September 29, 2021

Atara Biotherapeutics to Present Phase 1 Study Update of ATA188 in Progressive Multiple Sclerosis at ECTRIMS 2021

New Magnetization Transfer Ratio (MTR) Imaging Biomarker Data and Two-Year Clinical Data from Open-Label Extension (OLE)

Patients Achieving Sustained Expanded Disability Status Scale (EDSS) Improvement Show Increase in MTR at 12 Months Which May Suggest Remyelination

Company to Host Live Conference Call and Webcast to Review Full Results on Wednesday, October 13, 2021, at 8:30 a.m. EDT

SOUTH SAN FRANCISCO, Calif.--(BUSINESS WIRE)-- Atara Biotherapeutics, Inc. (Nasdaq: ATRA), today announced the upcoming full release of new translational data and two-year open-label extension (OLE) clinical data from the study of ATA188 in progressive multiple sclerosis (MS). The findings will be presented as an ePoster at the 37th Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) taking place virtually October 13-15, 2021.

The presentation includes new imaging data on magnetization transfer ratio (MTR), a key biomarker of myelination status that may be tied to improvements in expanded disability status scale (EDSS) as seen with ATA188. Atara is a leader in T-cell immunotherapy, leveraging its novel allogeneic Epstein-Barr virus (EBV) T-cell platform to develop transformative therapies for patients with cancer and autoimmune diseases, including MS.

“ATA188 has a novel mechanism of action, and our clinical program is generating new insights into how the targeting of EBV-infected B cells and plasma cells can potentially benefit people living with progressive multiple sclerosis,” said AJ Joshi, MD, Chief Medical Officer at Atara. “At ECTRIMS, we will be presenting new MTR imaging data suggestive of remyelination that provide a potential biologic basis for the clinical EDSS improvements observed with ATA188 treatment in the Phase 1 and OLE studies.”

As reported in the full abstract available today on the ECTRIMS website, the data demonstrate that ATA188 continues to be well-tolerated. Of 24 patients evaluated for efficacy in the initial 12-month period, 18 chose to participate in the OLE and as of April 2021, have been followed for up to 33 months. Nine patients met sustained disability improvement (SDI) criteria, a composite scale combining confirmed improvement in either the EDSS score or timed 25-foot walk test in the initial 12-month period (n=7) or in the OLE (n=2). Of these nine patients, seven achieved SDI via sustained EDSS improvement. Eight patients that achieved SDI at any point in the study participated in the OLE. A relationship between dose-escalation and increasing clinical response was observed, with a higher proportion of patients achieving SDI at higher doses. No grade >3 adverse events (AE), dose-limiting toxicities, cytokine release syndrome, graft versus host disease, or infusion-

related reactions were observed.

Changes in MTR, reflecting myelination status, may provide insights into the mechanism of EDSS improvement in our clinical assessment of ATA188 and was assessed in all patients. At 12 months, the seven patients achieving SDI by EDSS showed increases in MTR versus those that did not have EDSS improvement. The increase in MTR suggests increased myelin density in the central nervous system of patients receiving ATA188.

Updated OLE data of up to 33 months follow-up continue to support the durability of disability improvement following ATA188 treatment. Of the eight patients who achieved SDI and entered the OLE, seven maintained SDI at all subsequent timepoints. One patient with secondary progressive multiple sclerosis (SPMS) achieved SDI at 15 months and experienced a non-treatment related relapse at 18 months, occurring approximately 6 months after the last ATA188 dose, and elected to discontinue the study.

Further detail on the MTR data, as well as updated safety and efficacy data for up to 39 months follow-up in the OLE will be presented on October 13 in the ePoster presentation.

In a separate ePoster, Atara will also present encore data profiling and evaluating the functionality and proliferation potential of ATA188 following antigen exposure. This comprehensive analysis of ATA188 lots produced from diverse human leukocyte antigen (HLA) donors demonstrates a robust manufacturing process showing consistent functional activation and productive effector responses.

Poster Presentation Details:
Title: Updated open-label extension clinical data and new magnetization transfer ratio imaging data from a Phase I study of ATA188, an off-the-shelf, allogeneic Epstein-Barr virus-targeted T-cell immunotherapy for progressive multiple sclerosis
Presenting Author: Douglas L. Arnold, MD, Montreal Neurological Institute, McGill University and NeuroRx Research, Montreal, Canada
Date & Time: Wednesday, October 13, 2021, at 16:45 CEST / 10:45 a.m. EDT / 7:45 a.m. PDT
Poster Session & Number: eP31 - Immunomodulation/Immunosuppression, P638

Title: Comprehensive profiling of ATA188, an off-the-shelf, allogeneic Epstein-Barr virus-specific T-cell immunotherapy for progressive multiple sclerosis
Presenting Author: Monica Moreno, PhD, Atara Biotherapeutics, Thousand Oaks, United States
Date & Time: Wednesday, October 13, 2021, at 16:45 CEST / 10:45 a.m. EDT / 7:45 a.m. PDT
Poster Session & Number: eP31 - Immunomodulation/Immunosuppression, P644

Atara Conference Call and Webcast Information

Atara will hold a conference call on Wednesday, October 13 at 8:30 a.m. EDT / 5:30 a.m. PDT for analysts and investors to review the data that will be presented. The call will include:

- Pascal Touchon, President and Chief Executive Officer, Atara Biotherapeutics
- Jakob Dupont, MD, Executive Vice President, Global Head of Research and Development, Atara Biotherapeutics

- AJ Joshi, MD, Senior Vice President and Chief Medical Officer, Atara Biotherapeutics
- Douglas L. Arnold, MD, Montreal Neurological Institute, McGill University and NeuroRx Research, Montreal, Canada

Analysts and investors can participate in the conference call by dialing (877) 407-8291 for domestic callers and (201) 689-8345 for international callers, using the conference ID 13722755. A live audio webcast can be accessed by visiting the Investors & Media – News & Events section of atarabio.com. An archived replay will be available on the Company's website for 30 days.

About ATA188

Epstein-Barr Virus (EBV) is associated with a wide range of hematologic malignancies and solid tumors, as well as certain autoimmune conditions, such as multiple sclerosis (MS). T cells are a critical component of the body's immune system which normally target EBV-infected B cells. ATA188, Atara's investigational off-the-shelf T-cell candidate, has the potential to target EBV-infected B cells and plasma cells in the central nervous system that may catalyze autoimmune responses and MS pathophysiology. Atara is currently enrolling EMBOLD, a Phase 2 clinical study of ATA188 in the treatment of patients with progressive forms of MS, across clinical sites in the U.S. and Australia.

About Atara Biotherapeutics, Inc.

Atara Biotherapeutics, Inc. (@Atarabio) is a pioneer in T-cell immunotherapy leveraging its novel allogeneic EBV T-cell platform to develop transformative therapies for patients with serious diseases including solid tumors, hematologic cancers and autoimmune disease. With our lead program in Phase 3 clinical development, Atara is the most advanced allogeneic T-cell immunotherapy company and intends to rapidly deliver off-the-shelf treatments to patients with high unmet medical need. Our platform leverages the unique biology of EBV T cells and has the capability to treat a wide range of EBV-associated diseases, or other serious diseases through incorporation of engineered CARs (chimeric antigen receptors) or TCRs (T-cell receptors). Atara is applying this one platform to create a robust pipeline including: tab-cel® in Phase 3 development for Epstein-Barr virus-driven post-transplant lymphoproliferative disease (EBV^+ PTLD) and other EBV-driven diseases; ATA188, a T-cell immunotherapy targeting EBV antigens as a potential treatment for multiple sclerosis; and multiple next-generation chimeric antigen receptor T-cell (CAR-T) immunotherapies for both solid tumors and hematologic malignancies. Improving patients' lives is our mission and we will never stop working to bring transformative therapies to those in need. Atara is headquartered in South San Francisco and our leading-edge research, development and manufacturing facility is based in Thousand Oaks, California. For additional information about the company, please visit atarabio.com and follow us on Twitter and LinkedIn.

Forward-Looking Statements

This press release contains or may imply "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. For example, forward-looking statements include statements regarding: the potential benefits; safety and efficacy of ATA188; translational and biomarker data for ATA188, including magnetization transfer ratio data; data from ATA188 OLE study; timing and

progress of clinical trials of ATA188; and Atara's ability to successfully advance the development of ATA188. Because such statements deal with future events and are based on Atara Biotherapeutics' current expectations, they are subject to various risks and uncertainties and actual results, performance or achievements of Atara Biotherapeutics could differ materially from those described in or implied by the statements in this press release. These forward-looking statements are subject to risks and uncertainties, including, without limitation, risks and uncertainties associated with the costly and time-consuming pharmaceutical product development process and the uncertainty of clinical success; the ongoing COVID-19 pandemic, which may significantly impact (i) our business, research, clinical development plans and operations, including our operations in South San Francisco and Southern California and at our clinical trial sites, as well as the business or operations of our third-party manufacturer, contract research organizations or other third parties with whom we conduct business, (ii) our ability to access capital, and (iii) the value of our common stock; the sufficiency of Atara's cash resources and need for additional capital; and other risks and uncertainties affecting Atara's and its development programs, including those discussed in Atara Biotherapeutics' filings with the Securities and Exchange Commission (SEC), including in the "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections of the Company's most recently filed periodic reports on Form 10-K and Form 10-Q and subsequent filings and in the documents incorporated by reference therein. Except as otherwise required by law, Atara Biotherapeutics disclaims any intention or obligation to update or revise any forward-looking statements, which speak only as of the date hereof, whether as a result of new information, future events or circumstances or otherwise.

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