UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K/A

(Amendment No. 1)

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): January 13, 2020

AEGLEA BIOTHERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**001-37722**	**46-4312787**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

901 S. MoPac Expressway
Barton Oaks Plaza One
Suite 250
Austin, TX **78746**
(Address of principal executive offices) **(Zip Code)**

(512) 942-2935
(Registrant's telephone number, including area code)

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Common Stock, $0.0001 Par Value Per Share	AGLE	The Nasdaq Stock Market LLC (Nasdaq Global Market)

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☒

EXPLANATORY NOTE

This Amendment No. 1 (this "Form 8-K/A") relates to the Current Report on Form 8-K of Aeglea BioTherapeutics, Inc. (the “Company”) filed with the Securities and Exchange Commission on January 13, 2020 (the "Original Form 8-K"). This Form 8-K/A is being filed to provide clarification regarding the Company’s product candidate’s name and the agency to which the Company submitted its Clinical Trial Application.

This Form 8-K/A amends and restates in its entirety the Original Form 8-K, in the manner set forth below.

Item 7.01 Regulation FD Disclosure.

On January 13, 2020, Aeglea BioTherapeutics, Inc. (the "Company") issued a press release announcing it has filed a Clinical Trial Application ("CTA") with the United Kingdom's Medicines and Healthcare Products Regulatory Agency ("MHRA") for ACN00177, a novel engineered human enzyme therapy designed to treat homocystinuria, a serious metabolic disorder that results in elevated levels of plasma homocysteine.

Additionally, the Company will present at the 38th Annual J.P. Morgan Healthcare Conference ("J.P. Morgan Conference") in San Francisco, California on January 15, 2019 at 2:30 p.m. Pacific Time. The Company will present an overview of its strategic focus in developing innovative human enzyme therapeutics with defined potential to address patients with Arginase 1 Deficiency, Homocystinuria and Cystinuria. A copy of the press release and corporate presentation are attached as Exhibits 99.1 and 99.2, respectively, to this Current Report on Form 8-K. The corporate presentation will also be available on the Company's website in the Events & Presentations section at www.aegleabio.com.

The information furnished with this report, including Exhibit 99.1, shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended ("Exchange Act"), or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference into any other filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such a filing.

Item 8.01 Other Events.

On January 13, 2020, the Company announced it has filed a CTA with the MHRA for ACN00177, a novel engineered human enzyme therapy designed to treat homocystinuria, a serious metabolic disorder that results in elevated levels of plasma homocysteine. The Company expects to initiate a Phase 1/2 trial in the second quarter of 2020 and provide initial clinical data in the first quarter of 2021.

Additionally, on January 15, 2020, the Company will provide updates on its strategic focus and new market estimates for Arginase 1 Deficiency based genetic prevalence methodology, including key geographic distribution, at the J.P. Morgan Conference. A recent genetic prevalence analysis commissioned by the Company suggests that the Arginase 1 Deficiency population may exceed 2,500 patients in the global addressable markets, as compared to greater than 1,000 patients as estimated based on scientific literature.

This current report contains "forward-looking" statements within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements can be identified by words such as: "anticipate," "intend," "plan," "goal," "seek," "believe," "project," "estimate," "expect," "strategy," "future," "likely," "may," "should," "will" and similar references to future periods. These statements are subject to numerous risks and uncertainties that could cause actual results to differ materially from what the Company expects. Examples of forward-looking statements include, among others, statements the Company makes regarding its cash forecasts, the timing and success of its clinical trials and related data, the timing and expectations for regulatory submissions and approvals, timing and results of meetings with regulators, the timing of announcements and updates relating to the Company's clinical trials and related data, its ability to enroll patients into its clinical trials, success in collaborations, potential addressable markets of the Company's product candidates and the potential therapeutic benefits and economic value of the Company's product candidates. Further information on potential risk factors that could affect our business and its financial results are detailed in the Company's most recent Quarterly Report on Form 10-Q for the quarter ended September 30, 2019 filed with the Securities and Exchange Commission (SEC), and other reports as filed with the SEC. The Company undertakes no obligation to publicly update any forward-looking statement, whether written or oral, that may be made from time to time, whether as a result of new information, future developments or otherwise.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit Number	Description
99.1*	Press Release
99.2*	Corporate Presentation

* Previously filed

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

AEGLEA BIOTHERAPEUTICS, INC.

Date: January 13, 2020

By: /s/ Charles N. York II
Charles N. York II
Chief Financial Officer