February 8, 2021

Atara Biotherapeutics Presents Key Data for Advancing the Development of Tab-cel® and ATA188 at the 2021 Transplantation & Cellular Therapy Meeting Digital Experience

First presentation of transcriptional data for tab-cel® demonstrates consistency of the product's activation profile irrespective of donor and consistent enrichment of receptors targeting EBV-driven diseases

Atara partnered with CareDx on an innovative testing solution that enables detection and quantification of non-engineered allogeneic T-cell therapies and establishes this as a sensitive and precise method for use in ATA188 clinical development

Six posters support Atara's novel allogeneic EBV T-cell platform

SOUTH SAN FRANCISCO, Calif.--(BUSINESS WIRE)--

Atara Biotherapeutics, Inc. (Nasdaq: ATRA), 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 diseases, today announced the presentation of data supporting the proposed mechanism of action of their lead product candidate, tabelecleucel (tab-cel®), and five additional poster presentations at the Transplantation & Cellular Therapy (TCT) Meeting of the American Society for Transplantation and Cellular Therapy (ASTCT) and the Center for International Blood & Marrow Transplant Research (CIBMTR), held virtually February 8-12, 2021.

"We are pleased to present key translational data advancing the clinical development of ATA188 and tab-cel®, the most advanced allogeneic T-cell immunotherapy in development. Additional data being presented at TCT also support the further development of tab-cel® in EBV-driven diseases, such as EBV^+ acquired and primary immunodeficiency lymphoproliferative diseases (AID-LPD and PID-LPD) for which we're currently enrolling patients for a clinical study," said Jakob Dupont, M.D., Head of Global Research & Development at Atara. "These are diseases with few treatment options and poor prognosis, and it is our goal to ultimately bring this potentially transformative therapy to patients in need. We look forward to advancing tab-cel®, remaining on track to complete the Biologics License Application in the third quarter of this year based on very encouraging clinical data from an interim analysis of our pivotal trial."

Results presented at TCT detail new findings from a comprehensive multiomic analysis of modes of activation for tab-cel®. Each component of the assessment contributes to building

the overall understanding of therapeutic activity, mechanisms of action and extended characteristics.

In this analysis, a subset of tab-cel® lots were used to confirm and establish the consistency of the product's profile, regardless of donor.

These results demonstrated, that upon stimulation, tab-cel® exhibits a consistent activation signature at the level of gene expression, T-cell receptor engagement (TCR), and secretion of factors associated with effective T cell responses. Results further illustrated that the tab-cel® manufacturing process results in complementary clonal expansion and consistent enrichment of TCRs associated with productive engagement of EBV-driven diseases.

Atara will also report additional data sets related to tab-cel®, as well as preclinical findings demonstrating the potent anti-tumor activity of the Company's next-generation CD19-based CAR T, ATA3219.

Additionally, the Company is presenting data on an innovative testing solution to detect and quantify non-engineered allogeneic T-cell therapies such as ATA188. As demonstrated in partnership with CareDx, AlloCell is a precise and reproducible method that resolves the analytical barrier for non-engineered allogeneic cell therapies, which do not have transgenes available to support standard quantitative pharmacokinetic (PK) assay development. The novel testing solution offers potential applications in clinical development for determining PK profiles and correlating with response and other clinical endpoints, including the understanding of fundamental aspects of pharmacology such as presence and expansion in the patient's body.

"Together these analyses represent a leading edge for allogeneic cell therapy research, leveraging state-of-the-art profiling technologies and innovating new methodologies in collaboration with CareDx to support development of Atara's programs," said Blake Aftab, Head of Preclinical Science and Translational Medicine at Atara. "These methods not only support our novel allogeneic EBV T-cell development programs, but also have potential for wide-ranging applications for patients."

Atara Poster Presentations at TCT 2021:
All posters will be available for viewing at the start of the meeting on Monday, February 8, 2021.

Title: Comprehensive activation profiling of tabelecleucel, an off-the-shelf, allogeneic EBV-specific T cell therapy
Poster #: 206

Title: A sensitive and precise universal surveillance solution for pharmacokinetic monitoring of off-the-shelf cell therapies *(in collaboration with CareDx)*
Poster #: 204

Title: Clinical experience of tabelecleucel in patients with EBV+ primary (PID) or acquired immunodeficiency (AID) associated lymphoproliferative disease (encore from ASH 2020)
Poster #: 219

Title: Clinical experience of tabelecleucel in patients with life-threatening complications of

Epstein–Barr virus viremia (encore from ASH 2020)
Poster #: 223

Title: A multicenter, multicohort, open-label, single arm per cohort, Phase II study to assess the efficacy and safety of tabelecleucel in patients with EBV-associated diseases using an adaptive two-stage study design (encore from ASH 2020)
Poster #: 532

Title: ATA3219: A potent next-generation allogeneic off-the-shelf CD19 CAR-T therapy without the need for gene editing (encore from ASH 2020)
Poster #: 203

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: preclinical results and data for ATA3219; the timing and progress of ATA3219, Atara's ability to successfully advance the development of its CAR T programs, the potential benefits, safety and efficacy of tab-cel®; the timing and progress of clinical trials of tab-cel®, Atara's ability to successfully advance the development of tab-cel®; data on an innovative testing solution, and Atara's ability to advance development of its programs, including 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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