FORM 3

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

| - 1 | | | | | | | | |
|-----|---|-----|--|--|--|--|--|--|
| | OMB APPROVAL | | | | | | | |
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| | 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

| Mirabelli Christopher | 2. Date of Event Requiring Staten Month/Day/Year 01/20/2017 | nent | 3. Issuer Name and Ticker or Trading Symbol LEAP THERAPEUTICS, INC. [LPTX] | | | | | |
|---|--|-------------------------|---|-----------------------|-----|--|---|--|
| (Last) (First) (Middle) C/O LEAP THERAPEUTICS, INC. | | | 4. Relationship of Reporting Perso (Check all applicable) X Director X | , | | 5. If Amendment, Date of Original Filed (Month/Day/Year) | | |
| 47 THORNDIKE STREET SUITE B1-1 | | | X Officer (give title below) | Other (spec below) | | ndividual or Joint licable Line) | t/Group Filing (Check | |
| (Street) CAMBRIDGE MA 02141 | | | CEO,Pres,Chairman o | f the Board | 2 | | y One Reporting Person y More than One erson | |
| (City) (State) (Zip) | | | | | | | | |
| | able I - Non | -Derivati | ive Securities Beneficiall | y Owned | | | | |
| 1. Title of Security (Instr. 4) | | | . Amount of Securities eneficially Owned (Instr. 4) | | | 4. Nature of Indirect Beneficial Ownership (Instr. 5) | | |
| | | | enericiany Owned (msu. 4) | | 1) | | | |
| Common Stock | | | 5,477,902 ⁽¹⁾⁽²⁾⁽³⁾ | | | Footnotes ⁽¹⁾⁽²⁾⁽ | (3) | |
| | | erivative | , , | (Instr. 5) I Owned | See | Footnotes ⁽¹⁾⁽²⁾⁽ | (3) | |
| | | Derivative S, warrar | 5,477,902 ⁽¹⁾⁽²⁾⁽³⁾ e Securities Beneficially (nts, options, convertible | Owned securities | See | 5. | 6. Nature of Indirect Beneficial Ownership (Instr. 5) | |

Explanation of Responses:

- 1. Consists of (i) 2,618,406 shares held by HealthCare Ventures VIII, L.P., (ii) 2,515,607 held by HealthCare Ventures IX, L.P. and (iii) 343,889 shares held by HealthCare Ventures Strategic Fund, L.P. Christopher K. Mirabelli, James H. Cavanaugh, John W. Littlechild, Harold Werner and Augustine Lawlor (collectively, the "HCVVIII Directors") are the Managing Directors of HealthCare Partners VIII, L.P. ("HCPVIII LLC"), which is the General Partner of HealthCare Ventures VIII, L.P. Each of the HCVVIII Directors, HCPVIII LLC and HCPVIII beneficially own and share voting and dispositive power with respect to all of the securities owned by HealthCare Ventures VIII, L.P. Christopher K. Mirabelli disclaims beneficial ownership of these shares except to the extent of his proportionate pecuniary interest in these securities.
- 2. Christopher K. Mirabelli, Douglas E. Onsi and Augustine Lawlor (collectively, the "HCVIX Directors") are the Managing Directors of HealthCare Partners IX, LLC ("HCPIX LLC"), which is the General Partner of HealthCare Partners IX, L.P. ("HCPIX"), which is the General Partner of HealthCare Ventures IX, L.P. Each of the HCVIX Directors, HCPIX LLC and HCPIX beneficially own and share voting and dispositive power with respect to all of the securities owned by HealthCare Ventures IX, L.P. Christopher K. Mirabelli disclaims beneficial ownership of these shares except to the extent of his proportionate pecuniary interest in these securities.
- 3. Christopher K. Mirabelli, Douglas E. Onsi and Augustine Lawlor (collectively, the "HCSP Directors") are the Managing Directors of HealthCare Strategic Partners, LLC ("HCV Strategic LLC"), which is the General Partner of HealthCare Ventures Strategic Fund, L.P. Each of the HCSP Directors, and HCV Strategic LLC beneficially own and share voting and dispositive power with respect to all of the securities owned by HCV Strategic Fund, L.P. Christopher K. Mirabelli disclaims beneficial ownership of these shares except to the extent of his proportionate pecuniary interest in these securities.

Remarks:

Exhibit 24.1 Power of Attorney

/s/ Douglas E. Onsi as attorney-in-fact for Christopher 01/23/2017 Mirabelli

** 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.

LEAP THERAPEUTICS, INC.

POWER OF ATTORNEY

Know all by these present, that the undersigned hereby constitutes and appoints each of Augustine Lawlor and Douglas Onsi with full power of substitution, the undersigned's true and lawful attorney-in-fact to, with respect to Leap Therapeutics, Inc., a Delaware corporation (the "Company"):

- (1) prepare, execute in the undersigned's name and on the undersigned's behalf, and submit to the U.S. Securities and Exchange Commission (the "SEC") a Form ID, including amendments thereto, and any other documents necessary or appropriate to obtain codes and passwords enabling the undersigned to make electronic filings with the SEC of reports required by Section 16(a) of the Securities Exchange Act of 1934, as amended, or any rule or regulation of the SEC;
- execute, for and on behalf of the undersigned, in the undersigned's capacity as an officer, director and/or more than 10% stockholder, if applicable, of any HealthCare Pharmaceutical affiliate company Forms 3, 4, and 5 as well as 13(g) and 13(d) filings, in accordance with Section 16 of the Securities Exchange Act of 1934, as amended, and the rules thereunder;
- (3) do and perform any and all acts for and on behalf of the undersigned which may be necessary or desirable to complete and execute any such Form 3, 4, or 5, and 13(g) and 13(d), complete and execute any amendment or amendments thereto, and timely file such form with the SEC and any stock exchange or similar authority; and
- take any other action of any type whatsoever in connection with the foregoing which, in the opinion of such attorney-in-fact, may be of benefit to, in the best interest of, or legally required by, the undersigned, it being understood that the documents executed by such 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 such attorney-in-fact may approve in such 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 attorney-in-fact, 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 Securities Exchange Act of 1934, as amended.

This Power of Attorney shall remain in full force and effect until the undersigned is no longer required to file Forms 3, 4, and 5 with respect to the undersigned's holdings of and transactions in securities issued by the Company, unless earlier revoked by the undersigned in a signed writing delivered to the foregoing attorney-in-fact. This Power of Attorney supersedes any prior power of attorney granted by the undersigned with respect to Forms 3, 4, and 5, and 13(g) and 13(d) with respect to the Company's securities.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 6th day of January, 2017.

/s/ Christopher Mirabelli, Ph.D. Christopher Mirabelli, Ph.D.