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Atara Biotherapeutics Initiates 60 Patient, Global Phase 1 Clinical Study to Evaluate Allogeneic ATA188 in Patients with Progressive or Relapsing-Remitting Multiple Sclerosis (MS)

Enrollment to begin in Australia; U.S. sites expected to open in early 2018

SOUTH SAN FRANCISCO, Calif., Oct. 19, 2017 (GLOBE NEWSWIRE) -- Atara Biotherapeutics, Inc. (Nasdaq:ATRA), a leading "off-the-shelf", or allogeneic, T-cell immunotherapy company developing novel treatments for patients with cancer and autoimmune diseases, announced today that the Company initiated a multinational, multicenter Phase 1 clinical study to evaluate allogeneic ATA188 in patients with progressive or relapsing-remitting MS. Allogeneic ATA188, the Company's next generation T-cell immunotherapy licensed from QIMR Berghofer Medical Research Institute, selectively targets specific Epstein-Barr virus (EBV) antigens believed to play an important role in the pathogenesis of MS.

"Starting the first allogeneic T-cell immunotherapy study in MS is a significant milestone for Atara," said Isaac Ciechanover, M.D., Chief Executive Officer and President of Atara Biotherapeutics. "Earlier this week, our collaborators reported that autologous ATA190 demonstrated encouraging updated results in a Phase 1 study, showing objective clinical improvements in five of eight patients with progressive MS. Development of an off-the-shelf version of ATA188 expands our allogeneic T-cell immunotherapy platform beyond oncology to autoimmune diseases and is a potential new approach to treat patients with progressive or relapsing-remitting MS."

The primary objective of Atara's Phase 1 clinical study is to assess the safety of allogeneic ATA188 in subjects observed for at least 1 year after the first dose. Key secondary endpoints in the study include measures of clinical improvement such as expanded disability status scale (EDSS) and annualized relapse rate (ARR) as well as MRI imaging. The open-label, single-arm study is expected to enroll a total of 60 patients: 30 patients with progressive forms of MS, either primary progressive MS (PPMS) or secondary progressive MS (SPMS), and 30 patients with relapsing-remitting MS (RRMS) across Australia, the US, and Europe. For more information about the study, please visit ClinicalTrials.gov (NCT03283826).

About Multiple Sclerosis
MS is a chronic neurological autoimmune disease that affects an estimated 2.3 million people around the world. Relapsing-remitting MS (RRMS) is the most common form of MS and is characterized by episodes of new or worsening signs or symptoms (relapses) followed by periods of recovery. Despite available disease-modifying treatments, most

individuals with RRMS continue to experience disease activity and disability progression.

Progressive MS (PMS) is a severe form of the disease with few therapeutic options. PMS comprises two conditions, both characterized by persistent progression and worsening of MS symptoms and physical disability over time. Primary Progressive MS (PPMS) occurs when continuous progressive disease is present at diagnosis and occurs in approximately 15% of newly diagnosed cases. Secondary Progressive MS (SPMS) initially begins as RRMS and develops into a progressive form. Up to 80% of people with RRMS will eventually develop SPMS. There is substantial unmet medical need for new and effective therapies for patients with PPMS and SPMS. Most treatment options that work well in reducing flares in RRMS have not been shown to be effective in slowing or reversing disability in PMS.

About allogeneic ATA188 and autologous ATA190
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 and can selectively target specific EBV antigens believed to be important for the potential treatment of MS. Allogeneic ATA188 and autologous ATA190, the Company's next generation T-cell immunotherapies developed by Professor Rajiv Khanna at QIMR Berghofer, have the potential to precisely recognize and eliminate EBV-infected B-cells and plasma cells in the central nervous system that may catalyze autoimmune responses and MS pathophysiology. Professor Michael Pender from The University of Queensland presented the results of the first autologous ATA190 study, which was partially funded by MS Research Australia, MS Queensland and Perpetual Foundation, at the American Academy of Neurology (AAN) meeting in April 2017. This study tested adoptive immunotherapy in patients with MS and showed that autologous ATA190, led to encouraging clinical improvements in MS symptoms that correlated with autologous ATA190's reactivity against target EBV antigens (EBV reactivity). A Phase 1 clinical study of autologous ATA190 in progressive forms of MS is ongoing, and a Phase 1 allogeneic ATA188 clinical study in patients with progressive and relapsing-remitting MS was recently initiated.

About Atara Biotherapeutics, Inc.
Atara Biotherapeutics, Inc. (@Atarabio) is a leading T-cell immunotherapy company developing novel treatments for patients with cancer and autoimmune diseases. The Company's "off-the-shelf", or allogeneic, T-cells are engineered from donors with healthy immune function and allow for rapid delivery from inventory to patients without a requirement for pretreatment. Atara's T-cell immunotherapies are designed to precisely recognize and eliminate cancerous or diseased cells without affecting normal, healthy cells. Atara's most advanced T-cell immunotherapy in development, ATA129, is being developed for the treatment of cancer patients with rituximab-refractory Epstein-Barr virus (EBV) associated post-transplant lymphoproliferative disorder (EBV-PTLD), as well as other EBV positive hematologic and solid tumors including nasopharyngeal carcinoma (NPC). Phase 3 studies of ATA129 in EBV-PTLD following a hematopoietic cell transplant (MATCH study) or solid organ transplant (ALLELE study) are expected to start in 2017, and a Phase 1/2 study of ATA129 in combination with Merck's anti-PD-1 (programmed death receptor-1) therapy, KEYTRUDA® (pembrolizumab), in patients with platinum-resistant or recurrent EBV-associated NPC is planned for 2018. ATA129 is also available to eligible patients with EBV-positive tumors through an ongoing multicenter expanded access protocol (EAP) clinical study. Atara expects to submit ATA129 for conditional marketing authorization in EBV-PTLD

following HCT in the EU in 2018. ATA188, the Company's next generation T-cell immunotherapy, selectively targets specific EBV antigens believed to be important for the potential treatment of multiple sclerosis (MS). A Phase 1 clinical study of autologous ATA190 in progressive forms of MS is ongoing, and a Phase 1 allogeneic ATA188 clinical study in patients with progressive and relapsing-remitting MS was recently initiated. Atara's clinical pipeline also includes ATA520 targeting Wilms Tumor 1 (WT1) and ATA230 directed against cytomegalovirus (CMV).

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 Company's belief that the clinical results of Autologous 190 in progressive MS patients are encouraging and that the development of an off-the-shelf version of ATA188 is a potential new approach to treat patients with progressive or relapsing-remitting MS; the Company's expectation that the Phase I clinical study for allogeneic ATA188 is expected to enroll a total of 60 patients: 30 patients with progressive forms of MS, either PPMS or SPMS, and 30 patients with RRMS across Australia, the US, and Europe; the Company's belief that ATA188 has the potential to precisely recognize and eliminate EBV-infected B-cells and plasma cells in the central nervous system that may catalyze autoimmune responses and MS pathophysiology; the Company's expected initiation of Phase 3 studies of ATA129 in EBV-PTLD following a HCT or SOT in 2017 and a Phase 1/2 study of ATA129 in combination with Merck's anti-PD-1 therapy, KEYTRUDA® (pembrolizumab), in patients with platinum-resistant or recurrent EBV-associated NPC in 2018; and the Company's expected submission of a conditional marketing authorization application in EBV-PTLD following HCT in the EU in 2018. 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 those discussed under the heading "Risk Factors" in Atara Biotherapeutics' quarterly report on Form 10-Q filed with the Securities and Exchange Commission (SEC) on August 7, 2017, including the documents incorporated by reference therein, and subsequent filings with the SEC. 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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