

Rosetta Genomics Ltd.
Form SC 13G/A
February 10, 2012

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 13G

Under the Securities Exchange Act of 1934

(Amendment No. 1)*

ROSETTA GENOMICS LTD.

(Name of issuer)

Ordinary Shares
(Title of class of securities)

M82183118
(CUSIP number)

December 31, 2011
(Date of event which requires filing of this statement)

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Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

Rule 13d-1(b)

Rule 13d-1(c)

Rule 13d-1(d)

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be filed for the purpose of Section 18 of the Securities Exchange Act of 1934 (" Act ") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications:

Taylor H. Wilson, Esq.

Haynes and Boone, LLP

2323 Victory Avenue, Suite 700

Dallas, Texas 75219

(214) 651-5000

SCHEDULE 13G

CUSIP No. M82183118

(1) Names of reporting persons

Becker Drapkin Management, L.P.

(2) Check the appropriate box if a member of a group (see instructions)

(a) (b)

(3) SEC use only

(4) Citizenship or place of organization

Texas

(5) Sole voting power

Number of

shares **0**
(6) Shared voting power

beneficially

owned by **312,500 (1) (2)**
each (7) Sole dispositive power

reporting

person **0**
(8) Shared dispositive power

with:

312,500 (1) (2)

(9) Aggregate amount beneficially owned by each reporting person

312,500 (1) (2)

(10) Check if the aggregate amount in Row (9) excludes certain shares (see instructions)

(11) Percent of class represented by amount in Row (9)

3.0% (3)

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(12) Type of reporting person (see instructions)

IA, PN

- (1) Includes warrants to purchase 312,500 ordinary shares of common stock of the Issuer that are exercisable within 60 days of the date of this Schedule 13G.
- (2) As adjusted to reflect a one-for-four reverse stock split that occurred on July 6, 2011.
- (3) Based upon 9,532,262 ordinary shares of common stock of the Issuer outstanding as of October 31, 2011, as disclosed in a Registration Statement on Form F-3 filed by the Issuer with the Securities and Exchange Commission on November 2, 2011, as adjusted to reflect the issuance of 986,255 ordinary shares of common stock on November 28, 2011.

SCHEDULE 13G

CUSIP No. M82183118

(1) Names of reporting persons

Becker Drapkin Partners (QP), L.P.

(2) Check the appropriate box if a member of a group (see instructions)

(a) (b)

(3) SEC use only

(4) Citizenship or place of organization

Texas

(5) Sole voting power

Number of

shares **271,875 (1) (2)**
(6) Shared voting power

beneficially

owned by **0**
each (7) Sole dispositive power

reporting

person **271,875 (1) (2)**
(8) Shared dispositive power

with:

0

(9) Aggregate amount beneficially owned by each reporting person

271,875 (1) (2)

(10) Check if the aggregate amount in Row (9) excludes certain shares (see instructions)

(11) Percent of class represented by amount in Row (9)

2.6% (3)

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(12) Type of reporting person (see instructions)

PN

- (1) Includes warrants to purchase 271,875 ordinary shares of common stock of the Issuer that are exercisable within 60 days of the date of this Schedule 13G.
- (2) As adjusted to reflect a one-for-four reverse stock split that occurred on July 6, 2011.
- (3) Based upon 9,532,262 ordinary shares of common stock of the Issuer outstanding as of October 31, 2011, as disclosed in a Registration Statement on Form F-3 filed by the Issuer with the Securities and Exchange Commission on November 2, 2011, as adjusted to reflect the issuance of 986,255 ordinary shares of common stock on November 28, 2011.

SCHEDULE 13G

CUSIP No. M82183118

(1) Names of reporting persons

Becker Drapkin Partners, L.P.

(2) Check the appropriate box if a member of a group (see instructions)

(a) (b)

(3) SEC use only

(4) Citizenship or place of organization

Texas

(5) Sole voting power

Number of

shares **0**
(6) Shared voting power

beneficially

owned by **40,625 (1)(2)**
each (7) Sole dispositive power

reporting

person **0**
(8) Shared dispositive power

with:

40,625 (1)(2)

(9) Aggregate amount beneficially owned by each reporting person

40,625 (1)(2)

(10) Check if the aggregate amount in Row (9) excludes certain shares (see instructions)

(11) Percent of class represented by amount in Row (9)

0.4% (3)

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(12) Type of reporting person (see instructions)

PN

- (1) Includes warrants to purchase 40,625 ordinary shares of common stock of the Issuer that are exercisable within 60 days of the date of this Schedule 13G.
- (2) As adjusted to reflect a one-for-four reverse stock split that occurred on July 6, 2011.
- (3) Based upon 9,532,262 ordinary shares of common stock of the Issuer outstanding as of October 31, 2011, as disclosed in a Registration Statement on Form F-3 filed by the Issuer with the Securities and Exchange Commission on November 2, 2011, as adjusted to reflect the issuance of 986,255 ordinary shares of common stock on November 28, 2011.

SCHEDULE 13G

CUSIP No. M82183118

(1) Names of reporting persons

BC Advisors, LLC

(2) Check the appropriate box if a member of a group (see instructions)

(a) (b)

(3) SEC use only

(4) Citizenship or place of organization

Texas

(5) Sole voting power

Number of

shares **0**
(6) Shared voting power

beneficially

owned by **312,500 (1) (2)**
each (7) Sole dispositive power

reporting

person **0**
(8) Shared dispositive power

with:

312,500 (1) (2)

(9) Aggregate amount beneficially owned by each reporting person

312,500 (1) (2)

(10) Check if the aggregate amount in Row (9) excludes certain shares (see instructions)

(11) Percent of class represented by amount in Row (9)

3.0% (3)

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(12) Type of reporting person (see instructions)

IA, OO

- (1) Includes warrants to purchase 312,500 ordinary shares of common stock of the Issuer that are exercisable within 60 days of the date of this Schedule 13G.
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- (3) Based upon 9,532,262 ordinary shares of common stock of the Issuer outstanding as of October 31, 2011, as disclosed in a Registration Statement on Form F-3 filed by the Issuer with the Securities and Exchange Commission on November 2, 2011, as adjusted to reflect the issuance of 986,255 ordinary shares of common stock on November 28, 2011.

SCHEDULE 13G

CUSIP No. M82183118

(1) Names of reporting persons

Steven R. Becker

(2) Check the appropriate box if a member of a group (see instructions)

(a) (b)

(3) SEC use only

(4) Citizenship or place of organization

United States

(5) Sole voting power

Number of

shares **0**
(6) Shared voting power

beneficially

owned by **312,500 (1) (2)**
each (7) Sole dispositive power

reporting

person **0**
(8) Shared dispositive power

with:

312,500 (1) (2)

(9) Aggregate amount beneficially owned by each reporting person

312,500 (1) (2)

(10) Check if the aggregate amount in Row (9) excludes certain shares (see instructions)

(11) Percent of class represented by amount in Row (9)

3.0% (3)

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(12) Type of reporting person (see instructions)

IN

- (1) Includes warrants to purchase 312,500 ordinary shares of common stock of the Issuer that are exercisable within 60 days of the date of this Schedule 13G.
- (2) As adjusted to reflect a one-for-four reverse stock split that occurred on July 6, 2011.
- (3) Based upon 9,532,262 ordinary shares of common stock of the Issuer outstanding as of October 31, 2011, as disclosed in a Registration Statement on Form F-3 filed by the Issuer with the Securities and Exchange Commission on November 2, 2011, as adjusted to reflect the issuance of 986,255 ordinary shares of common stock on November 28, 2011.

SCHEDULE 13G

CUSIP No. M82183118

(1) Names of reporting persons

Matthew A. Drapkin

(2) Check the appropriate box if a member of a group (see instructions)

(a) (b)

(3) SEC use only

(4) Citizenship or place of organization

United States

(5) Sole voting power

Number of

shares **0**
(6) Shared voting power

beneficially

owned by **312,500 (1) (2)**
each (7) Sole dispositive power

reporting

person **0**
(8) Shared dispositive power

with:

312,500 (1) (2)

(9) Aggregate amount beneficially owned by each reporting person

312,500 (1) (2)

(10) Check if the aggregate amount in Row (9) excludes certain shares (see instructions)

(11) Percent of class represented by amount in Row (9)

3.0% (3)

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(12) Type of reporting person (see instructions)

IN

- (1) Includes warrants to purchase 312,500 ordinary shares of common stock of the Issuer that are exercisable within 60 days of the date of this Schedule 13G.
- (2) As adjusted to reflect a one-for-four reverse stock split that occurred on July 6, 2011.
- (3) Based upon 9,532,262 ordinary shares of common stock of the Issuer outstanding as of October 31, 2011, as disclosed in a Registration Statement on Form F-3 filed by the Issuer with the Securities and Exchange Commission on November 2, 2011, as adjusted to reflect the issuance of 986,255 ordinary shares of common stock on November 28, 2011.

Item 1.

(a) Name of Issuer

Rosetta Genomics Ltd.

(b) Address of Issuer's Principal Executive Offices

10 Plaut Street, Science Park, Rehovot 76706 POB 4059, Israel

Item 2.

(a) Name of Person Filing

This statement is jointly filed by and on behalf of each of Becker Drapkin Management, L.P. (*BD Management*), Becker Drapkin Partners (QP), L.P. (*Becker Drapkin QP*), Becker Drapkin Partners, L.P. (*Becker Drapkin LP*), BC Advisors, LLC (*BCA*), Steven R. Becker (*Mr. Becker*) and Matthew A. Drapkin (*Mr. Drapkin* , and together with *BD Management*, *Becker Drapkin QP*, *Becker Drapkin LP*, *BCA* and *Mr. Becker*, the *Reporting Persons*). *Becker Drapkin QP* and *Becker Drapkin LP* are referred to collectively as the *Becker Drapkin Funds*.

Becker Drapkin QP has the power to vote or to direct the vote of (and the power to dispose or direct the disposition of) the ordinary shares of common stock (the *Common Stock*) owned by it (the *Becker Drapkin QP Shares*). *Becker Drapkin QP* disclaims beneficial ownership of the *Becker Drapkin LP Shares*.

Becker Drapkin LP has the power to vote or to direct the vote of (and the power to dispose or direct the disposition of) the *Common Stock* owned by it (the *Becker Drapkin LP Shares*, and together with the *Becker Drapkin QP Shares*, the *Becker Drapkin Funds Shares*). *Becker Drapkin LP* disclaims beneficial ownership of the *Becker Drapkin QP Shares*.

As general partner of each of the *Becker Drapkin Funds*, *BD Management* may be deemed to have the shared power to vote or direct the vote of (and the shared power to dispose or direct the disposition of) the *Becker Drapkin Funds Shares*. *BD Management* does not own any *Common Stock* directly and disclaims beneficial ownership of the *Becker Drapkin Funds Shares*.

As general partner of *BD Management*, *BCA* may be deemed to have the shared power to vote or direct the vote of (and the shared power to dispose or direct the disposition of) any *Common Stock* beneficially owned by *BD Management*. *BCA* does not own any *Common Stock* directly and disclaims beneficial ownership of any *Common Stock* beneficially owned by *BD Management*.

As co-managing members of *BCA*, each of *Mr. Becker* and *Mr. Drapkin* may be deemed to have the shared power to vote or direct the vote of (and the shared power to dispose or direct the disposition of) any *Common Stock* beneficially owned by *BCA*. *Mr. Becker* and *Mr. Drapkin* each hereby disclaim beneficial ownership of any *Common Stock* beneficially owned by *BCA*.

Each *Reporting Person* declares that neither the filing of this statement nor anything herein shall be construed as an admission that such person is, for the purposes of Section 13(d) or 13(g) of the Act, the beneficial owner of any securities covered by this statement.

(b) Address of Principal Business Office or, if none, Residence

The address of the principal business office of each of the *Reporting Persons* is 300 Crescent Court, Suite 1111, Dallas, Texas 75201.

(c) Citizenship

See Item 4 on the cover page(s) hereto.

(d) Title of Class of Securities

Ordinary Shares

(e) CUSIP Number

M82183118

Item 3. If this statement is filed pursuant to §§240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is:

- (a) .. A Broker or dealer registered under Section 15 of the Act (15 U.S.C. 78o).
- (b) .. A Bank as defined in Section 3(a)(6) of the Act (15 U.S.C. 78c).
- (c) .. An insurance company as defined in Section 3(a)(19) of the Act (15 U.S.C. 78c).
- (d) .. An investment company registered under Section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8).
- (e) .. An investment adviser in accordance with §240.13d-1(b)(1)(ii)(E);
- (f) .. An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F);
- (g) .. A parent holding company or control person in accordance with §240.13d-1(b)(1)(ii)(G);
- (h) .. A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i) .. A church plan that is excluded from the definition of an investment company under Section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (j) .. A non-U.S. institution in accordance with §240.13d-1(b)(1)(ii)(J);
- (k) .. A group, in accordance with §240.13d-1(b)(1)(ii)(K).

If filing as a non-U.S. institution in accordance with §240.13d-1(b)(1)(ii)(J), please specify the type of institution:

Not Applicable

Item 4. Ownership.

(a) Amount beneficially owned: See Item 9 on the cover page(s) hereto.

(b) Percent of class: See Item 11 on the cover page(s) hereto.

(c) Number of shares as to which such person has:

- (i) **Sole power to vote or to direct the vote:** See Item 5 on the cover page(s) hereto.

- (ii) **Shared power to vote or to direct the vote:** See Item 6 on the cover page(s) hereto.

- (iii) **Sole power to dispose or to direct the disposition of:** See Item 7 on the cover page(s) hereto.

- (iv) **Shared power to dispose or to direct the disposition of:** See Item 8 on the cover page(s) hereto.

Item 5. Ownership of Five Percent or Less of a Class.

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following .

Item 6. Ownership of More than Five Percent on Behalf of Another Person

Not Applicable

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company or Control Person.

Not Applicable

Item 8. Identification and Classification of Members of the Group

Not Applicable

Item 9. Notice of Dissolution of Group

Not Applicable

Item 10. Certifications

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: February 10, 2012

BECKER DRAPKIN MANAGEMENT, L.P.

By: BC Advisors, LLC, its general partner

By: /s/ Ashley Sekimoto
Name: Ashley Sekimoto
Title: Attorney-in-Fact

BECKER DRAPKIN PARTNERS (QP), L.P.

By: Becker Drapkin Management, L.P., its general partner

By: BC Advisors, LLC, its general partner

By: /s/ Ashley Sekimoto
Name: Ashley Sekimoto
Title: Attorney-in-Fact

BECKER DRAPKIN PARTNERS, L.P.

By: Becker Drapkin Management, L.P., its general partner

By: BC Advisors, LLC, its general partner

By: /s/ Ashley Sekimoto
Name: Ashley Sekimoto
Title: Attorney-in-Fact

BC ADVISORS, LLC

By: /s/ Ashley Sekimoto
Name: Ashley Sekimoto
Title: Attorney-in-Fact

STEVEN R. BECKER

/s/ Ashley Sekimoto
Name: Ashley Sekimoto
Title: Attorney-in-Fact

MATTHEW A. DRAPKIN

/s/ Ashley Sekimoto
Name: Ashley Sekimoto
Title: Attorney-in-Fact

EXHIBIT INDEX

Exhibit	Description of Exhibit
24.1	Joint Filing Agreement and Power of Attorney (incorporated by reference to Exhibit 24.1 to the Schedule 13G relating to the Common Stock of the Issuer filed on February 24, 2011 by the Reporting Persons with the Securities and Exchange Commission).