ROSETTAGENOMICS™
Revealing Genomic Answers

News Release

Rosetta Genomics Reports 2016 Second Quarter Financial Results

RosettaGX Reveal for the Diagnosis of Indeterminate Thyroid FNA Expected to Drive Significant Revenue Growth over the Next Several Years

Conference call begins today at 4:30 p.m. Eastern time

PHILADELPHIA and REHOVOT, Israel (September 26, 2016) – Rosetta Genomics Ltd. (NASDAQ: ROSG), a leading developer and provider of microRNA-based and other molecular diagnostics, reports financial results for the three and six months ended June 30, 2016.

Recent developments include:

- Gross billings for RosettaGX Reveal™ ("Reveal"), the Company's first-of-its-kind microRNA classifier for indeterminate thyroid nodules, are tracking to be approximately $1.5 million for the first nine months of 2016;
- Announced that Reveal is now available for use on ThinPrep® samples;
- Published data confirming the analytical validity of Reveal to classify indeterminate thyroid nodules in the peer-reviewed journal *Cancer Cytopathology*;
- Entered into a services agreement with an unnamed global pharmaceutical company to provide Fluorescence in Situ Hybridization (FISH) testing services for a clinical study the pharmaceutical company is conducting in prostate cancer;
- Launched OncoGxSelect™, a next-generation sequencing (NGS)-based test that detects somatic mutations frequently found in cancers and provides actionable results to help guide decisions related to targeted cancer therapies; and
- Received U.S. patent allowance for a microRNA-based ovarian cancer treatment.

Management Commentary

"Throughout the first half of 2016 we demonstrated our ability to increase revenues by expanding our molecular diagnostics test menu and advancing our commercial programs to enable precision medicine for patients and physicians," said Kenneth A. Berlin, President and Chief Executive Officer of Rosetta Genomics. "We are particularly pleased about our progress with the commercial launch and clinical adoption of our Reveal test for the classification of indeterminate thyroid nodules.

"We made two key advances that significantly enhance our commercial efforts with Reveal. First, compelling analytical data was published in a peer-reviewed journal that supports the robustness

of the Reveal assay under many different laboratory conditions. In addition, we presented data at the recent American Thyroid Society annual meeting confirming that Reveal produces the same high-level performance on ThinPrep prepared slides as it does on a direct smear from a thyroid Fine Needle Aspirate ("FNA") biopsy. We believe offering the option of using Reveal with either ThinPrep or direct smears will expand our customer base and potentially increase our test volumes by more than 50% over the next several months.

"We are gaining traction with our strategy to use Reveal to access new accounts to promote our exceptional thyroid offering as well as our urologic cancer and solid tumor product lines. In the near term, this primary focus on Reveal may temporarily slow the growth of the solid tumor and urology business lines as our sales people will be mainly calling on pathologists and endocrinologists, rather than oncologists and urologists. Over the long term, we believe that by winning new accounts with our Reveal offering we will be able to expand use of our solid tumor and urologic oncology offerings by many of these new accounts, thus further accelerating revenue growth.

"The commercial launch of Reveal will continue to be a prime focus of our company. We believe Reveal's excellent performance – combined with the assay's ability to be used with either ThinPrep or FNA biopsy, as well as its unique ability to use the same smears from the original indeterminate diagnosis – gives Reveal a significant competitive advantage that we expect will allow us to gain meaningful market share in this $350 million market in the U.S. and recent trends in demand and gross billings for Reveal demonstrate this. For example, in the third quarter we expect approximately 300 Reveal orders with gross billings of approximately $900,000.

"With demand for Reveal reaching higher levels in the current quarter and with that demand expected to continue to increase substantially going forward, we are increasing capacity at our Philadelphia laboratory to process samples. In addition, the investments we made in enhancing billing and collections is bearing fruit as we continue to improve collections.. We are pleased with our progress to date, as evidenced by our cash collections during the first half of 2016.

"Throughout the balance of the year we will continue to build on recent progress to drive demand for Reveal and the rest of our products and improve billings, collections and reimbursement. We look forward to making advances that will enhance shareholder value," concluded Mr. Berlin.

Second Quarter Financial Results

- Revenues for the second quarter of 2016 increased 23% to $2.4 million compared with revenues of $2.0 million for the second quarter of 2015, and decreased 7% compared with revenues of $2.6 million for the first quarter of 2016. On a pro-forma basis (as if the PersonalizeDx acquisition occurred on January 1, 2015 instead of the actual acquisition date of April 13, 2015), revenues increased 13% compared with revenues of $2.1 million for the second quarter of 2015.
- Revenues from urologic cancer testing services in the second quarter of 2016 increased 43% to $1.4 million, compared with $971,000 for the second quarter of 2015, and represented approximately 58% of clinical testing revenues for the second quarter of 2016. On a pro-forma basis, revenues increased 26% compared with $1.1 million for the second quarter of 2015.

- Revenues from solid tumor testing services in the second quarter of 2016 of $855,000 decreased 13% compared with $986,000 in the second quarter of 2015, primarily due to a refocused sales force emphasis on the Reveal introduction. Solid tumor testing services, represented 35% of total clinical testing revenues during the second quarter of 2016. On a pro-forma basis, revenues decreased 17% compared with $1.0 million in the second quarter of 2015.
- Reveal revenues during the second quarter of 2016 were $166,000 compared with $17,000 in the first quarter of 2016. There were no Reveal revenues in the second quarter of 2015 as the assay was not launched commercially until the first quarter of 2016. On a non-GAAP basis, gross billings for Reveal during the second quarter of 2016 were $511,000 compared with gross billings of Reveal of $111,000 in the first quarter of 2016. Gross billings are the aggregate amounts invoiced to customers.
- Cost of revenues for the second quarter of 2016 increased to $2.0 million from $1.9 million for the second quarter of 2015.
- Research and development expenses for the second quarter of 2016 increased to $618,000 from $613,000 for the second quarter of 2015.
- Sales, marketing and business development expenses for the second quarter of 2016 decreased to $1.7 million from $2.5 million in the prior-year period primarily due to higher headcount in 2015 and transitional expenses associated with the consolidation of the PersonalizeDx business into Rosetta.
- General and administrative expenses for the second quarter of 2016 decreased to $1.5 million compared with $2.2 million for the same period in 2015 primarily due to acquisition-related expenses in 2015.
- The operating loss for the second quarter of 2016 was $3.4 million, which included $229,000 of non-cash stock-based compensation expense, compared with an operating loss of $2.9 million for the second quarter of 2015, which included $268,000 of non-cash stock-based compensation expense as well as a gain of $2.4 million on bargain purchase related to the acquisition of PersonalizeDx.
- The net loss for the second quarter of 2016 was $3.4 million, or $0.16 per ordinary share on 20.9 million weighted average shares outstanding, compared with a net loss for the second quarter of 2015 of $2.8 million, or $0.20 per ordinary share on 14.4 million weighted average shares outstanding.
- On a non-GAAP basis, excluding $229,000 of non-cash stock-based compensation expense, the net loss for the second quarter of 2016 was $3.2 million, or $0.15 per ordinary share on 20.9 million weighted average shares outstanding. For the second quarter of 2015, excluding the $268,000 of non-cash stock-based compensation expense as well as the gain of $2.4 million on bargain purchase related to the acquisition of PersonalizeDx, the non-GAAP net loss was $4.9 million, or $0.34 per ordinary share on 14.4 million weighted average shares outstanding.

Six Month Financial Results

- Revenues for the first six months of 2016 increased 120% to $5.0 million compared with revenues of $2.3 million for the first six months of 2015. On a pro forma basis, revenues for the six months of 2016 increased 20% compared with pro forma revenues of $4.2M for the first six months of 2015.

- Cost of revenues for the six-month period ended June 30, 2016 was $3.6 million compared with $2.3 million for the same period of 2015.
- Total operating expenses for the first six months of 2016 of $8.8 million compared with $6.7 million in the first six months of 2015, which included a gain of $2.4 million on bargain purchase related to the acquisition of PersonalizeDx.
- The operating loss for the first half of 2016 was $7.4 million, which included $459,000 of non-cash stock-based compensation expense, compared with an operating loss of $6.7 million for the first half of 2015, which included $544,000 of non-cash stock-based compensation expense as well as a gain of $2.4 million on bargain purchase related to the acquisition of PersonalizeDx.
- The net loss for the first six months of 2016 was $7.4 million, or $0.36 per ordinary share on 20.8 million weighted average shares outstanding, compared with a net loss for the first six months of 2015 of $6.7 million, or $0.49 per ordinary share on 13.6 million weighted average shares outstanding.
- On a non-GAAP basis, excluding $459,000 of non-cash stock-based compensation expense, the net loss for the first half of 2016 was $7.0 million, or $0.34 per ordinary share on 20.8 million weighted average shares outstanding. For the first half of 2015, excluding the $544,000 of non-cash stock-based compensation expense as well as the gain of $2.4 million on bargain purchase related to the acquisition of PersonalizeDx, the non-GAAP net loss was $8.5 million, or $0.62 per ordinary share on 13.6 million weighted average shares outstanding.

Balance Sheet Highlights

As of June 30, 2016, Rosetta Genomics had cash, cash equivalents, restricted cash and short-term bank deposits of $8.7 million, compared with $13.6 million as of December 31, 2015. The Company used approximately $6.5 million in cash to fund operations during the first six months of 2016, and collected approximately $4.9 million in cash from its clinical testing services as well as $1.6 million from a licensing deal signed in December 2015. Based on the Company's current operations and plans, which include a cost-reduction plan should it be unable to raise sufficient additional capital, if necessary, Rosetta Genomics expects its current cash position will fund operations into May 2017.

Conference Call

Rosetta Genomics management will host a conference call today beginning at 4:30 p.m. Eastern time to provide an update on the Company's business and answer questions. Individuals interested in listening to the conference call may do so by dialing (866) 239-5859, or for international callers (702) 495-1913. The conference ID number is 82293939. The call is also being webcast, and can be accessed on the investor relations section of the Company's website at www.rosettagx.com.

A telephone replay will be available through October 2, 2016 by dialing (855) 859-2056, or for international callers (404) 537-3406, and entering the conference ID number 82293939. The webcast will be available on the Company's website for 30 days.

ThinPrep® is a registered trademark of Hologic, Inc.

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 news release, Rosetta provides non-GAAP gross billings, non-GAAP pro forma revenues and non-GAAP net loss 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 revenues, net loss or net loss per share prepared in accordance with GAAP.

Pursuant to the requirements of Regulation G promulgated by the Securities and Exchange Commission, 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 the tables 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.

About Rosetta Genomics
Rosetta develops and commercializes a full range of microRNA-based and other molecular diagnostics. 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. Through the acquisition of PersonalizeDx, the Company now offers core FISH, IHC and PCR-based testing capabilities and partnerships in Pathology, Oncology and Urology that provide additional content and platforms that complement Rosetta's microRNA and Next-Gen Sequencing offerings. RosettaGX Reveal™, a Thyroid microRNA Classifier for the diagnosis of indeterminate thyroid FNA smears, as well as the full RosettaGX™ portfolio of cancer testing services are commercially available through the Company's Philadelphia, PA- and Lake Forest, CA-based CAP-accredited, CLIA-certified labs. For more information visit www.rosettagx.com.

Forward-Looking Statement Disclaimer
Various statements in this release concerning Rosetta's future expectations, plans and prospects including, but not limited to statements about expanding the customer base, increasing test volumes by more than 50% over the next several months, increasing penetration of our solid tumor and urologic oncology offerings, accelerating revenue growth, gaining meaningful market

share, increasing demand, improving billings, collections and reimbursement, enhancing shareholder value, that RosettaGX Reveal is expected to drive significant revenue growth over the next several years, that Rosetta expects that RosettaGX Reveal's competitive advantage will allow it to gain meaningful market share in a $350 million market in the U.S., and that Rosetta expects its current cash position will fund operations at least through April 2017 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 most recently filed Annual Report on Form 20-F, 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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CONDENSED INTERIM CONSOLIDATED BALANCE SHEETS

U.S. dollars in thousands

	June 30, 2016 Unaudited	December 31, 2015
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 8,055	$ 12,447
Short-term bank deposits and restricted cash	600	1,098
Trade receivables	3,371	3,633
Other accounts receivable and prepaid expenses	767	2,192
Total current assets	12,793	19,370
LONG TERM ASSETS:		
Property and equipment, net	2,918	2,975
Long-term bank deposits and other long-term receivables	84	78
Total long term assets	3,002	3,053
Total assets	$ 15,795	$ 22,423

CONDENSED INTERIM CONSOLIDATED BALANCE SHEETS

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

	June 30, 2016 Unaudited	December 31, 2015
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Current maturity of long-term capital lease	$ 55	$ -
Trade payables	982	1,070
Accrued expenses	409	517
Employees and accruals	1,608	1,216
Total current liabilities	3,054	2,803
LONG-TERM LIABILITIES:		
Long term capital lease obligations	92	-
Total long-term liabilities	92	-
COMMITMENTS AND CONTINGENT LIABILITIES		
SHAREHOLDERS EQUITY:		
Share capital:		
Ordinary Shares of NIS 0.6 par value: 60,000,000 shares authorized at June 30, 2016 and December 31, 2015; 20,868,826 (unaudited) and 20,518,794 shares issued at June 30, 2016 and December 31, 2015, respectively; 20,865,568 (unaudited) and 20,515,536 shares outstanding at June 30, 2016 and December 31, 2015, respectively	3,247	3,194
Additional paid-in capital	157,102	156,696
Accumulated deficit	(147,700)	(140,270)
Total shareholders' equity	12,649	19,620
Total liabilities and shareholders' equity	$ 15,795	$ 22,423

CONDENSED INTERIM CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

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

	Three months ended June 30,		Six months ended June 30,	
	2016	2015	2016	2015
	Unaudited		Unaudited	
Revenues	$ 2,412	$ 1,957	$ 5,015	$ 2,278
Cost of revenues	1,989	1,917	3,647	2,269
Gross profit	423	40	1,368	9
Operating expenses:				
Research and development, net	618	613	1,459	1,361
Sales, marketing and business development	1,742	2,478	3,639	4,075
General and administrative	1,451	2,232	3,664	3,643
Gain from bargain purchase related to acquisition of CynoGen, Inc.	-	(2,352)	-	(2,352)
Total operating expenses	3,811	2,971	8,762	6,727
Operating loss	3,388	2,931	7,394	6,718
Financial expense (income), net	(1)	(117)	24	41
Income tax expenses	6	5	12	10
Net comprehensive loss	$ 3,393	$ 2,819	$ 7,430	$ 6,687
Basic and diluted net loss per ordinary share attributable to Rosetta Genomics' shareholders	$ 0.16	$ 0.20	$ 0.36	$ 0.49
Weighted average number of ordinary shares used to compute basic and diluted net loss per ordinary share	20,862,599	14,425,034	20,756,461	13,598,198

Non-GAAP RECONCILING TABLES

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

USD in thousands	Quarter ended June 30, 2015 (Unaudited)
GAAP revenues	$ 1,957
Additional revenues from PersonalizeDx for non-consolidated period of April 1, 2015 - April 12, 2015	169
Pro forma revenues	$ 2,126

USD in thousands	Quarter ended June 30, 2015 (Unaudited)
GAAP revenues for urologic cancer testing services	$ 971
Additional revenues from PersonalizeDx for non-consolidated period of April 1, 2015 - April 12, 2015	131
Pro forma revenues for urologic cancer testing services	$ 1,102

USD in thousands	Quarter ended June 30, 2015 (Unaudited)
GAAP revenues for solid tumor testing services	$ 986
Additional revenues from PersonalizeDx for non-consolidated period of April 1, 2015 - April 12, 2015	38
Pro forma revenues for solid tumor testing services	$ 1,024

	Three months ended	
USD in thousands	June 30, 2016	March 31, 2016
Revenues for Reveal	$166	$17
Unrecognized billings	$345	$94
Gross billings for Reveal	$511	$111

USD in thousands	Six months ended June 30, 2015 (Unaudited)
GAAP revenues	$2,278
Additional revenues from PersonalizeDx for the non-consolidated period of January 1, 2015 - April 12, 2015	$1,903
Pro forma revenues	$4,181

USD in thousands	Quarter ended June 30, 2016 (Unaudited)	2015 (Unaudited)
Net loss	$3,393	$2,819
Share-based compensation	$229	$268
Gain from bargain purchase related to acquisition of PersonalizeDx	-	(2,352)
non-GAAP net loss	**$3,164**	**$4,903**

Basic and diluted per share data	Quarter ended June 30, 2016 (Unaudited)	2015 (Unaudited)
Net loss	$0.16	$0.20
Share-based compensation	$0.01	$0.02
Gain from bargain purchase related to acquisition of PersonalizeDx	-	$(0.16)
non-GAAP net loss	**$0.15**	**$0.34**
Weighted average number of Ordinary shares used to compute basic and diluted net loss per Ordinary share	20,862,599	14,425,034

USD in thousands	Six months ended June 30, 2016 (Unaudited)	2015 (Unaudited)
Net loss	$7,430	$6,687
Share-based compensation	$459	$544
Gain from bargain purchase related to acquisition of PersonalizeDx	-	$(2,352)
non-GAAP net loss	**$6,971**	**$8,495**

Basic and diluted per share data	Six months ended June 30, 2016 (Unaudited)	2015 (Unaudited)
Net loss	$0.36	$0.49
Share-based compensation	$0.02	$0.04
Gain from bargain purchase related to acquisition of PersonalizeDx	$ -	$(0.17)
non-GAAP net loss	**$0.34**	**$0.62**
Weighted average number of Ordinary shares used to compute basic and diluted net loss per Ordinary share	20,756,461	13,598,198

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