FORM 3

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

| OMB APPROVAL | | | | | | | | |
|--------------------------|-----|--|--|--|--|--|--|--|
| OMB Number: 3235-0104 | | | | | | | | |
| Estimated average burden | | | | | | | | |
| hours per response: | 0.5 | | | | | | | |

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| KENYON LAWRENCE A | | | . Date of Event Requiring Staten Month/Day/Year 05/12/2016 | nent | 3. Issuer Name and Ticker or Trading Symbol Oncobiologics, Inc. [ONS] | | | | | | | |
|--|---------------------|--|---|---|---|---|--|---|---|---|--|--|
| (Last) C/O ONCOBI | (First) OLOGICS, IN | (Middle) | | | | ationship of Reporting Perso < all applicable) Director | son(s) to Issuer 10% Owner | | 5. If Amendment, Date of Original Filed (Month/Day/Year) | | | |
| 7 CLARKE DRIVE | | | | | X | below) | Other (spe | ecify | 6. Individual or Joint/Group Filing (Check Applicable Line) | | | |
| (Street) CRANBURY | NJ | 08521 | | | | CFO and Secret | tary | | X | | y One Reporting Person y More than One erson | |
| (City) | (State) | (Zip) | | | | | | | | | | |
| Table I - Non-Derivative Securities Beneficially Owned | | | | | | | | | | | | |
| 1. Title of Security (Instr. 4) | | | | | ially Owned (Instr. 4) | | | 4. Nature of Indirect Beneficial Ownership (Instr. 5) | | | | |
| Restricted Stock Units ⁽¹⁾ | | | | | 42,478(2)(3) | D | | | | | | |
| Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) | | | | | | | | | | | | |
| · · · · · · · · · · · · · · E | | 2. Date Exercisable and Expiration Date (Month/Day/Year) | | nd 3. Title and Amount of Securiti Underlying Derivative Security | | ty (Instr. 4) Conve | | ersion C ercise F | 5. Ownership Form: | 6. Nature of Indirect Beneficial Ownership (Instr. 5) | | |
| | | | Date Exercisable | Expiratio Date | n Title | 9 | Amount or Number of Shares | Price o Deriva Securi | tive | Direct (D) or Indirect (I) (Instr. 5) | | |

Explanation of Responses:

- 1. Granted pursuant to the Issuer's 2015 Equity Incentive Plan.
- $2. \ Each \ restricted \ stock \ unit \ ("RSU") \ represents \ the \ right \ to \ receive, \ at \ settlement, \ one \ (1) \ share \ of \ the \ Issuer's \ common \ stock.$
- 3. The RSUs are subject to, and to vest must satisfy, both (a) performance-based vesting restrictions (the RSUs will satisfy the performance-based vesting restrictions upon the first to occur of (x) a change of control as defined in the award agreement and (y) the expiration of the 6 month lock-up period following the Issuer's initial public offering, subject to continued service through such event) and (b) time-based vesting restrictions (50% of the RSUs will satisfy the time-based vesting restrictions on each of the third and fourth anniversaries of September 15, 2015, subject to continued service through such dates). In addition, 100% of the RSUs will satisfy the time-based vesting restrictions upon the occurrence of a change of control, subject to continued service through such event.

Remarks:

/s/ Lawrence A. Kenyon

05/12/2016

** Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

- * If the form is filed by more than one reporting person, see Instruction 5 (b)(v).
- ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

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 Number.

(For Executing Form ID and Forms 3, 4 and 5)

Know all by these presents, that the undersigned hereby constitutes and appoints each of Pia Kaur, Leah Braukman and Jonathan Arpino of Cooley LLP, and Pankaj Mohan of Oncobiologics, Inc. (the "Company"), signing individually, the undersigned's true and lawful attorneys-in fact and agents to:

- (1) Prepare, execute in the undersigned's name and on the undersigned's behalf, and submit to the the Securities and Exchange Commission (the "SEC") Form ID and Forms 3, 4 and 5 (including amendments thereto and joint filing agreements in connection therewith) in accordance with Section 16(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and the rules thereunder in the undersigned's capacity as an officer, director or beneficial owner of more than 10% of a registered class of securities of the Company;
- (2) Do and perform any and all acts for and on behalf of the undersigned that may be necessary or desirable to prepare and execute any such Form ID and Forms 3, 4 or 5 (including amendments thereto and joint filing agreements in connection therewith) and file such forms with the SEC and any stock exchange, self-regulatory association or any similar authority; and
- (3) Take any other action of any type whatsoever in connection with the foregoing that, in the opinion of such attorney-in-fact, may be of benefit to, in the best interest of, or legally required of the undersigned, it being understood that the documents executed by the attorney-in-fact on behalf of the undersigned pursuant to this Power of Attorney shall be in such form and shall contain such terms and conditions as the attorney-in-fact may approve in the attorney-in-fact's discretion.

The undersigned hereby grants to each such attorney in fact full power and authority to do and perform any and every act and thing whatsoever requisite, necessary, or proper to be done in the exercise of any of the rights and powers herein granted, as fully to all intents and purposes as the undersigned might or could do if personally present, with full power of substitution or revocation, hereby ratifying and confirming all that such attorney in fact, or such attorney in fact's substitute or substitutes, shall lawfully do or cause to be done by virtue of this power of attorney and the rights and powers herein granted. The undersigned acknowledges that the foregoing attorneys-in-fact, and their substitutes, in serving in such capacity at the request of the undersigned, are not assuming (nor is the Company assuming) any of the undersigned's responsibilities to comply with Section 16 of the Exchange Act.

This Power of Attorney shall remain in full force and effect until the earliest to occur of (a) the undersigned is no longer required to file Form ID or Forms 3, 4 and 5 with respect to the undersigned's holdings of and transactions in securities issued by the Company, (b) revocation by the undersigned in a signed writing delivered to the Company and the foregoing attorneys-in fact or (c) as to any attorney-in-fact individually, until such attorney-in-fact is no longer employed by the Company or Cooley LLP, as applicable.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of the date written below.

Date: February 1, 2016

By: /s/ Lawrence Kenyon
Name: Lawrence Kenyon
Title: CFO and Secretary