

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP**

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>Quinn Anthony G.</u>  (Last) (First) (Middle) C/O AEGLEA BIOTHERAPEUTICS, INC. 901 S. MOPAC EXPRESSWAY, SUITE 250  (Street) AUSTIN TX 78746  (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>Aeglea BioTherapeutics, Inc. [ AGLE ]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <b>President &amp; CEO</b>
	3. Date of Earliest Transaction (Month/Day/Year) 12/07/2018	
4. If Amendment, Date of Original Filed (Month/Day/Year)		

**Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned**

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	02/15/2018		P	V	2,000 <sup>(1)</sup>	A	\$6.02	94,793	D	
Common Stock	08/15/2018		P	V	994 <sup>(1)</sup>	A	\$9.13	95,787	D	
Common Stock	12/07/2018		M		150,000	A	\$4.11	245,787	D	
Common Stock	12/07/2018		M		3,306	A	\$5.46	249,093	D	
Common Stock	12/07/2018		M		18,584	A	\$6.31	267,677	D	

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)	5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)	6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
						Date Exercisable	Expiration Date					
Director Stock Option (right to buy)	\$4.11	12/07/2018		M	150,000	(2)	08/30/2027	Common Stock 150,000	\$0	0	D	
Director Stock Option (right to buy)	\$5.46	12/07/2018		M	3,306	(3)	03/17/2026	Common Stock 3,306	\$0	1,985	D	
Director Stock Option (right to buy)	\$6.31	12/07/2018		M	18,584	(4)	02/19/2028	Common Stock 18,584	\$0	144,950	D	

**Explanation of Responses:**

- These shares were acquired under the Issuer's Employee Stock Purchase Plan in a transaction that was exempt under both Rule 16b-3(d) and Rule 16b-3(c).
- The stock option vested and became exercisable as to 100% of the shares subject to the option on July 18, 2018, subject to the continuing service of the Reporting Person on the vesting date.
- The stock option vested and became exercisable as to 1/36th of the shares subject to the option on April 3, 2016, and thereafter vests as to 1/36th of the shares each month in equal installments, until such time as the option is 100% vested, subject to the continuing service of the Reporting Person on each vesting date.
- The stock option vests and becomes exercisable in 48 equal monthly installments beginning on March 20, 2018, until such time as the option is 100% vested, subject to the continuing employment of the Reporting Person on each vesting date.

/s/ Charles N. York II, by  
power of attorney

12/10/2018

\*\* 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 4 (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.**