July 7, 2016

Eleven Biotherapeutics Announces Effectiveness of Investigational New Drug Application for EBI-031

Eleven entitled to receive $22.5 million milestone payment for IND effectiveness

CAMBRIDGE, Mass.--(BUSINESS WIRE)-- Eleven Biotherapeutics, Inc. (NASDAQ: EBIO), a biopharmaceutical company discovering and developing protein therapeutics to treat diseases of the eye, today announced that the company's Investigational New Drug (IND) application for EBI-031, a humanized monoclonal antibody that potently binds interleukin-6 (IL-6) and inhibits all known forms of IL-6 cytokine signaling, for treatment of ocular diseases, has become effective. As a result of the achievement of this milestone, Eleven is entitled to receive a $22.5 million payment from F. Hoffmann-La Roche Ltd. and Hoffmann-La Roche Inc. (Roche) pursuant to the terms of its license agreement with Roche.

On June 13, 2016, Eleven announced that it had entered into an exclusive license agreement with Roche for the further development and commercialization of EBI-031 and all other IL-6 antagonist antibody technology owned by Eleven. Under the terms of the agreement, Eleven could receive up to $262.5 million upon the achievement of certain regulatory, development and commercialization milestones, including this $22.5 million payment upon the effectiveness of the IND for EBI-031. In addition, Eleven could be entitled to receive royalties for net sales of potential future products containing EBI-031 or any other potential future products containing other Eleven IL-6 compounds. Effectiveness of the license agreement, including Roche's obligation to make the $22.5 million milestone payment, is subject to approval of the license by holders of at least a majority of the outstanding shares of Eleven's common stock.

"We look forward to Roche advancing EBI-031 into the clinic to explore its potential use for ocular diseases, such as diabetic macular edema, in an effort to bring this potential treatment to patients," said Abbie Celniker, Ph.D., President and Chief Executive Officer of Eleven Biotherapeutics.

About EBI-031

Eleven Biotherapeutics' most advanced preclinical product candidate is EBI-031 for treatment of diabetic macular edema, or DME, and uveitis. EBI-031 was designed and engineered for intravitreal delivery using Eleven's AMP-Rx platform. EBI-031 is a potent blocker of both free IL-6 and IL-6 complexed to the soluble IL-6 receptor (IL-6R). Eleven filed an IND with the FDA in June 2016 for the purpose of conducting clinical trials of EBI-031 in DME and uveitis.

About Eleven Biotherapeutics

Eleven Biotherapeutics, Inc. is a preclinical-stage biopharmaceutical company with a proprietary protein engineering platform, called AMP-Rx, that it applies to the discovery and development of protein therapeutics to treat diseases of the eye. Eleven's therapeutic approach is based on the role of cytokines in diseases of the eye, the Company's understanding of the structural biology of cytokines and the Company's ability to rationally design and engineer proteins to modulate the effects of cytokines. Cytokines are cell signaling molecules found in the body that can have important inflammatory effects. For more information please refer to the Company's website www.elevenbio.com.

Important Information

The Company plans to file with the Securities and Exchange Commission ("SEC") and mail to its stockholders a proxy statement in connection with the transactions contemplated by the license agreement. Additionally, the Company will file other relevant materials with the SEC in connection with the transactions contemplated by the license agreement. The proxy statement will contain important information about the Company, the transactions contemplated by the license agreement and related matters. Investors and security holders are urged to read the proxy statement carefully when it is available before making any voting or investment decision with respect to the proposed transactions because they will contain important information about the proposed transactions.

Investors and security holders will be able to obtain free copies of the proxy statement and other documents filed with the SEC by the Company through the web site maintained by the SEC at www.sec.gov. In addition, investors and security holders will be able to obtain free copies of the proxy statement from public company by contacting Leah Monteiro at (617) 714-0619.

The Company and its directors and executive officers may be deemed to be participants in the solicitation of proxies in

respect of the transactions contemplated by the license agreement. Information regarding the Company's directors and executive officers is contained in the Company's Form 10-K for the fiscal year ended December 31, 2015, and its proxy statement dated April 29, 2016, each of which has been filed with the SEC. Additional information regarding the participants in the solicitation of proxies in respect of the transactions contemplated by the license agreement and a description of their direct and indirect interests, by security holdings or otherwise, will be contained in the proxy statement and other relevant materials to be filed with the SEC when they become available.

Cautionary Note on Forward-Looking Statements

Any statements in this press release about future expectations, plans and prospects for the Company, including statements about the potential effectiveness of the license agreement or receipt of payments thereunder, the future rights and obligations of the parties under the license agreement, the Company's strategy, future operations, advancement or maturation of its product candidates and product pipeline, clinical development of the Company's product candidates, including expectations regarding timing of regulatory submissions and initiation of clinical trials, regulatory requirements for initiation of clinical trials and registration of product candidates, the review of its strategic alternatives and the outcome of such review, the completion and results of potential strategic transactions, the sufficiency of its cash resources and other statements containing the words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "potential," "will," "would," "could," "should," "continue," and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: the occurrence of any event, change or other circumstances that could give rise to the termination of the license agreement, the outcome of any legal proceedings that could be instituted against the Company or its directors related to the license agreement, the inability to consummate the transactions contemplated by the license agreement due to the failure to obtain the requisite approval of the Company's stockholders, the uncertainties inherent in the initiation and conduct of clinical trials, availability and timing of data from clinical trials, whether results of early clinical trials or preclinical studies will be indicative of the results of future trials, the adequacy of any clinical models, uncertainties associated with regulatory review of clinical trials and applications for marketing approvals and other factors discussed in the "Risk Factors" section of the Company's quarterly report on Form 10-Q for the quarter ended March 31, 2016 as filed with the Securities and Exchange Commission and other reports on file with the Securities and Exchange Commission. In addition, the forward-looking statements included in this press release represent the Company's views as of the date hereof. The Company anticipates that subsequent events and developments will cause the Company's views to change. However, while the Company may elect to update these forward-looking statements at some point in the future, the Company specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date hereof.

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