chief Executive Officer of Rosetta Genomics. “Our newly developed protocol for extraction of microRNAs from blood serum demonstrates the considerable promise of our technology. This proprietary extraction protocol is a critical milestone towards successfully developing early detection tests based on a simple blood draw. The ongoing progress in both our lead diagnostic program for cancer of unknown primary and lead therapeutic program for liver cancer, are very encouraging signs for the remainder of 2007.”

Net Loss

The net loss for the first quarter of 2007 was \$2 million, or \$0.23 per ordinary share, as compared to \$1.5 million, or \$0.57 per ordinary share, in the first quarter of 2006. Non-cash stock-based compensation charges for the first quarter of 2007 included \$205,000 compared to \$92,000 in the first quarter of 2006. The Company’s accumulated deficit during the development stage totaled \$22.8 million for the period from March 9, 2000 (date of inception) to March 31, 2007.

Research and Development Expenses

Research and development remained the company’s largest expense and accounted for 52 % and 60% of our operating expenses in the quarters ended March 31, 2007 and 2006, respectively. Research and development expenses were \$1.2 million in the first quarter of 2007, including \$66,000 of non-cash stock-based compensation, as compared to research and development expenses of \$886,000 in the first quarter of 2006, which included \$52,000 of non-cash stock-based compensation. This increase resulted primarily from an increase in



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purchasing of tissue samples and other research related materials as we made progress in our Cancer of Unknown Primary (CUP) diagnostic program as well as an increase in costs relating to our intellectual property and costs associated with license fees.

Marketing and Business Development Expenses

Marketing and business development expenses were \$375,000 in the first quarter of 2007, including \$31,000 of non-cash stock-based compensation, as compared to \$387,000 in the first quarter of 2006.

General and Administrative Expenses

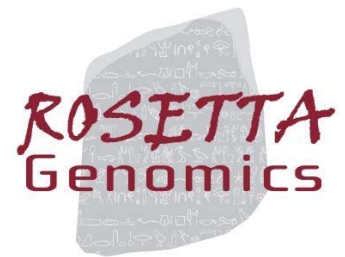
General and administrative expenses were \$680,000 in the first quarter of 2007, including \$108,000 of non-cash stock-based compensation, as compared to \$211,000 in the first quarter of 2006 which included \$40,000 of non-cash stock-based compensation. This increase resulted primarily from legal and other professional fees associated with completion of our initial public offering and operation as a public company.

Financial Income (expenses), Net

Net financial income was \$200,000 in the first quarter of 2007, as compared to net financial income of \$33,000 in the first quarter of 2006. Financial income is derived primarily from interest income on bank deposits and realized income from marketable securities.

Cash, Cash Equivalents, Short term Bank Deposit and Marketable Securities

On March 31, 2007, we had cash, cash equivalents, short term bank deposit and marketable securities of \$36.3 million, compared to \$10.8 million on December 31, 2006 and \$4.4 million on March 31, 2006. We received approximately \$26 million in net proceeds from our initial public offering of 4,312,500 shares in March 2007 and net proceeds of \$13.8 million from a private placement early in 2006 and from the exercise of warrants in 2006.



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Recent Highlights

Rosetta Genomics presented the following diagnostic and therapeutic developments at Cambridge Healthtech Institute's MicroRNA in Human and Disease and Development Conference on March 29-31, 2007 and at the Annual Meeting of the American Association for Cancer Research (AACR) on April 17, 2007.

Diagnostic Program

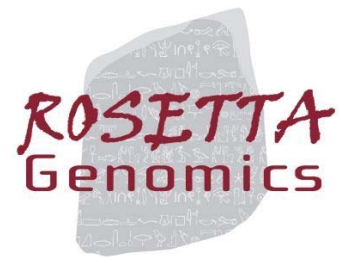
- The lead diagnostic program for Cancer of Unknown Primary (CUP) expanded from 14 microRNAs to include 19 microRNAs, which we believe are sufficient to potentially identify 15 tumor types, with 85% accuracy. In addition, CUP related results showed that a single microRNA may distinguish between subtypes of cancers for example the difference between adenocarcinomas and squamous cell carcinomas.

MicroRNA Extraction Protocol from Blood Serum

- A proprietary microRNA extraction protocol from blood serum was developed, which enables the detection of microRNAs in blood serum in a robust and sensitive manner. The protocol showed no significant loss of artificial microRNA spiked-in during the extraction and consistency over time in the level of microRNAs.

Therapeutic Program

- The lead therapeutic program for liver cancer (HCC) being conducted in collaboration with Isis Pharmaceuticals identified four potential microRNA targets that when inhibited lead to a decrease in proliferation of liver cancer cell-lines



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Conference Call Information

Rosetta Genomics will host a conference call at 4:30 p.m. ET on May 8, 2007 to discuss first quarter activities and recent corporate developments. The call may be accessed by dialing U.S. Toll Free (866)-409-1557 or International 1-(913)-312 1237 and providing the passcode 3026948.

A replay of the call will be available until May 15, 2007. To access the replay, please dial (888)-203-1112 (domestic) or 1-(719)-457-0820 (international). The replay passcode is 3026948.

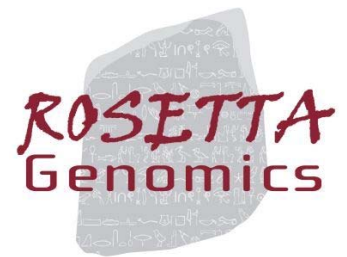
A live audio webcast of the call will also be available on the "Investors" section of the company's website, www.RosettaGenomics.com. An archived webcast will be available on the Company's website approximately two hours after the event, and will be archived for 45 days thereafter.

About MicroRNAs

MicroRNAs (miRNAs) are a recently discovered, naturally occurring RNAi. These small RNAs act as protein regulators and have the potential to form the basis for a new class of diagnostics and therapeutics. Since many diseases are caused by the abnormal activity of proteins, the ability to selectively regulate protein activity through microRNAs could provide the means to treat a wide range of human diseases. In addition, microRNAs have been shown to have different expression levels in certain diseased versus normal tissues. As a result, these differences potentially provide for a novel diagnostic strategy for many diseases. MicroRNAs are thought to play a key role in the differentiation of cells into specific cell types performing various functions in the body.

About Rosetta Genomics

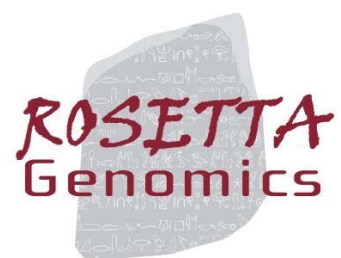
Rosetta Genomics (Nasdaq: ROSG) is a leader in the development of microRNA-based diagnostics and therapeutics. Founded in 2000, the company's integrative research platform combining bioinformatics and state-of-the-art laboratory processes has led to the discovery of hundreds of biologically validated novel human microRNAs. Building on its strong IP position and strategic alliances with leading biotechnology companies, Rosetta Genomics is working to develop a full range of diagnostic and therapeutic products based on microRNAs. The company's primary focus is in the development of microRNA-based products to diagnose and treat different forms of cancer and infectious diseases.



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Forward-Looking Statement Disclaimer

Various statements in this release concerning Rosetta's future expectations, plans and prospects, including without limitation, statements relating to the role of miRNAs in human physiology and disease, the potential of microRNAs in the diagnosis and treatment of disease, and the possible identification of a novel diagnostics approach for targeting miRNAs, 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 risks related to: Rosetta's approach to discover and develop novel diagnostics products, which is unproven and may never lead to marketable products; Rosetta's ability to fund and the results of further pre-clinical and clinical trials; obtaining, maintaining and protecting intellectual property utilized by Rosetta's products; Rosetta's ability to enforce its patents against infringers and to defend its patent portfolio against challenges from third parties; Rosetta's ability to obtain additional funding to support its business activities; Rosetta's dependence on third parties for development, manufacture, marketing, sales, and distribution of products; the successful development of Rosetta's product candidates, all of which are in early stages of development; obtaining regulatory approval for products; competition from others using technology similar to Rosetta's and others developing products for similar uses; Rosetta's dependence on collaborators; and Rosetta's short operating history; as well as those risks more fully discussed in the "Risk Factors" section of Rosetta's most recent Registration Statement on Form F-1 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.



CONSOLIDATED STATEMENTS OF OPERATIONS
U.S. dollars in thousands (except share and per share data)

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	Three months ended	
	March 31	
	2007	2006
	Unaudited	
Operating expenses::		
Research and development, net	\$ 1,161	\$ 886
Marketing and business development	375	387
General and administrative	680	211
Operating loss	2,216	1,484
Financial income, net	(200)	(33)
Net loss	\$ 2,016	\$ 1,451
Basic and diluted net loss per Ordinary share	\$ 0.23	\$ 0.57
Weighted average number of Ordinary shares used to compute basic and diluted net loss per Ordinary share	8,874,841	2,548,765
Pro forma basic and diluted net loss per share		\$ 0.26
Weighted average number of shares used to compute basic and diluted pro forma net loss per shares		5,626,229

CONSOLIDATED BALANCE SHEETS

U.S. dollars in thousands

	March 31,	December 31,
	2007	2006
	Unaudited	
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 10,776	\$ 5,228
Short-term bank deposits	5,214	5,149
Marketable securities	20,292	386
Other accounts receivable and prepaid expenses	329	134
Deferred issuance costs	-	1,787
Total current assets	36,611	12,684
SEVERANCE PAY FUND	111	98
PROPERTY AND EQUIPMENT, NET	519	461
Total assets	\$ 37,241	\$ 13,243
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Short-term bank loan, current maturities of capital lease and of long-term loan	\$ 39	\$ 48
Trade payables	547	745
Deferred revenue	228	228
Other accounts payable and accruals	718	750
Total current liabilities	1,532	1,771
LONG-TERM LIABILITIES:		
Long-term bank loan and capital lease	22	29
Accrued severance pay	361	344
Total Long-term Liabilities	383	373
SHAREHOLDERS' EQUITY:		
Share capital:	27	17
Additional paid-in capital	58,166	31,958
Other comprehensive income	16	3
Deferred stock-based compensation	(36)	(48)
Deficit accumulated during the development stage	(22,847)	(20,831)
Total shareholders' equity	35,326	11,099
Total liabilities and shareholders' equity	\$ 37,241	\$ 13,243