

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) 20 PARK PLAZA, SUITE 1200 (Street) BOSTON MA 02116 (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) 11/10/2015	3. Issuer Name and Ticker or Trading Symbol <u>Wave Life Sciences Ltd. [WVE]</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)
Ordinary Shares	4,041,591 ⁽¹⁾	I	See Footnote ⁽²⁾⁽³⁾

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				
Series B Preferred Shares	(4)	(4)	Ordinary Shares 1,172,060 ⁽⁵⁾	(4)	I	See Footnote ⁽²⁾⁽³⁾

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

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

Explanation of Responses:

1. These securities include 4,041,591 shares held by RA Capital Healthcare Fund, L.P. (the "Fund").
2. RA Capital Management, LLC (the "Adviser") is the general partner of the Fund and the investment adviser of Blackwell Partners, LLC (the "Blackwell Account"). Peter Kolchinsky is a director of the issuer and is the sole manager of the Adviser. In their respective capacities, each of Mr. Kolchinsky and the Adviser may be deemed to beneficially own the reported securities for purposes of Section 13(d) of the Securities Exchange Act of 1934.
3. The Adviser and Mr. Kolchinsky disclaim beneficial ownership of the reported securities for purposes of Rule 16a-1(a)(1) under the Exchange Act in reliance on Rule 16a-1(a)(1)(v) and (vii), respectively, and therefore disclaim any obligation to report ownership of the reported securities under Section 16(a) of the Exchange Act. The filing of this Form 3 shall not be construed as an admission that either the Adviser or Mr. Kolchinsky is or was, for purposes of Rule 16a-1(a)(1) under the Exchange Act, the beneficial owner of any of the securities reported herein. Mr. Kolchinsky and the Adviser disclaim beneficial ownership of the securities reported herein for purposes of Rule 16a-1(a)(2) under the Exchange Act except to the extent of their pecuniary interest therein.
4. The Series B preferred shares are convertible at any time into ordinary shares on a one-for-one basis at any time at the election of the holder into ordinary shares and have no expiration date.
5. These securities include 970,466 shares held by the Fund and 201,594 shares held in an account owned by the Blackwell Account.

/s/ Peter Kolchinsky, Manager
of RA Capital Management,
LLC 11/10/2015

/s/ Peter Kolchinsky,
individually. 11/10/2015

/s/ Peter Kolchinsky, Manager
of RA Capital Management,
LLC, The General Partner of
RA Capital Healthcare Fund,
L.P. 11/10/2015

** 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.