Jasper Therapeutics Presents Data from Preclinical Briquilimab Studies at the American Academy of Allergy, Asthma, and Immunology (AAAAI) Annual Meeting

February 23, 2024

REDWOOD CITY, Calif., Feb. 23, 2024 (GLOBE NEWSWIRE) -- Jasper Therapeutics, Inc. (Nasdaq: JSPR) (Jasper), a biotechnology company focused on development of briquilimab, a novel antibody therapy targeting c-Kit (CD117) in mast cell driven diseases such as chronic spontaneous urticaria (CSU) and chronic inducible urticaria (CIndU), is presenting results from three preclinical studies evaluating briquilimab, at the 2024 American Academy of Allergy, Asthma & Immunology (AAAAI) Annual Meeting, being held February 23-26 in Washington, D.C. One study will be featured in an oral presentation and two studies in poster presentations.

Each of the studies being presented utilized Jasper's proprietary c-Kit Mouse™, which was developed to enable direct testing of briquilimab across a number of disease models, overcoming the limitations of standard models which do not bind antibodies directed at the human c-Kit receptor. The two poster presentations cover separate studies that evaluated briquilimab in Mrgprb2-mediated drug-induced anaphylaxis (DIA) and passive systemic anaphylaxis (PSA). Results from both studies demonstrated that a single dose of briquilimab protected against anaphylaxis, as measured by significantly higher core body temperatures in animals treated with briquilimab vs. untreated animals. The oral presentation covers a study that evaluated briquilimab in allergic asthma, which demonstrated that a single dose of briquilimab significantly reduced the numbers of lung mast cells and bronchoalveolar lavage-recovered eosinophils. Additionally, airway-infiltrated eosinophils and neutrophils, as well as airway hyper-responsiveness, decreased in briquilimab-treated mice, suggesting briquilimab has the potential to prevent allergic asthma via mast cell depletion.

"We are excited to present promising preclinical results from multiple studies this year at AAAAI, which indicate that briquilimab may be able to mitigate the likelihood of severe allergic reaction and anaphylaxis," said Wendy Pang, M.D., Ph.D., Senior Vice President, Research and Translational Medicine. "Each of these studies was conducted using the Jasper c-Kit Mouse™, which we believe enables the generation of preclinical data with superior clinical translatability, and in turn, informs our clinical development programs."

"While our initial development efforts with subcutaneous briquilimab have focused on urticaria and other dermatological conditions, we are excited by its broad potential in a variety of mast cell driven diseases," said Edwin Tucker, M.D., Chief Medical Officer. "The preclinical data being generated by our research team across numerous mast cell driven diseases is critical to determining the next indication for briquilimab clinical development this year."

Details of the presentations are as follows:
Abstract Title: Briquilimab, An Anti-CD117 Antibody, Prevents Passive Systemic Anaphylaxis in Mice Expressing Chimeric Human and Mouse CD117 Through Mast Cell Depletion
Poster Number: 024
Session Title: Therapeutic Trials in Allergic Skin Disorders and Anaphylaxis 2024
Session Type: Poster Session
Session Date / Time: Friday, February 23, 2024; 3:15 p.m. - 4:15 p.m. EST

Abstract Title: Briquilimab, an Anti-CD117 Antibody, Prevents Cockroach Allergen Induced Allergic Asthma in Mice Expressing Chimeric Human and Mouse CD117
Publication Number: 441
Session Title: Old Therapeutics and New Targets in Asthma
Session Type: Oral Abstract Session
Session Date / Time: Saturday, February 24, 2024; 2:00 p.m. - 3:15 p.m. EST

Abstract Title: Amelioration Of Mrgprb2-Mediated Anaphylactoid Drug Reactions With Briquilimab, An Anti-CD117 Antibody, Through Mast Cell Depletion In Mice Expressing Chimeric Human And Mouse CD117
Poster Number: 747
Session Title: Around the Horn: Dermatology, Drug Allergy, Anaphylaxis, Insect Hypersensitivity
Session Type: Featured Poster Session
Session Date / Time: Sunday, February 25, 2024; 4:45 p.m. - 6:15 p.m. EST

About Briquilimab

Briquilimab (formerly JSP191) is a targeted aglycosylated monoclonal antibody that blocks stem cell factor from binding to the cell-surface receptor c-Kit, also known as CD117, thereby inhibiting signaling through the receptor. This inhibition disrupts the critical survival signal, leading to the depletion of the mast cells via apoptosis which removes the underlying source of the inflammatory response in mast cell driven diseases such as chronic urticaria. Jasper is currently conducting clinical studies of briquilimab as a treatment in patients with CSU or with CIndU. Briquilimab is also currently in clinical studies as a treatment for patients with LR-MDS and as a conditioning agent for cell and gene therapies for rare diseases. To date, briquilimab has a demonstrated efficacy and safety profile in more than 145 dosed participants and healthy volunteers, with clinical outcomes as a conditioning agent in severe combined immunodeficiency (SCID), acute myeloid leukemia (AML), myelodysplastic syndromes (MDS), Fanconi Anemia (FA), and sickle cell disease (SCD).

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 MDS and as a conditioning agent for stem cell transplants for rare

diseases such as SCD, FA and SCID. To date, briquilimab has a demonstrated efficacy and safety profile in more than 145 dosed participants and healthy volunteers, with clinical outcomes as a conditioning agent in SCID, AML, MDS, FA, and SCD. 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 in mast cell driven diseases such as CSU and CIndU, its potential to protect against anaphylaxis and prevent allergic asthma via mast cell depletion, its ability mitigate the likelihood of severe allergic reaction and anaphylaxis and its broad potential in a variety of mast cell driven diseases; the ability of the Jasper c-Kit Mouse™ to enable the generation of preclinical data with superior clinical translatability and its ability to inform Jasper's clinical development programs; and Jasper's expectations regarding briquilimab clinical development. 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; 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, 2022 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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