

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM S-8**  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933

**Oncobiologics, Inc.**

(Exact name of Registrant as specified in its charter)

**Delaware**

(State or other jurisdiction of Incorporation or organization)

**38-3982704**

(I.R.S. Employer Identification No.)

**7 Clarke Drive  
Cranbury, New Jersey 08512**

(Address of principal executive offices) (Zip code)

**2011 Stock Incentive Plan  
2015 Equity Incentive Plan  
2016 Employee Stock Purchase Plan**

(Full title of the plan)

**Pankaj Mohan, Ph.D.**  
**Chairman, President and Chief Executive Officer**  
**Oncobiologics, Inc.**  
**7 Clarke Drive**  
**Cranbury, New Jersey 08512**  
**(609) 619-3990**

(Name and address of agent for service) (Telephone number, including area code, of agent for service)

**Copies to:**

**Yvan-Claude Pierre**  
**Daniel I. Goldberg**  
**Marianne C. Sarrazin**  
**Cooley LLP**  
**1114 Avenue of the Americas**  
**New York, New York 10036**  
**(212) 479-6000**

**Lawrence A. Kenyon**  
**Chief Financial Officer**  
**Oncobiologics, Inc.**  
**7 Clarke Drive**  
**Cranbury, New Jersey 08512**  
**(609) 619-3990**

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer   
Non-accelerated filer  (Do not check if a smaller reporting company)

Accelerated filer   
Smaller reporting company

**CALCULATION OF REGISTRATION FEE**

<b>Title of Securities to be Registered</b>	<b>Amount to be Registered(1)</b>	<b>Proposed Maximum Offering Price per Share</b>	<b>Proposed Maximum Aggregate Offering Price</b>	<b>Amount of Registration Fee</b>
Common Stock, par value \$0.01 per share, reserved for issuance pursuant to the 2015 Equity Incentive Plan	149,917 (2)(3)	\$6.00(8)	\$899,502.00	\$90.58
Common Stock, par value \$0.01 per share, reserved for issuance pursuant to restricted stock unit awards outstanding under the 2015 Equity Incentive Plan	1,096,460 (4)	\$6.00 (9)	\$6,578,760.00	\$662.48
Common Stock, par value \$0.01 per share, reserved for issuance pursuant to the 2016 Employee Stock Purchase Plan	289,855 (5)(6)	\$6.00 (10)	\$1,739,130.00	\$175.13
Common Stock, par value \$0.01 per share, reserved for issuance pursuant to performance stock unit awards outstanding under the 2011 Stock Incentive Plan	249,510 (7)	\$6.35 (11)	\$1,584,388.50	\$159.55
<b>Total</b>	1,785,742		\$10,801,780.5	\$1,087.74(12)

- (1) Pursuant to Rule 416(a) promulgated under the Securities Act of 1933, as amended (the “**Securities Act**”), this Registration Statement shall also cover any additional shares of Registrant’s common stock, par value \$0.01 (the “**Common Stock**”), that become issuable under the plans set forth herein by reason of any stock dividend, stock split, recapitalization or other similar transaction effected that results in an increase to the number of outstanding shares of Registrant’s common stock.
- (2) Represents 149,917 shares of the Registrant’s Common Stock reserved for future issuance under the Oncobiologics, Inc. 2015 Equity Incentive Plan (the “**2015 EIP**”) as of the date of this Registration Statement. Pursuant to the terms of the 2015 EIP, any shares subject to outstanding awards granted under the 2015 EIP that expire or terminate, or are forfeited, for any reason prior to exercise or settlement, shall become available for issuance under the 2015 EIP, subject to certain limitations. See footnote 4 below.
- (3) The number of shares of Common Stock reserved for issuance under the 2015 EIP will automatically increase on (i) the date that is sixty (60) calendar days following the date of the underwriting agreement between the Registrant and the underwriters managing the initial public offering of the Common Stock (the “**IPO Date**”) by an amount of shares of Common Stock equal to 3% of the total number of shares of Common Stock outstanding on such sixtieth (60<sup>th</sup>) day following the IPO Date, and (ii) January 1<sup>st</sup> of each year, starting on January 1, 2017 and continuing through January 1, 2026, in an amount equal to the lesser of (A) 3% of the total number of shares of Common Stock outstanding on December 31<sup>st</sup> of the immediately preceding calendar year and (B) a number determined by the Registrant’s board of directors.
- (4) Represents 1,096,460 shares of Registrant’s Common Stock reserved for issuance upon the settlement of outstanding restricted stock unit awards granted under the 2015 EIP as of the date of this Registration Statement. To the extent that any outstanding awards under the 2015 EIP expire or are forfeited subsequent to the date of this Registration Statement, the shares of the Registrant’s Common Stock reserved for issuance pursuant to such awards will become available for issuance under the 2015 EIP subject to certain limitations. See footnote 2 above.
- (5) Represents 289,855 shares of Registrant’s Common Stock reserved for future issuance under the Oncobiologics, Inc. 2016 Employee Stock Purchase Plan (the “**2016 ESPP**”).
- (6) The number of shares reserved for issuance under the 2016 ESPP will automatically increase on January 1st each year, starting on January 1, 2017 and continuing through January 1, 2026, by the lesser of (i) one percent (1%) of the total number of shares of the Registrant’s Common Stock outstanding on December 31st of the preceding calendar year, (ii) 1,760,000 shares of Common Stock and (iii) a number determined by the Registrant’s board of directors.

- (7) Represents 249,510 shares of Registrant's Common Stock reserved for issuance upon the settlement of outstanding performance stock unit awards ("PSUs") granted under the Oncobiologics, Inc. 2011 Stock Incentive Plan (the "2011 Plan") as of the date of this Registration Statement. The 2011 Plan has been terminated and no further awards will be granted pursuant to the 2011 Plan.
  - (8) Estimated in accordance with Rule 457(h) solely for the purpose of calculating the registration fee on the basis of the initial public offering price of \$6.00 per share of Common Stock included in the Units as set forth in the Registrant's Registration Statement on Form S-1 (File No. 333-209011) declared effective on May 12, 2016.
  - (9) Estimated in accordance with Rule 457(h) solely for the purpose of calculating the registration fee on the basis of the initial public offering price of \$6.00 per share of Common Stock included in the Units as set forth in the Registrant's Registration Statement on Form S-1 (File No. 333-209011) declared effective on May 12, 2016.
  - (10) Estimated in accordance with Rule 457(h) solely for the purpose of calculating the registration fee on the basis of 85% of the initial public offering price of \$6.00 per share of Common Stock included in the Units as set forth in the Registrant's Registration Statement on Form S-1 (File No. 333-209011) declared effective on May 12, 2016. Pursuant to the 2016 ESPP, the purchase price of the shares of the Registrant's Common Stock reserved for issuance thereunder will be at least 85% of the lower of the fair market value of the Registrant's Common Stock on the first trading day of the offering period or on the exercise date.
  - (11) Estimated in accordance with Rule 457(h) solely for the purpose of calculating the registration fee on the basis of \$6.35, the weighted-average exercise price for outstanding PSUs granted pursuant to the 2011 Plan.
  - (12) Filing fee previously paid with the Registrant's Registration Statement on Form S-1 (File No. 333-209011) on January 15, 2016.
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## PART II

### ITEM 3. INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The following documents filed by Oncobiologics, Inc. (the “**Registrant**”) with the Securities and Exchange Commission are incorporated by reference into this Registration Statement:

(a) The Registrant’s prospectus filed on May 13, 2016 pursuant to Rule 424(b) under the Securities Act, relating to the Registration Statement on Form S-1 (File No. 333-209011), which contains audited financial statements for the Registrant’s latest fiscal year for which such statements have been filed.

(b) The description of the Registrant’s Common Stock which is contained in the Registrant’s Registration Statement on Amendment No. 1 to Form 8-A filed on May 11, 2016 (File No. 001-37759) under the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), including any amendment or report filed for the purpose of updating such description.

(c) All documents, reports and definitive proxy or information statements filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act (other than Current Reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits furnished on such form that relate to such items) on or after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement that indicates that all securities offered have been sold or that deregisters all securities then remaining unsold shall be deemed to be incorporated by reference in this Registration Statement and to be part hereof from the date of filing of such documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any subsequently filed document that also is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

### ITEM 4. DESCRIPTION OF SECURITIES

See the description of the Registrant’s Common Stock contained in the Registrant’s Registration Statement on Form S-1 (File No. 333-209011).

### ITEM 5. INTERESTS OF NAMED EXPERTS AND COUNSEL

Not applicable.

### ITEM 6. INDEMNIFICATION OF DIRECTORS AND OFFICERS

The Registrant is incorporated under the laws of the State of Delaware. Section 102 of the Delaware General Corporation Law, or the DGCL, permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit.

Section 145 of the DGCL provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against expenses (including attorneys’ fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he is or is threatened to be made a party by reason of such position, if such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

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As permitted by the DGCL, the Registrant's amended and restated certificate of incorporation and amended and restated bylaws provide that: (i) the Registrant is required to indemnify its directors to the fullest extent permitted by the DGCL; (ii) the Registrant may, in its discretion, indemnify its officers, employees and agents as set forth in the DGCL; (iii) the Registrant is required, upon satisfaction of certain conditions, to advance all expenses incurred by its directors in connection with certain legal proceedings; (iv) the rights conferred in the bylaws are not exclusive; and (v) the Registrant is authorized to enter into indemnification agreements with its directors, officers, employees and agents.

The Registrant has entered into agreements with its directors and executive officers that require the Registrant to indemnify them against all expenses, judgments, penalties, fines and amounts paid in settlement actually and reasonably incurred by him or her, or on his or her behalf, in connection with any proceeding or any claim, issue or matter therein, if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the Registrant, and with respect to any criminal proceeding, had no reasonable cause to believe the person's conduct was unlawful. The indemnification agreements also set forth certain procedures that will apply in the event of a claim for indemnification thereunder. At present, no litigation or proceeding is pending that involves any of the Registrant's directors or officers regarding which indemnification is sought, nor is the Registrant aware of any threatened litigation that may result in claims for indemnification.

The Registrant maintains a directors' and officers' liability insurance policy. The policy insures directors and officers against unindemnified losses arising from certain wrongful acts in their capacities as directors and officers and reimburses the Registrant for those losses for which it has lawfully indemnified the directors and officers. The policy contains various exclusions.

**ITEM 7. EXEMPTION FROM REGISTRATION CLAIMED.**

Not applicable.

**ITEM 8. EXHIBITS**

**Exhibit  
Number**

**Description**

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|---------|--|
| 4.1(1)  | Certificate of Incorporation of Oncobiologics, Inc., as presently in effect.   |
| 4.2(2)  | Certificate of Amendment of Certificate of Incorporation, dated April 26, 2016.  |
| 4.3(3)  | Form of Amended and Restated Certificate of Incorporation of Oncobiologics, Inc., to be in effect upon closing of its initial public offering. |
| 4.4(4)  | Bylaws of Oncobiologics, Inc., as presently in effect.   |
| 4.5(5)  | Form of Amended and Restated Bylaws of Oncobiologics, Inc., to be in effect upon closing of its initial public offering.                       |
| 5.1     | Opinion of Cooley LLP.   |
| 23.1    | Consent of Independent Registered Public Accounting Firm.  |
| 23.2    | Consent of Cooley LLP (included in Exhibit 5.1).   |
| 24.1    | Power of Attorney (see signature page hereto).   |
| 99.1(6) | 2011 Stock Incentive Plan.   |
| 99.2(7) | Form of Amended and Restated Performance Stock Unit Agreement for 2011 Stock Incentive Plan.   |
| 99.3(8) | 2015 Equity Incentive Plan.  |
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99.4(9) Forms of agreements and award grant notices 2015 Equity Incentive Plan.

99.5(10) 2016 Employee Stock Purchase Plan.

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- (1) Previously filed as Exhibit 3.1 to the Registrant's registration statement on Form S-1 (File No. 333-209011), filed with the Commission on January 15, 2016, and incorporated by reference herein.
  - (2) Previously filed as Exhibit 3.2 to Registrant's Amendment No. 3 to the registration statement on Form S-1 (File No. 333-209011), filed with the Commission on April 27, 2016, and incorporated by reference herein.
  - (3) Previously filed as Exhibit 3.4 to the Registrant's Amendment No. 1 to the registration statement on Form S-1 (File No. 333-209011), filed with the Commission on February 12, 2016, and incorporated by reference herein.
  - (4) Previously filed as Exhibit 3.3 to the Registrant's registration statement on Form S-1 (File No. 333-209011), filed with the Commission on January 15, 2016, and incorporated by reference herein.
  - (5) Previously filed as Exhibit 3.5 to the Registrant's Amendment No. 1 to the registration statement on Form S-1 (File No. 333-209011), filed with the Commission on February 12, 2016, and incorporated by reference herein.
  - (6) Previously filed as Exhibit 10.2 to the Registrant's registration statement on Form S-1 (File No. 333-209011), filed with the Commission on January 15, 2016, and incorporated by reference herein.
  - (7) Previously filed as Exhibit 10.29 to the Registrant's registration statement on Form S-1 (File No. 333-209011), filed with the Commission on April 27, 2016, and incorporated by reference herein.
  - (8) Previously filed as Exhibit 10.3 to the Registrant's registration statement on Form S-1 (File No. 333-209011), filed with the Commission on January 15, 2016, and incorporated by reference herein.
  - (9) Previously filed as Exhibit 10.4 to the Registrant's registration statement on Form S-1 (File No. 333-209011), filed with the Commission on January 15, 2016, and incorporated by reference herein.
  - (10) Previously filed as Exhibit 10.5 to Amendment No. 1 to the Registrant's registration statement on Form S-1 (File No. 333-209011), filed with the Commission on February 12, 2016, and incorporated by reference herein.

## **ITEM 9. UNDERTAKINGS**

1. The undersigned registrant hereby undertakes:

(a) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

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(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

*provided, however,* that paragraphs (a)(i) and (a)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

(b) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(d) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

2. The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Cranbury, New Jersey, on May 13, 2016.

**ONCOBIOLOGICS, INC.**

By: /s/ Pankaj Mohan

Pankaj Mohan, Ph.D.

*Chairman, President and Chief Executive Officer*

## POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Pankaj Mohan, Ph.D. and Lawrence A. Kenyon, and each of them, his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or each of them, or their or his or her substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Pankaj Mohan, Ph.D.</u> Pankaj Mohan, Ph.D.	Chairman, President and Chief Executive Officer (Principal Executive Officer)	May 13, 2016
<u>/s/ Lawrence A. Kenyon</u> Lawrence A. Kenyon	Chief Financial Officer (Principal Accounting and Financial Officer)	May 13, 2016
<u>/s/ Todd C. Brady, M.D., Ph.D.</u> Todd C. Brady, M.D., Ph.D.	Director	May 13, 2016
<u>/s/ Scott Canute</u> Scott Canute	Director	May 13, 2016
<u>/s/ Albert D. Dyrness</u> Albert D. Dyrness	Director	May 13, 2016
<u>/s/ Donald J. Griffith</u> Donald J. Griffith	Director	May 13, 2016
<u>/s/ Kurt J. Hilzinger</u> Kurt J. Hilzinger	Director	May 13, 2016
<u>/s/ Robin Smith Hoke</u> Robin Smith Hoke	Director	May 13, 2016

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Yvan-Claude Pierre  
T: +1 212-479-6721  
ypierre@cooley.com

May 13, 2016

Oncobiologics, Inc.  
7 Clarke Drive  
Cranbury, New Jersey 08512

Ladies and Gentlemen:

You have requested our opinion, as counsel to Oncobiologics, Inc., a Delaware corporation (the "**Company**"), in connection with the filing by the Company of a Registration Statement on Form S-8 (the "**Registration Statement**") with the Securities and Exchange Commission covering the offering of up to (i) 249,510 shares (the "**2011 Plan Shares**") of the Company's Common Stock, par value \$0.01 per share (the "**Common Stock**"), pursuant to the Company's 2011 Stock Incentive Plan (the "**2011 Plan**"), (ii) 1,246,377 shares (the "**2015 Plan Shares**") of Common Stock pursuant to the Company's 2015 Equity Incentive Plan (the "**2015 Plan**"), and (iii) 289,855 shares (together with the 2011 Plan Shares and the 2015 Plan Shares, the "**Shares**") of Common Stock pursuant to the Company's 2016 Employee Stock Purchase Plan (together with the 2011 Plan and 2015 Plan, the "**Plans**").

In connection with this opinion, we have examined and relied upon (a) the Registration Statement and the related prospectuses, (b) the Company's Amended and Restated Certificate of Incorporation and the Company's Amended and Restated Bylaws, each as currently in effect, (c) the Plans, and (d) the originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness and authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies, the accuracy, completeness and authenticity of certificates of public officials; and the due authorization, execution and delivery of all documents by all persons other than the Company where authorization, execution and delivery are prerequisites to the effectiveness of such documents. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not sought independently to verify such matters.

Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware. We express no opinion as to whether the laws of any particular jurisdiction other than those identified above are applicable to the subject matter of this opinion. We are not rendering any opinion as to compliance with any federal or state law, rule or regulation relating to securities, or to the sale or issuance thereof.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued in accordance with the Plans, the Registration Statement and the related prospectuses, will be validly issued, fully paid and nonassessable (except as to shares issued pursuant to certain deferred payment arrangements, which will be fully paid and nonassessable when such deferred payments are made in full).

We consent to the filing of this opinion as an exhibit to the Registration Statement.



Yvan-Claude Pierre  
T: +1 212-479-6721  
ypierre@cooley.com

Sincerely,

COOLEY LLP

By:           /s/ Yvan-Claude Pierre  
Yvan-Claude Pierre

1114 AVENUE OF THE AMERICAS, NEW YORK, NEW YORK, 10036-7798 T: (212) 479 -6000 F: (212) 479 -6275 WWW.COOLEY.COM

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**Consent of Independent Registered Public Accounting Firm**

The Board of Directors  
Oncobiologics, Inc.:

We consent to the use of our report incorporated by reference herein. Our report dated November 16, 2015, except as to the recapitalization described in Note 3, which is as of April 26, 2016, contains an explanatory paragraph that states that Oncobiologics, Inc. has incurred recurring losses and negative cash flows from operations since inception and has an accumulated deficit at September 30, 2015 of \$94.1 million and \$14.2 million of indebtedness that is due on demand, which raises substantial doubt about its ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ KPMG LLP

Philadelphia, Pennsylvania  
May 13, 2016

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