Jasper Therapeutics

Corporate Presentation

June 2024

JASPER THERAPEUTICS

Safe Harbor Statements

Forward-Looking Statements

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

Briquilimab: Franchise Potential in Mast Cell Diseases

c-Kit inhibition
clinically validated MOA in mast cell diseases

- c-Kit inhibition is the only therapeutic mechanism shown to significantly deplete mast cells
- Mast cell depletion has unique potential to deliver safe and durable disease control
- c-Kit inhibition has demonstrated clinical proof of concept in multiple mast cell mediated diseases

Briquilimab
a potent c-Kit inhibitor

- Briquilimab is a potent c-Kit inhibitor proven to drive mast cell depletion
- Briquilimab could allow for less frequent dosing
- Optimal biologic dosing and PK profile could minimize unwanted adverse effects

Robust pipeline
multiple company-led clinical programs

- CSU: Enrolling patients in Phase 1b/2a BEACON study (initial data expected 3Q 2024)
- CIndU: Enrolling patients in Phase 1b/2a SPOTLIGHT study (initial data expected 2H 2024)
- Asthma: Enrollment in Phase 1b/2a study expected to commence Q4 2024
- Additional mast cell mediated indications under evaluation

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Expanded portfolio presents exciting new opportunities in mast cell diseases

Investigator Sponsored Studies

Indication	Sponsor	Preclinical	Phase 1	Phase 2	Phase 3	Program Milestones
Briquilimab						
Mast Cell Diseases (Subcutaneous)						
Chronic Spontaneous Urticaria	JASPER THERAPEUTICS	BEACON				• Phase 1b/2a being conducted in the US and EU • Actively enrolling patients • Initial clinical data expected in 3Q 2024
Chronic Inducible Urticaria	JASPER THERAPEUTICS	SPOTLIGHT				• Phase 1b/2a study being conducted in the EU • Actively enrolling patients • Initial clinical data expected in 2H 2024
Asthma	JASPER THERAPEUTICS					• Enrollment in Phase 1b/2a expected Q4 2024 • Initial clinical data expected 2H 2025
Stem Cell Diseases (Intravenous)						
Low-to-Intermediate Risk MDS	JASPER THERAPEUTICS					• Enrolling patients • Initial clinical data expected 2H 2024
SCID	JASPER THERAPEUTICS					• Enrolling patients • Discussing potential BLA filing with the FDA
Fanconi Anemia	Stanford University					• First 6 patients achieved full chimerism & count recovery; expansion to Phase 2a (enrolling)
SCD / CGD / GATA2 MDS	NIH					• First 3 patients with full chimerism & Hb increase (SCD) • Enrolling patients (CGD) • Study start up (GATA2 MDS)

SCD, sickle cell disease; CGD, chronic granulomatous disease; MDS, myelodysplastic syndrome.

Jasper maintains full worldwide rights to develop and commercialize briquilimab in all indications

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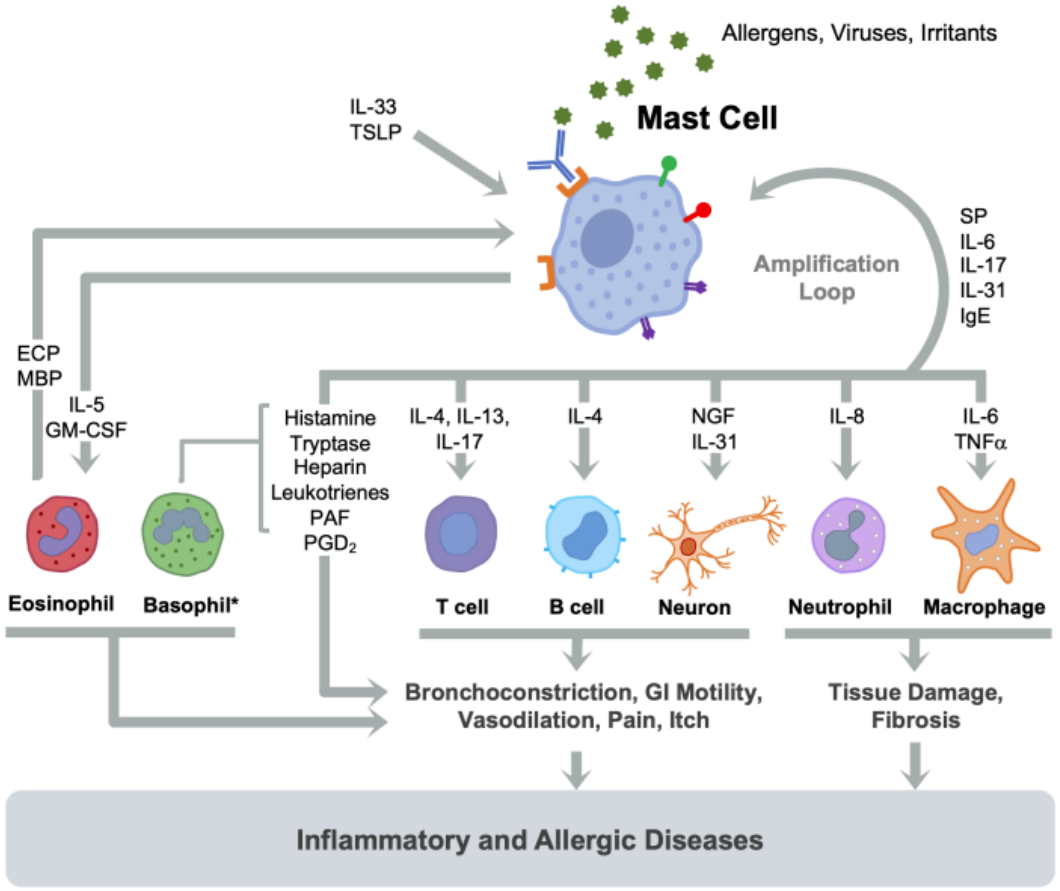
Mast cells are the most potent drivers of inflammatory response in skin, lungs and gut



Metz et al. Allergy (2023)

- Mast cells are primitive immune cells involved in protection against venom and parasitic infection
- Mast cells triggered by allergens, viruses and other irritants degranulate and release pro-inflammatory compounds implicated in large number of immunologic diseases
- Limited function or need for skin mast cells in modern settings

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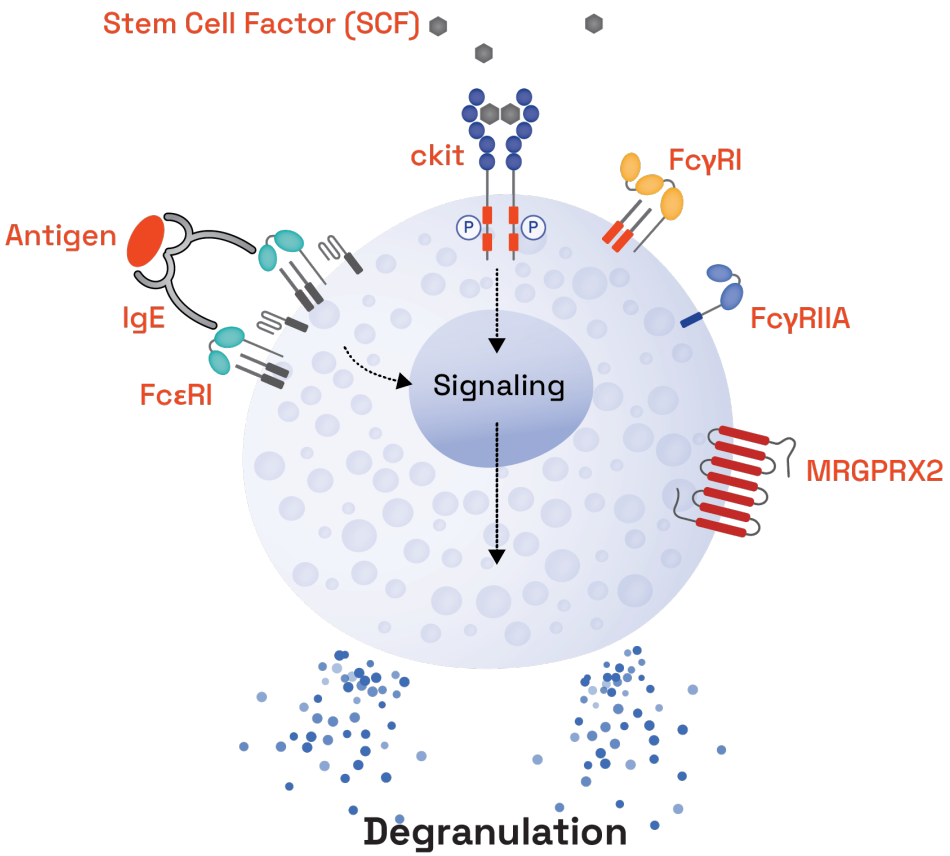
Mast cells are key drivers of the inflammatory response in a number of immunologic diseases with high unmet need



- Activated mast cells are the perpetrating cell driving diseases such as:
  - Asthma
  - Atopic Dermatitis
  - Chronic Rhinosinusitis
  - COPD
  - Eosinophilic Esophagitis (EoE)
  - Prurigo Nodularis
  - Urticaria
- Currently approved therapies targeting mast cell driven diseases rely on indirect mast inhibition and have limited efficacy and durability of response

Theoharides et al. N Engl J Med. (2015)

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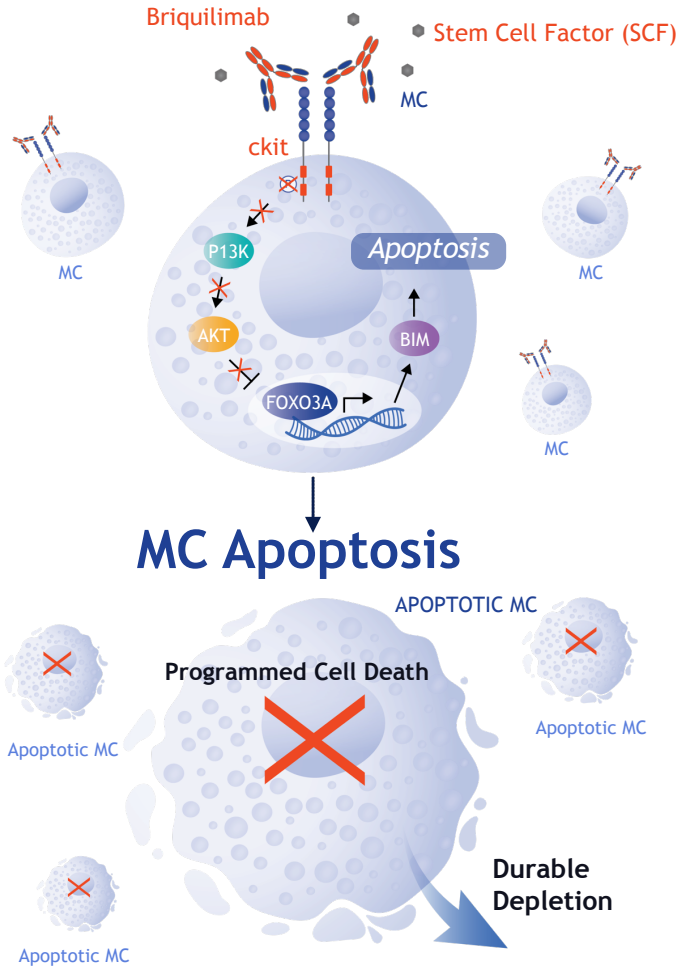
Depletion of mast cells by anti-c-Kit monoclonal antibody blockade is a novel approach with potential to deliver safe and durable disease control

- Briquilimab is an aglycosylated IgG1 anti c-Kit antibody with high affinity to c-Kit
  - Aglycosylated c-Kit antibodies avoid indiscriminate ADCC driven killing of other c-Kit expressing cells[1]
  - Kd < 5pM affinity to human c-Kit with IC50 ~ 70pM
  - Human mast cell survival bioassay IC50 ~12.5nM
  - Half life of 9 days
- Briquilimab blocks c-Kit signaling at the SCF ligand binding site on the receptor triggering apoptosis
  - Mast cell depletion occurs within hours to days
- Mast cell recovery in the skin takes 3 months or longer[2], potentially leading to durable disease control



1. Arnold JN et al. Annu Rev Immunol (2007)
2. Maurer et al, GA²LEN Global Urticaria Forum – Berlin, December 6, 2022

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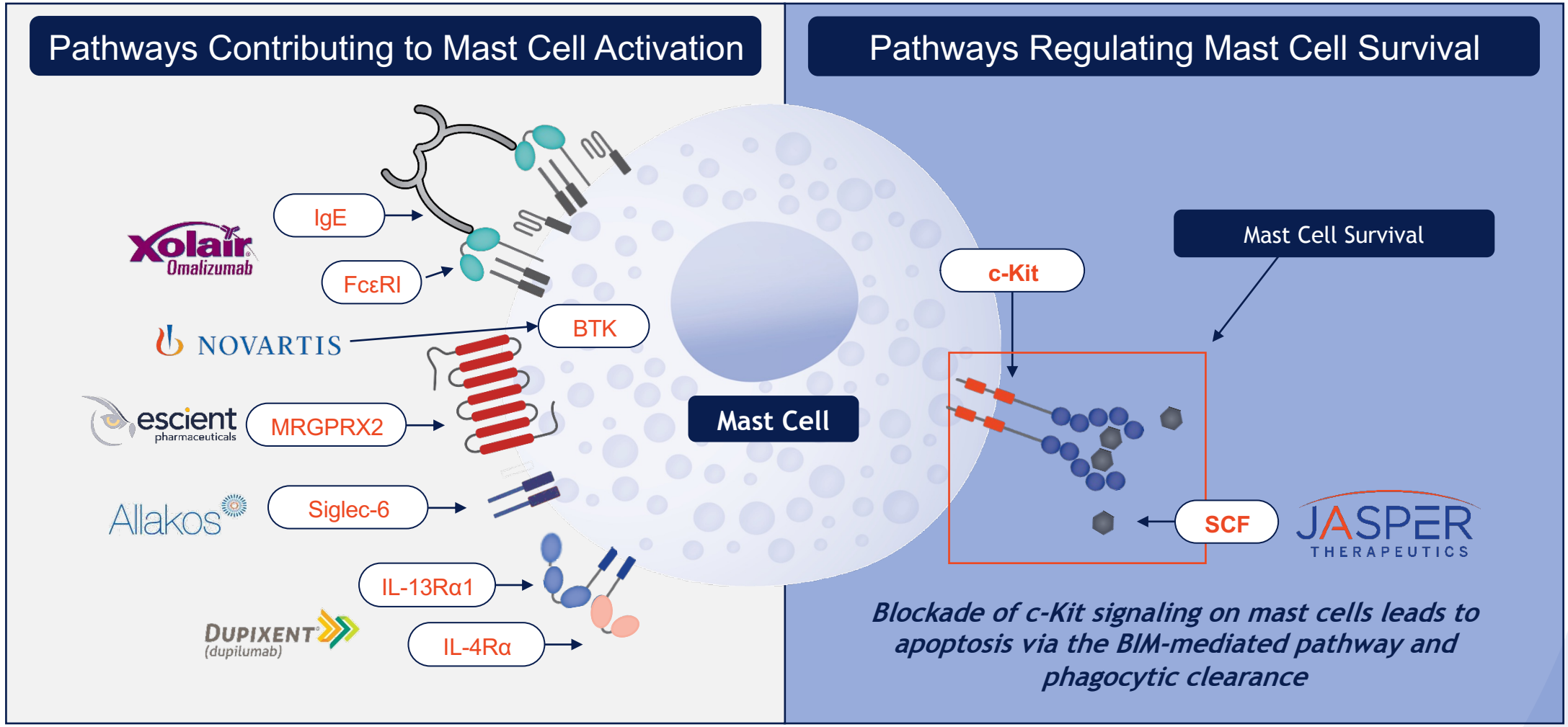
Mast cell depletion may lead to deeper and more durable efficacy compared to inhibition and silencing approaches



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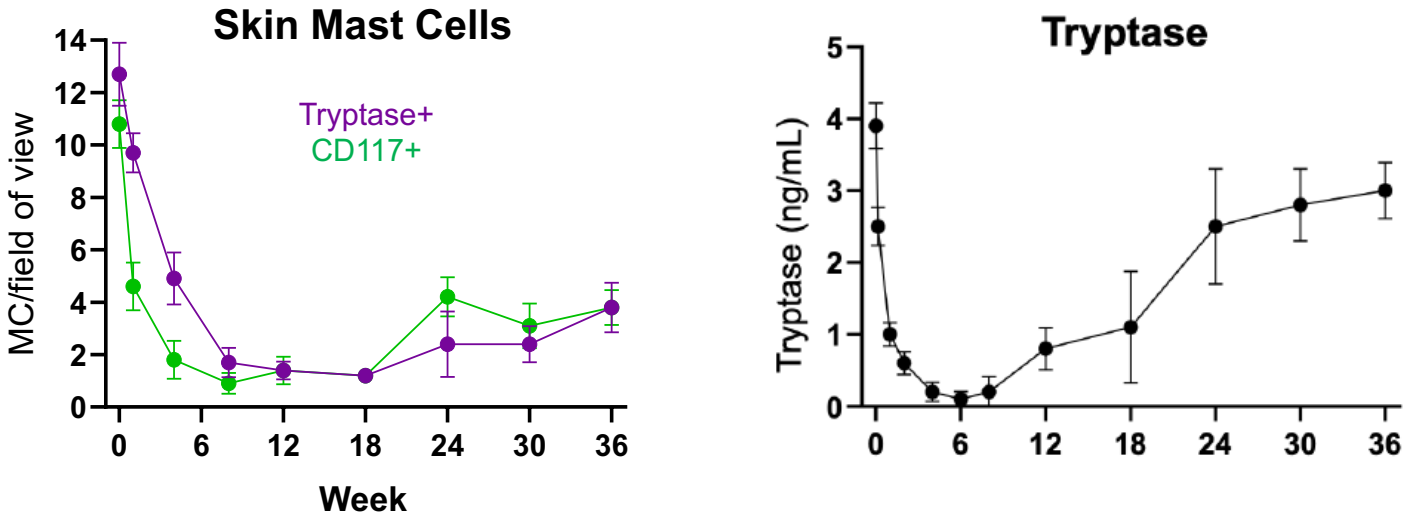
Single administration of anti-c-Kit antibody leads to rapid and durable depletion of skin mast cells

- Significant depletion of mast cells occurs within one week following dosing
- Serum tryptase reduction correlates to mast cell depletion
- Serum tryptase recovery precedes return of urticarial symptoms and skin mast cells
- Following depletion, mast cell recovery in the skin takes at least three months[1]

Single Dose of Barzolvolimab in CIndU (3 mg/kg IV)



Minimal recovery of skin mast cells by week 36 following single administration of barzolvolimab IV in CIndU patients[1]

1 Maurer et al, GA²LEN Global Urticaria Forum – Berlin, December 6, 2022

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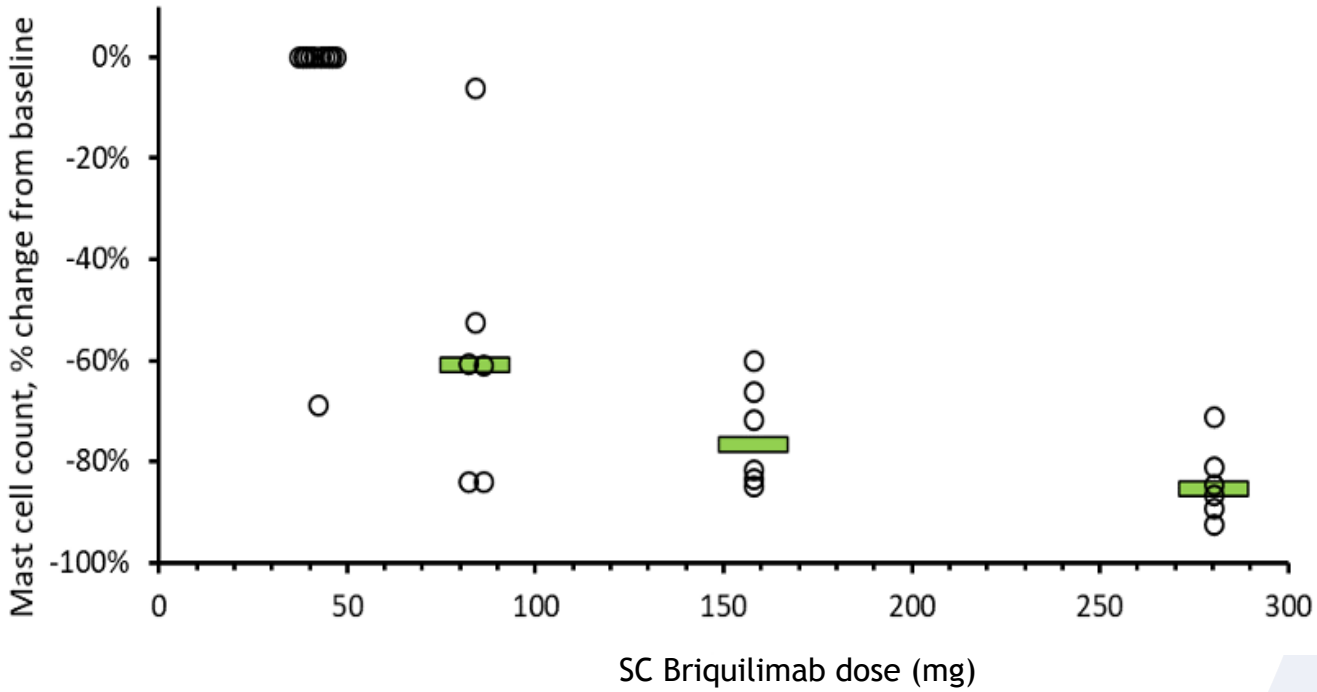
Briquilimab significantly depletes skin mast cells in humans at subcutaneous (SC) doses above ~80 mg

- Single SC dose at or above ~80 mg potently depletes mast cells in the skin of healthy volunteers
- Cmax reached at ~day 5
- Depletion begins occurring as early 7 days following SC dosing
- Robust depletion at day 29
- Briquilimab's favorable pharmacokinetic properties may enable optimal biologic dosing

Briquilimab Healthy Volunteer Phase 1 Subcutaneous Study

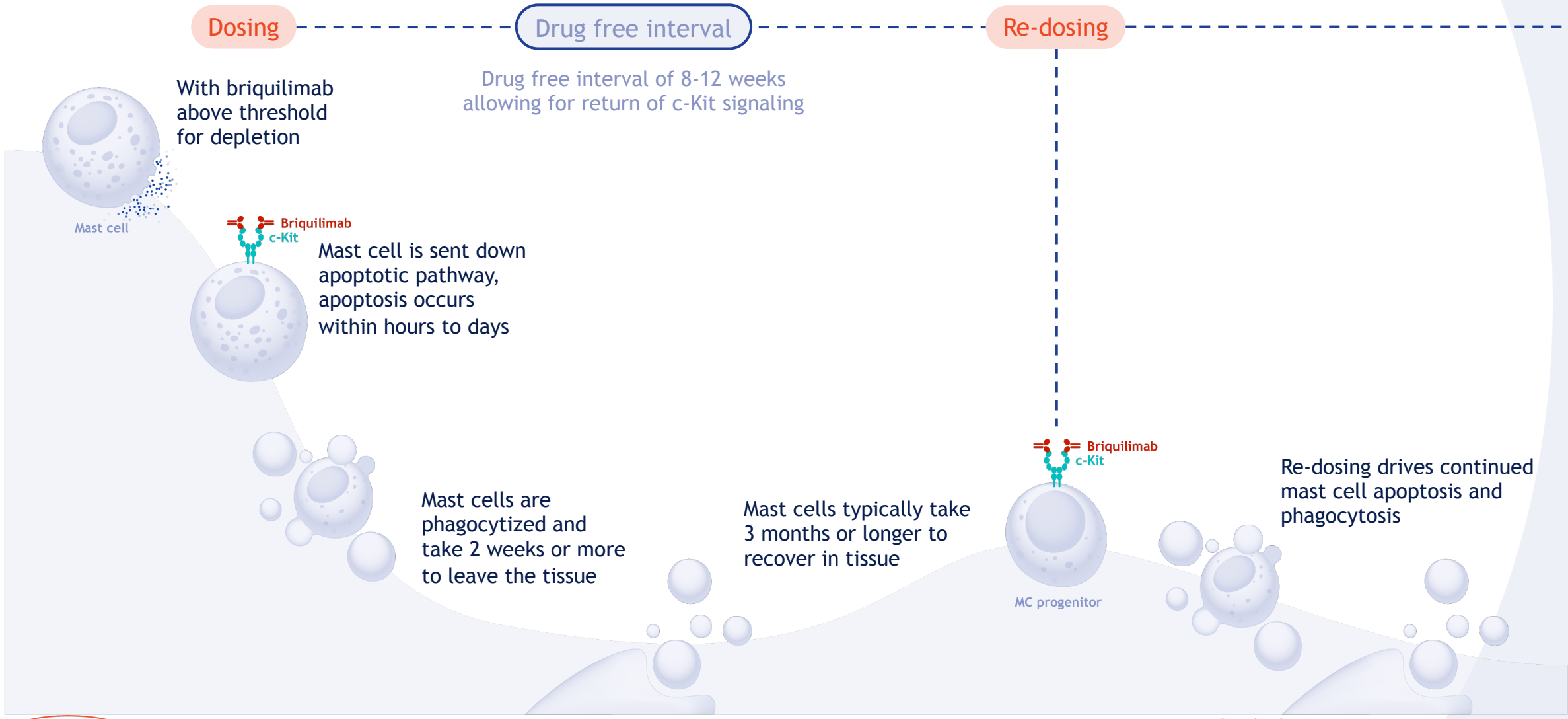
Skin mast cell depletion 4 weeks after single dose (42 mg, 84mg, 158mg, 280mg)[1]



1 Jasper internal data (Phase 1a, healthy volunteer study); Dose is adjusted to body weight (mg/kg) on graph. Skin biopsies were used to count mast cells.

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

Briquilimab design and characteristics enable optimal biologic dosing and could minimize unwanted effects of c-Kit inhibition



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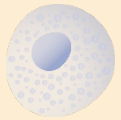
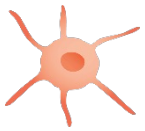
Transient blockade of c-Kit leads to temporary and reversible effects on other cells expressing c-Kit

Cell type	Role of c-Kit	Impact of c-Kit Blockade	Benefit of Short Half-Life Exposure
 **Mast cell**	Survival signal	Mast cell apoptosis via the Bim-mediated pathway[1]	**Mast cells are depleted and take months to repopulate**
 **Stem Cell (HSC)**	Cellular maintenance	Differentiation and exit out of the bone marrow niche[2]	**Mild, transient drop in a subset of cycling neutrophils and reticulocytes** with rapid recovery expected after c-Kit signaling restored
 **Melanocyte**	Proliferation and melanin production	Blocks melanocyte proliferation and melanogenesis[3]	**Potential graying** with prolonged c-Kit inhibition and pigmentation expected to return after c-Kit signaling restored
 **Spermatogonial Progenitor**	Downstream survival signal	Downstream (non-stem cell) progenitor cell apoptosis[4]	**Transient drop in sperm count**, and effects on fully reversible given lack of effect on spermatogonial stem cells (SSCs)
 **Taste Cell**	Cellular maintenance	Disruption of specific mature taste cell subpopulations[5]	**Potential impairment of salt and umami taste** with rapid recovery expected to return after c-Kit signaling restored

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1 Alfredsson J, et al. Cell Death and Differentiation (2005)
2 Shin JY, et al. Journal of Experimental Medicine (2014)
3 Alexeev V, Yoon K, Journal of Investigative Dermatology (2006)
4 Morimoto H, et al. PLoS ONE (2009); 5 Choo E, Dando R. Chemosensory Perception (2019).

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

Briquilimab safety profile to-date supports development in a wide variety of mast cell diseases

- Briquilimab's dosing schedule and favorable elimination kinetics may allow for an improved safety profile

- Low frequency of ADAs (14%) and do not appear to affect PK

Relevant Preclinical & Clinical Experience

- NHP Chronic Toxicology Study
  - Paleness in skin & fur, depletion of colonic mast cells, decrease in reticulocytes and RBC mass, impact on spermatogenesis
  - All effects, except for paleness in skin/fur, reversible at highest dose of 300mg/kg weekly for 26 weeks

- Healthy Volunteer Subcutaneous Studies (n=77 briquilimab-treated)
  - TEAEs in the HV studies, in the highest frequency of reporting, were Headache, Nausea, Upper Respiratory Tract Infection, Back Pain and Dizziness
    - All were mild or moderate in severity and all resolved with no medical intervention
  - One Grade 3 allergic reaction reported

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Depletion of mast cells by anti-c-Kit monoclonal antibody blockade is a novel approach to treat mast cell driven diseases

Rapid onset of effect: Mast cell depletion occurs within days[1]

Clinical validation: Mast cells are critical effector cells in several diseases

Duration of response: Once depleted, mast cells take at least 3 months to recover, potentially leading to convenient dosing at Q12W[3]

Specificity of response: Mast cell depletion leaves other healthy adaptive and innate immune responses intact[4]

Response across populations: c-Kit inhibition has been shown to benefit in several mast cell driven diseases, including chronic urticarias, PN and asthma, among others[2,3,5]

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1 Jasper internal data (Phase 1a, healthy volunteer study); 2 Barzolvolimab Phase 2 Topline CSU & Phase 1b PN Data, November 6, 2023; 3 Maurer et al, GA²LEN Global Urticaria Forum – Berlin, December 6, 2022; 4 Tsai M, Grimbaldeston M, Galli S, "Mast cells and immunoregulation/immunomodulation", Mast Cell Biology: Contemporary and Emerging Topics, 2000; 5 Barzolvolimab Phase 1b MAD CSU Updated Study Results, AAAAI – San Antonio, February 26, 2023.

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Briquilimab in Chronic Urticaria

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Briquilimab Phase 1b/2a BEACON study in patients with Chronic Spontaneous Urticaria (CSU) ongoing

BEACON TRIAL

Study Goal: identify the optimal therapeutic doses & dosing frequency of subcutaneous briquilimab to inform future registrational trials

Key Objectives:

- Study multiple briquilimab dose levels, and intervals up to every 12 weeks to determine optimal biologic dosing via assessment of:
  - Mast cell depletion and disease symptom/disease modifications
  - Briquilimab drug clearance
  - Time to return of disease symptoms
  - Briquilimab effect on other c-Kit expressing cell lineages
- Identify dose and dosing schedule for registrational trial

Status: Patient enrollment ongoing at sites in US and EU

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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
- Inadequate response to omalizumab

Study Operations

- **US Lead: Tom Casale, MD**
- **EU Lead: Marcus Maurer, MD**
- ~30 sites in the US & EU
- N = ~38

Key Assessments

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

	Patients (Randomization)	Dose (Frequency)	Cohorts	Key Assessments & Follow Up
Part 1 Open Label (n=6)	3+3 3+3	10 mg 40 mg	Dose W0, 4, 12, 20 Dose W0, 4, 12, 20	Day 8 - Safety Assessment Week 12 - UAS7 Efficacy Assessment 24 week - Follow Up
Part 2 Double-Blind Placebo-Controlled (n=28)	n=8 (3:1) n=6 (2:1) n=6 (2:1) n=8 (3:1)	80 mg (Q8W) 120 mg (Q8W) 120 mg (Q12W) 180 mg (Q12W)	Dose W0, 8, 16, 24 Dose W0, 8, 16, 24 Dose W0, 12, 24 Dose W0, 12, 24	Day 8 - Safety Assessment Week 12 - UAS7 Efficacy Assessment* 24 week - Follow Up
Part 3 Double-Blind Placebo-Controlled (n=4)	n=4 (3:1)	240 mg	Single Dose	Day 8 - Safety Assessment Week 12 - UAS7 Efficacy Assessment* 36 week - Follow Up

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* Interim analyses built into the design for a 12-week efficacy endpoint readout

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Briquilimab Phase 1b/2a SPOTLIGHT study in patients with Chronic Inducible Urticaria (CIndU)

SPOTLIGHT TRIAL

Study Goal: identify therapeutic doses of subcutaneous briquilimab to inform future registrational trials

Key Objectives:

- Assess the effects of single dose briquilimab on mast cell depletion and disease symptoms/disease modification to inform optimal biologic dosing in future studies
- Demonstration of efficacy and safety in a second indication
- Provocation study enables a clear demonstration of potential drug effect

Status: Patient enrollment ongoing at sites in EU

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Briquilimab Phase 1b/2a SPOTLIGHT Study in CIndU

Open-Label, Cold Urticaria & Symptomatic Dermographism, Single Ascending Dose Study

SPOTLIGHT TRIAL

Screening/Eligibility

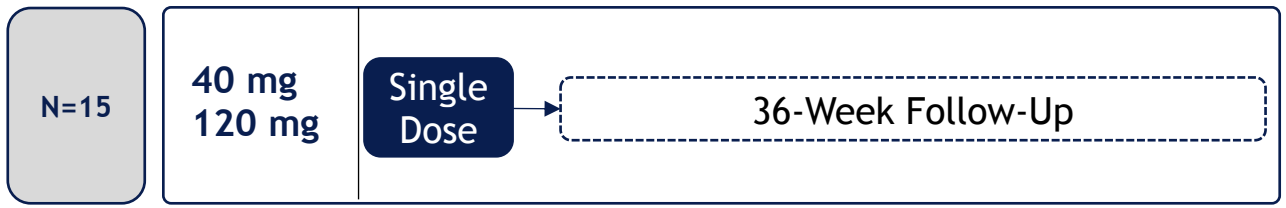
- Diagnosis of Cold Urticaria (ColdU) or Symptomatic Dermographism (SD) for ≥ 3 mos.
- H1-antihistamine-failed
- 18+ years

Study Operations

- **EU Lead: Marcus Maurer, MD**
- ~5 sites in the EU
- N = ~15

Key Assessments

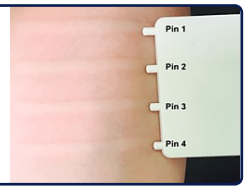
- **Provocation Test:** TempTest (ColdU), FricTest (SD)
- **Disease Scores:** UCT
- **Mast Cell Depletion & Recovery:** Serum Tryptase, Skin Biopsies
- **Safety:** TEAEs, SAEs



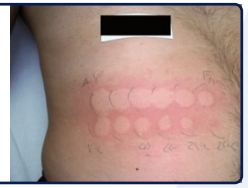
Provocation test measured at 12 weeks (Primary Endpoint)

Provocation Tests Used for Clinical Evaluation

Symptomatic Dermographism
FricTest



Cold Urticaria
TempTest



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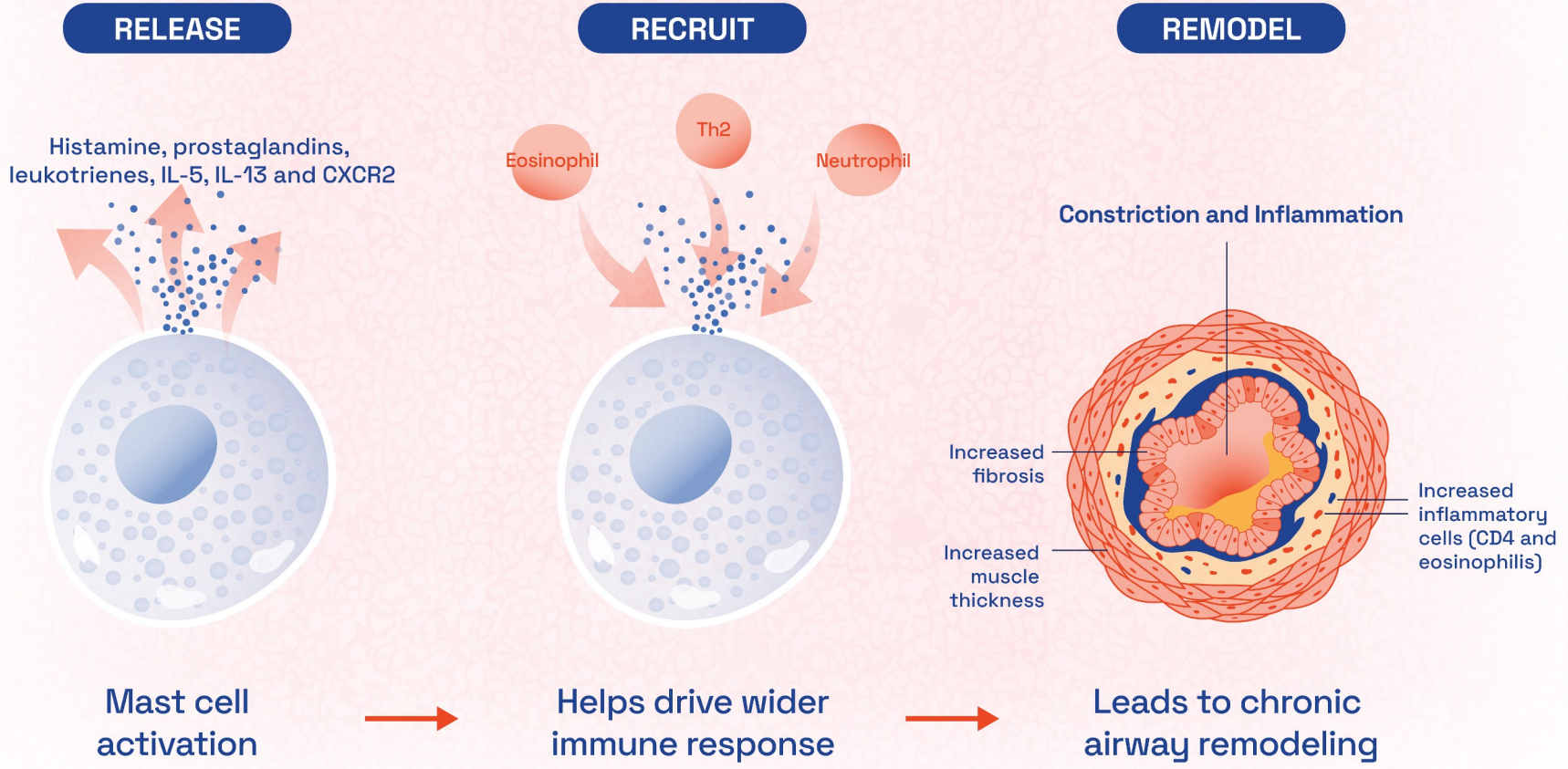
Briquilimab in Asthma

Mast cells play a critical role in allergic inflammation and tissue remodeling in asthma

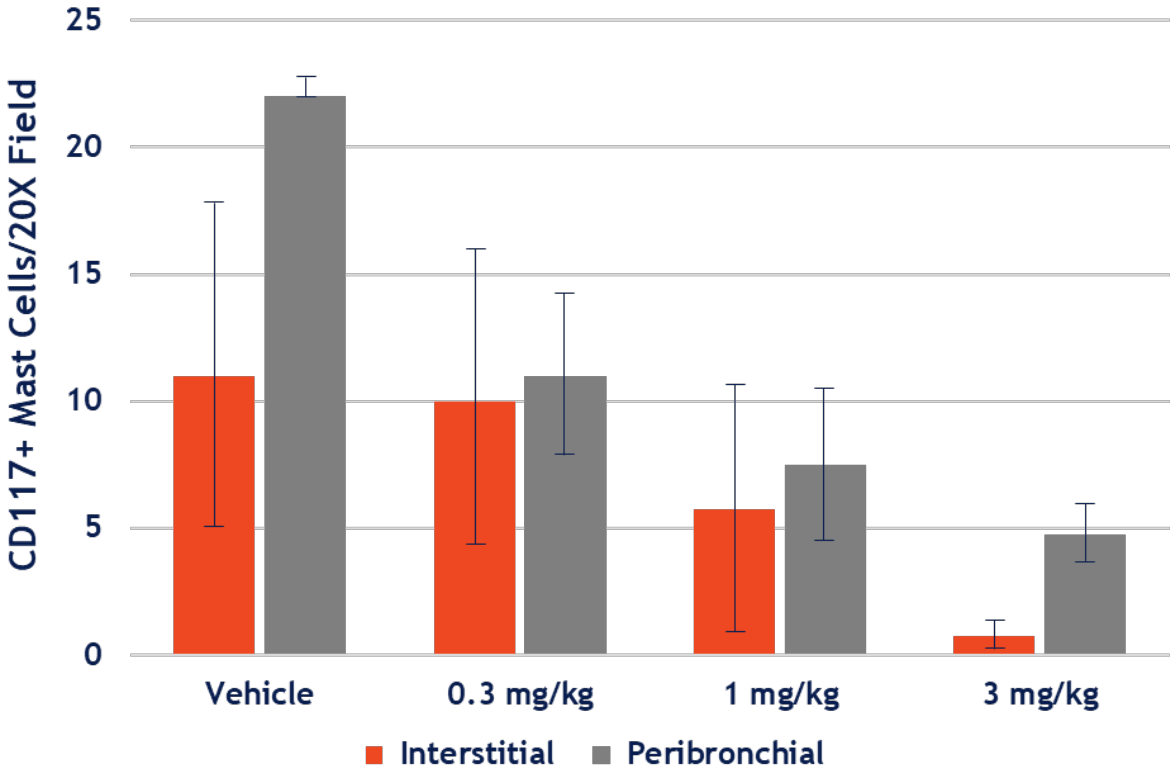
- Mast cells are distributed throughout multiple compartments in the lung[1]
- Mast cells release mediators and recruit other cell types into the airway that drive inflammation throughout all phases of the asthmatic response[2]



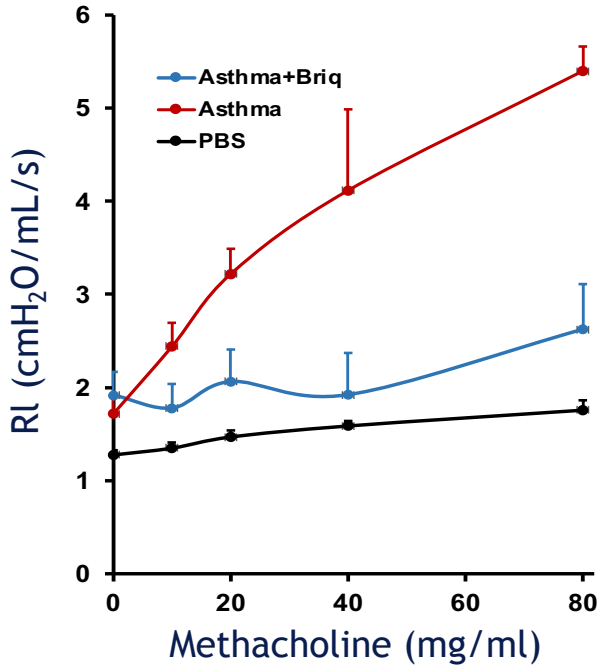
1 Méndez-Enríquez E, Hallgren J. Mast cells and their progenitors in allergic asthma. Front Immunol. 2019;10:442022.
2 Galli SJ, Tsai M, Piliponsky AM. The development of allergic inflammation. Nature. 2008;454(7203):445-454.

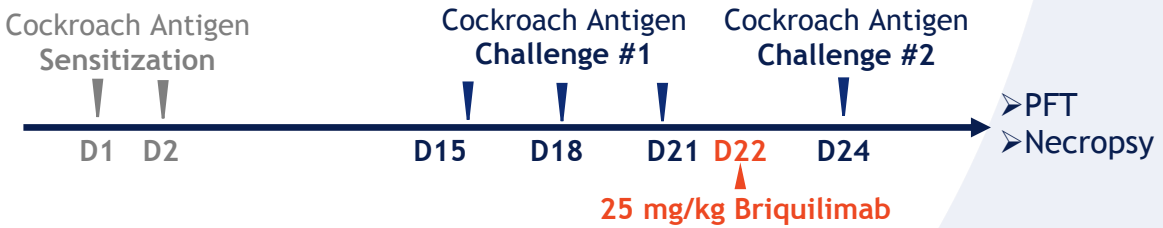
Single dose of briquilimab depleted lung mast cells in NHP and reduced asthmatic response to allergen in Jasper c-Kit Mouse™

Lung Mast Cell Counts in African Green Monkeys



Jasper c-Kit Mouse™ - Pulmonary Resistance





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1 Jasper Internal Data
2 AAAAI February 23-26, 2024.

c-Kit inhibition in severe asthma is well supported across preclinical and clinical Phase 2 and Phase 3 data sets

- ✓ Mast cells are central to asthma pathophysiology[1]
- ✓ Preclinical evidence shows that briquilimab depletes lung mast cells and reduces asthmatic response to allergen[2]
- ✓ Clinical evidence that c-Kit inhibition improves airway response and reduces exacerbations across severe asthma endotypes[3,4]
  - ✓ Imatinib Phase 2 data - challenge model
  - ✓ Masitinib Phase 3 data – reduction in exacerbations

Airway Hyperresponsiveness

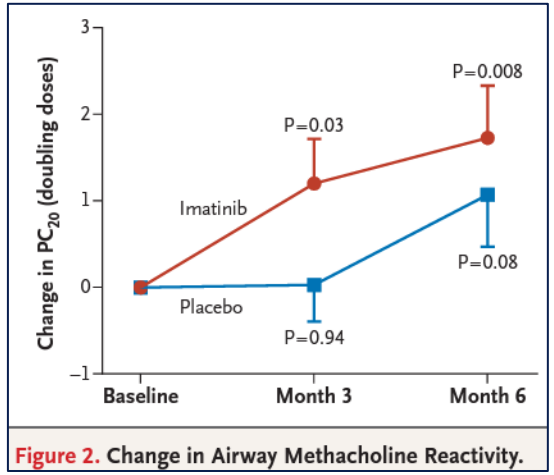

Figure 2. Change in Airway Methacholine Reactivity.

Serum Tryptase

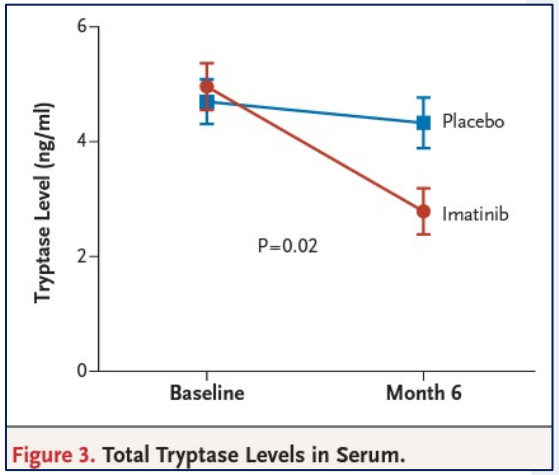

Figure 3. Total Tryptase Levels in Serum.

In patients with severe asthma, imatinib decreased airway hyperresponsiveness, MC counts, and tryptase release[3]

1 Galli SJ, Tsai M, Piliponsky AM. The development of allergic inflammation. Nature. 2008;454(7203):445-454.

2 Yu, M, et al. "Briquilimab, an Anti-CD117 (c-Kit) Antibody, Prevents Cockroach Allergen-Induced Allergic Asthma in Mice Expressing Chimeric Human and Mouse CD117.", AAAAI February 23-26, 2024.

3 Cahill KN, Katz HR, Cui J, et al. Kit inhibition by imatinib in patients with severe refractory asthma. N Engl J Med. 2017;376(20):1911-1920.

4 Davidescu L, Ursol G, Korzh O, et al. Efficacy and safety of masitinib in corticosteroid-dependent severe asthma: a randomized placebo-controlled trial. J Asthma Allergy. 2022;15:737-747.

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Briquilimab Phase 1b/2a asthma challenge study

Study Goal: demonstrate proof-of-concept in asthma with a therapeutic dose of subcutaneous briquilimab to inform future trials

Key Objectives:

- Demonstration of safety and efficacy in a new immunology and inflammation indication
- Challenge study has a high predictive value for success of future trials
- Assess the early and late asthmatic response and airway hyperresponsiveness following briquilimab administration
- Study design intended to be efficient, enabling rapid advancement of clinical program

Status: FPI targeted in Q4 2024

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Mast cell depletion offers a novel therapeutic approach for asthma

Mast cell depletion: briquilimab has demonstrated the ability to deplete mast cells throughout multiple tissue types

Early and late phase response: early phase in asthma is driven by mast cell degranulation, which may also drive the late phase recruitment of other cell types to the lung

Airway remodeling: reduction of inflammation by mast cell depletion may reduce excess inflammation and epithelial remodeling

Durability and convenience: mast cell depletion may lead to durable effect based on long periods of mast cell recovery lasting weeks to months

Broad response: c-Kit targeting may have an impact across multiple asthma endotypes

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Market Opportunity in Mast Cell Diseases

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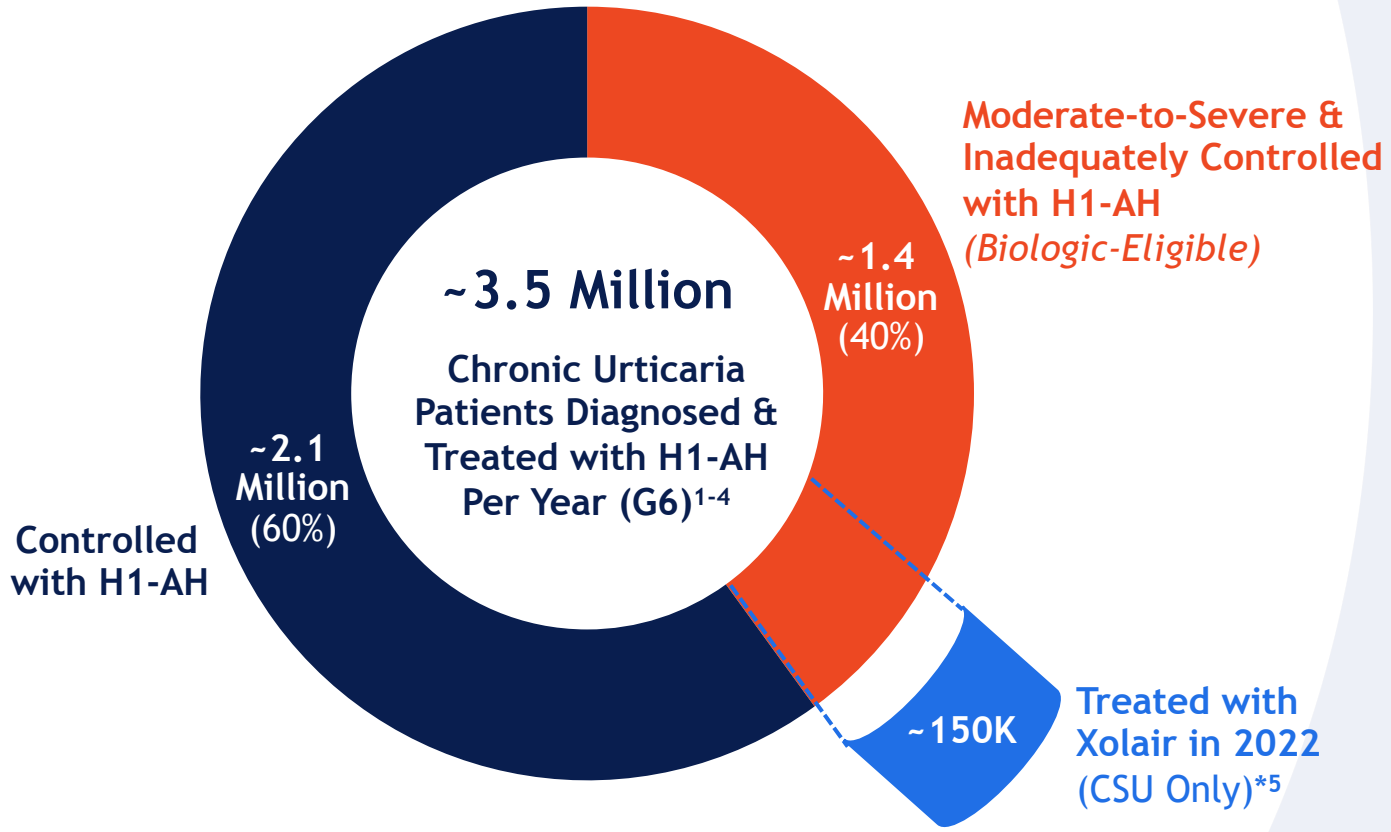
Chronic urticaria is one of the most prevalent immunological conditions with ~1.4 million biologic eligible patients in the G6

Chronic urticaria is a devastating disease characterized by severe itching, hives/wheals, inflammation, and/or angioedema **occurring for >6 weeks**

Chronic urticaria symptoms can **arise spontaneously (CSU) or after known triggers (CIndU)**

~1.4 million patients have moderate-to-severe disease, in which the disease commonly persists for 5+ years[6]

Chronic Urticaria Market Opportunity



~2/3 chronic urticaria cases are CSU; ~1/3 are CIndU (~15% of patients have both)[1]

*Approximately 50% of patients receiving Xolair have an inadequate response (Xolair prescribing information); H1-AH = H1-antihistamines

1 Kolkhir P, et al. Nature Reviews. 2022; 2 Balp MM, et al., EADV 2023; 3 Novartis R&D Day, Dec. 2021; 4 Decision Resources Group, Chronic Urticaria, Dec. 2023; 5 IQVIA sales data; 6 Saini S, Kaplan A. JACI Practice. 2018.

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

c-Kit blockade has achieved deeper and more consistent responses in chronic urticaria than other approaches

Target[1]	Mechanisms	Dosing Frequency	CSU Efficacy[2]	CIndU Efficacy[2]
c-Kit	Mast cell depletion	4 to 12+ weeks (SQ)	++	++
IgE*	Signal inhibition	4 weeks (SQ)	+	✕
IL-4/IL-13	Cytokine inhibition	2 weeks (SQ)	+	✕
BTK	Signal inhibition	Twice daily (Oral)	+	?
MRGPRX2	Signal inhibition	Daily (Oral)	?	?
JAK	Signal inhibition	Unknown (Oral)	?	?
Siglec-6	Signal inhibition	Unknown (SQ)	?	?

*Xolair (omalizumab) FDA Approved for use in chronic spontaneous urticaria

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1. Kolkhir P et al. Nature Reviews Disease Primers (2022); 2. Characterized by complete response and overall effects on disease control, as demonstrated in published clinical trials. Maurer et al, GA²LEN Global Urticaria Forum – Berlin, December 6, 2022 (Barzolvolimab); Xolair prescribing information; Maurer M et al. JACI 2022 (Dupilumab); Maurer M et al. JACI 2022 (Remibrutinib); Altrichter S et al. JACI 2022 (Lirentelimab)

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Briquilimab is a Differentiated c-Kit Inhibiting mAb

c-Kit Abs in Development

c-Kit (CD117) monoclonal antibody
- c-Kit antibodies in development are humanized, aglycosylated IgG1 inhibitors of c-Kit signaling

On-target depletion of mast cells
- Early clinical data suggests dose-dependent inhibition of c-Kit on mast cells in the skin

Predictable SQ PK/PD profile
- Established in multiple early stage trials

Key Differentiators for Briquilimab

Briquilimab directly blocks SCF binding
- Direct and potent blockage of natural ligand binding to the c-Kit receptor, limiting signal leakage

Shorter half-life / safety
- Sufficient to deplete mast cells while minimizing unwanted effects on other c-Kit expressing cells

Optimized dosing
- Less frequent dosing potentially leading to fewer side effects and greater compliance

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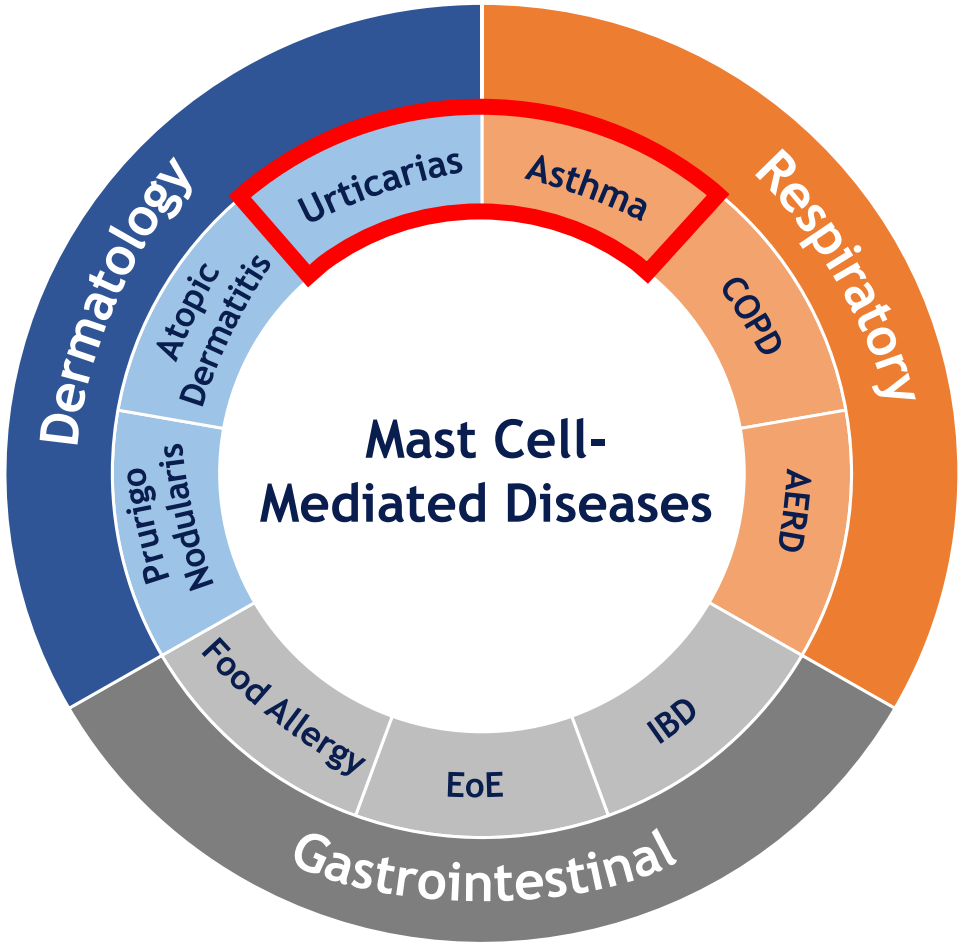
Mast cells play a central role in many diseases, presenting numerous potential opportunities for briquilimab in immunology and inflammation



Currently targeted indications

Dermatology	Other
Chronic Spontaneous Urticaria	Allergic Conjunctivitis
Chronic Inducible Urticaria	Age-Related Macular Degeneration (AMD)
Allergic Contact Dermatitis	Alpha-1 Antitrypsin Deficiency
Alopecia Areata	Alzheimer's Disease
Atopic Dermatitis	Angioedema
Bullous Pemphigoid	Celiac Disease, Dermatitis Herpetiformis
Prurigo Nodularis	Chronic GvHD
Psoriasis	Cystitis
Rosacea	Endometriosis
Respiratory	Fibromyalgia
Asthma	Hereditary Alpha Tryptasemia (HaT)
Allergic Rhinitis	Idiopathic Anaphylaxis
Aspirin Exacerbated Respiratory Disease (AERD)	Insulin-Dependent Diabetes Mellitus
Chronic Obstructive Pulmonary Disease (COPD)	Mast Cell Activation Syndrome (MCAS)
Chronic Rhinosinusitis with Nasal Polyps (CRSwNP)	Mast Cell Leukemia
Idiopathic Pulmonary Fibrosis	Mastocytosis (KIT negative)
Gastrointestinal	Migraine
Eosinophilic Esophagitis (EoE)	Multiple Sclerosis
Food Allergy & Oral Immunotherapy	Pancreatitis (acute/chronic)
IBD (Crohn's, Ulcerative Colitis)	Rheumatoid Arthritis
Irritable Bowel Syndrome (IBS)	Sickle Cell Disease (Sickle Crisis)

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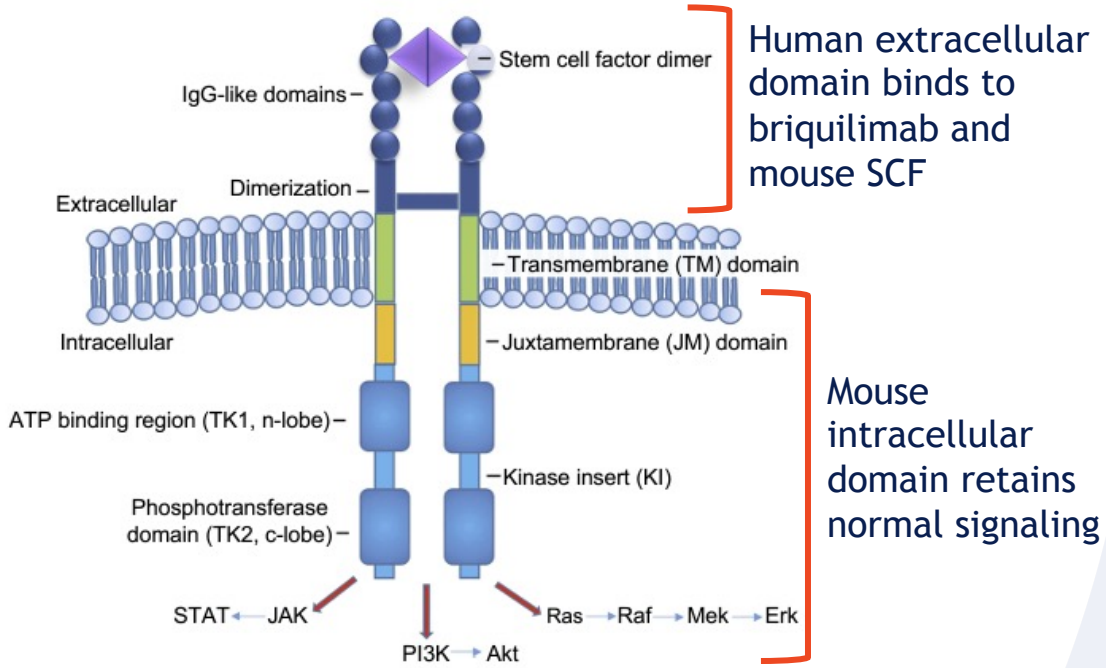
Jasper's c-Kit Mouse™ enables direct in-vivo disease model testing to support briquilimab's significant mast cell franchise opportunity

- c-Kit antibodies designed against human receptor do not bind to wild type mouse c-Kit, thereby limiting disease model testing
- Jasper's proprietary transgenic mouse allows for direct in-vivo testing of briquilimab
  - Transgenic mouse with human c-Kit ectodomain and mouse c-Kit intracellular domain allows for briquilimab binding leading to mast cell apoptosis

Jasper c-Kit Mouse™



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

Expanded portfolio presents exciting new opportunities in mast cell diseases

Investigator Sponsored Studies

Indication	Sponsor	Preclinical	Phase 1	Phase 2	Phase 3	Program Milestones
Briquilimab						
Mast Cell Diseases (Subcutaneous)						
Chronic Spontaneous Urticaria	JASPER THERAPEUTICS	BEACON				• Phase 1b/2a being conducted in the US and EU • Actively enrolling patients • Initial clinical data expected in 3Q 2024
Chronic Inducible Urticaria	JASPER THERAPEUTICS	SPOTLIGHT				• Phase 1b/2a study being conducted in the EU • Actively enrolling patients • Initial clinical data expected in 2H 2024
Asthma	JASPER THERAPEUTICS					• Enrollment in Phase 1b/2a expected Q4 2024 • Initial clinical data expected 2H 2025
Stem Cell Diseases (Intravenous)						
Low-to-Intermediate Risk MDS	JASPER THERAPEUTICS					• Enrolling patients • Initial clinical data expected 2H 2024
SCID	JASPER THERAPEUTICS					• Enrolling patients • Discussing potential BLA filing with the FDA
Fanconi Anemia	Stanford University					• First 6 patients achieved full chimerism & count recovery; expansion to Phase 2a (enrolling)
SCD / CGD / GATA2 MDS	NIH					• First 3 patients with full chimerism & Hb increase (SCD) • Enrolling patients (CGD) • Study start up (GATA2 MDS)

SCD, sickle cell disease; CGD, chronic granulomatous disease; MDS, myelodysplastic syndrome.

Jasper maintains full worldwide rights to develop and commercialize briquilimab in all indications

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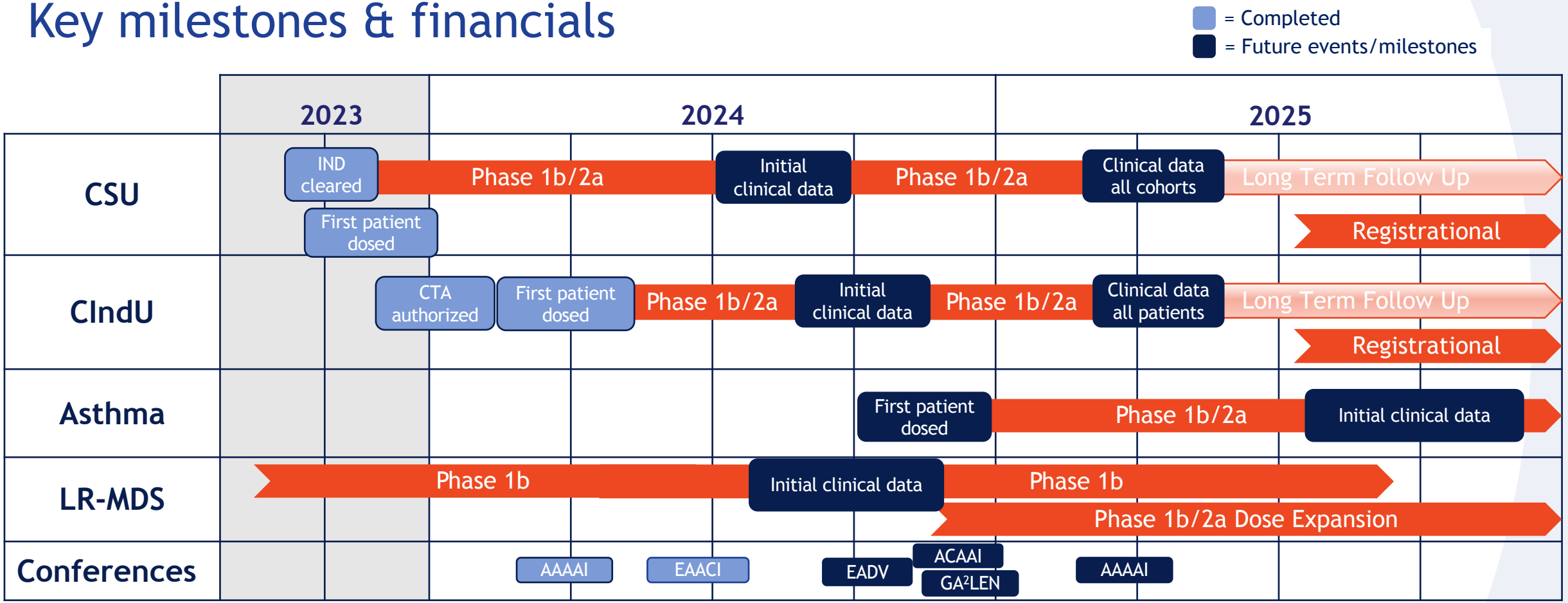
Key milestones & financials



Financial Overview

$118.5M cash & investments at 3/31/24 *	Cash runway through 3Q25

*Completed $50m equity financing in February 2024

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Jasper: Advancing briquilimab in multiple large indications

Several significant data readouts expected in 2024

c-Kit inhibition – a clinically validated mechanism driving depletion of mast cells

- Has potential to address diseases impacting millions of patients

Briquilimab – a potent and differentiated c-Kit inhibitor

- Drives mast cell depletion while potentially minimizing unwanted adverse effects
- Evaluating less-frequent dosing aligned with duration of mast cell depletion

Briquilimab – franchise potential in mast cell diseases

- CSU: Phase 1b/2a BEACON study enrolling (initial data expected 3Q 2024)
- CIndU: Phase 1b/2a SPOTLIGHT study enrolling (initial data expected 2H 2024)
- Asthma: Enrollment in Phase 1b/2a study expected to commence 4Q 2024
- Additional mast cell indications under evaluation

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June 2024

Jasper Therapeutics

NASDAQ: JSPR

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