

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

Schedule 13G  
(Amendment No. )

Under the Securities Exchange Act of 1934\*

Synthetic Biologics Inc.

(Name of Issuer)

Common Stock

(Title of Class of Securities)

87164U102

(CUSIP Number)

October 10, 2014

(Date of Event which Requires Filing of this Statement)

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).

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

## 1. NAMES OF REPORTING PERSONS

Great Point Partners, LLC

I.R.S. IDENTIFICATION NO. OF ABOVE PERSON (ENTITIES ONLY):

37-1475292

## 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a) £

(b) £

## 3. SEC USE ONLY

## 4. CITIZENSHIP OR PLACE OF ORGANIZATION

USA

NUMBER OF SHARES

## 5. SOLE VOTING POWER

BENEFICIALLY

0

OWNED BY EACH

## 6. SHARED VOTING POWER

REPORTING PERSON

7,321,380<sup>1</sup>

WITH

## 7. SOLE DISPOSITIVE POWER

0

## 8. SHARED DISPOSITIVE POWER

7,321,380<sup>1</sup>

## 9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

7,321,380<sup>1</sup>

## 10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (See Instructions)

£

## 11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

9.98%<sup>2</sup>

<sup>1</sup> Includes warrants to purchase an aggregate of 847,382 shares underlying warrants, owned by Biomedical Value Fund, LP, Biomedical Offshore Value Fund, Ltd., Biomedical Institutional Value Fund, LP, GEF-SMA, LP and Class D Series of GEF-PS, LP. Does not include of an aggregate of 2,742,018 shares underlying such warrants. The provisions of such warrants restrict the exercise of such warrants to the extent that, after giving effect to such exercise, the holder of the warrants and its affiliates and any other person or entities with which such holder would constitute a group would beneficially own in excess of 9.98% of the number of shares of Common Stock of the Issuer outstanding immediately after giving effect to such exercise (the "Ownership Cap"). Therefore, the reporting persons could be deemed to beneficially own such number of shares underlying such warrants as would result in total beneficial ownership by such reporting persons up to the Ownership Cap.

<sup>2</sup> Based on a total of 72,513,144 shares of Common Stock outstanding as reported in the Issuer's prospectus filed with the SEC on October 10, 2014.

12. TYPE OF REPORTING PERSON (See Instructions)

IA

---

## 1. NAMES OF REPORTING PERSONS

Dr. Jeffrey R. Jay, M.D.

I.R.S. IDENTIFICATION NO. OF ABOVE PERSON (ENTITIES ONLY):

## 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a) £

(b) £

## 3. SEC USE ONLY

## 4. CITIZENSHIP OR PLACE OF ORGANIZATION

USA

NUMBER OF SHARES

## 5. SOLE VOTING POWER

BENEFICIALLY

0

OWNED BY EACH

## 6. SHARED VOTING POWER

REPORTING PERSON

7,321,380<sup>1</sup>

WITH

## 7. SOLE DISPOSITIVE POWER

0

## 8. SHARED DISPOSITIVE POWER

7,321,380<sup>1</sup>

## 9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

7,321,380<sup>1</sup>

## 10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (See Instructions)

£

## 11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

9.98%<sup>2</sup>

## 12. TYPE OF REPORTING PERSON (See Instructions)

IN

## 1. NAMES OF REPORTING PERSONS

Mr. David Kroin

I.R.S. IDENTIFICATION NO. OF ABOVE PERSON (ENTITIES ONLY):

## 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a) £

(b) £

## 3. SEC USE ONLY

## 4. CITIZENSHIP OR PLACE OF ORGANIZATION

USA

NUMBER OF SHARES

## 5. SOLE VOTING POWER

BENEFICIALLY

0

OWNED BY EACH

## 6. SHARED VOTING POWER

REPORTING PERSON

7,321,380<sup>1</sup>

WITH

## 7. SOLE DISPOSITIVE POWER

0

## 8. SHARED DISPOSITIVE POWER

7,321,380<sup>1</sup>

## 9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

7,321,380<sup>1</sup>

## 10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (See Instructions)

£

## 11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

9.98%<sup>2</sup>

## 12. TYPE OF REPORTING PERSON (See Instructions)

IN

Item 1.

(a) Name of Issuer

Synthetic Biologics Inc.

(b) Address of Issuer's Principal Executive Offices

155 Gibbs Street, Suite 412, Rockville, MD 20850

Item 2.

(a) Name of Person Filing

Great Point Partners, LLC  
Dr. Jeffrey R. Jay, M.D.  
Mr. David Kroin

The Reporting Persons have entered into a Joint Filing Agreement, dated October 20, 2014, a copy of which is filed with this Schedule 13G as Exhibit A, pursuant to which the Reporting Persons have agreed to file this statement jointly in accordance with the provisions of Rule 13d-1(k)(1) under the Act.

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

The address of the principal business office of each of the Reporting Persons is

165 Mason Street, 3rd Floor  
Greenwich, CT 06830

(c) Citizenship

Great Point Partners, LLC is a limited liability company organized under the laws of the State of Delaware. Dr. Jeffrey R. Jay, M.D. is a citizen of the United States. Mr. David Kroin is a citizen of the United States.

(d) Title of Class of Securities

Common Stock

(e) CUSIP Number

87164U102

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:

Not Applicable.

(a) ☐ Broker or dealer registered under Section 15 of the Act (15 U.S.C. 78o)

(b) ☐ Bank as defined in Section 3(a)(6) of the Act (15 U.S.C. 78c).

(c) ☐ Insurance company as defined in Section 3(a)(19) of the Act (15. U.S.C. 78c).

- (d) £ 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) £ Group, in accordance with §240.13d-1(b)(1)(ii)(J).

Item 4. Ownership

Biomedical Value Fund, L.P. ("BVF") is the record owner of 1,917,637 shares of Common Stock (the "BVF Shares"). Great Point Partners, LLC ("Great Point") is the investment manager of BVF, and by virtue of such status may be deemed to be the beneficial owner of the BVF Shares. Each of Dr. Jeffrey R. Jay, M.D. ("Dr. Jay"), as senior managing member of Great Point, and Mr. David Kroin ("Mr. Kroin"), as special managing member of Great Point, has voting and investment power with respect to the BVF Shares, and therefore may be deemed to be the beneficial owner of the BVF Shares. In addition, BVF is the record owner of warrants to purchase 1,063,300 shares of Common Stock.

Biomedical Offshore Value Fund, Ltd. ("BOVF") is the record owner of 2,337,118 shares of Common Stock (the "BOVF Shares"). Great Point is the investment manager of BOVF, and by virtue of such status may be deemed to be the beneficial owner of the BOVF Shares. Each of Dr. Jay, as senior managing member of Great Point, and Mr. Kroin, as special managing member of Great Point, has voting and investment power with respect to the BOVF Shares, and therefore may be deemed to be the beneficial owner of the BOVF Shares. In addition, BOVF is the record owner of warrants to purchase 1,295,897 shares of Common Stock.

Biomedical Institutional Value Fund, L.P. ("BIVF") is the record owner of 419,483 shares of Common Stock (the "BIVF Shares"). Great Point is the investment manager of BIVF, and by virtue of such status may be deemed to be the beneficial owner of the BIVF Shares. Each of Dr. Jay, as senior managing member of Great Point, and Mr. Kroin, as special managing member of Great Point, has voting and investment power with respect to the BIVF Shares, and therefore may be deemed to be the beneficial owner of the BIVF Shares. In addition, BIVF is the record owner of warrants to purchase 232,597 shares of Common Stock.

GEF-SMA, LP ("GEF-SMA") is the record owner of 1,318,376 shares of Common Stock (the "GEF-SMA Shares"). Great Point is the investment manager of GEF-SMA, and by virtue of such status may be deemed to be the beneficial owner of the GEF-SMA Shares. Each of Dr. Jay, as senior managing member of Great Point, and Mr. Kroin, as special managing member of Great Point, has voting and investment power with respect to the GEF-SMA Shares, and therefore may be deemed to be the beneficial owner of the GEF-SMA Shares. In addition, GEF-SMA is the record owner of warrants to purchase 731,019 shares of Common Stock.

---



Class D Series of GEF-PS, LP ("GEF-PS") is the record owner of 480,784 shares of Common Stock (the "GEF-PS Shares"). Great Point is the investment manager of GEF-PS, and by virtue of such status may be deemed to be the beneficial owner of the GEF-PS Shares. Each of Dr. Jay, as senior managing member of Great Point, and Mr. Kroin, as special managing member of Great Point, has voting and investment power with respect to the GEF-PS Shares, and therefore may be deemed to be the beneficial owner of the GEF-PS Shares. In addition, GEF-PS is the record owner of warrants to purchase 266,587 shares of Common Stock.

The provisions of the warrants described above restrict the exercise of such warrants to the extent that, after giving effect to such exercise, the holder of the warrants and its affiliates and any other person or entities with which such holder would constitute a group would beneficially own in excess of 9.98% of the number of shares of Common Stock of the Issuer outstanding immediately after giving effect to such exercise (the "Ownership Cap"). Therefore, the reporting persons could be deemed to beneficially own such number of shares underlying such warrants as would result in total beneficial ownership by such reporting persons up to the Ownership Cap.

Notwithstanding the above, Great Point, Dr. Jay and Mr. Kroin disclaim beneficial ownership of the BVF Shares, the BOVF Shares, the BIVF Shares, the GEF-SMA Shares, the GEF-PS Shares, and the shares of Common Stock underlying warrants described above, except to the extent of their respective pecuniary interests.

1. Great Point Partners, LLC

(a) Amount beneficially owned: 7,321,380<sup>3</sup>

(b) Percent of class: 9.98%<sup>4</sup>

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

(i) Sole power to vote or to direct the vote: 0.

(ii) Shared power to vote or to direct the vote: 7,321,380<sup>3</sup>

(iii) Sole power to dispose or to direct the disposition of: 0.

(iv) Shared power to dispose or to direct the disposition of: 7,321,380<sup>3</sup>

2. Dr. Jeffrey R. Jay, M.D.

<sup>3</sup> Includes warrants to purchase an aggregate of 847,382 shares underlying warrants, owned by Biomedical Value Fund, LP, Biomedical Offshore Value Fund, Ltd., Biomedical Institutional Value Fund, LP, GEF-SMA, LP and Class D Series of GEF-PS, LP. Does not include of an aggregate of 2,742,018 shares underlying such warrants. The provisions of such warrants restrict the exercise of such warrants to the extent that, after giving effect to such exercise, the holder of the warrants and its affiliates and any other person or entities with which such holder would constitute a group would beneficially own in excess of 9.98% of the number of shares of Common Stock of the Issuer outstanding immediately after giving effect to such exercise (the "Ownership Cap"). Therefore, the reporting persons could be deemed to beneficially own such number of shares underlying such warrants as would result in total beneficial ownership by such reporting persons up to the Ownership Cap.

<sup>4</sup> Based on a total of 72,513,144 shares of Common Stock outstanding as reported in the Issuer's prospectus

filed with the SEC on October 10, 2014.

---

- (a) Amount beneficially owned: 7,321,380<sup>3</sup>
- (b) Percent of class: 9.98%<sup>4</sup>
- (c) Number of shares as to which the person has:
  - (i) Sole power to vote or to direct the vote: 0.
  - (ii) Shared power to vote or to direct the vote: 7,321,380<sup>3</sup>
  - (iii) Sole power to dispose or to direct the disposition of: 0.
  - (iv) Shared power to dispose or to direct the disposition of: 7,321,380<sup>3</sup>

3. Mr. David Kroin

- (a) Amount beneficially owned: 7,321,380<sup>3</sup>
- (b) Percent of class: 9.98%<sup>4</sup>
- (c) Number of shares as to which the person has:
  - (i) Sole power to vote or to direct the vote: 0.
  - (ii) Shared power to vote or to direct the vote: 7,321,380<sup>3</sup>
  - (iii) Sole power to dispose or to direct the disposition of: 0.
  - (iv) Shared power to dispose or to direct the disposition of: 7,321,380<sup>3</sup>

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 each of the Reporting Persons 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:

See Item 4.

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

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. Certification

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 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: October 20, 2014

GREAT POINT PARTNERS, LLC

By: /s/ Dr. Jeffrey R. Jay, M.D.

Dr. Jeffrey R. Jay, M.D.,  
as senior managing member

/s/ Dr. Jeffrey R. Jay, M.D.

DR. JEFFREY R. JAY, M.D.

/s/ Mr. David Kroin

Mr. David Kroin

---

AGREEMENT REGARDING THE JOINT FILING OF SCHEDULE 13G

The undersigned hereby agree as follows:

(i) Each of them is individually eligible to use the Schedule 13G to which this Exhibit is attached, and such Schedule 13G is filed on behalf of each of them; and

(ii) Each of them is responsible for the timely filing of such Schedule 13G and any amendments thereto, and for the completeness and accuracy of the information concerning such person contained therein; but none of them is responsible for the completeness or accuracy of the information concerning the other persons making the filing, unless such person knows or has reason to believe that such information is inaccurate.

Date: October 20, 2014

GREAT POINT PARTNERS, LLC

By: /s/ Dr. Jeffrey R. Jay, M.D.

Dr. Jeffrey R. Jay, M.D.,  
as senior managing member

/s/ Dr. Jeffrey R. Jay, M.D.

DR. JEFFREY R. JAY, M.D.

/s/ Mr. David Kroin

Mr. David Kroin

---