

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

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

1. Name and Address of Reporting Person* <u>New Leaf Venture Management III, L.L.C.</u> (Last) (First) (Middle) C/O NEW LEAF VENTURES 7 TIMES SQUARE, SUITE 3502 (Street) NEW YORK NY 10036 (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) 09/27/2017	3. Issuer Name and Ticker or Trading Symbol <u>Deciphera Pharmaceuticals, Inc. [DCPH]</u>	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director <input checked="" type="checkbox"/> 10% Owner Officer (give title below) Other (specify below)	5. If Amendment, Date of Original Filed (Month/Day/Year) 6. Individual or Joint/Group Filing (Check Applicable Line) Form filed by One Reporting Person <input checked="" type="checkbox"/> Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
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Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares			
Series B-1 Preferred Stock	(1)	(1)	Common Stock	839,110	(1)	I	See Footnotes ⁽²⁾⁽³⁾
Series B-2 Preferred Stock	(1)	(1)	Common Stock	1,118,722	(1)	I	See Footnotes ⁽²⁾⁽³⁾
Series B-1 Preferred Stock	(1)	(1)	Common Stock	279,703	(1)	I	See Footnotes ⁽⁴⁾⁽⁵⁾
Series B-2 Preferred Stock	(1)	(1)	Common Stock	1,118,722	(1)	I	See Footnotes ⁽⁴⁾⁽⁵⁾
Series C Preferred Stock	(1)	(1)	Common Stock	372,883	(1)	I	See Footnotes ⁽⁴⁾⁽⁵⁾

1. Name and Address of Reporting Person*
New Leaf Venture Management III, L.L.C.
 (Last) (First) (Middle)
 C/O NEW LEAF VENTURES
 7 TIMES SQUARE, SUITE 3502
 (Street)
 NEW YORK NY 10036
 (City) (State) (Zip)

1. Name and Address of Reporting Person*
New Leaf Ventures III, L.P.
 (Last) (First) (Middle)
 C/O NEW LEAF VENTURES
 7 TIMES SQUARE, SUITE 3502
 (Street)
 NEW YORK NY 10036
 (City) (State) (Zip)

1. Name and Address of Reporting Person*
New Leaf Biopharma Opportunities I, L.P.
 (Last) (First) (Middle)

C/O NEW LEAF VENTURES
7 TIMES SQUARE, SUITE 3502

(Street)
NEW YORK NY 10036
(City) (State) (Zip)

1. Name and Address of Reporting Person*

New Leaf Venture Associates III, L.P.

(Last) (First) (Middle)
C/O NEW LEAF VENTURES
7 TIMES SQUARE, SUITE 3502
(Street)
NEW YORK NY 10036
(City) (State) (Zip)

1. Name and Address of Reporting Person*

New Leaf BPO Associates I, L.P.

(Last) (First) (Middle)
C/O NEW LEAF VENTURES
7 TIMES SQUARE, SUITE 3502
(Street)
NEW YORK NY 10036
(City) (State) (Zip)

Explanation of Responses:

1. Represents preferred stock of Deciphera Pharmaceuticals, LLC ("Deciphera, LLC"). Upon the closing of the Issuer's initial public offering, each share of preferred stock will automatically be converted into 5.65 shares of common stock of the Issuer.
2. The preferred stock is currently owned by NLV-3 Deciphera, Inc., a wholly-owned subsidiary of New Leaf Ventures III, L.P. ("NLV III") whose sole purpose is to hold equity interests in Deciphera, LLC. Pursuant to that certain Reorganization Agreement and Plan of Merger by and among the Issuer, Deciphera, LLC and the other parties named therein, dated September 26, 2017 and in the form attached as Exhibit 2.1 to the Issuer's registration statement on Form S-1, File No. 333-220299 (the "Merger Agreement"), the Issuer will issue shares of its common stock to NLV III in exchange for the shares of Deciphera, LLC. New Leaf Venture Associates III, L.P. ("NLV Associates III") is the sole general partner of NLV III. New Leaf Venture Management III, L.L.C. ("NLV Management III") is the sole general partner of NLV Associates III. New Leaf Venture Partners, L.L.C. ("NLVP") is the investment adviser of NLV III.
3. (Continued from Footnote 2) Each of NLV Associates III and NLV Management III disclaim beneficial ownership of these securities and this report shall not be deemed an admission that NLV Associates III or NLV Management III are beneficial owners of such securities for purposes of Section 16 or for any other purpose, except to the extent of their respective pecuniary interests therein. Each of Liam Ratcliffe, a member of the Issuer's board of directors, Jeani Delagardelle, Ronald M. Hunt and Vijay K. Lathi (each, a "Member" and collectively, the "Members") is a member of NLV Management III and may be deemed to have shared voting and dispositive power of these securities. Each of the Members disclaims beneficial ownership of these securities and this report shall not be deemed an admission that any of them is the beneficial owner of such securities for purposes of Section 16 or for any other purpose, except to the extent of their respective pecuniary interests therein.
4. The preferred stock is currently owned by NLV-G Deciphera, Inc., a wholly-owned subsidiary of New Leaf Biopharma Opportunities I, L.P. ("Biopharma I") whose sole purpose is to hold equity interests in Deciphera, LLC. Pursuant to the Merger Agreement, the Issuer will issue shares of its common stock to Biopharma I in exchange for shares of Deciphera, LLC. New Leaf BPO Associates I, L.P. ("NLBA I") is the sole general partner of Biopharma I. NLV Management III is the sole general partner of NLBA I. NLVP is the investment adviser of Biopharma I. Each of NLBA I and NLV Management III disclaim beneficial ownership of these securities and this report shall not be deemed an admission that NLBA I or NLV Management III are beneficial owners of such securities for purposes of Section 16 or for any other purpose, except to the extent of their respective pecuniary interests therein. Each of the Members may be deemed to have shared voting and dispositive power of these securities.
5. (Continued from Footnote 4) Each of the Members disclaims beneficial ownership of these securities and this report shall not be deemed an admission that any of them is the beneficial owner of such securities for purposes of Section 16 or for any other purpose, except to the extent of their respective pecuniary interests therein.

Remarks:

/s/ Craig Slutzkin, attorney-in-
fact for New Leaf Ventures III, 09/28/2017
L.P.
/s/ Craig Slutzkin, attorney-in-
fact for New Leaf Biopharma 09/28/2017
Opportunities I, L.P.
/s/ Craig Slutzkin, attorney-in-
fact for New Leaf Venture 09/28/2017
Associates III, L.P.
/s/ Craig Slutzkin, attorney-in-
fact for New Leaf BPO 09/28/2017
Associates I, L.P.
/s/ Craig Slutzkin, attorney-in-
fact for New Leaf Venture 09/28/2017
Management III, L.L.C.

** 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.