Jasper Therapeutics Presents Data Supporting Ongoing Development of Briquilimab, its c-Kit Targeting Antibody, at the 2023 Transplantation & Cellular Therapy Meetings of the ASTCT and CIBMTR

February 17, 2023

- Oral Presentation, Abstract #59: 12 out of 12 AML in complete remission patients with full 1-year follow-up achieved successful neutrophil engraftment at a median of 19 days after conditioning with briquilimab in combination with fludarabine and low dose irradiation
- Oral Presentation, Abstract #86: All 12 patients at Stanford receiving briquilimab-based conditioning and donor cell infusion in an outpatient setting were discharged from the hospital the same day, requiring zero days inpatient
- Poster, Abstract #351: Addition of briquilimab to fludarabine and low dose irradiation conditioning regimen with common GVHD prophylaxis, does not appear to increase GVHD incidence relative to previously published rates

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 new positive Phase 1 data on briquilimab (formerly known as JSP191) in combination with fludarabine and low-dose irradiation (Flu/TBI) conditioning in older adults with acute myeloid leukemia (AML) or myelodysplastic syndromes (MDS) undergoing allogeneic hematopoietic cell transplant (HCT). The data are being featured in two oral presentations and one poster presentation at the 2023 Tandem Meetings: Transplantation & Cellular Therapy Meetings of ASTCT and CIBMTR (February 15-19, 2023; Orlando, Florida).

The presentations further support the differentiated clinical profile of briquilimab and its potential as a safe and efficacious conditioning agent for HCT therapies. Specifically, the data show that a conditioning regimen of briquilimab plus Flu/TBI led to successful engraftment of donor blood stem cells in the patients treated. The conditioning regimen was well-tolerated, with no infusion toxicities observed and no briquilimab-related serious adverse events (SAEs). The emerging safety profile of briquilimab provides continued validation of its ability to directly block c-Kit signaling in HCT as well as facilitates the broader exploration of this mechanism in other stem and mast cell-driven chronic diseases.

“As we focus the development of briquilimab on treating chronic mast cell diseases and as a conditioning agent for stem cell transplants addressing rare diseases, we believe that the data presented at the Transplantation & Cellular Therapy Meetings of ASTCT and CIBMTR provides the additional mechanistic and clinical proof-of-concept rationale for its mechanism of targeting c-Kit,” said Ronald Martell, President and Chief Executive Officer of Jasper. “The data continues to show a favorable safety profile and a consistent and predictable pharmacokinetic/ pharmacodynamic profile, making briquilimab potentially amenable to various indications. We demonstrated that briquilimab exhibits on-target effects on HSC depletion when combined with Flu/TBI and enables full donor myeloid chimerism, resulting in promising disease resolution in older patients with AML or MDS. We look forward to continuing the development of briquilimab and to exploring its long-term potential to become the leading antibody targeting c-Kit.”

Summaries of data presentations:

Abstract: *Subanalysis from Phase 1 Study of JSP191, an Anti-CD117 Monoclonal Antibody, in Combination with Low Dose Irradiation and Fludarabine Conditioning, Shows Durable Remissions in Older Adults with Acute Myeloid Leukemia in Complete Remission Undergoing Allogeneic Hematopoietic Cell Transplantation (oral presentation)*

Key Findings: 1-year follow-up data of 12 AML subjects with a median age of 70 years old showed that 0.6 mg/kg briquilimab in combination with Flu/TBI conditioning was well-tolerated, with no infusion reactions and no briquilimab-related SAEs. 8 out of 12 (67%) of the evaluated AML patients were determined to be free from morphological relapse and 6 out of 9 (67%) of the patients who received a transplant with detectable AML have no measurable residual disease at last follow-up. All patients achieved engraftment with neutrophil recovery between 13 and 24 days (median time of 19 days). The 11 evaluable subjects at day 90 achieved full donor myeloid chimerism (mean 98.5±1.3%) and total chimerism of 94% (mean 95.6±1.3%). Three subjects had grade 2-4 acute graft-versus-host disease (aGVHD), with one grade 2 skin aGVHD that resolved, one late-onset grade 2 skin aGVHD, and 1 non-relapse mortality due to late-onset grade 3 gastrointestinal aGVHD. Four subjects had moderate chronic graft-versus-host disease (cGVHD), and none had severe cGVHD. Three subjects have relapsed, 1 at ~2 months and the others at ~6 months post-HCT.

Abstract: *Immune Biomarkers Associated with Chronic GVHD in Phase 1 Study of JSP191, an Anti-CD117 Monoclonal Antibody, in Combination with Low Dose Irradiation and Fludarabine Conditioning in Older Adults with MDS/AML Undergoing Allogeneic HCT (poster presentation)*

Key Findings: Analysis of lymphocyte and cytokine changes that may correlate with graft-versus-host disease (GVHD) in briquilimab/TBI/Flu for HCT revealed that briquilimab improves anti-leukemic efficacy while not increasing inflammation/toxicity from the conditioning that may impact GVHD. Moreover, the addition of briquilimab a to low dose TBI/Flu conditioning regimen with sirolimus/tacrolimus/MMF GVHD prophylaxis does not appear to increase GVHD incidence relative to previously published rates.

Abstract: *Evaluation of Clinical Outcomes and Healthcare Resource Use of Outpatient Allogeneic Stem Cell Transplant in Older Adults with AML/MDS, Using JSP191, an Anti-CD117 Monoclonal Antibody, in Combination with Low Dose Irradiation and Fludarabine Conditioning – a Single Center Analysis (oral presentation)*

Key Findings: 12 subjects treated at Stanford with MDS (n=8) or AML in morphologic complete remission (n=4) received outpatient conditioning with a briquilimab-based regimen and outpatient donor cell infusion, requiring zero days inpatient. All 12 patients engrafted, with neutrophil recovery occurring between treatment day (TD)+15 to TD+26. Only 6 out of 12 patients required an inpatient stay in the first 100 days and the mean stay was 4 days among all patients. These early results demonstrate that outpatient allogeneic HCT is clinically feasible with a briquilimab-based conditioning regimen, which has the potential to significantly lower the overall clinical and economic burden of allogeneic HCT by reducing the average inpatient stay of 35-45 days and estimated $250,000 or more that is spent per patient on HCT in the U.S. today (Broder et al., 2017; Murthy et al., 2019).

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 ability to directly block c-Kit signaling in HCT, its safety and pharmacokinetic/ pharmacodynamic profiles, its potential to become the leading antibody targeting c-Kit, its potential to improve the safety and efficacy of stem cell transplants for a range of malignant and rare diseases and its potential to lower the overall clinical and economic burden of allogenic HCT 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.

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