Jasper Therapeutics Announces Positive Follow-up Clinical Data from Investigator-Sponsored Study of Briquilimab Conditioning in Fanconi Anemia Patients at the 2023 Transplantation & Cellular Therapy Meetings of the ASTCT and CIBMTR

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- Both Fanconi Anemia patients treated with briquilimab successfully engrafted with neutrophil engraftment within 11 days
- 100% total donor chimerism was achieved through six months for the first patient and through three months for the second patient
- Both patients are doing well post-transplant with briquilimab-based conditioning

REDWOOD CITY, Calif., Feb. 17, 2023 (GLOBE NEWSWIRE) -- Jasper Therapeutics, Inc. (Nasdaq: JSPR) (Jasper), a biotechnology company focused on developing novel antibody therapies targeting c-Kit (CD117) to address diseases such as chronic spontaneous urticaria and lower to intermediate risk myelodysplastic syndromes (MDS) as well as novel stem cell transplant conditioning regimes, today announced that new follow-up data from Jasper's investigator-sponsored study of briquilimab (formerly known as JSP191) as a conditioning agent in the treatment of Fanconi Anemia (FA) were presented in a poster presentation today at the 2023 Tandem Meetings: Transplantation & Cellular Therapy Meetings of ASTCT and CIBMTR taking place in Orlando, Florida.

The study is a Phase 1/2 clinical trial (NCT04784052) utilizing briquilimab to treat FA patients in bone marrow failure requiring allogeneic transplant with non-sibling donors. The objective of the study is to develop cell therapy, which enables blood and immune reconstitution in FA patients with decreased toxicity, by using briquilimab as a part of conditioning which eliminates the need for busulfan chemotherapy or total body irradiation.

In the follow-up data series presented, 100% total donor chimerism was achieved through six months for the first patient and at three months for the second patient. Neutrophil engraftment was reached on day 11 for both patients and platelet engraftment was achieved on days 14 and 9 for the first and second patient, respectively. Briquilimab was cleared by day 9 after dosing in both patients and no treatment-related adverse events or toxicities were observed. No veno-occlusive disease or graft-versus-host disease has been observed. Initial data from this study were previously presented at the annual conference of the Inborn Errors Working Party (IEWP), a research group of the European Society of Blood and Marrow Transplantation, in September 2022.

"It is encouraging that the first two patients in this study who received briquilimab as a core part of a non-toxic conditioning regime for stem cell transplant to treat FA are showing promising outcomes, with the first patient now at 9 months post-procedure," said Ronald Martell, President and Chief Executive Officer of Jasper. "The team at Stanford has enrolled a third patient in the trial, providing the potential for additional data in this setting later this year. This positive update adds to our confidence in briquilimab and its potential to address a variety of patient populations by targeting c-Kit expressed on stem cells and mast cells."

Allogeneic hematopoietic stem cell transplantation (allo-HSCT) offers a potential cure for many diseases, including FA. It is also the only proven treatment for the bone marrow failure that occurs in a majority of patients with FA. However, current allo-HSCT protocols require conditioning with genotoxic chemotherapy and/or irradiation leading to toxicities, including mucositis, end organ damage, infertility and secondary malignancies. Furthermore, allo-HSCT can also be complicated by graft-versus-host disease and serious infections. Patients with FA are particularly vulnerable to such toxicities due to their inherent inability to DNA repair defects.

The details of the poster presentation are as follows:

Abstract Title: *Stanford Children's Fanconi Anemia Clinical Trial Using JSP191 Antibody Conditioning and TCRαβ+ T-Cell/CD19+ B-Cell Depleted Grafts*
Author: Rajni Agarwal-Hashmi, M.D., Professor of Pediatrics and Stem Cell Transplantation, the Stanford University School of Medicine
Abstract #: 211 (poster presentation)

Jasper thanks its Stanford collaborators, The Center for Definitive and Curative Medicine and investigators Dr. Rajni Agarwal, Dr. Agnieszka Czechowicz and Dr. Alice Bertaina, in testing briquilimab safety and efficacy in the allo-HSCT setting in the vulnerable FA patient population.

About Fanconi Anemia
Fanconi Anemia (FA) is a rare but serious blood disorder that prevents the bone marrow from making sufficient new red blood cells. The disorder can also cause the bone marrow to make abnormal blood cells. FA typically presents at birth or early in childhood between five and ten years of age. Ultimately, it can lead to serious complications, including bone marrow failure and severe aplastic anemia. Cancers such as acute myeloid leukemia (AML) and myelodysplastic syndromes (MDS) are other possible complications. Treatment may include blood transfusions or medicine to create more red blood cells, but a hematopoietic stem cell transplant (HSCT) is currently the only cure.

About Jasper
Jasper is a clinical-stage biotechnology company developing briquilimab, a monoclonal antibody targeting c-Kit (CD117) as a therapeutic for chronic mast and stem cell diseases such as chronic urticaria and lower to intermediate risk myelodysplastic syndromes (MDS) and as a conditioning agent for stem cell transplants for rare diseases such as sickle cell disease (SCD), Fanconi anemia (FA) and severe combined immunodeficiency (SCID). To date, briquilimab has a demonstrated efficacy and safety profile in over 130 dosed subjects and healthy volunteers, with clinical outcomes as a

conditioning agent in SCID, acute myeloid leukemia (AML), MDS, FA, and SCD. In addition, briquilimab is being advanced as a transformational non-genotoxic conditioning agent for gene therapy. For more information, please visit us at www.jaspertherapeutics.com.

Forward-Looking Statements

Certain statements included in this press release that are not historical facts are forward-looking statements for purposes of the safe harbor provisions under the United States Private Securities Litigation Reform Act of 1995. Forward-looking statements are sometimes accompanied by words such as "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "expect," "should," "would," "plan," "predict," "potential," "seem," "seek," "future," "outlook" and similar expressions that predict or indicate future events or trends or that are not statements of historical matters. These forward-looking statements include, but are not limited to, statements regarding briquilimab's potential, including with respect to its potential as part of a non-toxic conditioning regime resulting in the elimination of the need for genotoxic chemotherapy and/or irradiation for FA patients and its potential to address a variety of patient populations, and the potential for additional data for the study to be available later this year. These statements are based on various assumptions, whether or not identified in this press release, and on the current expectations of Jasper and are not predictions of actual performance. These forward-looking statements are provided for illustrative purposes only and are not intended to serve as, and must not be relied on by an investor as, a guarantee, an assurance, a prediction or a definitive statement of fact or probability. Many actual events and circumstances are beyond the control of Jasper. These forward-looking statements are subject to a number of risks and uncertainties, including general economic, political and business conditions; the risk that the potential product candidates that Jasper develops may not progress through clinical development or receive required regulatory approvals within expected timelines or at all; the risk that clinical trials may not confirm any safety, potency or other product characteristics described or assumed in this press release; the risk that Jasper will be unable to successfully market or gain market acceptance of its product candidates; the risk that prior study results may not be replicated; the risk that Jasper's product candidates may not be beneficial to patients or successfully commercialized; patients' willingness to try new therapies and the willingness of physicians to prescribe these therapies; the effects of competition on Jasper's business; the risk that third parties on which Jasper depends for laboratory, clinical development, manufacturing and other critical services will fail to perform satisfactorily; the risk that Jasper's business, operations, clinical development plans and timelines, and supply chain could be adversely affected by the effects of health epidemics, including the ongoing COVID-19 pandemic; the risk that Jasper will be unable to obtain and maintain sufficient intellectual property protection for its investigational products or will infringe the intellectual property protection of others; and other risks and uncertainties indicated from time to time in Jasper's filings with the SEC, including its Annual Report on Form 10-K for the year ended December 31, 2021 and subsequent Quarterly Reports on Form 10-Q. If any of these risks materialize or Jasper's assumptions prove incorrect, actual results could differ materially from the results implied by these forward-looking statements. While Jasper may elect to update these forward-looking statements at some point in the future, Jasper specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing Jasper's assessments of any date subsequent to the date of this press release. Accordingly, undue reliance should not be placed upon the forward-looking statements.

Contacts:

John Mullaly (investors)
LifeSci Advisors
617-429-3548
jmullaly@lifesciadvisors.com

Jeet Mahal (investors)
Jasper Therapeutics
650-549-1403
jmahal@jaspertherapeutics.com

Lauren Barbiero (media)
Real Chemistry
646-564-2156
lbarbiero@realchemistry.com

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