

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>RA CAPITAL MANAGEMENT, LLC</u> (Last) (First) (Middle) C/O RA CAPITAL MANAGEMENT, LLC 20 PARK PLAZA, SUITE 1200 (Street) BOSTON MA 02116 (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) 05/16/2017	3. Issuer Name and Ticker or Trading Symbol <u>G1 Therapeutics, Inc. [GTHX]</u>	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> 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) <input type="checkbox"/> 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 Preferred Stock	(1)	(2)	Common Stock	1,723,304	(3)	I	see footnote ⁽⁴⁾⁽⁵⁾
Series C Preferred Stock	(1)	(2)	Common Stock	560,940	(6)	I	see footnote ⁽⁴⁾⁽⁷⁾

1. Name and Address of Reporting Person*
RA CAPITAL MANAGEMENT, LLC
 (Last) (First) (Middle)
 C/O RA CAPITAL MANAGEMENT, LLC
 20 PARK PLAZA, SUITE 1200
 (Street)
 BOSTON MA 02116
 (City) (State) (Zip)

1. Name and Address of Reporting Person*
Kolchinsky Peter
 (Last) (First) (Middle)
 C/O RA CAPITAL MANAGEMENT, LLC
 20 PARK PLAZA, SUITE 1200
 (Street)
 BOSTON MA 02116
 (City) (State) (Zip)

1. Name and Address of Reporting Person*
RA Capital Healthcare Fund LP
 (Last) (First) (Middle)
 C/O RA CAPITAL MANAGEMENT, LLC
 20 PARK PLAZA, SUITE 1200
 (Street)

BOSTON MA 02116

(City) (State) (Zip)

Explanation of Responses:

1. These shares are convertible into the Issuer's common stock in accordance with the Issuer's Fifth Amended and Restated Certificate of Incorporation, as amended, at any time after the issuance of such shares, at the holder's election.
2. Not applicable.
3. The shares of preferred stock shall convert into common stock upon the closing of the Issuer's initial public offering using a calculation defined in the Issuer's Fifth Amended and Restated Certificate of Incorporation, as amended, based on the conversion rate in effect at the time of conversion. The Series B Preferred Stock will convert on a 1-for-3.0 basis and such conversion rate is reflected in the amount of common stock underlying the security.
4. RA Capital Management, LLC ("Adviser") is the general partner of RA Capital Healthcare Fund, L.P. ("Fund") and the investment adviser for a separately managed account (the "Account"). Peter Kolchinsky is the manager of Adviser. Adviser and Dr. Kolchinsky may be deemed indirect beneficial owners of the reported securities and disclaim beneficial ownership thereof: (A) in reliance on Rule 16a-1(a)(1)(v) and (vii); and (B) held by Fund, for purposes of Rule 16a-1(a)(2), except to the extent of their pecuniary interest therein. Adviser and Dr. Kolchinsky have no pecuniary interest in the reported securities held in Account and disclaim: (A) beneficial ownership thereof for purposes of Rule 16a-1(a)(2); and (B) any filing obligations under Section 16 other than as a director by deputization and a director. This Form 3 shall not be construed as an admission that Adviser or Dr. Kolchinsky is or was under Section 16(a), or otherwise, the beneficial owner of any of the reported securities.
5. Includes shares of Series B Preferred Stock convertible into 1,723,304 shares of the Issuer's common stock held by the Fund.
6. The shares of preferred stock shall convert into common stock upon the closing of the Issuer's initial public offering using a calculation defined in the Issuer's Fifth Amended and Restated Certificate of Incorporation, as amended, based on the conversion rate in effect at the time of conversion. The Series C Preferred Stock will convert on a 1-for-3.0 basis and such conversion rate is reflected in the amount of common stock underlying the security.
7. Includes shares of Series C Preferred Stock convertible into 453,801 shares of the Issuer's common stock held by the Fund and shares of Series C Preferred Stock convertible into 107,139 shares of the Issuer's common stock held by the Account.

Remarks:

Peter Kolchinsky is a Director and is acting in this capacity at the direction of the Fund, which is a shareholder, and the Adviser, which is the general partner of the Fund. Exhibit 24.1 - Power of Attorney of RA Capital Management, LLC and RA Capital Healthcare Fund LP Exhibit 24.2 - Power of Attorney of Peter Kolchinsky

/s/ Peter Kolchinsky, Manager
of RA Capital Management, LLC 05/16/2017

/s/ Peter Kolchinsky,
individually 05/16/2017

/s/ Peter Kolchinsky, Manager
of RA Capital Management,
LLC, the General Partner of
RA Capital Healthcare Fund,
L.P. 05/16/2017

** 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.