EVELO BIOSCIENCES

Phase 2 Study of Early Intervention with EDP1815 for Patients with COVID-19

May 7, 2020

Forward looking statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this press release that do not relate to matters of historical fact should be considered forward-looking statements, including statements concerning EDP1815's ability to treat patients with COVID-19 and other diseases, the timing of trials and results of data involving EDP1815 for the treatment of COVID-19, our development plans and the promise and potential impact of any of our monoclonal microbials or preclinical or clinical trial data.

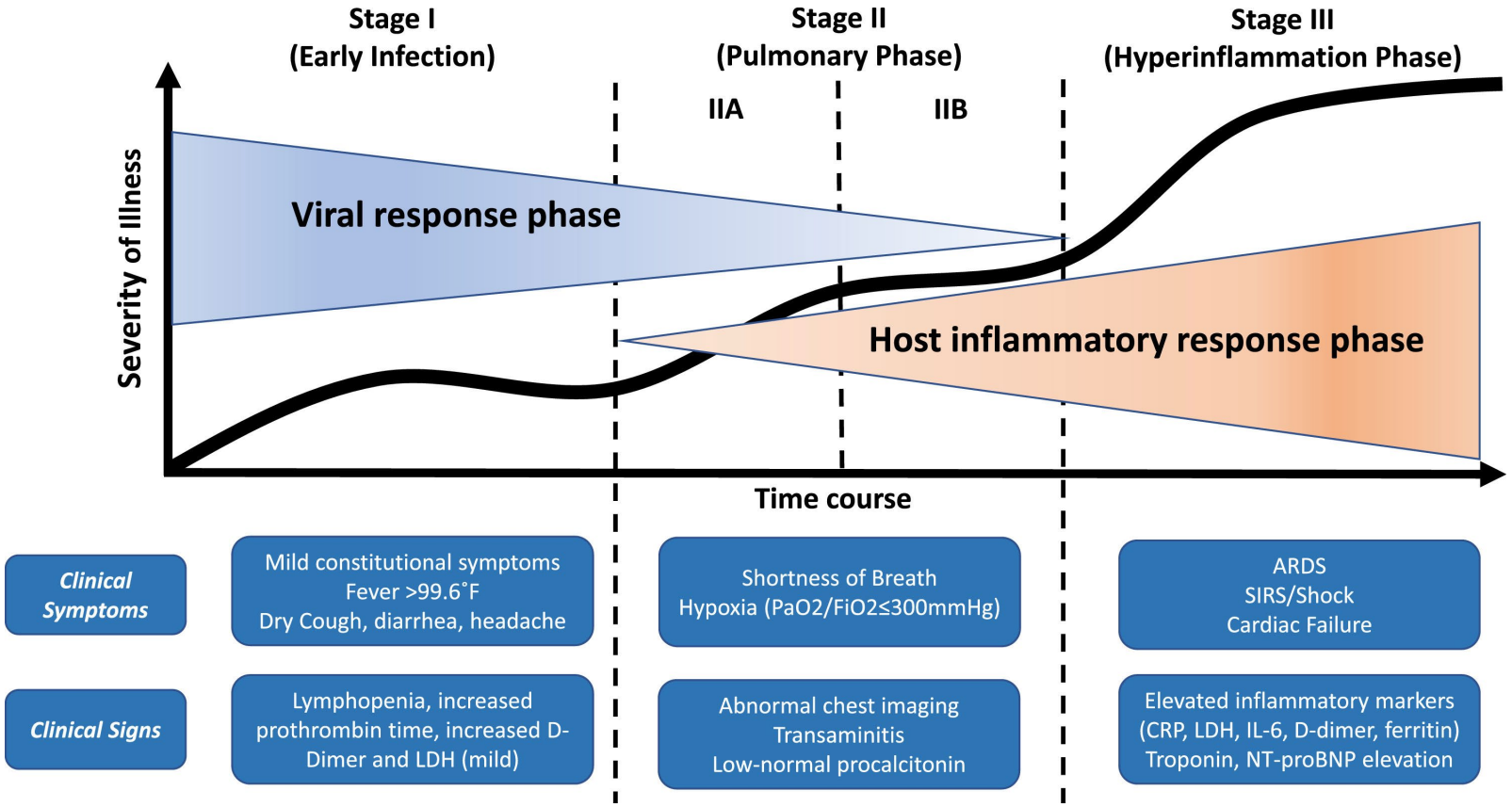
These forward-looking statements are based on management's current expectations. These statements are neither promises nor guarantees, but involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements, including, but not limited to, the following: the impact of the COVID-19 pandemic on our business and operations, including our preclinical studies and clinical trials, and on general economic conditions; we have incurred significant losses, are not currently profitable and may never become profitable; our need for additional funding; our limited operating history; our unproven approach to therapeutic intervention; the lengthy, expensive, and uncertain process of clinical drug development, including potential delays in regulatory approval; our reliance on third parties and collaborators to expand our microbial library, conduct our clinical trials, manufacture our product candidates, and develop and commercialize our product candidates, if approved; our lack of experience in manufacturing, selling, marketing, and distributing our product candidates; failure to compete successfully against other drug companies; protection of our proprietary technology and the confidentiality of our trade secrets; potential lawsuits for, or claims of, infringement of third-party intellectual property or challenges to the ownership of our intellectual property; our patents being found invalid or unenforceable; risks associated with international operations; our ability to retain key personnel and to manage our growth; the potential volatility of our common stock; our management and principal stockholders have the ability to control or significantly influence our business; costs and resources of operating as a public company; unfavorable or no analyst research or reports; and securities class action litigation against us.

These and other important factors discussed under the caption "Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019 and our other reports filed with the SEC could cause actual results to differ materially from those indicated by the forward-looking statements made in this press release. Any such forward-looking statements represent management's estimates as of the date of this press release. While we may elect to update such forward-looking statements at some point in the future, except as required by law, we disclaim any obligation to do so, even if subsequent events cause our views to change. These forward-looking statements should not be relied upon as representing our views as of any date subsequent to the date of this press release.

Today's announcement

- Evaluating EDP1815 for the treatment of hospitalized patients with newly diagnosed COVID-19
- Partnering with Rutgers University and Robert Wood Johnson University Hospital
- IND submitted to U.S. FDA
- Data expected during 2H 2020
- Explore EDP1815's potential in other areas relevant to hyperinflammation and cytokine storm, including influenza

Early intervention is critical for COVID-19 patients



Goal: Intervene at earlier stages of infection to **modify the inflammatory impact of COVID-19**

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Siddiqi, Hassan K., and Mandeep R. Mehra. "COVID-19 Illness in Native and Immunosuppressed States: A Clinical-Therapeutic Staging Proposal." The Journal of Heart and Lung Transplantation, 20 Mar. 2020, Elsevier Inc., Figure 1, doi: https://doi.org/10.1016/j.healun.2020.03.012.

Life-threatening effects of COVID-19 are driven by hyperinflammation and cytokine storm

- COVID-19 can have life-threatening effects on the respiratory and other organ systems; in severe cases it is associated with ARDS, pneumonia, and death
- Respiratory complications are driving majority of hospitalizations and ICU admissions worldwide and putting significant strain on healthcare systems
- Respiratory complications are primarily caused by cytokine storm and hyperinflammation

Mehta et al 2020 Covid-19: consider cytokine storm syndromes and immunosuppression; The Lancet https://doi.org/10.1016/S0140-6736(20)30628-0

EDP1815 may allow for early intervention with a scalable, affordable treatment

- Well tolerated with no overall difference from placebo in Phase 1 clinical study
- Modulation of multiple inflammatory pathways, without impacting anti-viral response
- Convenient, oral administration
- Scalable and affordable for the treatment of large populations

If early intervention with an oral anti-inflammatory agent such as EDP1815 is proven effective, it could also be useful in the outpatient setting to control the community impact of the ongoing COVID-19 pandemic

EDP1815-205: Phase 2 study evaluating EDP1815 for hospitalized patients with newly diagnosed COVID-19

- Enrolling patients age 15 and older who present at ER within last 36 hours and test positive for COVID-19
- Double-blind, placebo-controlled study in partnership with Rutgers University and Robert Wood Johnson University Hospital
- Study will initially evaluate 60 patients to determine if EDP1815 can prevent progression of COVID-19 symptoms and development of COVID-Related Complications (CRC)
- Primary endpoint is reduced requirements for oxygen therapy (as measured by SpO2/FiO2)
- Key secondary endpoints include total symptom duration, progression along WHO scale of disease severity, and mortality
- Data expected during 2H 2020

EDP1815 may offer key advantages over other anti-inflammatories for COVID-19

- **Unique mechanism of action:** modulate multiple immune pathways associated with cytokine storm to resolve inflammation without suppressing anti-viral immune response
- **Safety results**: neither immunosuppressive nor systemically absorbed, limiting risk of infection or potential interaction with other medicines
- **Orally administered**, allowing for easy and flexible administration
- **Scalable and affordable** for the treatment of large populations

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Q&A