

Mirati Therapeutics, Inc.
Form SC 13D/A
March 17, 2016

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

SCHEDULE 13D

(Rule 13d-101)

Under the Securities Exchange Act of 1934

(Amendment No. 5)*

Mirati Therapeutics, Inc.

(Name of Issuer)

Common Stock, \$0.001 par value

(Title of Class of Securities)

60468T105

(CUSIP Number)

David A. Brown

Alston & Bird LLP

950 F Street, N.W.

Washington, DC 20004-1404

202-239-3463

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

March 16, 2016

(Date of Event Which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box " ".

* 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 disclosures provided in a prior cover page.

The information required on 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).

CUSIP No. 60468T105

SCHEDULE 13D/A

1 NAMES OF REPORTING PERSONS

Boxer Capital, LLC

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a) (b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

..

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF 7 SOLE VOTING POWER

SHARES

BENEFICIALLY 0

8 SHARED VOTING POWER

OWNED BY

EACH

947,715*

REPORTING 9 SOLE DISPOSITIVE POWER

PERSON

WITH 0

10 SHARED DISPOSITIVE POWER

Edgar Filing: Mirati Therapeutics, Inc. - Form SC 13D/A

947,715*

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

947,715*

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)

..

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

4.8%**

14 TYPE OF REPORTING PERSON (See Instructions)

OO

* This number includes 189,780 shares of common stock that Boxer Capital has the right to acquire pursuant to the Boxer 2012 Warrant.

** Based on 19,630,081 shares of common stock outstanding which is the sum of (i) 19,302,313 shares of common stock reported to be outstanding as of March 4, 2016 by the Issuer on its Form 10-K filed with the SEC on March 9, 2016, (ii) 189,780 shares of common stock, which Boxer Capital currently has the right to acquire pursuant to the Boxer 2012 Warrant (as defined below), (iii) 78,186 shares of common stock, which MVA Investors currently has the right to acquire pursuant to the MVA 2012 Warrant (as defined below) and (iv) 59,802 shares of common stock subject to options exercisable within the next 60 days.

CUSIP No. 60468T105

SCHEDULE 13D/A

1 NAMES OF REPORTING PERSONS

Boxer Asset Management Inc.

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a) (b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

..

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Bahamas

NUMBER OF 7 SOLE VOTING POWER

SHARES

BENEFICIALLY 0

8 SHARED VOTING POWER

OWNED BY

EACH

947,715*

REPORTING 9 SOLE DISPOSITIVE POWER

PERSON

WITH 0

10 SHARED DISPOSITIVE POWER

Edgar Filing: Mirati Therapeutics, Inc. - Form SC 13D/A

947,715*

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

947,715*

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)

..

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

4.8%**

14 TYPE OF REPORTING PERSON (See Instructions)

CO

* This number includes 189,780 shares of common stock that Boxer Capital has the right to acquire pursuant to the Boxer 2012 Warrant.

** Based on 19,630,081 shares of common stock outstanding which is the sum of (i) 19,302,313 shares of common stock reported to be outstanding as of March 4, 2016 by the Issuer on its Form 10-K filed with the SEC on March 9, 2016, (ii) 189,780 shares of common stock, which Boxer Capital currently has the right to acquire pursuant to the Boxer 2012 Warrant, (iii) 78,186 shares of common stock, which MVA Investors currently has the right to acquire pursuant to the MVA 2012 Warrant and (iv) 59,802 shares of common stock subject to options exercisable within the next 60 days.

CUSIP No. 60468T105

SCHEDULE 13D/A

1 NAMES OF REPORTING PERSONS

MVA Investors, LLC

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a) (b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

..

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF 7 SOLE VOTING POWER

SHARES

BENEFICIALLY 507,526*

8 SHARED VOTING POWER

OWNED BY

EACH

0

REPORTING 9 SOLE DISPOSITIVE POWER

PERSON

WITH 507,526*

10 SHARED DISPOSITIVE POWER

0

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

507,526*

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)

..

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

2.6%**

14 TYPE OF REPORTING PERSON (See Instructions)

OO

* This number includes 78,186 shares of common stock that MVA Investors, LLC has the right to acquire pursuant to the MVA 2012 Warrant.

** Based on 19,630,081 shares of common stock outstanding which is the sum of (i) 19,302,313 shares of common stock reported to be outstanding as of March 4, 2016 by the Issuer on its Form 10-K filed with the SEC on March 9, 2016, (ii) 189,780 shares of common stock, which Boxer Capital currently has the right to acquire pursuant to the Boxer 2012 Warrant, (iii) 78,186 shares of common stock, which MVA Investors currently has the right to acquire pursuant to the MVA 2012 Warrant and (iv) 59,802 shares of common stock subject to options exercisable within the next 60 days.

CUSIP No. 60468T105

SCHEDULE 13D/A

1 NAMES OF REPORTING PERSONS

Braslyn Ltd.

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a) (b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

..

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Bahamas

NUMBER OF 7 SOLE VOTING POWER

SHARES

BENEFICIALLY 0

8 SHARED VOTING POWER

OWNED BY

EACH

1,523,987

REPORTING 9 SOLE DISPOSITIVE POWER

PERSON

WITH 0

10 SHARED DISPOSITIVE POWER

1,523,987

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

1,523,987

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)

..

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

7.8%*

14 TYPE OF REPORTING PERSON (See Instructions)

CO

* Based on 19,630,081 shares of common stock outstanding which is the sum of (i) 19,302,313 shares of common stock reported to be outstanding as of March 4, 2016 by the Issuer on its Form 10-K filed with the SEC on March 9, 2016, (ii) 189,780 shares of common stock, which Boxer Capital currently has the right to acquire pursuant to the Boxer 2012 Warrant, (iii) 78,186 shares of common stock, which MVA Investors currently has the right to acquire pursuant to the MVA 2012 Warrant and (iv) 59,802 shares of common stock subject to options exercisable within the next 60 days.

CUSIP No. 60468T105

SCHEDULE 13D/A

1 NAMES OF REPORTING PERSONS

Aaron I. Davis

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a) (b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

OO

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

..

6 CITIZENSHIP OR PLACE OF ORGANIZATION

United States of America

NUMBER OF 7 SOLE VOTING POWER

SHARES

BENEFICIALLY 87,052

8 SHARED VOTING POWER

OWNED BY

EACH

0

REPORTING 9 SOLE DISPOSITIVE POWER

PERSON

WITH 87,052

10 SHARED DISPOSITIVE POWER

0

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

87,052

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)

..

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

0.4%*

14 TYPE OF REPORTING PERSON (See Instructions)

IN

* Based on 19,630,081 shares of common stock outstanding which is the sum of (i) 19,302,313 shares of common stock reported to be outstanding as of March 4, 2016 by the Issuer on its Form 10-K filed with the SEC on March 9, 2016, (ii) 189,780 shares of common stock, which Boxer Capital currently has the right to acquire pursuant to the Boxer 2012 Warrant, (iii) 78,186 shares of common stock, which MVA Investors currently has the right to acquire pursuant to the MVA 2012 Warrant and (iv) 59,802 shares of common stock subject to options exercisable within the next 60 days.

CUSIP No. 60468T105

SCHEDULE 13D/A

1 NAMES OF REPORTING PERSONS

Shehan B. Dissanayake

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a) (b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

OO

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

..

6 CITIZENSHIP OR PLACE OF ORGANIZATION

United States of America

NUMBER OF 7 SOLE VOTING POWER

SHARES

BENEFICIALLY 77,038

8 SHARED VOTING POWER

OWNED BY

EACH

0

REPORTING 9 SOLE DISPOSITIVE POWER

PERSON

WITH 77,038

10 SHARED DISPOSITIVE POWER

0

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

77,038

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)

..

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

0.4%*

14 TYPE OF REPORTING PERSON (See Instructions)

IN

* Based on 19,630,081 shares of common stock outstanding which is the sum of (i) 19,302,313 shares of common stock reported to be outstanding as of March 4, 2016 by the Issuer on its Form 10-K filed with the SEC on March 9, 2016, (ii) 189,780 shares of common stock, which Boxer Capital currently has the right to acquire pursuant to the Boxer 2012 Warrant, (iii) 78,186 shares of common stock, which MVA Investors currently has the right to acquire pursuant to the MVA 2012 Warrant and (iv) 59,802 shares of common stock subject to options exercisable within the next 60 days.

CUSIP No. 60468T105

SCHEDULE 13D/A

1 NAMES OF REPORTING PERSONS

Christopher Fuglesang

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a) (b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

OO

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

..

6 CITIZENSHIP OR PLACE OF ORGANIZATION

United States of America

NUMBER OF 7 SOLE VOTING POWER

SHARES

BENEFICIALLY 30,518

8 SHARED VOTING POWER

OWNED BY

EACH

0

REPORTING 9 SOLE DISPOSITIVE POWER

PERSON

WITH 30,518

10 SHARED DISPOSITIVE POWER

0

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

30,518

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)

..

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

0.1%*

14 TYPE OF REPORTING PERSON (See Instructions)

IN

* Based on 19,630,081 shares of common stock outstanding which is the sum of (i) 19,302,313 shares of common stock reported to be outstanding as of March 4, 2016 by the Issuer on its Form 10-K filed with the SEC on March 9, 2016, (ii) 189,780 shares of common stock, which Boxer Capital currently has the right to acquire pursuant to the Boxer 2012 Warrant, (iii) 78,186 shares of common stock, which MVA Investors currently has the right to acquire pursuant to the MVA 2012 Warrant and (iv) 59,802 shares of common stock subject to options exercisable within the next 60 days.

CUSIP No. 60468T105

SCHEDULE 13D/A

1 NAMES OF REPORTING PERSONS

Peter E. Harwin

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a) (b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

OO

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

..

6 CITIZENSHIP OR PLACE OF ORGANIZATION

United States of America

NUMBER OF 7 SOLE VOTING POWER

SHARES

BENEFICIALLY 5,743

8 SHARED VOTING POWER

OWNED BY

EACH

0

REPORTING 9 SOLE DISPOSITIVE POWER

PERSON

WITH 5,743

10 SHARED DISPOSITIVE POWER

0

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

5,743

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)

..

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

0.0%*

14 TYPE OF REPORTING PERSON (See Instructions)

IN

* Based on 19,630,081 shares of common stock outstanding which is the sum of (i) 19,302,313 shares of common stock reported to be outstanding as of March 4, 2016 by the Issuer on its Form 10-K filed with the SEC on March 9, 2016, (ii) 189,780 shares of common stock, which Boxer Capital currently has the right to acquire pursuant to the Boxer 2012 Warrant, (iii) 78,186 shares of common stock, which MVA Investors currently has the right to acquire pursuant to the MVA 2012 Warrant and (iv) 59,802 shares of common stock subject to options exercisable within the next 60 days.

CUSIP No. 60468T105

SCHEDULE 13D/A

1 NAMES OF REPORTING PERSONS

Rodney W. Lappe

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a) (b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

OO

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

..

6 CITIZENSHIP OR PLACE OF ORGANIZATION

United States of America

NUMBER OF 7 SOLE VOTING POWER

SHARES

BENEFICIALLY 72,465*

8 SHARED VOTING POWER

OWNED BY

EACH

0

REPORTING 9 SOLE DISPOSITIVE POWER

PERSON

WITH 72,465*

10 SHARED DISPOSITIVE POWER

0

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

72,465*

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)

..

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

0.4%**

14 TYPE OF REPORTING PERSON (See Instructions)

IN

* This number includes 59,802 shares of common stock that Rodney W. Lappe has the right to acquire pursuant to stock options.

** Based on 19,630,081 shares of common stock outstanding which is the sum of (i) 19,302,313 shares of common stock reported to be outstanding as of March 4, 2016 by the Issuer on its Form 10-K filed with the SEC on March 9, 2016, (ii) 189,780 shares of common stock, which Boxer Capital currently has the right to acquire pursuant to the Boxer 2012 Warrant, (iii) 78,186 shares of common stock, which MVA Investors currently has the right to acquire pursuant to the MVA 2012 Warrant and (iv) 59,802 shares of common stock subject to options exercisable within the next 60 days.

CUSIP No. 60468T105

SCHEDULE 13D/A

1 NAMES OF REPORTING PERSONS

Ivan M. Lieberburg

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a) (b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

OO

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

..

6 CITIZENSHIP OR PLACE OF ORGANIZATION

United States of America

NUMBER OF 7 SOLE VOTING POWER

SHARES

BENEFICIALLY 37,241

8 SHARED VOTING POWER

OWNED BY

EACH

0

REPORTING 9 SOLE DISPOSITIVE POWER

PERSON

WITH 37,241

10 SHARED DISPOSITIVE POWER

0

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

37,241

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)

..

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

0.2%*

14 TYPE OF REPORTING PERSON (See Instructions)

IN

* Based on 19,630,081 shares of common stock outstanding which is the sum of (i) 19,302,313 shares of common stock reported to be outstanding as of March 4, 2016 by the Issuer on its Form 10-K filed with the SEC on March 9, 2016, (ii) 189,780 shares of common stock, which Boxer Capital currently has the right to acquire pursuant to the Boxer 2012 Warrant, (iii) 78,186 shares of common stock, which MVA Investors currently has the right to acquire pursuant to the MVA 2012 Warrant and (iv) 59,802 shares of common stock subject to options exercisable within the next 60 days.

CUSIP No. 60468T105

SCHEDULE 13D/A

1 NAMES OF REPORTING PERSONS

Neil Reisman

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a) (b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

OO

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

..

6 CITIZENSHIP OR PLACE OF ORGANIZATION

United States of America

NUMBER OF 7 SOLE VOTING POWER

SHARES

BENEFICIALLY 13,131

8 SHARED VOTING POWER

OWNED BY

EACH

0

REPORTING 9 SOLE DISPOSITIVE POWER

PERSON

WITH 13,131

10 SHARED DISPOSITIVE POWER

0

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

13,131

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)

..

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

0.1%*

14 TYPE OF REPORTING PERSON (See Instructions)

IN

* Based on 19,630,081 shares of common stock outstanding which is the sum of (i) 19,302,313 shares of common stock reported to be outstanding as of March 4, 2016 by the Issuer on its Form 10-K filed with the SEC on March 9, 2016, (ii) 189,780 shares of common stock, which Boxer Capital currently has the right to acquire pursuant to the Boxer 2012 Warrant, (iii) 78,186 shares of common stock, which MVA Investors currently has the right to acquire pursuant to the MVA 2012 Warrant and (iv) 59,802 shares of common stock subject to options exercisable within the next 60 days.

CUSIP No. 60468T105

SCHEDULE 13D/A

1 NAMES OF REPORTING PERSONS

William N. Harwin 2012 Gift Trust F/B/O Peter Harwin

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a) (b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

OO

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

..

6 CITIZENSHIP OR PLACE OF ORGANIZATION

California

NUMBER OF 7 SOLE VOTING POWER

SHARES

BENEFICIALLY 1,425

8 SHARED VOTING POWER

OWNED BY

EACH

0

REPORTING 9 SOLE DISPOSITIVE POWER

PERSON

WITH

1,425

10 SHARED DISPOSITIVE POWER

0

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

1,425

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)

..

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

0.0%*

14 TYPE OF REPORTING PERSON (See Instructions)

OO

* Based on 19,630,081 shares of common stock outstanding which is the sum of (i) 19,302,313 shares of common stock reported to be outstanding as of March 4, 2016 by the Issuer on its Form 10-K filed with the SEC on March 9, 2016, (ii) 189,780 shares of common stock, which Boxer Capital currently has the right to acquire pursuant to the Boxer 2012 Warrant, (iii) 78,186 shares of common stock, which MVA Investors currently has the right to acquire pursuant to the MVA 2012 Warrant and (iv) 59,802 shares of common stock subject to options exercisable within the next 60 days.

CUSIP No. 60468T105

SCHEDULE 13D/A

1 NAMES OF REPORTING PERSONS

Joe Lewis

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a) (b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

WC

5 CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

..

6 CITIZENSHIP OR PLACE OF ORGANIZATION

United Kingdom

NUMBER OF 7 SOLE VOTING POWER

SHARES

BENEFICIALLY 0

8 SHARED VOTING POWER

OWNED BY

EACH

REPORTING 9 2,471,702*
SOLE DISPOSITIVE POWER

PERSON

WITH 0

10 SHARED DISPOSITIVE POWER

2,471,702*

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,471,702*

12 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)

..

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

12.6%**

14 TYPE OF REPORTING PERSON (See Instructions)

IN

* This number includes 189,780 shares of common stock that Boxer Capital has the right to acquire pursuant to the Boxer 2012 Warrant.

** Based on 19,630,081 shares of common stock outstanding which is the sum of (i) 19,302,313 shares of common stock reported to be outstanding as of March 4, 2016 by the Issuer on its Form 10-K filed with the SEC on March 9, 2016, (ii) 189,780 shares of common stock, which Boxer Capital currently has the right to acquire pursuant to the Boxer 2012 Warrant, (iii) 78,186 shares of common stock, which MVA Investors currently has the right to acquire pursuant to the MVA 2012 Warrant and (iv) 59,802 shares of common stock subject to options exercisable within the next 60 days.

CUSIP No. 60468T105

SCHEDULE 13D/A

This Amendment No. 5 (Amendment No. 5) amends and supplements the statement on Schedule 13D filed on November 4, 2013 (the Original Filing) by Boxer Capital, LLC (Boxer Capital), Boxer Asset Management Inc. (Boxer Management), MVA Investors, LLC (MVA Investors) and Joe Lewis, as amended by Amendment No. 1 filed on February 2, 2015, Amendment No. 2 filed on September 18, 2015, Amendment No. 3 filed on January 6, 2016 (Amendment No. 3) and Amendment No. 4 filed on January 15, 2016 (Amendment No. 4). Amendment No. 3 was an original filing for Braslyn Ltd. (Braslyn). Amendment No. 4 was an original filing for Aaron I. Davis, Shehan B. Dissanayake, Christopher Fuglesang, Peter E. Harwin, Rodney W. Lappe, Ivan M. Lieberburg, Neil Reisman and William N. Harwin 2012 Gift Trust F/B/O Peter Harwin (the Harwin Trust). Boxer Capital, Boxer Management, MVA Investors, Braslyn, Joe Lewis, Aaron I. Davis, Shehan B. Dissanayake, Christopher Fuglesang, Peter E. Harwin, Rodney W. Lappe, Ivan M. Lieberburg, Neil Reisman and the Harwin Trust are collectively referred to herein as the Reporting Persons. The Original Filing, as amended, remains in effect except to the extent that it is amended, restated or superseded by information contained in this Amendment No. 5. Capitalized terms used and not defined in this Amendment No. 5 have the meanings set forth in the Original Filing, as amended.

This Amendment No. 5 is being filed to reflect Boxer Capital's transfer of shares of common stock of the issuer, pro rata for no consideration as part of an internal reorganization. See Item 4.

Item 3. Source and Amount of Funds or Other Consideration.

Item 3 is hereby amended to add the following:

On March 16, 2016, Boxer Capital transferred 474,158 shares of the Common Stock of the Issuer, pro rata for no consideration as part of an internal reorganization.

On March 17, 2016, Boxer Management transferred 375,298 shares of the Common Stock of the Issuer to Braslyn for no consideration as part of an internal reorganization.

Item 4. Purpose of the Transaction.

Item 4 is hereby amended to add the following:

On March 16, 2016, Boxer Capital transferred 474,158 shares of the Common Stock of the Issuer, pro rata for no consideration as part of an internal reorganization.

On March 17, 2016, Boxer Management transferred 375,298 shares of the Common Stock of the Issuer to Braslyn for no consideration as part of an internal reorganization.

Item 5. Interest in Securities of the Issuer.

Item 5 is hereby amended and restated in its entirety as follows:

All percentages are based on 19,630,081 shares of Common Stock outstanding which is the sum of (i) 19,302,313 shares of common stock reported to be outstanding as of March 4, 2016 by the Issuer on its Form 10-K filed with the SEC on March 9, 2016, (ii) 189,780 shares of common stock, which Boxer Capital currently has the right to acquire pursuant to the Boxer 2012 Warrant, (iii) 78,186 shares of common stock, which MVA Investors currently has the right to acquire pursuant to the MVA 2012 Warrant and (iv) 59,802 shares of common stock subject to options exercisable within the next 60 days.

(a) The Reporting Persons may be deemed to beneficially own, in the aggregate, 3,303,841 shares of Common Stock, representing 16.8% of the Issuer's outstanding Common Stock.

CUSIP No. 60468T105

SCHEDULE 13D/A

Boxer Capital and Boxer Management beneficially own 947,715 shares of Common Stock which represents 4.8% of the Issuer's outstanding Common Stock. Braslyn beneficially owns 1,523,987 shares of Common Stock which represents 7.8% of the Issuer's outstanding Common Stock. Joe Lewis beneficially owns 2,471,702 shares of Common Stock which represents 12.6% of the Issuer's outstanding Common Stock. MVA Investors beneficially owns 507,526 shares of Common Stock which represents 2.6% of the Issuer's outstanding Common Stock. Aaron I. Davis beneficially owns 87,052 shares of Common Stock which represents 0.4% of the Issuer's outstanding Common Stock. Shehan B. Dissanayake beneficially owns 77,038 shares of Common Stock which represents 0.4% of the Issuer's outstanding Common Stock. Christopher Fuglesang beneficially owns 30,518 shares of Common Stock which represents 0.1% of the Issuer's outstanding Common Stock. Peter E. Harwin beneficially owns 5,743 shares of Common Stock which represents 0.0% of the Issuer's outstanding Common Stock. Ivan M. Lieberburg beneficially owns 37,241 shares of Common Stock which represents 0.2% of the Issuer's outstanding Common Stock. Neil Reisman beneficially owns 13,131 shares of Common Stock which represents 0.1% of the Issuer's outstanding Common Stock. The Harwin Trust beneficially owns 1,425 shares of Common Stock which represents 0.0% of the Issuer's outstanding Common Stock.

Rodney W. Lappe beneficially owns 72,465 shares of Common Stock, which includes 59,802 shares of Common Stock subject to options exercisable within the next 60 days, and represents 0.4% of the Issuer's outstanding Common Stock.

The table below reflects options to purchase shares of Common Stock of the Issuer owned by Rodney W. Lappe that are not currently exercisable within the next 60 days:

Grant Date	Number of Options	Vesting Schedule
5/21/2015	1,250	Exercisable in 12 equal monthly installments following the date of grant
9/9/2014	7,111	Exercisable in 36 equal monthly installments following the date of grant
7/17/2012	1,390	The remainder of these options will vest and become exercisable on July 17, 2016
6/28/2012	400	The remainder of these options will vest and become exercisable on June 28, 2016

The 2012 Warrants represent a right for Boxer Capital and MVA Investors to purchase 189,780 and 78,186 shares of Common Stock, respectively, at an exercise price of \$7.86 (subject to adjustment). The 2012 Warrants are only exercisable to the extent that the holders thereof and their affiliates and joint actors would beneficially own no more than 19.99% of the outstanding Common Stock after exercise.

(b) With respect to any rights or powers to vote, or to direct the vote of, or to dispose of, or direct the disposition of, the Common Stock owned by the Reporting Persons:

(i) Sole power to vote or direct the vote:

MVA Investors has the sole power to vote the 507,526 shares of Common Stock it beneficially owns. Aaron I. Davis has the sole power to vote the 87,052 shares of Common Stock he beneficially owns. Shehan B. Dissanayake has the sole power to vote the 77,038 shares of Common Stock he beneficially owns. Christopher Fuglesang has the sole power to vote the 30,518 shares of Common Stock he beneficially owns. Peter E. Harwin has the sole power to vote the 5,743 shares of Common Stock he beneficially owns. Rodney W. Lappe has the sole power to vote the 72,465 shares of Common Stock he beneficially owns. Ivan M. Lieberburg has the sole power to vote the 37,241 shares of Common Stock he beneficially owns. Neil Reisman has the sole power to vote the 13,131 shares of Common Stock he

beneficially owns. The Harwin Trust has the sole power to vote the 1,425 shares of Common Stock it beneficially owns. Boxer Capital, Boxer Management, Braslyn and Joe Lewis do not have the sole power to vote or direct the vote of any shares of Common Stock.

(ii) Shared power to vote or to direct the vote:

Boxer Capital and Boxer Management have shared voting power with respect to the 947,715 shares of Common Stock they beneficially own. Braslyn has shared voting power with respect to the 1,523,987 shares of Common Stock it beneficially owns. Joe Lewis has shared voting power with respect to the 2,471,702 shares of Common Stock he beneficially owns. Neither MVA Investors, Aaron I. Davis, Shehan B. Dissanayake, Christopher Fuglesang, Peter E. Harwin, Rodney W. Lappe, Ivan M. Lieberburg, Neil Reisman nor the Harwin Trust has shared power to vote or direct the vote of any shares of Common Stock.

CUSIP No. 60468T105

SCHEDULE 13D/A

(iii) Sole power to dispose or direct the disposition of:

MVA Investors has the sole power to dispose of the 507,526 shares of Common Stock it beneficially owns. Aaron I. Davis has the sole power to vote the 87,052 shares of Common Stock he beneficially owns. Shehan B. Dissanayake has the sole power to vote the 77,038 shares of Common Stock he beneficially owns. Christopher Fuglesang has the sole power to vote the 30,518 shares of Common Stock he beneficially owns. Peter E. Harwin has the sole power to vote the 5,743 shares of Common Stock he beneficially owns. Rodney W. Lappe has the sole power to vote the 72,465 shares of Common Stock he beneficially owns. Ivan M. Lieberburg has the sole power to vote the 37,241 shares of Common Stock he beneficially owns. Neil Reisman has the sole power to vote the 13,131 shares of Common Stock he beneficially owns. The Harwin Trust has the sole power to vote the 1,425 shares of Common Stock it beneficially owns. Boxer Capital, Boxer Management, Braslyn and Joe Lewis do not have the sole power to dispose or direct the disposition of any shares of Common Stock.

(iv) Shared power to dispose or to direct the disposition of:

Boxer Capital and Boxer Management have shared dispositive power with respect to the 947,715 shares of Common Stock they beneficially own. Braslyn has shared dispositive power with respect to the 1,523,987 shares of Common Stock it beneficially owns. Joe Lewis has shared voting power with respect to the 2,471,702 shares of Common Stock he beneficially owns. Neither MVA Investors, Aaron I. Davis, Shehan B. Dissanayake, Christopher Fuglesang, Peter E. Harwin, Rodney W. Lappe, Ivan M. Lieberburg, Neil Reisman nor the Harwin Trust has shared power to dispose of or direct the disposition of any shares of Common Stock.

(c) Other than as described herein, the Reporting Persons have not engaged in any transaction in the Common Stock in the past 60 days.

(d) No other person has the right to receive or the power to direct the receipt of dividends, or proceeds of sale of such securities outlined in this report.

(e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer.

Item 6 is amended and restated in its entirety as follows:

Except as otherwise described in the Original Filing, as amended, there are no contracts, arrangements, understandings or relationships (legal or otherwise) among the persons named in Item 2 and between such persons and any person with respect to any securities of the Issuer, including, but not limited to, transfer or voting of any of the securities, finder's fees, joint ventures, loan or option arrangements, puts or calls, guarantees of profits, division of profits or loss, or the giving or withholding of proxies.

Item 7. Material to Be Filed as Exhibits.

Exhibit 1 Joint Filing Agreement, dated January 15, 2016, among Boxer Capital, Boxer Management, Braslyn, MVA Investors, Joe Lewis, Aaron I. Davis, Shehan B. Dissanayake, Christopher Fuglesang, Peter E. Harwin, Rodney W. Lappe, Ivan M. Lieberburg, Neil Reisman and William N. Harwin 2012 Gift Trust

Edgar Filing: Mirati Therapeutics, Inc. - Form SC 13D/A

F/B/O Peter Harwin, which is incorporated by reference to Exhibit 1 to Amendment No. 4

Exhibit 2 Form of Securities Purchase Agreement relating to the 2012 Private Placement, which is incorporated herein by reference to Exhibit 10.2 to the Form 10 filed by the Issuer on May 10, 2013

Exhibit 3 Form of Warrant Certificate issued in connection with the 2012 Private Placement, which is incorporated herein by reference to Exhibit 10.4 to the Form 10 filed by the Issuer on May 10, 2013

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.

Dated: March 17, 2016

BOXER CAPITAL, LLC

By: /s/Aaron I. Davis
Name: Aaron I. Davis
Title: Authorized Signatory

BOXER ASSET MANAGEMENT INC.

By: /s/ Jefferson R. Voss
Name: Jefferson R. Voss
Title: Director

BRASLYN LTD.

By: /s/ Jefferson R. Voss
Name: Jefferson R. Voss
Title: Authorized Signatory

MVA INVESTORS, LLC

By: /s/ Aaron I. Davis
Name: Aaron I. Davis
Title: Authorized Signatory

JOSEPH C. LEWIS

By: /s/ Joseph C. Lewis
Joseph C. Lewis, Individually

RODNEY W. LAPPE

By: /s/ Rodney W. Lappe
Rodney W. Lappe, Individually

IVAN M. LIEBERBURG

By: /s/ Ivan. M. Lieberburg
Ivan M. Lieberburg, Individually

AARON I. DAVIS

By: /s/ Aaron I. Davis

Aaron I. Davis, Individually

NEIL REISMAN

By: /s/ Neil Reisman
Neil Reisman, Individually

CUSIP No. 60468T105

SCHEDULE 13D/A

SHEHAN B. DISSANAYAKE

By: /s/ Shehan B. Dissanayake
Shehan B. Dissanayake, Individually

CHRISTOPHER FUGLESANG

By: /s/ Christopher Fuglesang
Christopher Fuglesang, Individually

PETER E. HARWIN

By: /s/ Peter E. Harwin
Peter E. Harwin, Individually

WILLIAM N. HARWIN 2012 GIFT TRUST
F/B/O PETER HARWIN

By: /s/ William N. Harwin
Name: William N. Harwin
Title: Trustee

EXHIBIT INDEX

- Exhibit 1 Joint Filing Agreement, dated January 15, 2016, among Boxer Capital, Boxer Management, Braslyn, MVA Investors, Joe Lewis, Aaron I. Davis, Shehan B. Dissanayake, Christopher Fuglesang, Peter E. Harwin, Rodney W. Lappe, Ivan M. Lieberburg, Neil Reisman and William N. Harwin 2012 Gift Trust F/B/O Peter Harwin, which is incorporated by reference to Exhibit 1 to Amendment No. 4
- Exhibit 2 Form of Securities Purchase Agreement relating to the 2012 Private Placement, which is incorporated herein by reference to Exhibit 10.2 to the Form 10 filed by the Issuer on May 10, 2013
- Exhibit 3 Form of Warrant Certificate issued in connection with the 2012 Private Placement, which is incorporated herein by reference to Exhibit 10.4 to the Form 10 filed by the Issuer on May 10, 2013