Evelo Biosciences Reports First Quarter Financial Results and Business Highlights

–Submitted investigational new drug (IND) application for a Phase 2 trial of EDP1815 for COVID-19; data readout expected during 2H 2020–
– Selected enteric capsule formulation of EDP1815 for Phase 2 dose ranging trial in psoriasis; trial initiation now expected in 3Q 2020, with interim data in mid-2021–
–Evelo to continue enrollment in triple-negative breast cancer arm of ongoing Phase 1/2 trial of EDP1503–
– Management to host conference call at 8:30 a.m. ET –

CAMBRIDGE, Mass., May 11, 2020 – Evelo Biosciences, Inc. (Nasdaq:EVLO), a clinical stage biotechnology company developing a new modality of orally delivered, systemically acting biologics, today reported financial results and business highlights for the first quarter 2020.

"We are pleased to report that we have gathered additional clinical evidence for EDP1815 as an effective anti-inflammatory drug. In addition, based on initial clinical response data, we have decided to focus on the triple-negative breast cancer cohort for EDP1503. We also announced last week the submission of an IND for a Phase 2 study of EDP1815 for early intervention to treat COVID-19. The data readout from this trial is just one of several important catalysts for Evelo during the second half of 2020," said Simba Gill, Ph.D., chief executive officer of Evelo. "After reviewing new clinical and biomarker data from two formulations of EDP1815, we have selected the enteric capsule formulation for evaluation in our Phase 2 psoriasis trial, which we now expect to initiate in the third quarter of 2020, with interim data expected by the middle of next year. Thanks to the nimbleness and adaptability of the team at Evelo, the Company is moving forward with executing its plans with only modest COVID-19 related delays."

First Quarter 2020 Highlights and Recent Progress:

Inflammation

EDP1815

Phase 2 Trial in COVID-19

- Evelo, Rutgers University, and Robert Wood Johnson University Hospital announced last week the submission of an IND for an Evelo-sponsored Phase 2 clinical trial, EDP1815-205.
- EDP1815-205 is a Phase 2, double-blind, placebo-controlled trial investigating the safety and efficacy of oral EDP1815 for the treatment of hospitalized patients with newly diagnosed COVID-19, age 15 and older.
- The trial will initially evaluate 60 patients to determine if early intervention with EDP1815 can prevent progression of COVID-19 symptoms and the development of COVID-Related Complications (CRC). Eligible participants will be dosed with EDP1815 or placebo, on top of standard of care, for 14 days. They will have presented at the ER within the last 36 hours and tested positive for COVID-19.
- The primary endpoint is reduced requirements for oxygen therapy, measured by the ratio of oxygen saturation (SpO2) / fraction of inspired oxygen (FiO2).
- Secondary endpoints include symptom duration, progression along the World Health Organization (WHO) scale of disease severity, and mortality.
- If the Phase 2 trial is successful in COVID-19, Evelo plans to move into Phase 3, with the goal of advancing EDP1815 towards potential registration, and to investigate EDP1815 as a potential therapy for other diseases such as influenza in which hyperinflammation and cytokine storm can play a key role.

Biomarker Data Supporting EDP1815's Ability to Modulate Multiple Cytokines

- In March, the Company reported interim Phase 1b biomarker data for the enteric capsule formulation of EDP1815 in mild to moderate psoriasis. The data demonstrated inhibitory activity on four systemic markers of inflammation known to be key drivers of the cytokine storm in patients infected with COVID-19, including interleukin-6 (IL-6) tissue necrosis factor (TNF), interleukin-8 (IL-8) and interleukin-1 beta (IL-1β).

Additional Clinical Data with EDP1815 in an Immunopharmacology and Formulation Trial & Phase 2 Update

Evelo today announced the results of two additional clinical studies with EDP1815. Based on these data, Evelo has selected the enteric capsule formulation of EDP1815 for evaluation in its Phase 2 trial in mild to moderate psoriasis. This study will evaluate three doses of the enteric capsule formulation of EDP1815 versus placebo in approximately 225 individuals with mild to moderate psoriasis. The primary endpoint will be mean reduction in PASI score at 16 weeks.

- Evelo announced positive clinical data from a healthy volunteer immunopharmacology trial with EDP1815. Healthy volunteers were dosed daily for 28 days with the enteric capsule formulation of EDP1815 or placebo in a clinical version of the preclinical delayed type hypersensitivity challenge trial.
- Treatment with EDP1815 resulted in a greater than 15-fold reduction in the inflammatory reaction, compared to placebo. This is a reduction in the inflammatory response of over 90%, and further evidence of the potential anti-inflammatory effects of EDP1815 with the enteric capsule formulation.
- Evelo also announced interim data from cohorts of individuals with either mild to moderate psoriasis or atopic dermatitis who were treated with the newer, alternate formulation of EDP1815 in the ongoing Phase 1b studies. Meaningful clinical responses were not observed in either cohort. Based on these data, Evelo is discontinuing development of the alternate formulation.

Oncology

EDP1503

Evelo to Focus on Triple-negative Breast Cancer (TNBC)

- A total of 61 individuals have been enrolled into the Phase 1/2 trial across three patient cohorts: microsatellite colorectal cancer, TNBC, and PD-1/PD-L1 relapsed solid tumors. Individuals received EDP1503 at either a high dose of four capsules twice daily of the enteric capsule formulation, or a low dose of two capsules twice daily, in combination with KEYTRUDA® (pembrolizumab), Merck's anti-PD-1 therapy.
- Initial safety and efficacy analysis was performed; relevant cohorts passed prespecified futility criteria.
- Based on initial clinical response data Evelo has decided to focus enrollment on high dose EDP1503 in combination with pembrolizumab to treat TNBC. Evelo continues to monitor individuals in all three cohorts who remain on study.
- Evelo expects to present results of this study, including the TNBC cohort, at a future medical conference.

Business Highlights

- In March 2020, the U.S. Patent and Trademark Office issued to Evelo U.S. Patent No. 10,576,111, entitled "Method of treating cancer using *Bifidobacterium animalis ssp. lactis* strain PTA-125097." The patent covers the use of a proprietary *Bifidobacterium* strain for the treatment of cancer, including use in combination with anti-PD-1 antibodies and other checkpoint inhibitors.
- In April 2020, Evelo announced the appointment of Neil Graham, M.D., M.B.B.S., M.P.H., as chief development officer. Dr. Graham's most recent experiences include strategic program leadership and drug development roles at Regeneron and Vertex.

Upcoming Key Milestones

Given the ongoing COVID-19 pandemic and its current and anticipated impact on clinical site initiation and patient recruitment, Evelo is revising milestone guidance for EDP1815 in psoriasis and EDP1867 in atopic diseases. The company now expects to achieve the following near-term milestones across its portfolio:

EDP1815

- Phase 2 data from EDP1815-205, an Evelo-sponsored COVID-19 trial, in 2H 2020.
- Initiation of a Phase 2 trial for EDP1815 in mild to moderate psoriasis in 3Q 2020.
- Interim Phase 2 data readout for EDP1815 in mild to moderate psoriasis by mid-2021.

EDP1867

- Initiation of Phase 1b trial of EDP1867 in atopic diseases in 1Q 2021.

EDP1503

- Clinical data from a cohort of individuals with TNBC in the Phase 1/2 trial of EDP1503 in 2H 2020.

First Quarter 2020 Financial Results

- **Cash Position:** As of March 31, 2020, cash and cash equivalents were $58.1 million, as compared to cash and cash equivalents of $77.8 million as of December 31, 2019. This decrease was due to cash used to fund operating activities and capital expenditures in the first quarter of 2020.
- **Research and Development Expenses:** R&D expenses were $17.4 million for the three months ended March 31, 2020, compared to $15.7 million for the three months ended March 31, 2019. The increase of $1.7 million was primarily due to increased costs related to Evelo's inflammation clinical development programs, R&D platform, and personnel costs.

- **General and Administrative Expenses:** G&A expenses were $5.8 million for the three months ended March 31, 2020, compared to $5.1 million for the three months ended March 31, 2019. The increase of $0.7 million was primarily due to increased personnel costs, and facilities and other costs.
- **Net Loss:** Net loss was $23.0 million for the three months ended March 31, 2020, or $(0.71) per basic and diluted share, as compared to a net loss of $20.3 million for the three months ended March 31, 2019, or $(0.64) per basic and diluted share.

Conference Call
Evelo will host a conference call and webcast at 8:30 a.m. ET today. To access the call please dial (866) 795-3242 (domestic) or (409) 937-8909 (international) and refer to conference ID 2186056. A live webcast of the event will also be available under "News and Events" in the Investors section of Evelo's website at http://ir.evelobio.com. The archived webcast will be available on Evelo's website approximately two hours after the completion of the event and will be available for 30 days following the call.

About Evelo Biosciences
Evelo Biosciences, Inc. is a clinical stage biotechnology company developing oral biologics that act on SINTAX with systemic therapeutic effects. SINTAX plays a central role in governing the immune, metabolic and neurological systems. The company's first product candidates are single strains of microbes selected for defined pharmacological properties. Evelo's therapies have the potential to be effective, safe and affordable medicines to improve the lives of people with chronic diseases and cancer.

Evelo currently has four product candidates: EDP1815, EDP1867, and EDP2939 for the treatment of inflammatory diseases, and EDP1503 for the treatment of cancer. Evelo is also advancing additional oral biologics through preclinical development in other disease areas.

For more information, please visit www.evelobio.com and engage with Evelo on LinkedIn.

Forward Looking Statements
This press release 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 the development of EDP1815 for the treatment of patients with COVID-19, our development plans, the promise and potential impact of any of our monoclonal microbials or preclinical or clinical trial data, the timing of and plans for clinical studies of EDP1815, EDP1867 and EDP1503, the timing and results of any clinical studies or readouts, and the scalability of manufacturing for EDP1815.

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 operations, including our preclinical studies and clinical trials, and the continuity of our business; 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 Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, 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.

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EVELO BIOSCIENCES, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (UNAUDITED)
(in thousands, except share and per share amounts)

	Three Months Ended March 31,	
	2020	**2019**
Operating Expenses (1):		
Research and development	$ 17,419	$ 15,680
General and administrative	5,842	5,124
Total operating expenses	23,261	20,804
Loss from operations	(23,261)	(20,804)
Other income, net	285	505
Loss before income taxes	$ (22,976)	$ (20,299)
Income tax expense	(65)	—
Net loss	$ (23,041)	$ (20,299)
Net loss per share - basic and diluted	$ (0.71)	$ (0.64)
Weighted-average common shares used in computing net loss per share - basic and diluted	32,250,050	31,925,072

(1) Expenses include the following amount of non-cash stock-based compensation expense:

Research and development	$ 1,066	$ 891
General and administrative	889	1,062

EVELO BIOSCIENCES, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS (UNAUDITED)
(in thousands)

	March 31, 2020	December 31, 2019
Assets:		
Cash, cash equivalents	$ 58,115	$ 77,833
Property and equipment, net	8,478	8,341
Right of use asset - operating lease	12,106	—
Other assets	4,448	4,746
Total assets	$ 83,147	$ 90,920
Liabilities and stockholders' equity:		
Accounts payable, accrued expenses and other	$ 10,657	$ 9,743
Long-term debt	19,720	19,634
Operating lease liability	13,257	—
Other liabilities	169	1,346
Total liabilities	43,803	30,723
Total stockholders' equity	39,344	60,197
Total liabilities and stockholders' equity	$ 83,147	$ 90,920