UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

Date of Report (Date of earliest event reported): January 8, 2025

JASPER THERAPEUTICS, INC.
(Exact Name of Registrant as Specified in its Charter)

Delaware	001-39138	84-2984849
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(IRS Employer Identification No.)

2200 Bridge Pkwy Suite #102
Redwood City, California 94065
(Address of Principal Executive Offices) (Zip Code)

(650) 549-1400
Registrant's telephone number, including area code

N/A
(Former Name, or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Exchange Act:

(Title of each class)	(Trading Symbol)	(Name of exchange on which registered)
Voting Common Stock, par value $0.0001 per share	**JSPR**	**The Nasdaq Stock Market LLC**
Redeemable Warrants, each ten warrants exercisable for one share of Voting Common Stock at an exercise price of $115.00	**JSPRW**	**The Nasdaq Stock Market LLC**

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 8.01. Other Events.

On January 8, 2025, Jasper Therapeutics, Inc. (the "Company"), issued a press release reporting positive preliminary data from the Company's ongoing BEACON Phase 1b/2a study of subcutaneous briquilimab in adult participants with chronic spontaneous urticaria and disclosing that the Company will hold a conference call and webinar at 8:00 am EST on January 8, 2025 to present the preliminary data from the BEACON Phase 1b/2a study.

A copy of the press release is attached as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated herein by reference. A copy of the presentation to be used in connection with the conference call and webinar on January 8, 2025 is attached as Exhibit 99.2 to this Current Report on Form 8-K and is incorporated herein by reference.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

Number	Description
99.1	Press Release, dated January 8, 2025.
99.2	Presentation—Jasper Therapeutics: Preliminary BEACON Results, dated January 8, 2025.
104	Cover Page Interactive Data File, formatted in Inline Extensible Business Reporting Language (iXBRL).

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

JASPER THERAPEUTICS, INC.

Date: January 8, 2025

By: /s/ Herb Cross
Name: Herb Cross
Title: Chief Financial Officer

Exhibit 99.1

Jasper Therapeutics Reports Positive Data from BEACON Study of Briquilimab in Chronic Spontaneous Urticaria

Rapid onset of deep and durable clinical responses observed across multiple dosing cohorts with a favorable safety profile

Mean change in UAS7 from baseline of -26.6 observed in the 240mg single dose cohort at 8 weeks, multiple dosing regimens ≥120mg demonstrated UAS7 change of more than -25 points

100% (N=3) Complete Responses (UAS7 = 0) observed in the 240mg single dose cohort at 8 weeks and 66% maintained Well Controlled disease at 12 weeks

Serum tryptase reductions below the lower limit of quantification observed at multiple dose levels

Data supports commencement of CSU registrational program expected to commence second half of 2025

Company to host conference call and webinar today at 8:00 a.m. EDT

REDWOOD CITY, Calif., January 8, 2025 (GLOBE NEWSWIRE) – Jasper Therapeutics, Inc. (Nasdaq: JSPR) (Jasper), a clinical stage biotechnology company focused on development of briquilimab, a novel antibody therapy targeting c-Kit (CD117) to address mast cell driven diseases such as chronic spontaneous urticaria (CSU), chronic inducible urticaria (CIndU) and asthma, today reported positive preliminary data from Jasper's ongoing BEACON Phase 1b/2a study of subcutaneous briquilimab in adult participants with CSU. Substantial reductions in UAS7 were reported, with a mean change from baseline at 8 weeks of -26.6 in the 240mg single-dose cohort and multiple dosing regimens at or above 120mg demonstrating UAS7 changes of more than -25 points. Clinical responses were observed as early as 1-week post-first dose, and Complete Responses (UAS7 = 0) were achieved by patients at each therapeutic dose level (80mg, 120mg, 180mg and 240mg), most notably, all patients in the 240mg single-dose cohort (N=3) maintained Complete Responses through the 8-week time-point. Durability of response was generally dose dependent and reductions in serum tryptase to levels below the lower limit of quantification were observed at multiple dose levels. Briquilimab was well tolerated in the study with a favorable safety profile.

"I am excited to see the preliminary clinical data which demonstrated that treatment with briquilimab led to rapid and durable symptom control in patients with CSU, especially given the omalizumab-experienced population enrolled in the BEACON study," said Thomas B. Casale, M.D., Professor of Medicine and Pediatrics, University of South Florida Morsani College of Medicine. "I am also very encouraged by the safety and tolerability profile observed thus far in both the BEACON and SPOTLIGHT studies. I believe these data support advancing briquilimab into a registrational program following the completion of BEACON, and I look forward to participating in additional studies of briquilimab in chronic urticaria."

"We are very pleased to present the positive preliminary data from the BEACON study, which demonstrates the potential of briquilimab as a leading therapeutic for CSU patients," said Edwin Tucker, Chief Medical Officer of Jasper. "The profound reduction in UAS7 from baseline in multiple cohorts, the dose dependent durability of response and the significant and prolonged drops in mean serum tryptase from baseline demonstrate the potential for deep and durable efficacy of briquilimab in CSU. Combined with the favorable safety profile enabled by our optimal biologic dosing approach, we believe briquilimab has demonstrated the potential to be a leading therapeutic option for patients with CSU. On behalf of the entire Jasper team, I'd like to thank the investigators and the patients who are participating in the study, along with their families and caregivers."

BEACON Study Design and Data Summary:

The BEACON study is a randomized, double-blind, and placebo-controlled Phase 1b/2a trial evaluating multiple ascending doses of subcutaneous briquilimab as a treatment for adult patients with moderate to severe CSU despite high dose antihistamines and treatment with, or who cannot tolerate, omalizumab. The primary endpoints are safety and tolerability of briquilimab and secondary endpoints are focused on clinical activity and PK/PD, including measurement of serum tryptase and mast cells in skin. Primary measurements used to assess clinical activity were the sum of the Hives Severity Score and the daily Itch Severity Score (ISS), as measured via the Urticaria Activity Score over 7 days (UAS7) on a 0 to 42-point scale.

The preliminary data, as of December 31, 2024, includes the results from 49 participants (N=3 at 10mg, N=3 at 40mg, N=6 at 80mg, N=8 at 120mg, N=14 at 180mg, N=3 at 240mg, and N=12 placebo) who completed at least 12 weeks of follow-up following initial dosing with investigational product. Participants had high disease burden as assessed by UAS7 score with mean baseline score of 27.9 in the 120mg dose group, 25.9 in the 180mg dose group, 26.6 in the 240mg dose group, and 28.6 in the placebo group.

Substantial reductions in UAS7 score were reported with multiple dosing regimens at or above 120mg demonstrating mean change from baseline of greater than -25 points at 12 weeks, as well as a mean change from baseline at 8 weeks of -26.6 points in the 240mg single-dose cohort. Complete responses (UAS7 = 0) were achieved by patients treated at each therapeutic dose level (80mg, 120mg, 180mg and 240mg), and all patients in the 240mg single-dose cohort (N=3) maintained Complete Responses through the 8-week time-point. In general, clinical responses following first dose at the 120mg and 180mg dose levels showed durability out to 4-6 weeks, while clinical responses at the 240mg level showed durability out to 8-12 weeks. These data demonstrate that treatment with briquilimab leads to rapid onset of durable and dose-dependent symptom control in patients with CSU.

Single-Dose Clinical Activity Assessments Summary at Week 8

	240 mg Single-Dose (N=3)	**Placebo (N=12)**
UAS7 Changes		
Baseline mean UAS7 (SD)	26.6 (10.9)	28.6 (9.4)
Mean change at Week 8	-26.6	-12.4
Mean difference from placebo	-14.2	-
Clinical Responses		
UAS7≤6 (Well Controlled)	100%	25%
UAS7=0 (Complete Response)	100%	17%

Q8W Dose Clinical Activity Assessments Summary at Week 12

	80mg Q8W (N=6)	120 mg Q8W (N=4)	180mg Q8W (N=7)	Placebo (N=12)
UAS7 Changes				
Baseline mean UAS7 (SD)	31.0 (7.9)	27.0 (7.5)	26.5 (8.0)	28.6 (9.4)
Mean change at Week 12	-9.3	-27.2	-13.2	-9.2
Mean difference from placebo	-0.1	-18.0	-4.0	-
Clinical Responses				
UAS7≤6 (Well Controlled)	33%	75%	43%	8%
UAS7=0 (Complete Response)	17%	50%	29%	8%

Q12W Dose Clinical Activity Assessments Summary at Week 16

	120 mg Q12W (N=4)	180mg Q12W (N=7)	Placebo (N=12)
UAS7 Changes			
Baseline mean UAS7 (SD)	28.8 (10.6)	27.8 (7.8)	28.6 (9.4)
Mean change at Week 16	-29.8	-21.7	-10.1
Mean difference from placebo	-19.7	-11.6	-
Clinical Responses			
UAS7≤6 (Well Controlled)	75%	57%	25%
UAS7=0 (Complete Response)	50%	57%	17%

Mean baseline serum tryptase for participants in the enrolled in the study was within the normal range in all cohorts. Substantial reductions in tryptase were observed as early as the week 1 assessment and were correlated with the onset of clinical responses. Tryptase levels below the lower limit of quantification were reported for 86% (6 of 7) of participants in the 180mg Q8W cohort at week 2, and for 100% (3 of 3) of participants in 240mg single dose cohort at week 1.

Briquilimab was well tolerated in the study, with no dose limiting toxicities observed. Safety observations potentially related to c-Kit blockade were infrequent and generally limited to low grade events, none of which resulted in discontinuations or dose delays and the majority of which resolved during repeat dosing. Predictable decreases in neutrophil counts were observed upon dosing, with counts generally recovering prior to subsequent dose and no association to fever or infection. A single Grade 3 neutropenia event was reported in a participant with prior history of idiopathic neutropenia and thrombocytopenia.

Patients enrolled in the study will continue to be dosed and assessed for safety/tolerability and clinical activity, and Jasper has commenced an open-label extension study in chronic urticarias that will roll over patients from the BEACON to a 180mg Q8W dose upon completion of their initial follow up period. Consistent with the Company's clinical development plan, Jasper submitted for regulatory review of two additional BEACON cohorts, 240mg Q8W (N=8) and 180mg Q8W following a 240mg induction dose (N=8).

Jasper expects to begin a registrational program in CSU with a Phase 2b study expected to commence in the second half of 2025. Final selection of doses for the Phase 2b study will be further informed by additional data at 180mg Q8W from the open-label extension study, as well as by further data from BEACON cohorts evaluating a 360mg single dose, a 240mg Q8W dose and a 180mg Q8W dose following a 240mg loading dose. Data from these additional cohorts are expected to be presented by mid-2025.

"We are very happy to report preliminary data from the BEACON study," said Ronald Martell, President and Chief Executive Officer of Jasper. "The favorable safety profile, rapid onset of durable responses, the pharmacokinetic profile, and the depth and durability of tryptase reductions observed, all support advancing a 240mg dosing regimen into the Phase 2b portion of a CSU registrational program that we plan to commence in the second half of 2025. With positive data in both SPOTLIGHT and BEACON studies and preliminary data on the ETESIAN study in asthma expected in the second half of 2025, we continue to rapidly advance our briquilimab franchise in mast cell driven diseases."

Conference Call / Webinar

Jasper will host a conference call and webinar today at 8:00 a.m. EDT, including remarks from Dr. Thomas B. Casale, M.D., the lead US investigator for the BEACON study. A live question and answer session with management will follow the formal presentations. A link to the webinar, including presentation slides, can be found here.

The presentation slides and a link to the live and archived webcast will also be available on the Events & News – Events page of Jasper's Investor Relations website.

About Briquilimab

Jasper is a clinical-stage biotechnology company focused on developing briquilimab as a therapeutic for chronic mast cell diseases. Briquilimab 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 and asthma. Jasper is currently conducting clinical studies of briquilimab as a treatment in patients with CSU, CIndU or asthma. Briquilimab has a demonstrated efficacy and safety profile in patients and healthy volunteers, with positive clinical outcomes in CSU and CIndU. For more information, please visit us at www.jaspertx.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, CIndU, and asthma and as a leading therapeutic for CSU patients; the potential for deep and durable efficacy of briquilimab in CSU; briquilimab's safety profile; the advancement of briquilimab into a registrational program; additional studies of briquilimab in chronic urticaria; patient enrollment in an open-label extension study in chronic urticarias that will roll over patients from the BEACON to a 180mg Q8W dose; regulatory review of two additional BEACON cohorts, 240mg Q8W (N=8) and 180mg Q8W following a 240mg induction dose (N=8); Jasper's expectations regarding a registrational program in CSU, including the expected timing of the Phase 2b study and dose selection; Jasper's expected timing for presenting data from additional BEACON cohorts; and Jasper's expectations regarding rapidly advancing its briquilimab franchise in mast cell driven diseases. 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 prior test, study and trial results, including preliminary results for the BEACON study reported in this press release, may not be replicated in continuing or future studies and trials; 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, 2023 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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January 8th, 2025

Jasper Therapeutics: Preliminary BEACON Results

NASDAQ: JSPR

JASPER THERAPEUTICS

Safe Harbor Statements

Forward-Looking Statements

This investor presentation and any accompanying oral presentation (together, this “Presentation”) contain forward-looking statements. All statements other than statements of historical fact contained in this Presentation, including statements regarding the future opportunities and prospects of Jasper Therapeutics, Inc. (together with its subsidiary, "Jasper" or the "Company"), including milestones, potential regulatory filings and the anticipated timing thereof, patient enrollment, future timelines, business strategy, and plans and objectives for future operations, are forward-looking statements. Jasper has based these forward-looking statements on its estimates and assumptions and its current expectations and projections about future events. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those contained in the "Risk Factors" section of the Company's Annual Report on Form 10-K for the year ended December 31, 2023, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K that the Company has subsequently filed or may subsequently file with the SEC. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this Presentation are inherently uncertain and may not occur, and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. Accordingly, you should not rely upon forward-looking statements as predictions of future events. Jasper undertakes no obligation to update publicly or revise any forward-looking statements for any reason after the date of this Presentation or to conform these statements to actual results or to changes in Jasper's expectations.

Industry and Market Data

Certain data in this Presentation was obtained from various external sources, and neither the Company nor its affiliates, advisers or representatives has verified such data with independent sources. Accordingly, neither the Company nor any of its affiliates, advisers or representatives makes any representations as to the accuracy or completeness of that data or undertakes any obligation to update such data after the date of this Presentation. Such data involves risks and uncertainties and is subject to change based on various factors.

Trademarks

The trademarks included herein are the property of the owners thereof and are used for reference purposes only. Such use should not be construed as an endorsement of the products or services of the Company.

Today's agenda and presenters

Topic	Presenter	Title (Affiliation)
Opening Remarks and Topline Summary	Ronald Martell	Chief Executive Officer
BEACON Preliminary Results Summary	Edwin Tucker, MD, MRCP	Chief Medical Officer
Briquilimab for Chronic Urticaria	Thomas B Casale, MD	Prof of Medicine and Pediatrics, University of South Florida
Upcoming Milestones and Closing Remarks	Ronald Martell	Chief Executive Officer

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Briquilimab is an investigative drug and is not approved for any indication

Edwin Tucker, MD, MRCP

BEACON Preliminary Results Summary

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Phase 1b/2a BEACON study in chronic spontaneous urticaria

Randomized, double-blind, placebo-controlled, multiple ascending dose study

BEACON TRIAL

Screening/Eligibility

- CSU diagnosis ≥ 6 mos.
- UAS7 ≥ 16
- 18+ years

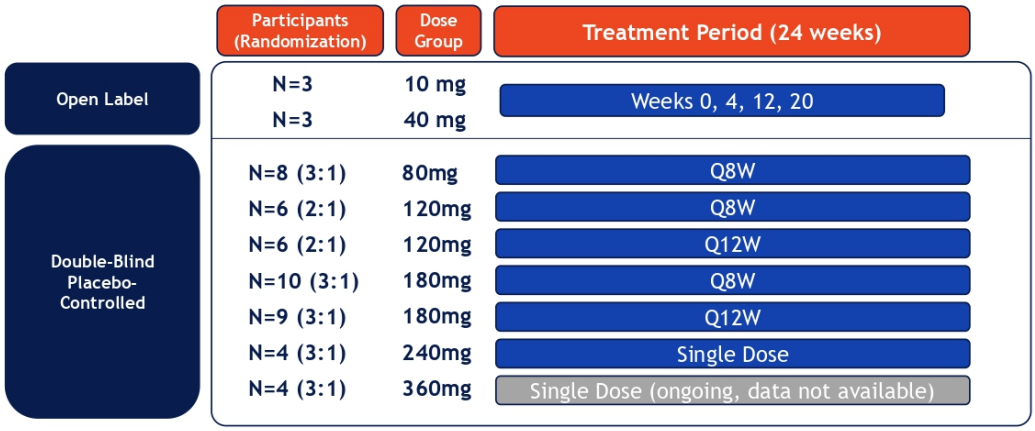
- H1-antihistamine-failed
- Intolerant or refractory to omalizumab

Study Operations

- **US Lead: Thomas Casale, MD**
- **EU Lead: Martin Metz, MD**
- ~30 sites in the US & EU
- n = ~77

Key Assessments

- ✓ **Disease Scores:** UAS7, UCT
- ✓ **Mast Cell Depletion & Recovery:** Serum Tryptase, Skin Biopsies
- ✓ **Safety:** TEAEs, SAEs
- ✓ **PK**



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Briquilimab is an investigative drug and is not approved for any indication

Baseline demographics were generally balanced across the cohorts

Representative of a population of moderate to severe patients with CSU

BEACON TRIAL

	10mg / 40mg[1] (N=6)	80mg Q8W (N=6)	120mg pooled (N=8)	180mg pooled (N=14)	240mg[2] (N=3)	Pooled Placebo (N=12)
Age (years), median (range)	55 (31-63)	63 (22-77)	43 (23-82)	38 (18-73)	44 (29-64)	39 (26-60)
Female Sex, n (%)	6 (100%)	3 (50%)	5 (63%)	7 (50%)	3 (100%)	10 (83%)
Weight (kg), median (range)	66 (55-93)	98 (77-129)	88 (63-122)	84 (64-131)	76 (67-84)	78 (66-110)
BMI, median (range)	25 (22-30)	34 (24-50)	29 (22-43)	31 (22-41)	27 (27-31)	27 (24-42)
UAS7 (0-42), mean (SD)	26.1 (9.5)	31.0 (7.9)	27.9 (8.6)	25.9 (7.8)	26.6 (10.9)	28.6 (9.4)
UCT (0-16), mean (SD)	3.6 (2.8)	3.3 (2.4)	3.7 (1.5)	4.5 (3.1)	3.7 (1.5)	3.7 (3.6)
Serum Tryptase (ug/L), mean (SD)	6.6 (1.4)	8.4 (2.6)	7.8 (5.1)	6.0 (3.2)	4.5 (1.0)	8.5 (4.7)

1 Briquilimab 10mg and 40 mg doses were administered at Week 0, 4, 12 and 20;
2 Briquilimab 240 mg was administered as a single dose

All participants were refractory or intolerant to omalizumab, representing a CSU population of highest unmet medical need

JASPER THERAPEUTICS

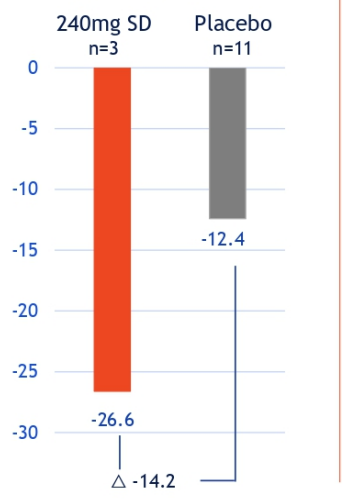
Briquilimab is an investigative drug and is not approved for any indication

Briquilimab demonstrated deep reductions in UAS7 scores

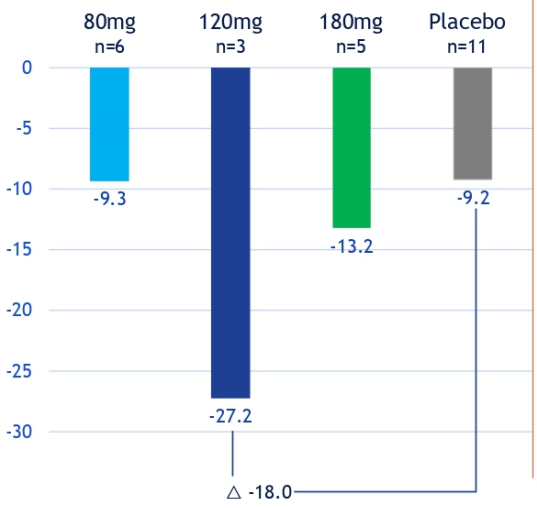
>25pt reduction in UAS7 noted in multiple dosing regimens ≥120mg

BEACON TRIAL

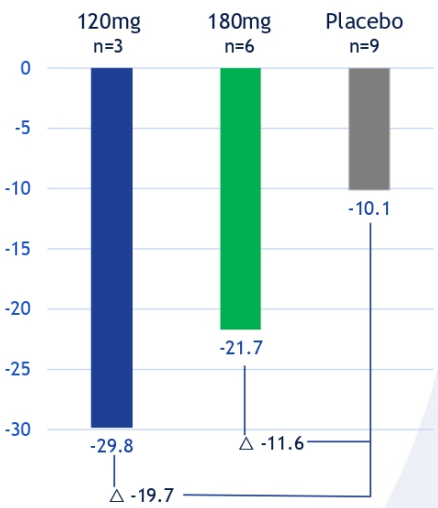
240mg SD UAS7 Mean Change from Baseline at Week 8



Q8W regimens UAS7 Mean Change from Baseline at Week 12



Q12W regimens UAS7 Mean Change from Baseline at Week 16



JASPER THERAPEUTICS

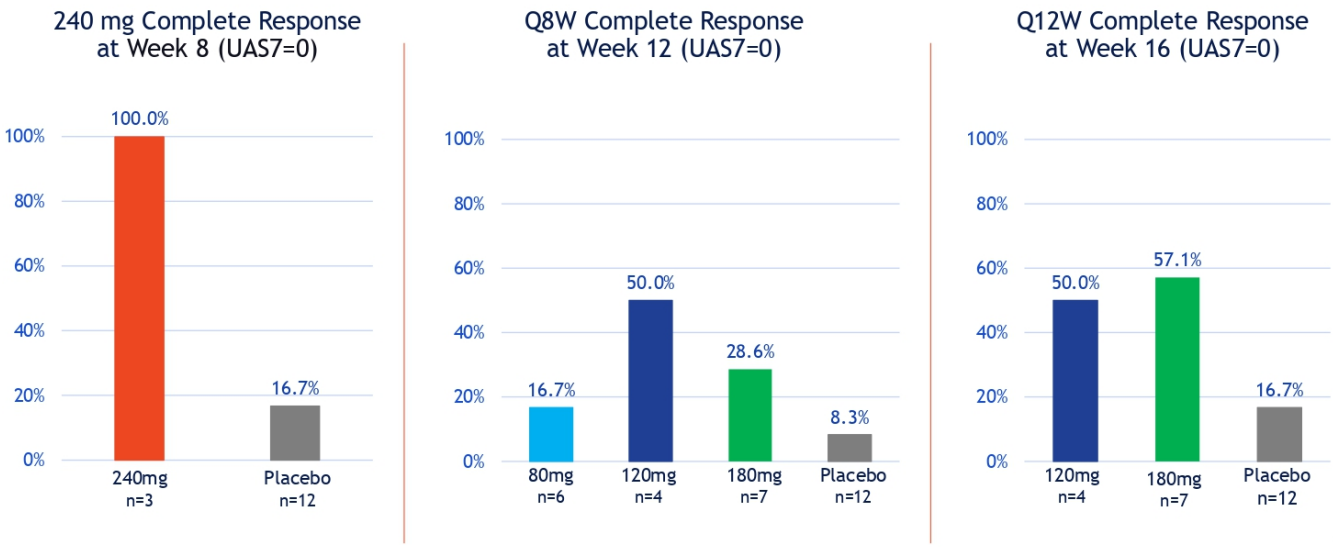
Data cut-off 31 Dec 2024

Briquilimab is an investigative drug and is not approved for any indication

Dose dependent increase in patients achieving Complete Response (UAS7=0)

Complete responses noted at all doses ≥ 80mg

BEACON TRIAL



The last observation carried forward (LOCF) method was used for data imputation

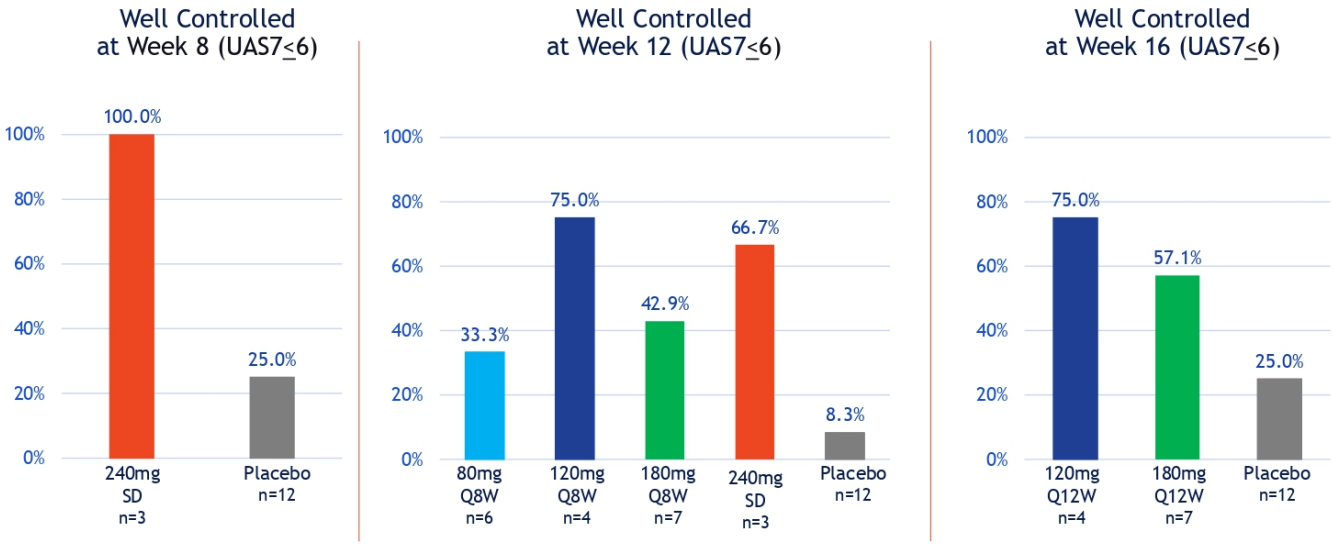
JASPER THERAPEUTICS

Data cut-off 31 Dec 2024

Briquilimab is an investigative drug and is not approved for any indication

Dose dependent increase in patients achieving Well Controlled Disease

50% or more of patients achieved well-controlled disease 4 weeks post-dosing in multiple dose regimens



The last observation carried forward (LOCF) method was used for data imputation

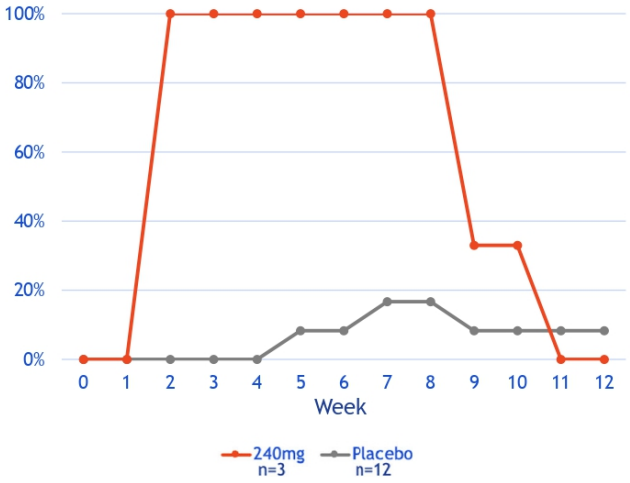
Data cut-off 31 Dec 2024

Briquilimab is an investigative drug and is not approved for any indication

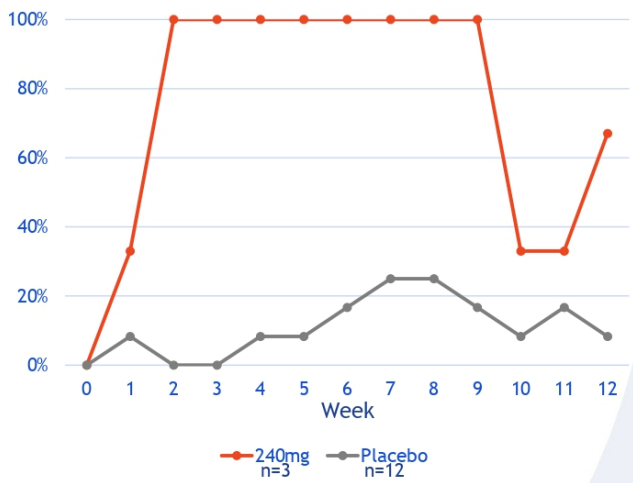
All patients in the 240mg single-dose cohort maintained CR to 8 weeks

All patients achieving CR by week 2, with 66% Well Controlled at Week 12

240mg Complete Response Weeks 1-12 (UAS7=0)



240mg Well Controlled Weeks 1-12 (UAS7 ≤ 6)



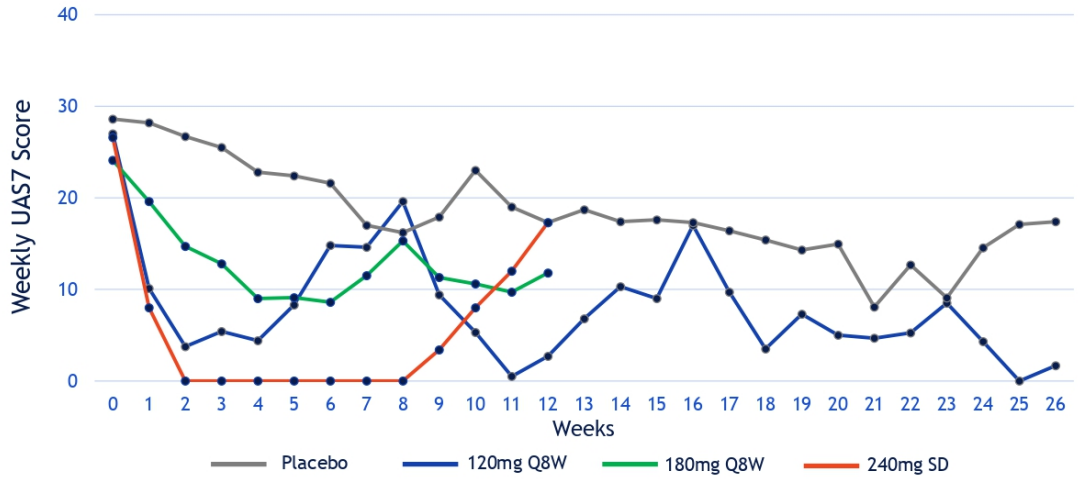
JASPER THERAPEUTICS

Data cut-off 31 Dec 2024

Briquilimab is an investigative drug and is not approved for any indication

Dose dependent UAS7 reductions observed over 26 weeks

Deeper UAS7 reductions observed in subsequent doses

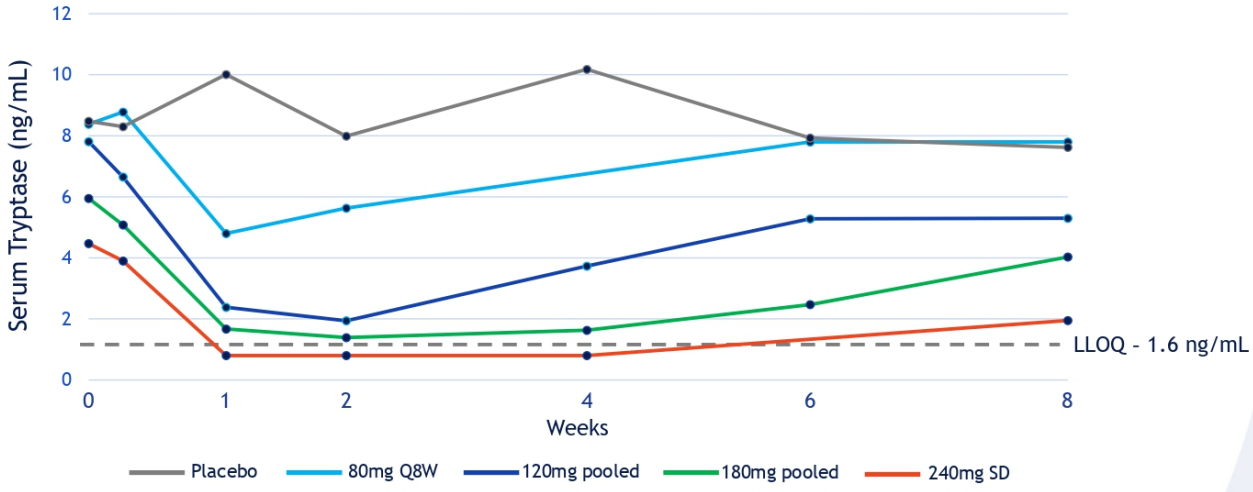


Data cut-off 31 Dec 2024

Briquilimab is an investigative drug and is not approved for any indication

Dose dependent reductions in serum tryptase

Reduction to LLOQ seen in multiple patients at 180mg Q8W and all patients at 240mg dose levels



* All values below LLOQ (1.6 ng/ml) are represented as 50% of LLOQ (0.8 ng/ml)

JASPER THERAPEUTICS

Data cut-off 31 Dec 2024

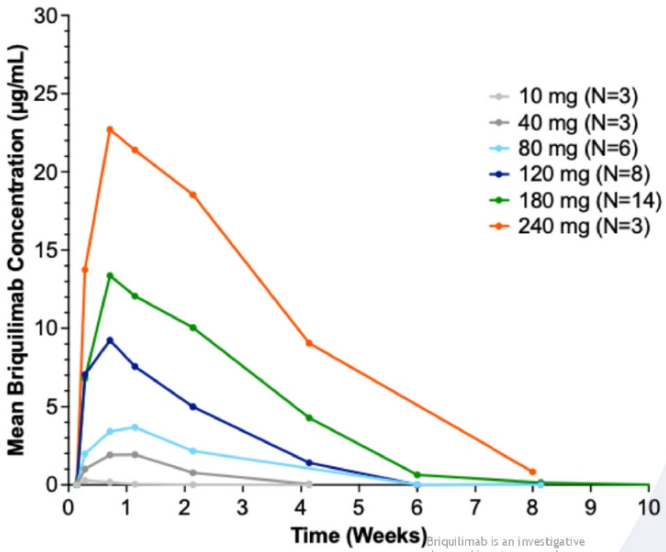
Briquilimab is an investigative drug and is not approved for any indication

Briquilimab PK demonstrates early Cmax consistent with rapid onset of response in patients with CSU

BEACON TRIAL

- Preliminary PK data in patients with CSU indicates briquilimab PK is comparable to historical data in healthy volunteers
- 240mg briquilimab SC Tmax is 4-7 days with a half-life of approximately 9 days
- No accumulation predicted for repeat dosing of 240mg SC briquilimab on a Q8W dosing schedule
- Preliminary data indicate 34% incidence of anti-drug antibodies (ADA) and no clinically meaningful effect of ADAs on briquilimab PK in CSU patients

Briquilimab Serum Concentration over Time in CSU Patients Following SC Administration



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Data cut-off 31 Dec 2024

Briquilimab was well tolerated and demonstrated a favorable safety profile

>24-week exposure for 10mg-180mg doses, 12-weeks for 240mg dose as of 31Dec24 data cut

Number of Participants With	Pooled Briquilimab (N=37) n (%)	Pooled Placebo (N=12) n (%)
Any DLT	0 (0)	0 (0)
Any TEAE	26 (70.3)	8 (66.7)
Any Treatment-Related Serious TEAE	1 (2.7)[1]	0 (0)
Any Hypersensitivity	1 (2.7)[1]	0 (0)
Any Anaphylaxis	0 (0)	0 (0)
Any TEAE Leading to Discontinuation of IP	1 (2.7)[1]	0 (0)
Adverse Event ≥ Grade 3	1 (2.7)[2]	1 (8.3)[3]

Most commonly reported AEs (≥5 participants): nasopharyngitis, fatigue, hair color change, taste changes

[1]Single participant, 180mg Q8W, CoFAR grade 2 hypersensitivity reaction
[2]Single participant, 180mg Q12W, CTCAE grade 3 AE: neutropenia, unrelated - prior history of idiopathic neutropenia, thrombocytopenia
[3]Single participant, placebo, CTCAE grade 3 bronchitis

Data cut-off 31 Dec 2024

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Safety observations possibly related to c-Kit blockade were infrequent and generally limited to low grade events

Majority resolved during repeat dosing and none resulted in discontinuations or dose delays

Adverse Event as reported term	Pooled Briquilimab N=37 (%)	Pooled Placebo N=12 (%)	CTCAE Grade / Comments
Hair color changes	4 (10.8)	1 (8.3)	• 4 reported as Grade 1, 1 Grade unreported • 2 cases reported to be resolved/resolving
Skin discoloration	0 (0)	1 (8.3)	• No skin discoloration observed with patient exposure up to 24 weeks
Taste change/ Hypogeusia	6 (16.2)	0 (0.0)	• All mild, Grade 1 occurring on first dose, 1 recurrence (resolved) • Taste reductions: bitter, salt, umami • Resolved in 4 patients: Median time to resolution of 31 days
Neutropenia	3 (8.1)	1 (8.3)	• Grade 3 neutropenia in a single participant with prior history of idiopathic neutropenia and thrombocytopenia • Grade 1 neutropenia in 3 participants, all resolved prior to subsequent dose • No fevers or infections associated
Neutrophil count decreased	2 (5.4)	0 (0.0)	• 2 Grade 1 decreases in neutrophil counts resolved prior to subsequent dose • No fevers or infections associated

Data cut-off 31 Dec 2024

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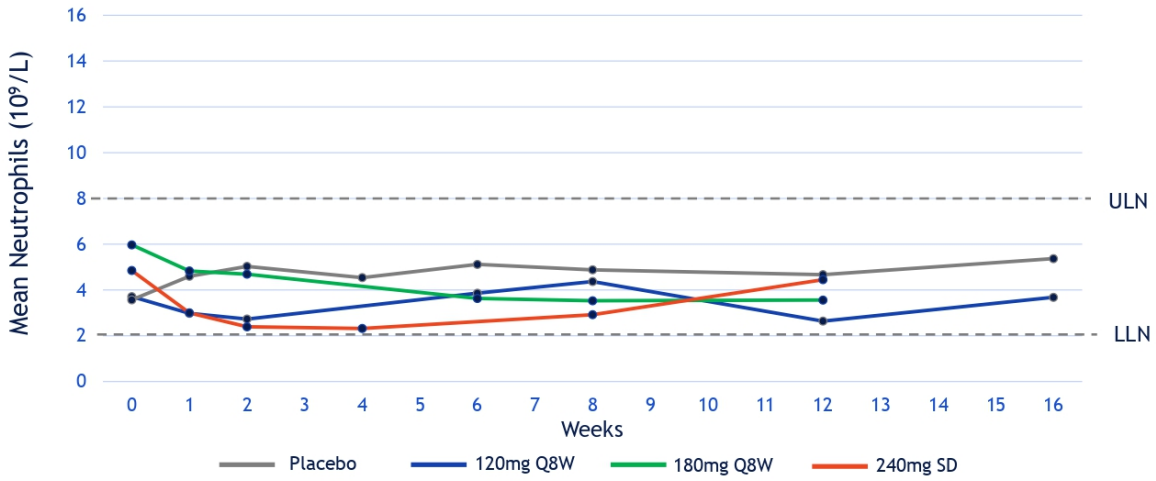
Neutrophil counts generally remained stable, with predictable reduction which subsequently recovered

No discontinuations or dose delays due to reductions in neutrophil counts



Data cut-off 31 Dec 2024 Source: Figure 14.3.4.1

Briquilimab is an investigative drug and is not approved for any indication

Preliminary BEACON study results demonstrate briquilimab achieved rapid, deep and durable responses in patients with moderate to severe CSU

BEACON TRIAL

- Participants had moderate to severe CSU and were omalizumab experienced
  - Clinical responses in this hard-to-treat population are encouraging for a broader CSU population
- Briquilimab demonstrated rapid and deep disease control
  - Rapid onset of effect
    - Clinical responses as early as 1 week post first dose
  - Deep dose-dependent response:
    - Multiple dosing regimens ≥120mg demonstrated UAS7 changes of more than -25 points
    - Deepest responses shown of -29 on the UAS7 scale
  - Complete and durable control demonstrated
    - Complete responses seen at all dose cohorts ≥ 80mg
    - 100% complete control with 240mg by week 2, durable to 8 weeks
    - Repeat dosing shows deepening clinical responses across multiple dose cohorts
- Rapid, dose-dependent tryptase reductions correlated with early onset of clinical response
  - Reduction to LLOQ observed in multiple dose cohorts

Efficacy, safety and PK informs an optimal biologic dose selection for briquilimab CSU registrational program expected to be initiated in 2H 2025

BEACON TRIAL

- Briquilimab was well tolerated and had a favorable safety profile in the study
  - Low and comparable frequency of Grade 1 hair color changes - in both active and placebo
  - Mild taste changes observed on first dose with majority resolving by a median of 31 days
  - No dose delays or discontinuations due to neutrophil reductions and no association with infection
    - Neutrophil recovery between doses
  - Single discontinuation due to AE
- Registrational program in CSU expected to commence second half of 2025
  - Deep and durable efficacy to 240mg dose, combined with the favorable safety profile observed support advancing into Phase 2b portion of a registrational program
- Ongoing trials continue to generate clinical data to support registrational program
  - Expansion of 240mg and 360mg single dose cohorts ongoing
  - Additional cohorts of 240mg Q8W and 240mg induction dose followed by 180mg Q8W
  - Additional 180mg Q8W data from BEACON and SPOTLIGHT Open Label Extension study
  - These data will further inform final dose selection for the Phase 2b portion of our registrational program

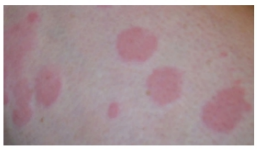
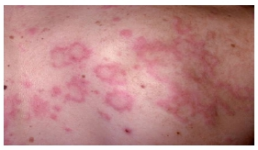
Thomas B Casale, MD
Prof of Medicine and Pediatrics,
University of South Florida

Briquilimab for Chronic Urticaria

JASPER THERAPEUTICS

Moderate-to-severe CSU may lead to significant impact to patient's lives and is associated with poorer outcomes

- CSU is a recurring inflammatory condition of the skin lasting 6 weeks or more, characterized by the development of itchy wheals (hives), angioedema, or both[1]
- CSU has a significant negative impact on daily life including sleep, relationships and ability to work[2]
- CSU is associated with higher risk of suicide, depression, anxiety and all-cause mortality[3]
- Approximately 1.4m patients in the US, Germany, France, Italy, Spain and the UK have moderate to severe CSU[4]
- Current approved therapies limited to anti-histamines and a single anti-IgE biologic (omalizumab)

	Moderate CSU	Severe CSU
Presentation		
	3-5 mod-severe flair-ups weekly	Persistent or severe full-body hives
Severity Score	UAS7 16-27 *Moderate itch and 20-50 wheals*	UAS7 28+ *Severe itch and 50+ wheals*
Quality of Life (DLQI)	10.9	14.3*
Prevalence	**25% of all CSU**	**15% of all CSU**

* Comparable to DLQI in moderate-severe psoriasis (Average DLQI of 14.8); other QoL measures (MCS, PCS) are similar across CSU, AD, and PsO (Nikolaev I, et al. EAACI Hybrid Congress, July 1-3, 2022)

1 Lambert et al. 2021; 2 Weller K, et al. EADV 2023; 3 Kolkhir et al. 2025; 4 Balp MM, et al., EADV 2023, Jasper Market Research and Expert Interviews

Briquilimab is an investigative drug and is not approved for any indication

Preliminary BEACON data in CSU show that briquilimab leads to deep and durable efficacy with a favorable safety profile

- Mast cell degranulation is the central pathogenic driver of chronic urticarias
- Briquilimab blocks c-Kit signaling and may lead to depletion of mast cells
- Preliminary BEACON efficacy results show multiple regimens associated with clinically meaningful declines in UAS7
- Preliminary efficacy results show rapid onset of action, with the 240mg dose showing high 100% CR, durable to 8 weeks
- Preliminary BEACON safety results show low incidence of manageable AEs
- Based on these data, briquilimab appears to a promising new therapy for moderate to severe CSU patients
- Advancement to registrational trials is warranted

BEACON TRIAL

JASPER THERAPEUTICS

1 Moller C et al. Blood (2005)
2 Hundley TR et al. Blood (2004)
3. Arnold JN et al. Annu Rev Immunol (2007)

Briquilimab is an investigative drug and is not approved for any indication

Ronald Martell

Upcoming Milestones and Closing Remarks

JASPER THERAPEUTICS

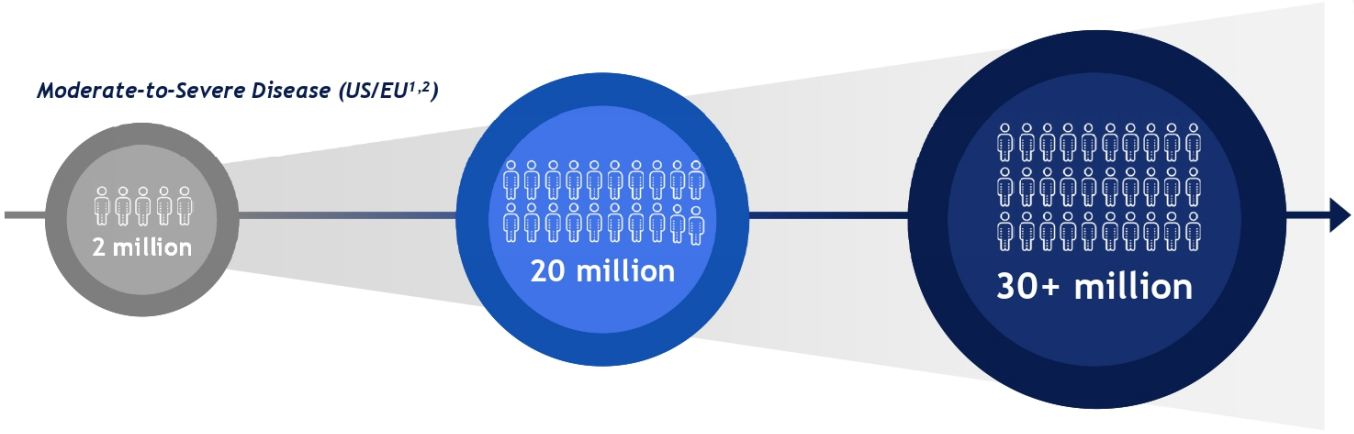
Positive preliminary BEACON study results support commencing briquilimab registrational program in CSU in 2H 2025

- Briquilimab demonstrated rapid onset of action with disease control observed as early as one week after initial dose
- Complete responses were observed at doses as low as 80mg Q8W and 240mg dose demonstrated 100% Complete Responses with durability out to 8 weeks
- Serum tryptase reductions below the lower limit of quantification were observed in multiple dose cohorts
- Favorable safety profile observed in preliminary data support the potential of optimal biologic dosing
  - On target adverse events seen were low-grade and at low incidence rates
  - Many of the possible on-target AEs resolved between doses
- Additional BEACON cohorts and the open label extension study will further inform final dose selection for Phase 2b study planned to commence 2H 2025

JASPER THERAPEUTICS

Briquilimab is an investigative drug and is not approved for any indication

Briquilimab has the potential to be a major immunology franchise by delivering control to millions of patients with mast-cell driven diseases



Chronic Atopic and Mast Cell Driven Diseases

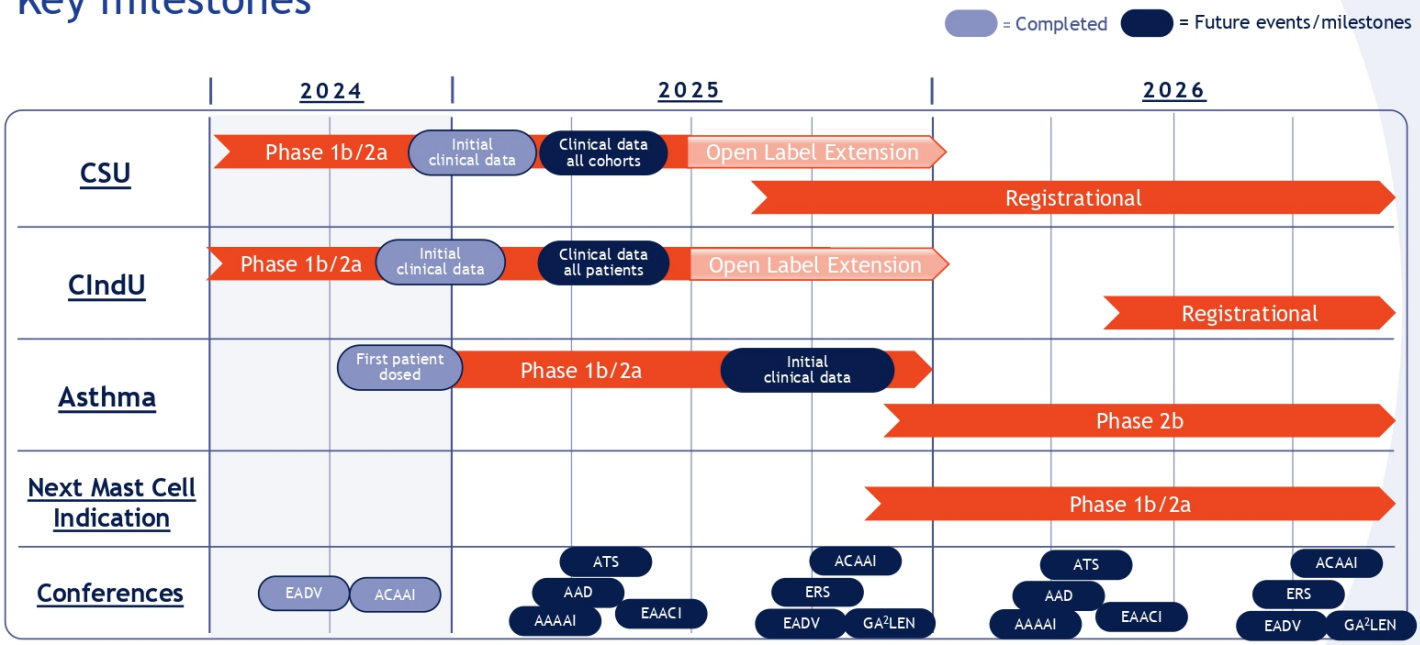
- Chronic Spontaneous Urticaria
- Chronic Inducible Urticaria
- Asthma
- COPD
- Chronic Rhinosinusitis with Nasal Polyps
- Prurigo Nodularis
- Atopic Dermatitis
- Eosinophilic Esophagitis
- IBD
- Food Allergies

JASPER THERAPEUTICS

1 EvaluatePharma; 2 Databridge Market Research (allergic rhinitis)

Briquilimab is an investigative drug and is not approved for any indication

Key milestones



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Q&A

January 8th, 2025

Jasper Therapeutics: Preliminary BEACON Results

NASDAQ: JSPR

JASPER THERAPEUTICS