Synthetic Biologics, Inc.
Form 424B3
December 03, 2012

Filed Pursuant to Rule 424(b)(3)

Registration Statement No. 333-180562

December 3, 2012

PROSPECTUS SUPPLEMENT NO. 11

SYNTHETIC BIOLOGICS, INC.

112,573 Shares of Common Stock

This prospectus supplement amends and supplements our prospectus, dated July 26, 2012 relating to the resale, from time to time, of up to 112,573 shares of common stock of Synthetic Biologics, Inc. upon the exercise of warrants issued in July 2011 at an exercise price of $1.00 per share and warrants sold in our July 2010 offering at an exercise price of $1.32 per share. We will receive proceeds if the warrants are exercised for cash; to the extent we receive such proceeds, they will be used for working capital purposes.

Our common stock became eligible for trading on the NYSE MKT October 16, 2008. Our common stock is eligible for quotation on the NYSE MKT under the symbol “SYN”. The closing price of our stock on November 30, 2012 was $2.00.

This prospectus supplement is being filed to include the information set forth in the Current Report on Form 8-K filed on December 3, 2012, which is set forth below. This prospectus supplement should be read in conjunction with the prospectus dated July 26, 2012, supplement no. 1 dated August 9, 2012, prospectus supplement no. 2 dated August 15, 2012, prospectus supplement no. 3 dated August 15, 2012, prospectus supplement no. 4 dated September 12, 2012, prospectus supplement no. 5 dated October 9, 2012, prospectus supplement no. 6 dated October 17, 2012, prospectus supplement no. 7 dated November 1, 2012, prospectus supplement no. 8 dated November 14, 2012; prospectus supplement no. 9 dated November 15, 2012; and prospectus supplement no. 10 dated November 15, 2012 which are to be delivered with this prospectus supplement.

Investing in our securities involves a high degree of risk. See "Risk Factors" beginning on page 4 of the original prospectus for more information.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus or the prospectus to which it relates is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this Prospectus Supplement No. 11 is December 3, 2012.

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (date of earliest event reported): **November 28, 2012**

Synthetic Biologics, Inc.

(Exact name of registrant as specified in charter)

Nevada

(State or other jurisdiction of incorporation)

01-12584	13-3808303
(Commission File Number)	(IRS Employer Identification No.)

617 Detroit Street, Suite 100

Ann Arbor, MI 48104

(Address of principal executive offices and zip code)

(734) 332-7800

(Registrant's telephone number including area code)

N/A

(Former Name and Former Address)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of registrant under any of the following provisions:

¨Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

¨Soliciting material pursuant to Rule 14a-12(b) under the Exchange Act (17 CFR 240.14a-12)

¨Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

¨Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 3.02 Unregistered Sales of Equity Securities.

On November 28, 2012, a closing was held for the transaction previously announced on November 12, 2012 between Synthetic Biologics, Inc. (the "Company") and Prev ABR LLC ("Prev"). The Company issued 625,000 shares of Company common stock (the "Shares") in partial consideration for the acquisition of the *C. diff* program assets of Prev, including pre-Investigational New Drug (IND) package, Phase I and Phase II clinical data, manufacturing process data and all issued and pending U.S. and international patents. The offer and issuance of the Shares have not been registered under the Securities Act of 1933, as amended (the "Securities Act"), and therefore may not be offered or sold in the United States absent registration or an applicable exemption from registration requirements. For this issuance, the Company is relying on the exemption from federal registration under Section 4(2) of the Securities Act, based on the Company's belief that the offer and sale of the Shares does not involve a public offering as all of the members of Prev have represented that they are "accredited investors" as defined under Section 501 promulgated under the Securities Act and no general solicitation has been involved in the offering.

On December 3, 2012, the Company issued the press release attached hereto as Exhibit 99.1 regarding the closing described herein.

Item 8.01 **Other Events.**

On November 28, 2012, the Company completed the closing of its Asset Purchase Agreement with Prev, which was previously announced in the Company's press release on November 12, 2012. Pursuant to the Asset Purchase Agreement, upon the closing, the Company paid Prev an additional cash payment of $135,000 and issued to Prev the Shares, of which 375,000 Shares are being held in escrow.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
99.1	Press Release dated December 3, 2012.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: December 3, 2012

SYNTHETIC BIOLOGICS, INC.
(Registrant)

By: /s/ C. Evan Ballantyne
Name: C. Evan Ballantyne
Title: Chief Financial Officer

INDEX OF EXHIBITS

Exhibit No.	Description
99.1	Press Release dated December 3, 2012.

Synthetic Biologics Closes Deal for Acquisition of *C. difficile* Infectious Disease Program

For Immediate Release

Rockville, MD, December 3, 2012 – Synthetic Biologics, Inc. (NYSE MKT: SYN), a developer of synthetic biologics and innovative medicines for serious infections and diseases, announced today that the Company closed the previously announced deal with Prev AbR LLC (Prev) and acquired a series of -lactamase compounds (P1A, P2A and P3A) and related assets targeting the prevention of *Clostridium difficile* (*C. diff*) infection. Utilizing the newly acquired biologic compounds, Synthetic Biologics intends to develop a proprietary oral -lactamase enzyme product candidate, SYN-004. When co-administered with certain -lactam antibiotics, it is expected that SYN-004 can degrade the antibiotic and preserve the balance of the patient's gastrointestinal (GI) microflora, thus preventing opportunistic *C. diff* infection (CDI). -lactam antibiotics are a mainstay in hospital infection management and include both penicillins and cephalosporins. In 2011, an estimated 8.7 million Americans were administered intravenous -lactam antibiotics.[1]

"Our Company's primary focus is on the development of biologics to prevent and treat multidrug-resistant infectious diseases, and we are pleased to add the *C. diff* program to our pipeline. We believe we are at the forefront of developing a prophylactic to prevent the devastating effects of *C. diff* infection, for which there is currently no vaccine or other approved preventive therapy," stated Jeffrey Riley, Chief Executive Officer of Synthetic Biologics. "With regulatory discussions previously initiated by Prev, we intend to continue to work with the FDA to design a regulatory pathway for a new product candidate and to advance to clinical trials as soon as possible."

C. diff is the leading cause of hospital acquired infections in which the toxins produced by the bacteria result in *C. diff*-associated diarrhea (CDAD), and in the most serious cases, erosion of the GI tract that can lead to death. In 2009, aggregate costs associated with CDI-related stays in the hospital were $8.2 billion in the U.S.[2]

About Synthetic Biologics, Inc.

Synthetic Biologics is a biotechnology company focused on the development of product candidates for serious infections and diseases. Synthetic Biologics is developing a biologic for the prevention of *C. diff* infection, and a series of monoclonal antibodies (mAbs) for the treatment of serious infectious diseases, including *Acinetobacter*. The

Company is also developing a synthetic DNA-based therapy for the treatment of pulmonary arterial hypertension (PAH). In addition, the Company is developing a drug candidate for the treatment of relapsing-remitting multiple sclerosis (MS) and cognitive dysfunction in MS, and designing a clinical development pathway for the treatment of amyotrophic lateral sclerosis (ALS). For more information, please visit Synthetic Biologics' website at www.syntheticbiologics.com.

This release includes forward-looking statements on Synthetic Biologics' current expectations and projections about future events. In some cases forward-looking statements can be identified by terminology such as "may," "should," "potential," "continue," "expects," "anticipates," "intends," "plans," "believes," "estimates," and similar expressions. These statements are based upon current beliefs, expectations and assumptions and are subject to a number of risks and uncertainties, many of which are difficult to predict and include statements regarding our intention to develop and commercialize a proprietary oral -lactase enzyme product candidate using the acquired assets that will have the desired results, our intention to commence clinical trials and the expected size of the market for C. diff therapeutics. The forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those set forth or implied by any forward-looking statements. Important factors that could cause actual results to differ materially from those reflected in Synthetic Biologics' forward-looking statements include, among others, our inability to timely commence or complete the clinical trials consistent with our current expectations and our inability to successfully develop, receive regulatory approvals for or to commercialize a new product candidate to prevent C. diff infection and other factors described in Synthetic Biologics' report on Form 10-K/A for the year ended December 31, 2011 and any other filings with the SEC. The information in this release is provided only as of the date of this release, and Synthetic Biologics undertakes no obligation to update any forward-looking statements contained in this release on account of new information, future events, or otherwise, except as required by law.

For further information, please contact:

Kris Maly

Vice President, Corporate Communication

(734) 332-7800, ext. 22

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[1] GlobalData. Beta-lactam Antibiotics Sales - United States of America, 2011. Prepared for Synthetic Biologics, Inc. November 2012.

[2] Agency for Healthcare Research and Quality. Healthcare and Cost Utilization Project. Statistical Brief #124. *Clostridium difficile* Infections (CDI) in Hospital Stays, 2009. January 2012. Available at http://www.hcup-us.ahrq.gov/reports/statbriefs/sb124.pdf.