#### UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

#### FORM 8-K/A

#### **CURRENT REPORT**

#### Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): February 15, 2022

#### Allakos Inc.

(Exact name of Registrant as Specified in Its Charter)

Delaware (State or Other Jurisdiction of Incorporation) 001-38582 (Commission File Number) 45-4798831 (IRS Employer Identification No.)

975 Island Drive, Suite 201 Redwood City, California (Address of Principal Executive Offices)

94065 (Zip Code)

Registrant's Telephone Number, Including Area Code: 650 597-5002

(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)

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

D 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 Act:

	Trading	
Title of each class	Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.001	ALLK	The Nasdag Global Select Market

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  $\Box$ 

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.

#### **Explanatory Note**

This amendment to Form 8-K is being filed to amend and supplement a Form 8-K filed by Allakos Inc. (the "Company") on February 15, 2022 (the "Form 8-K") solely for the purpose of correcting the hyperlink to Exhibit 99.1 contained in Item 9.01 of the Form 8-K. Other than the foregoing, there are no changes to the disclosures provided in the Form 8-K.

#### Item 8.01 Other Events.

On February 15, 2022, the Company is hosting an Investor Day. A copy of the investor presentation is filed as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated herein by reference.

#### Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit	Description
99.1	Investor Presentation dated February 15, 2022.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

#### 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 thereunto duly authorized.

Allakos Inc.

Date: February 15, 2022 By:

<u>/s/ H. Baird Radford, III</u> H. Baird Radford, III Chief Financial Officer

# Allakos

### Corporate Update

February 15, 2022

### Disclaimer

This presentation contains forward-looking statements. All statements of historical fact contained in this presentation, including statements regarding the financial position of Allakos. Inc. ("Allakos," the "Company," we" or "our"): the generation of future value; business strategy; plans and objectives for future operations; our expectations regarding the potential benefits, activity, effectiveness and safety of our product candidates; our expectations with regard to the initiation, design, timing and results of our clinical studies, preclinical studies and research and development programs, including the timing and availability of data from such studies; our preclinical, clinical and regulatory development plans for our product candidates, including the timing or likelihood of regulatory filings and approvals for our product candidates and advance such product candidates in the diseases we are targeting; and our expectations with regard to our ability to acquire, discover and develop additional product candidates and advance such product candidates into, and successfully complete, clinical studies, are forward-looking statements. Allakos has based these forward-looking statements on its estimates and assumptions and its current expectations and projections about future events. The words "anticipate," "believe," "continue," "could," and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. The Company may not actually achieve the plans, intentions, or expectations disclosed in these forward-looking statements, and you should not place undue reliance on these forward-looking statements. The forward-looking statements is clinical trials; uncertainties related to the enrollment of places in its clinical trials; (company's ability to demonstrate sufficient safety and efficacy of its product candidates in its clinical trials; uncertainties related to the success of later-stage clinical trials, regardles of the diseases

Accuracy of Data: This presentation contains statistical data based on independent industry publications or other publicly available information, as well as other information based on Allakos's internal sources. We have not independently verified the accuracy or completeness of the data contained in these industry publications and other publicly available information. Accordingly, Allakos makes no representations as to the accuracy or completeness of that data.

Additional Information: The Company has filed and will file Current Reports on Form 8-K, Quarterly Reports on Form 10-Q, and Annual Reports on Form 10-K, and other documents with the SEC. You should read these documents for more complete information about the Company. You may get these documents for free by visiting EDGAR on the SEC website a

This presentation concerns products that are under clinical investigation and which have not yet been approved for marketing by the U.S. Food and Drug Administration. It is currently limited by federal law to investigational use, and no representation is made as to its safety or effectiveness for the purposes for which it is being investigated.



### Allakos Investor Day Agenda

#### **Robert Alexander, PhD**

Introductions

Craig A. Paterson, MD
 Review of KRYPTOS and ENIGMA 2 Clinical Studies

Evan S. Dellon, MD, MPH

Physician Perspective

**Robert Alexander, PhD** 

· Atopic Dermatitis and Chronic Spontaneous Urticaria

#### Marcus Maurer, MD

Physician Perspective

Brad A. Youngblood, PhD

Pipeline Strategy & Update

#### **Closing Remarks**

Q&A



## Review of KRYPTOS (EoE) and ENIGMA2 (EG/EoD) Clinical Studies

Craig A. Paterson, MD CMO – Allakos Inc.



### **KRYPTOS Phase 2/3 EoE Study Design**

#### - Study Design -Multi-center, randomized, DB, placebo-controlled Active moderate to severe symptoms . Dysphagia Symptom Questionnaire (DSQ) ≥12 **Biopsy confirmed EoE** Esophagus: ≥15 eos/high power field (hpf) in 1 hpf 276 patients dosed (1:1:1 randomization) High dose lirentelimab 1 + 3 + 3 + 3 + 3 + 3 mg/kg (n=91) Secondary Endpoints – Low dose lirentelimab 1 + 1 + 1 + 1 + 1 + 1 mg/kg (n=93) - Placebo (n=92) 6 monthly doses . Includes adolescents age 12-17 Activity in adolescents

Open-label extension .

#### Endpoints

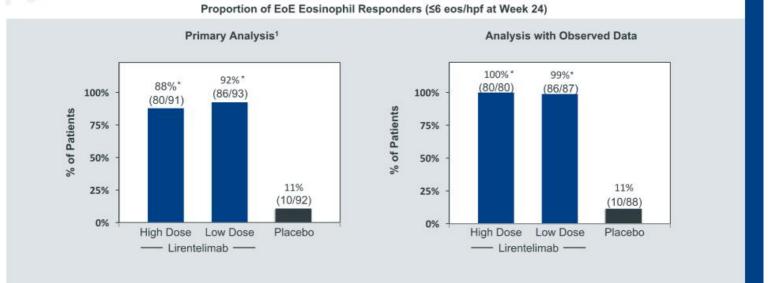
#### **Histologic Co-Primary Endpoint**

- Proportion of tissue eosinophil responders: Esophagus: ≤6 eos/hpf in peak hpf
- Symptom Co-Primary Endpoint
  - Absolute change in Dysphagia Symptom Questionnaire (DSQ) score
  - Percent change in DSQ from baseline

#### **Other Analyses of Interest**

Open-label extension

### Histology Co-primary Endpoint: Eosinophil Responders

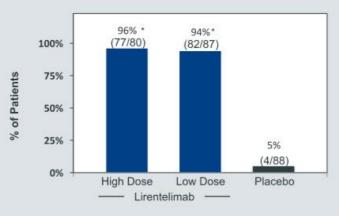


\* Difference from placebo p-values <0.0001 derived using Fisher's Exact Test 1 ITT: Missing data was treated as non-responders

### **Complete Histologic Responders**

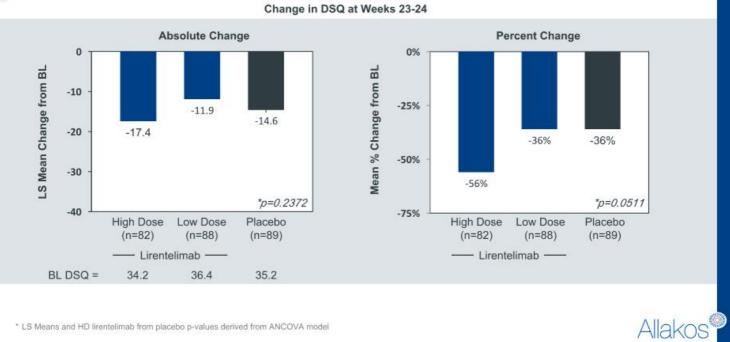
#### Secondary Endpoint: Complete Histologic Remission at Week 241

Achieved Peak Esophageal Eos ≤1 Eos/hpf at Week 24



\* Difference from placebo p-values <0.0001 derived using Fisher's Exact Test 1 Observed data

### Symptom Co-primary Endpoint: Change in DSQ



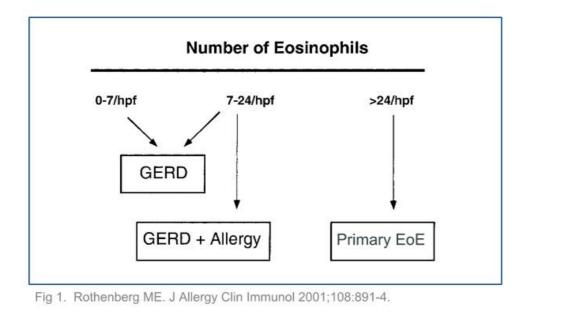
\* LS Means and HD lirentelimab from placebo p-values derived from ANCOVA model

### **Baseline Demographics and Patient Characteristics**

Patient Characteristics	HD Lirentelimab (n=91)	LD Lirentelimab (n=93)	Placebo (n=92)
Age, median years (range)	29 (12 - 69)	34 (12 - 67)	32 (12 - 70)
Female sex, % (n)	29% (26)	43% (40)	40% (37)
History of EoE, % (n)	89% (81)	90% (84)	93% (86)
Duration of EoE, median years (range)	4 (0 - 38)	5 (0 - 56)	4 (0 - 18)
History of proton pump inhibitor use for EoE, % (n)	23% (21)	23% (21)	23% (21)
History of swallowed topical steroid for EoE, % (n)	20% (18)	17% (16)	21% (19)
History of esophageal dilatations, % (n)	4% (4)	6% (6)	8% (7)
Number of prior esophageal dilatations, mean ± SD	2.3 ± 1.3	2.3 ± 1.5	1.4 ± 0.5
History of atopy <sup>1</sup> , % (n)	76% (69)	71% (66)	79% (73)
Peak esophageal eosinophil counts/hpf, mean ± SD	59 ± 33	61 ± 35	59 ± 33
Peripheral blood eosinophils cells/µL, median (IQR)	300 (230 - 470)	270 (180 - 440)	350 (200 - 435)
Serum IgE, kU/L, median (IQR)	103 (53 - 349)	99 (39 - 283)	90 (29 - 241)
Baseline DSQ [0-84], mean ± SD	34 ± 12	36 ± 12	35 ± 12

1 Asthma, allergic rhinitis, atopic dermatitis and/or food allergy

### Eosinophilic Threshold for Establishing Moderate-Severe EoE

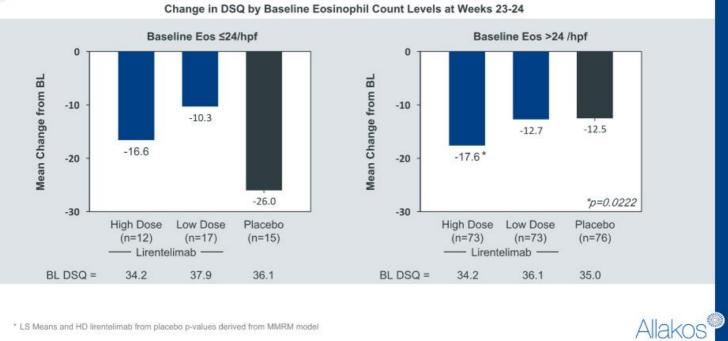


#### **Baseline Demographics and Patient Characteristics:** By Peak Esophageal Eosinophils

	Peak Esophageal Eosinophil Counts ≤24/hpf			Peak Esophageal Eosinophil Counts >24/hpf		
Patient Characteristics	HD Lirentelimab (n=14)	LD Lirentelimab (n=18)	Placebo (n=16)	HD Lirentelimab (n=77)	LD Lirentelimab (n=75)	Placebo (n=76)
Age, median years (range)	35.5 (15 - 67)	33.5 (15 - 67)	43.5 (20 - 68)	29 (12 - 69)	34 (12 - 67)	30 (12 - 70)
Female sex, % (n)	43% (6)	44% (8)	38% (6)	26% (20)	43% (32)	41% (31)
History of EoE, % (n)	79% (11)	83% (15)	94% (15)	91% (70)	92% (69)	93% (71)
Duration of EoE, median years (range) [mean]	4 (1 - 19) [6.5]	4 (0 - 11) [5.0]	4 (0 - 12) [4.9]	4 (0 - 38) [6.3]	5 (0 - 56) [7.7]	5 (0 - 18) [5.2]
History of proton pump inhibitor use for EoE, % (n)	21% (3)	11% (2)	0%	23% (18)	25% (19)	28% (21)
History of swallowed topical steroid for EoE, % (n)	7% (1)	22% (4)	6% (1)	22% (17)	16% (12)	24% (18)
History of esophageal dilatations, n (%)	14% (2)	17% (3)	6% (1)	3% (2)	4% (3)	8% (6)
Number of prior esophageal dilatations, mean ± SD	3 ± 1	3 ± 1	2 ± 0	2 ± 1	2 ± 1	1 ± 1
History of atopy, % (n)	79% (11)	67% (12)	56% (9)	75% (58)	72% (54)	84% (64)
Peak esophageal eosinophil counts/hpf, mean ± SD	20 ± 3	19 ± 3	20 ± 3	66 ± 31	71 ± 32	67 ± 30
Peak esophageal eos/hpf in distal location, mean ± SD	15±7	17 ± 4	17 ± 7	54 ± 32	59 ± 31	55 ± 29
Peak esophageal eos/hpf in proximal/mid location, mean ± SD	13±9	7±9	10 ± 9	48 ± 29	54 ± 37	46 ± 35
Peripheral blood eosinophils cells/µL, median (IQR)	310 (213 - 430)	175 (143 - 245)	220 (98 - 400)	300 (240 - 470)	300 (210 - 500)	380 (240 - 455
Serum IgE, kU/L, median (IQR)	83 (33 - 348)	64 (21 - 168)	65 (24 - 140)	105 (54 - 349)	117 (46 - 314)	98 (33 - 255)
Baseline DSQ [0-84], mean ± SD	34 ± 10	38 ± 11	36 ± 10	34 ± 12	36 ± 12	35 ± 13

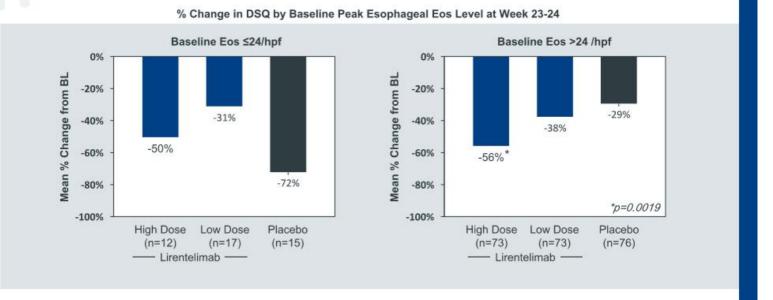
SOURCE: Stein ML, Collins MH, et al. J Allergy Clin Immunol 2006;118:1312-3219; Noel RJ, Putnam PE, Rothenberg ME, N Engl J Med 2004;351:940-941. Rothenberg ME, J Allergy Clin Immunol 2001

### DSQ Response in Patients by Baseline Peak Eosinophil Count



\* LS Means and HD lirentelimab from placebo p-values derived from MMRM model

### DSQ Response in Patients by Baseline Peak Eosinophil Count



\* LS Means and HD lirentelimab from placebo p-values derived from MMRM model

### Study Results in Adolescents

Age 12 - 17 years



### Baseline Demographics and Patient Characteristics: Adolescents

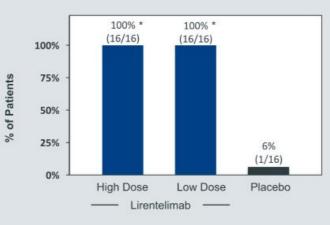
Patient Characteristics	HD Lirentelimab (n=17)	LD Lirentelimab (n=17)	Placebo (n=17)
Age, median years (range)	14 (12 - 17)	15 (12 - 17)	14 (12 - 17)
Female sex, % (n)	12% (2)	29% (5)	24% (4)
History of EoE, % (n)	94% (16)	100% (17)	94% (16)
Duration of EoE, median years (range)	4 (2 - 10)	5 (0 - 13)	6 (1 - 15)
History of proton pump inhibitor use for EoE, % (n)	29% (5)	53% (9)	41% (7)
History of swallowed topical steroid for EoE, % (n)	18% (3)	24% (4)	53% (9)
History of atopy <sup>1</sup> , % (n)	88% (15)	88% (15)	88% (15)
Peak esophageal eosinophil counts/hpf, mean ± SD	66 ± 32	84 ± 32	55 ± 26
Peak esophageal eos/hpf in distal location, mean ± SD	61 ± 32	69 ± 39	48 ± 25
Peak esophageal eos/hpf in proximal/mid location, mean ± SD	45 ± 31	67 ± 28	33 ± 28
Peripheral blood eosinophils cells/µL, median (IQR)	295 (225 - 400)	625 (285 - 770)	420 (380 - 675
Serum IgE, kU/L, median (IQR)	237 (140 - 806)	304 (74 - 402)	185 (85 - 374)
Baseline DSQ [0-84], mean ± SD	35 ± 14	35 ± 13	34 ± 12

1 Asthma, allergic rhinitis, atopic dermatitis and/or food allergy

### Histologic Response in Adolescents

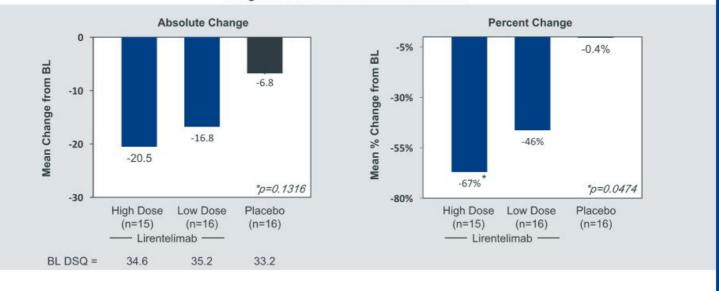
#### Proportion of Eosinophil Responders in Adolescents<sup>1</sup>

Achieved Peak Esophageal Eos ≤6 Eos/hpf at Week 24



\* Difference from placebo p-values <0.0001 derived using Fisher's Exact Test 1 Observed data

### DSQ Response in Adolescents



Change in DSQ<sup>1</sup> at Weeks 23-24 in Adolescents

\* LS Means and HD lirentelimab from placebo p-values derived from ANCOVA model 1 Observed data





**KRYPTOS Safety Summary** 

Treatment-Emergent AEs in ≥5% of Patients

n (%) of Patients	HD Lirentelimab (n=91)	LD Lirentelimab (n=93)	Placebo (n=92)
≥1 Treatment-Emergent Adverse Event (TEAE)	61 (67.0%)	65 (69.9%)	53 (57.6%)
Infusion related reaction	35 (38.5%)	24 (25.8%)	11 (12.0%)
Headache	6 (6.6%)	8 (8.6%)	6 (6.5%)

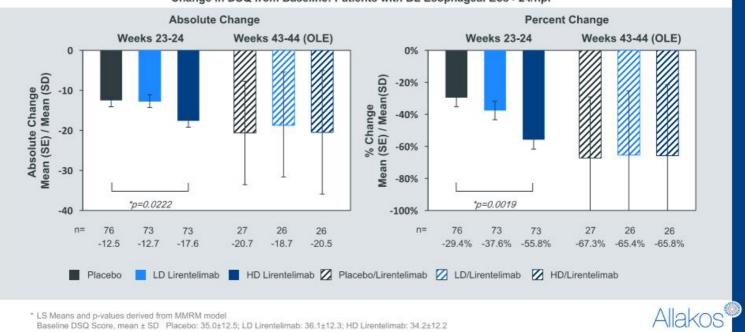
- Drug-related Serious AEs: 2 patients on HD lirentelimab, 1 patient on Placebo
- Safety risk profile overall was consistent with previously reported safety profile in ENIGMA1 and other lirentelimab studies to date



### **Open-Label Extension**



### Durability of Effect in Open-Label Extension



Change in DSQ from Baseline: Patients with BL Esophageal Eos >24/hpf

### Summary & Conclusions

- KRYPTOS Phase 2/3 study included patients with questionable EoE diagnosis
- Clear activity observed in moderate-to-severe EoE patients
- Clear activity in adolescents
- Durability of effect observed in interim analysis of open-label extension
- · Lirentelimab was well-tolerated in both adults and adolescents with EoE

### Review of ENIGMA2 Phase 3 EG/EoD Study



### ENIGMA2 Phase 3 EG/EoD Study Design

#### Study Design -

- Multi-center, randomized, DB, placebo-controlled
- Active moderate to severe symptoms
- Biopsy confirmed EG and/or EoD
  - Stomach: ≥30 eos/high powered field (hpf) in 5 hpfs
  - Duodenum: ≥30 eos/hpf in 3 hpfs
- 180 adult patients (1:1 randomization)
  - Lirentelimab 1 + 3 + 3 + 3 + 3 + 3 mg/kg (n = 91)
  - Placebo (n = 89)
- 6 monthly doses
- Open-label extension

#### Endpoints

#### Histologic Co-Primary Endpoint

- Proportion of tissue histologic responders:
  - Stomach: ≤4 eos/hpf in 5 hpfs, and/or
  - Duodenum: ≤15 eos/hpf in 3 hpfs

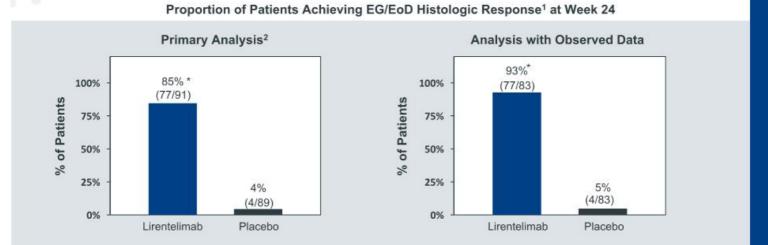
#### Symptom Co-Primary Endpoint

Absolute change in patient reported TSS-6

#### Key Secondary Endpoints

- Percent change in TSS-6 from baseline
- Proportion of patients achieving ≥50% and ≥70% improvement in TSS-6

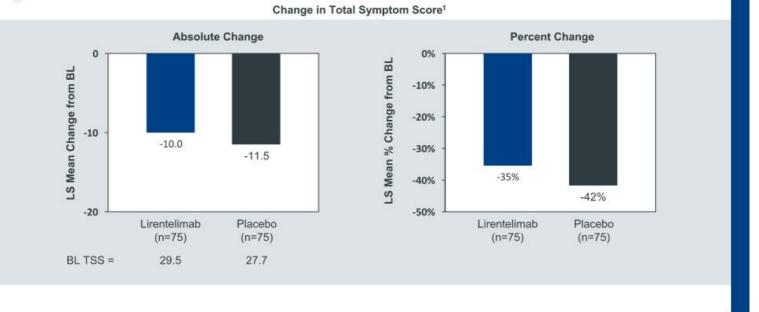
#### Histology Co-Primary Endpoint: Eosinophil Responders



#### 98% mean reduction of eosinophils on lirentelimab vs 24% in the placebo group

Difference from placebo p-values <0.0001 derived using Fisher's Exact Test</li>
 Eosinophil response criteria: ≤4 eos/hpf in top 5 gastric hpfs and/or ≤15 eos/hpf in top 3 duodenal hpfs
 ITT: Missing data was treated as non-responders

### Symptom Co-Primary Endpoint: TSS6

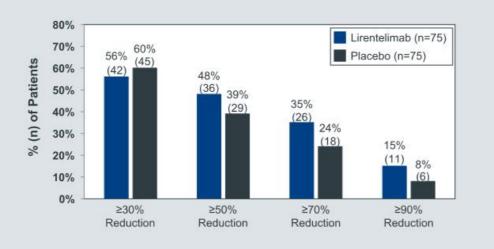


1 TSS6 Symptoms: abdominal pain, nausea, early satiety, loss of appetite, bloating, abdominal cramping

26

#### Responder Analysis Suggests Clinical Activity

#### Secondary Endpoint: Proportion of Patients Achieving TSS Thresholds at Weeks 23-241



1 Observed data

### Baseline Demographics & Patient Characteristics: ENIGMA1 and ENIGMA2

	Ph2 ENIGMA1 (E1)	Ph3 ENIGMA2	
Patient Characteristics	n=65	AK002 n=91	Placebo n=89
Age, median years (range)	40 (18-74)	43 (17-77)	41 (18-78)
Female sex, % (n)	62% (40)	62% (56)	69% (61)
History of EoE, % (n)	54% (35)	23% (21)	24% (21)
History of EG or EoD, % (n)	80% (52)	32% (29)	29% (26)
History of IBS, % (n)	3% (2)	40% (36)	37% (33)
History and background corticosteroid use, % (n)	42% (27)	41% (37)	31% (28)
Baseline use of physician prescribed diet regimen, % (n)	17% (11)	8% (7)	10% (9)
Gastric/duodenal eos/hpf in top 5/3 hpfs, mean ± SD	84 ± 52	65 ± 51	52 ± 25
Screening blood eos cells/µL, median (IQR)	330 (160-720)	200 (133-463)	230 (113-340
Screening IgE kU/L, median (IQR)	141 (44-361)	59 (18-167)	61 (25-165)
Baseline Total Symptom Score (TSS) [0-60], mean ± SD	28 ± 12	29 ± 11	28 ± 11

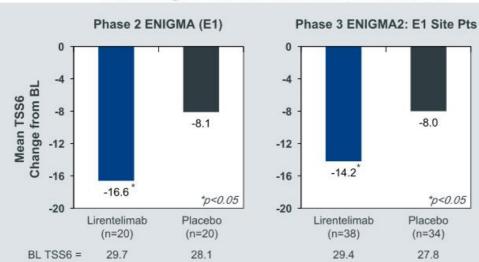


### Baseline Demographics & Patient Characteristics: Site Comparison

	Ph2 ENIGMA1 (E1)	Ph3 ENIGMA2		
Patient Characteristics	n=65	E1 Sites n=81	Non-E1 Sites n=99	
Age, median years (range)	40 (18-74)	45 (18-77)	40 (17-78)	
Female sex, % (n)	62% (40)	59% (48)	70% (69)	
History of EoE, % (n)	54% (35)	27% (22)	20% (20)	
History of EG or EoD, % (n)	80% (52)	47% (38)	17% (17)	
History of IBS, % (n)	3% (2)	31% (25)	44% (44)	
History and background corticosteroid use, % (n)	42% (27)	43% (35)	30% (30)	
Baseline use of physician prescribed diet regimen, % (n)	17% (11)	14% (11)	5% (5)	
Gastric/duodenal eos/hpf in top 5/3 hpfs, mean ± SD	84 ± 52	70 ± 53	50 ± 25	
Screening blood eos cells/µL, median (IQR)	330 (160-720)	250 (170-665)	180 (110-290	
Screening IgE kU/L, median (IQR)	141 (44-361)	72 (29-166)	58 (17-165)	
Baseline Total Symptom Score (TSS) [0-60], mean ± SD	28 ± 12	29 ± 12	29 ± 11	



### **Consistent Effects Observed in ENIGMA1 Site Patients**



Mean Change in TSS6 from Baseline at End of Treatment<sup>1</sup>

-8.0

Placebo

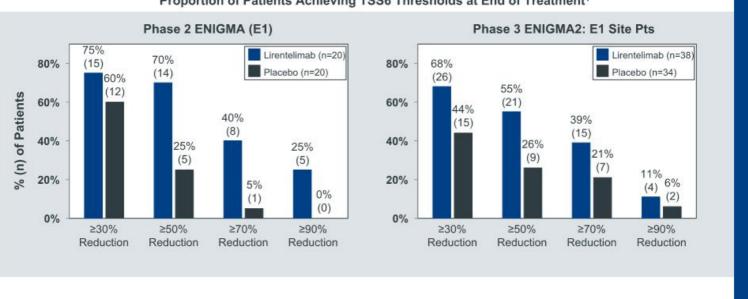
(n=34)

27.8

\*p<0.05

\* LS Means and p-values derived from ANCOVA/MMRM models 1 ENIGMA1: mean TSS6 change from BL to Weeks 13-14; ENIGMA2: mean TSS6 change from BL to Weeks 23-24

### Similar Results Seen in ENIGMA1 Site Patients

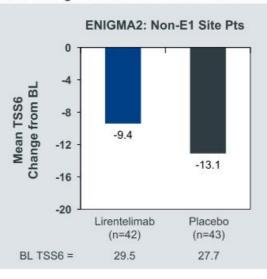


Proportion of Patients Achieving TSS6 Thresholds at End of Treatment<sup>1</sup>

1 ENIGMA1 end of treatment: Weeks 13-14 ENIGMA2 end of treatment: Weeks 23-24

### ENIGMA2: Non-ENIGMA1 Site Patients

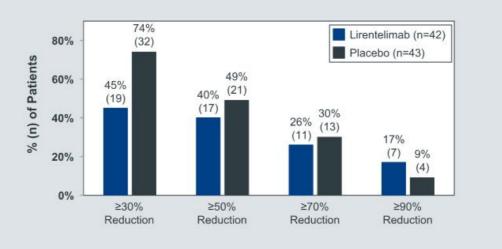
Mean Change in TSS6 from Baseline at End of Treatment



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### **ENIGMA2: Non-ENIGMA1 Site Patients**

#### Proportion of Patients Achieving TSS6 Thresholds at Weeks 23-24: Non-E1 Site Pts







# ENIGMA2 Safety Summary

Treatment-Emergent AEs in ≥5% of Patients

n (%) of Patients	Lirentelimab (n=91)	Placebo (n=89)
≥1 Treatment-Emergent Adverse Event (TEAE)	65 (71.4%)	57 (64.0%)
Infusion related reaction	31 (34.1%)	12 (13.5%)
Fatigue	5 (5.5%)	1 (1.1%)

No drug-related Serious AEs

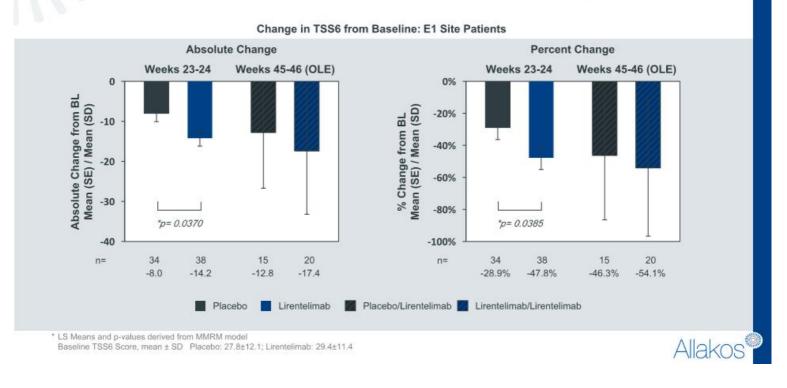
 Safety risk profile overall was consistent with previously reported safety profile in ENIGMA1 and other lirentelimab studies to date



# Open Label Extension



### Durability of Effect in Open-Label Extension (E1 Site Patients)



### Summary of ENIGMA2

- ENIGMA2 patients with similar characteristics to those included in Phase 2 reproduced original study results
- · Key patient characteristics identified include:
  - Higher tissue eos counts
  - Higher peripheral blood eos counts
  - Higher IgE levels
- Durability of effect observed in interim analysis of open-label extension
- Lirentelimab was well-tolerated in patients with EG and/or EoD

# Phase 3 EoD Study



### EoD Phase 3 Study Design

#### Study Design

- Multi-center, randomized, double-blind, placebo-controlled study in EoD
- Active moderate to severe symptoms
- Biopsy confirmed EoD ± colonic involvement
  - Duodenum: ≥30 eos/hpf in 3 hpfs
  - Stomach: <30 eos/high powered field (hpf) in 5 hpfs (Do NOT have EG)
  - Colonic involvement assessed by colonoscopy: biopsies collected from terminal ileum, colon (ascending, transverse, descending, sigmoid) and rectum
- 93 adult patients 2 arms
  - 3.0, 3.0, 3.0, 3.0, 3.0, 3.0 mg/kg lirentelimab
  - Placebo
- 6 monthly i.v. doses

#### Endpoints

- Histologic Co-Primary Endpoint
  - Proportion of responders:
    - Duodenum: ≤ 15 eos/hpf in 3 hpfs
- Symptom Co-Primary Endpoint
  - Absolute change in patient reported TSS-6
- Key Secondary Endpoints
  - Percent change in tissue eosinophil counts
  - Treatment responders: patients who achieve tissue eosinophil thresholds AND >30% improvement in TSS
  - Exploratory: change in colonic eosinophil counts

# Phase 3 EoD Study Update

- Fully enrolled (N=93)
- Study will complete mid-2022
- Population enrolled is similar to ENIGMA2 population
- Data from EoD study will inform correspondence with the FDA

# Next Steps in EGIDs

#### EoE

- End of Phase 2 meeting
- Update market post FDA meeting

### EG/EoD

- Await and incorporate 021 EoD study data
- Plan to meet with FDA to discuss data and findings
- Update the market post the FDA meeting

# Professor Evan S. Dellon, MD MPH

TITLE:	Professor of Medicine, Gastroenterology & Epidemiology			
	Director, Center for Esophageal Diseases and Swallowing	2		
	Director, CGIBD Biostatistics and Clinical Research Core			
INSTITUTION:	University of North Carolina School of Medicine			
SPECIALTY:	Gastroenterology	2= 1		
FOCUS:	Epidemiology, pathogenesis, diagnosis, treatment, and outc Eosinophilic Gastrointestinal Disorders	omes of		

- Investigator and member of NIH-funded Consortium of Eosinophilic Gastrointestinal Disease Researchers (CEGIR)
- Editorial Board: Clinical Gastroenterology and Hepatology
- Author/Co-Author: >300 peer-reviewed publications
- Investigator for multiple EGID studies including EoE





# Lirentelimab for Inflammatory Skin Diseases

Robert Alexander, PhD CEO



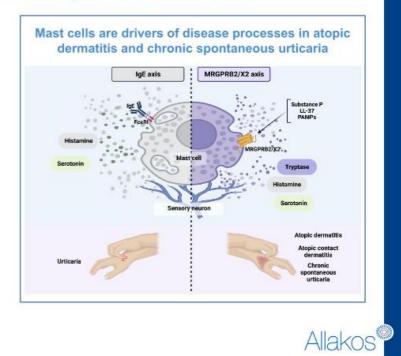
### Strong Scientific Rationale for Targeting Mast Cells and Eosinophils in Chronic Inflammatory Skin Diseases

Atopic dermatitis (AD) and chronic spontaneous urticaria (CSU) are characterized by inflamed itchy skin

Crosstalk between eosinophils, mast cells, and sensory neurons has been shown to drive inflammation and chronic itch in AD and CSU via IgE, IL-4, IL-13, IL-33, and MRGPRX2

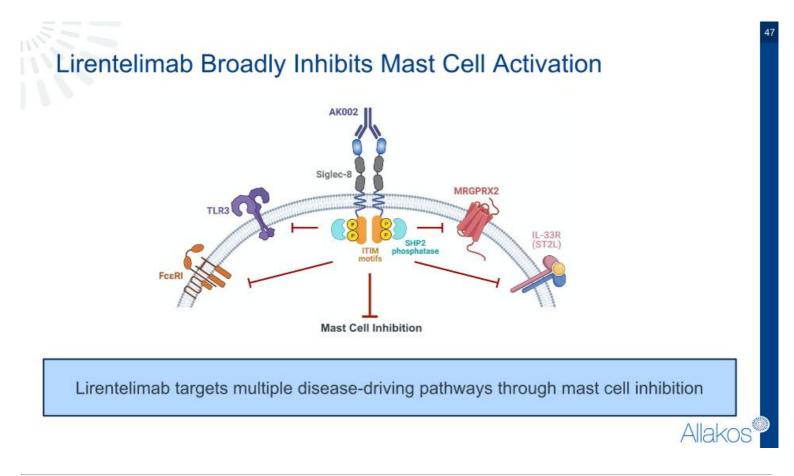
Eosinophils and mast cells are found in lesional skin in atopic dermatitis and chronic urticaria

Improvements observed in patients with concomitant atopic dermatitis and chronic urticaria in lirentelimab studies

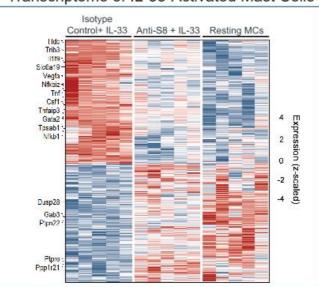


# AK002 Mast Cell Inhibition





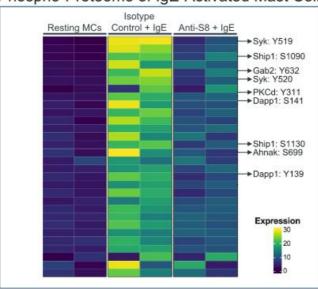
### Lirentelimab Inhibits IL-33-Mediated Mast Cell Activation



#### Transcriptome of IL-33-Activated Mast Cells

SOURCE: Schanin, J et al. Mucosal Immunology 2020; Korver, W et al. Frontiers in Immunology 2022

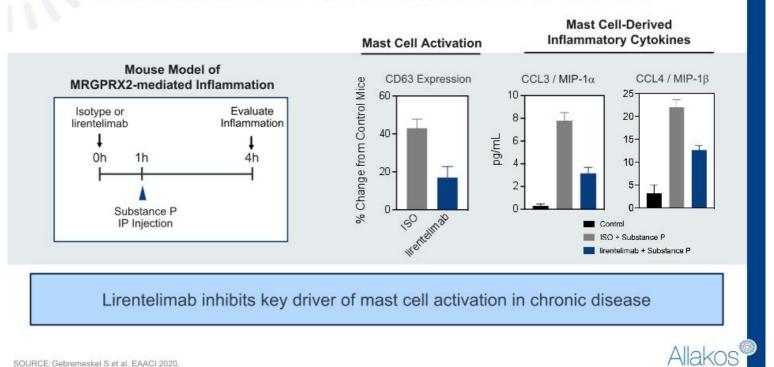
# Lirentelimab Inhibits IgE-Mediated Mast Cell Activation



#### Phospho-Proteome of IgE-Activated Mast Cells

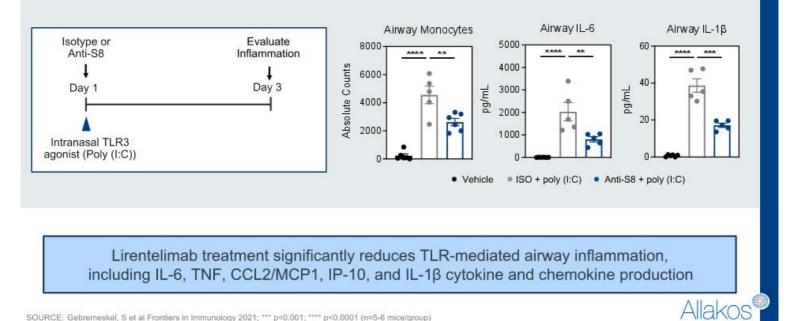
SOURCE: Schanin, J et al. Mucosal Immunology 2020; Korver, W et al. Frontiers in Immunology 2022

### Lirentelimab Inhibits MRGPRX2-Mediated Mast Cell Activation



SOURCE: Gebremeskel S et al. EAACI 2020.

# Lirentelimab Reduces TLR-mediated Inflammation In Vivo

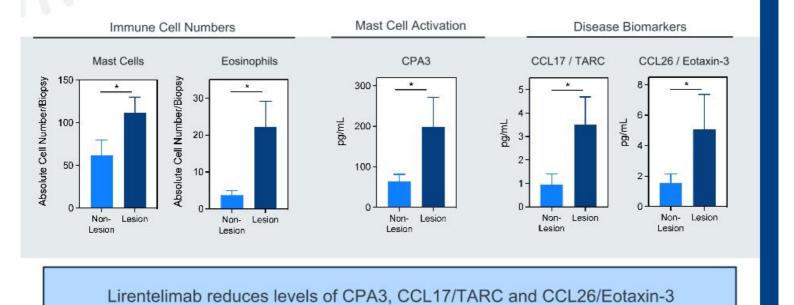


SOURCE: Gebremeskel, S et al Frontiers in Immunology 2021; \*\*\* p<0.001; \*\*\*\* p<0.0001 (n=5-6 mice/group)

Lirentelimab for Atopic Dermatitis



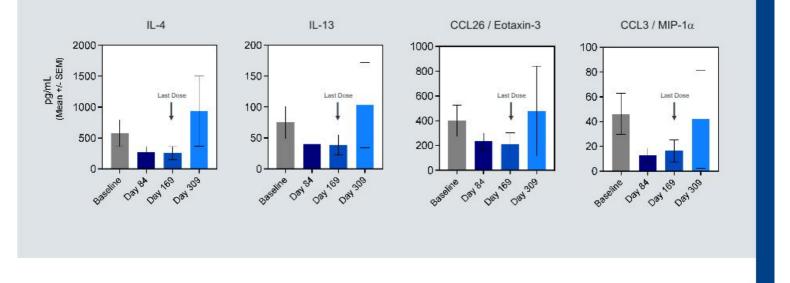
### AD Lesional Biopsies Show Evidence of MC and Eosinophil Activity



SOURCE: Youngblood, BA et al JCI Insights 2019; Schanin, J et al Mucosal Immunology 2020

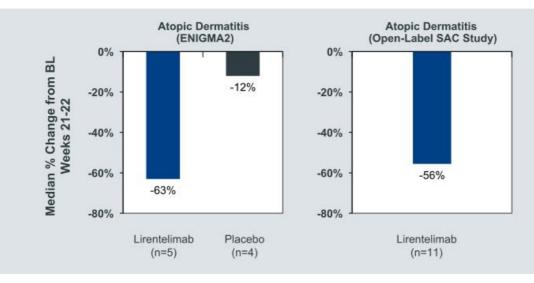
### **Reduction in Clinically-Relevant Cytokines**

#### Ocular Inflammation via Tear Cytokines (Ph1b Severe Allergic Conjunctivitis)



SOURCE: Data on file. Manuscript submitted

### Improvement in Concomitant Atopic Dermatitis



SOURCE: ENIGMA2 data on file. SAC manuscript submitted

### Phase 2 AD Study Design

#### - Study Design -

- Multi-center, randomized, DB, placebo-controlled
- Chronic disease that has been present ≥3 years
   EASI score ≥16
  - Involvement of ≥10% of body surface area
  - IGA score ≥3
  - Inadequate control by topical treatments
- Dupilumab, tralikinumab, and JAK naïve
- 120 adult patients (1:1 randomization)
  - 300 mg Q2W subcutaneous lirentelimab (n=60)
  - Placebo (n=60)
- Open-label extension

#### - Endpoints

#### Primary Endpoint

- Proportion of patients who achieve eczema area and severity index (EASI)-75 at week 14
- Key Secondary Endpoints
  - Percent change in EASI from baseline to week 14
  - Proportion of patients who achieve an IGA score of 0 or 1 AND a ≥2-point improvement in Investigator Global Assessment (IGA) at week 14

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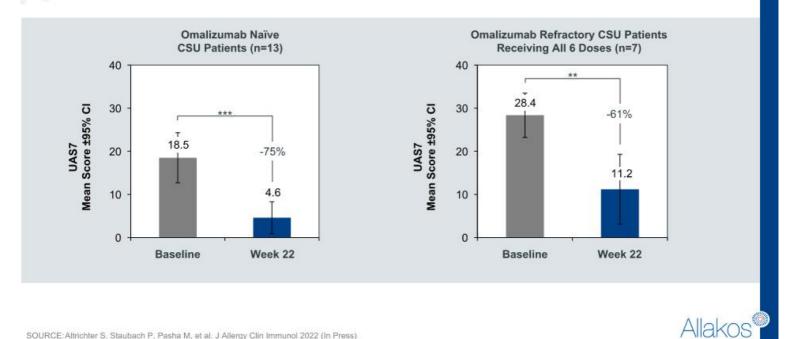
Chronic Spontaneous Urticaria



# Phase 2a Chronic Urticaria Study

<ul> <li>Open-label in Chronic Urticaria</li> <li>Uncontrolled CU (UCT&lt;12)</li> <li>Diagnosis of CU for at least 3 months, refractory to antihistamine treatment in single or 4-fold dosage</li> <li>45 patients – 4 arms         <ul> <li>Omalizumab-naïve CSU</li> <li>Omalizumab-refractory CSU</li> <li>Cholinergic urticaria</li> <li>Symptomatic dermographism</li> </ul> </li> <li>Open-label in Chronic Urticaria</li> <li>Primary Endpoint         <ul> <li>Change in Urticaria Control Te Baseline to Week 22</li> <li>Key Secondary Endpoints</li> <li>Change in disease activity by U</li> <li>Safety and tolerability</li> </ul> </li> </ul>	
<ul> <li>0.3 mg/kg starting lirentelimab dose; increased to 1.0 mg/kg (dose 2 and 3); if UCT &lt;12, increased to 3.0 mg/kg (dose 4, 5, and 6)</li> </ul>	est (UCT) from

### Phase 2a Chronic Urticaria Study – Results in CSU



SOURCE: Altrichter S, Staubach P, Pasha M, et al. J Allergy Clin Immunol 2022 (In Press)

### Phase 2b Chronic Spontaneous Urticaria Study

#### - Study Design -Endpoints Multi-center, randomized, DB, placebo-controlled **Primary Endpoint** Active moderate-to-severe symptoms . Change from baseline in UAS7 at week 12 CSU diagnosis with onset ≥6 months prior to . screening Diagnosis of CSU refractory to antihistamines **Key Secondary Endpoints** Presence of itch and hives despite current use of \_ Absolute change in ISS7 antihistamines Absolute change in HSS7 UAS7 score ≥16 and HSS7 score ≥8 at baseline Proportion of patients with UAS7=0 Omalizumab, dupilumab, and benralizumab naïve 100 adult patients - 2 arms 100 300 mg Q2W subcutaneous lirentelimab (n=50) Placebo (n=50)

### Lirentelimab for Inflammatory Skin Diseases

- · Mast cells and eosinophils are key drivers of inflammatory skin diseases
- Lirentelimab has demonstrated broad inhibition of mast cell and eosinophil activity in vivo and ex vivo studies
- Clinical proof of concept in patients with CSU and concomitant AD

### Professor Marcus Maurer, MD

TITLE:	Professor of Dermatology and Allergy
	Director of Research - Allergie Centrum Charité
INSTITUTION:	Charité Universitätsmedizin Berlin
SPECIALTY:	Dermatology, Allergy and Immunology
FOCUS:	Urticaria, Mastocytosis, Angioedema, Pruritus,
	Skin Infections, Allergic Diseases



- Organizing and Scientific Committee Member: GA2LEN/ UCARE, Multi-National Urticaria Centers of Excellence
- Editorial Board: Advances in Dermatology and Allergology
- Author/Co-Author: >500 peer-reviewed publications, 40 books and book chapters



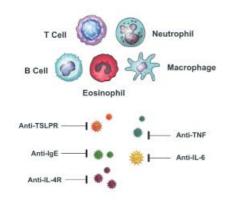
# Pipeline Strategy & Update

Bradford A. Youngblood, PhD Head of Research & Preclinical Development – Allakos Inc.



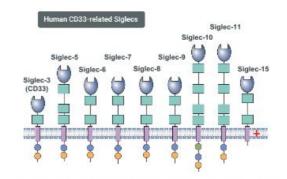
### **Pipeline Strategy Focused on Targeting Siglecs**

#### Current Landscape is Mediator Focused



- O Most molecules in development for inflammation target individual cytokines implicated in disease
- While effective, most mediators are produced by a small number of pathogenic immune cells that could be targeted directly

#### Inhibitory Receptors on Key Pathogenic Cells



- O Siglecs are inhibitory receptors selectively expressed on key disease driving cells
- O Ability to selectively suppress immune cell activation via agonistic mAbs to reduce chronic inflammation (ie lirentelimab)
- O Opportunity to selectively activate immune cells through neutralization to increase anti-tumor immunity



# Allakos Pipeline

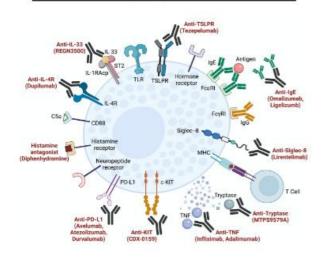
Antibody Program	Indication	Discovery	Preclinical		Phase 2	Phase 3	Registration	Milestone
	Eosinophilic Gastritis (EG) and/or EoD							Topline data announced Dec 2021
	Eosinophilic Duodenitis (EoD)							Topline data expected Q3 2022
	Eosinophilic Esophagitis (EoE)			_				Topline data announced Dec 2021
Lirentelimab	Chronic Urticaria			Initiation expected mid-2022				
(Anti-Siglec-8)	Atopic Dermatitis							Initiated Q4 2021
	Severe Allergic Conjunctivitis							Completed 2019
	Mast Cell Gastrointestinal Disease							Completed 2019
	Indolent Systemic Mastocytosis							Completed 2019
AK006 (Anti-Siglec-6)	Inflammatory Diseases							IND expected 1H 2023
AK007 (Undisclosed Target)	Inflammation							Ongoing
	Immuno-Oncology							Ongoing





### Mast Cells are Pathogenic Cells that are Non-Selectively Targeted

Molecules Targeting Mast Cell Receptors

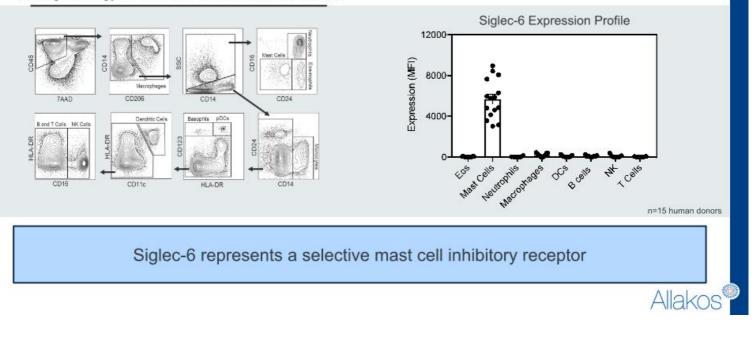


- O Mast cells express numerous activating receptors on their cell surface that contribute to disease
- O Multiple molecules in development target single activating receptors on the mast cell surface or mast cell-derived mediators
- O Currently, none of these molecules selectively target or broadly inhibit mast cells, resulting in incomplete mast cell inhibition or off target effects
- O Siglecs represent attractive targets for broadly regulating mast cell function
- O Siglec-6 is an inhibitory receptor selectively expressed on mast cells that has unique immunomodulatory activity

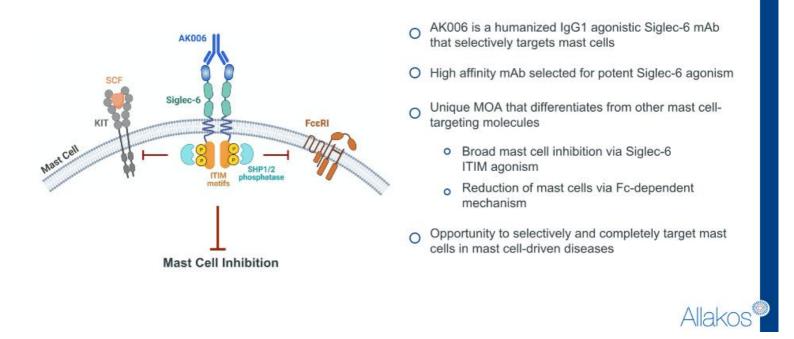


### Siglec-6 Is Selectively Expressed on Human Tissue Mast Cells

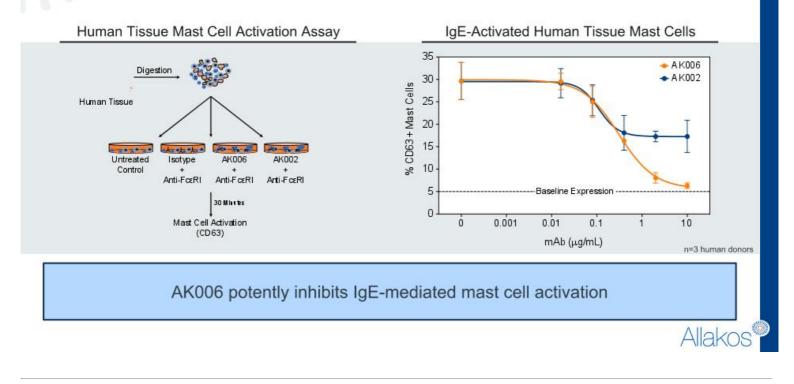
Gating Strategy for Immune Cells in Human Tissue



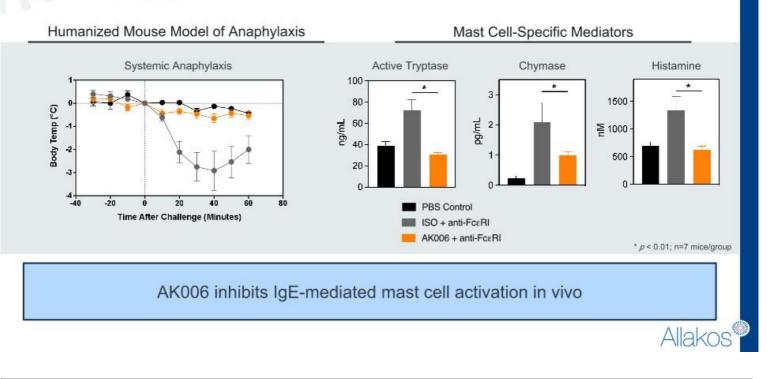
### AK006: Siglec-6 mAb That Selectively Targets Mast Cells



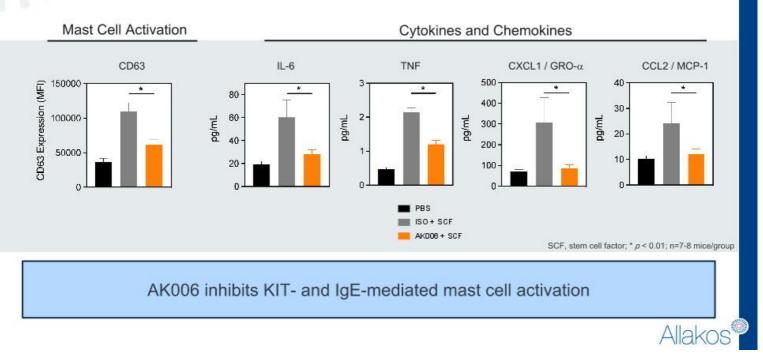
#### AK006 Inhibits Mast Cell Activation in Human Tissues



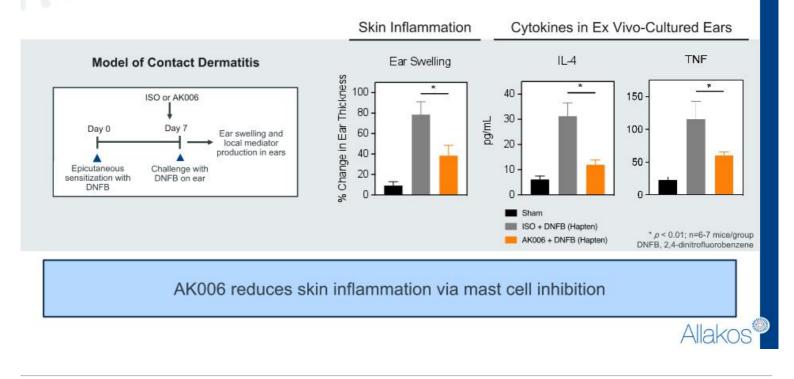
# AK006 Completely Protects Against Systemic Anaphylaxis in Humanized Mice



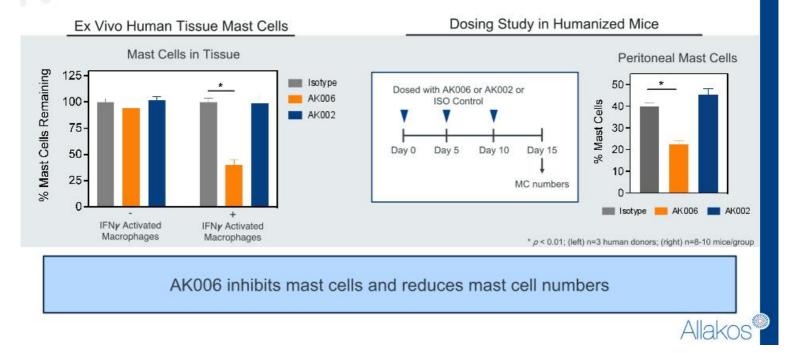
# AK006 Inhibits KIT-mediated Mast Cell Activation in Siglec-6 Transgenic Mice



### AK006 Inhibits Allergic Contact Dermatitis in Siglec-6 Transgenic Mice



## AK006 Reduces Human Tissue Mast Cells



# Summary

- AK006 is a humanized IgG1 agonistic Siglec-6 mAb that selectively inhibits mast cells and reduces their numbers
  - Represents the first mast cell-specific molecule in development
  - Avoids off-target effects of non-selective mast cell molecules
- Unique MOA that differentiates from other mast cell-targeting molecules
  - Inhibition of both IgE-dependent and independent mast cell activation
  - Reduces mast cell numbers in tissue
- First-in-human study planned 1H 2023

Allakos

# **Closing Remarks**

Baird Radford & Robert Alexander, PhD CFO and CEO – Allakos Inc.



# Expected Cash Runway into Early Q1 2024

#### **Adjusting Cost Structure**

Realigned operating and expense structures to enable our lirentelimab and AK006 development plans

Completed a 35% reduction in our workforce

Negotiated one-time settlements to exit future manufacturing and other contractual obligations with vendors as well as employee severance arrangements totaling approximately \$150 million

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Balance as of Dec 31, 2020	\$659 Million
Full Year 2021 Cash Used	\$235 Million
Balance as of Dec 31, 2021	\$424 Million



Development Timeline

	B	2021 2022			2023			2024				
	Program	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q
AK002 -	Eosinophilic Esophagitis (EoE)	Ph 2/3 EoE Study				Ph 3 E	oE Study (	SC) – exp	ected initia	ation		
	Eosinophilic Gastritis (EG) and/or EoD	Ph 3 EG/EoD Study Ph 3 EoD Study					Ph 3 EG/	EoD Study	/ (SC) – ex	pected ini	tiation	
AK002-	Atopic Dermatitis (AD)	Ph 2 AD Study (SC)										
	Chronic Spontaneous Urticaria (CSU)	Ph 2 CSU Study (SC)			C)							
AK006								Pha	se 1 SAD	& MAD	-	
		-	IV			SC						
												ΛII







Thank You

# References

- Rothenberg ME, Mishra A, Collins MH, et al. Pathogenesis and clinical features of eosinophilic esophagitis. J Allergy Clin Immunol. 2001 Dec;108(6):891-4.
- Straumann A, Spichtin HP, Grize L, et al. Natural history of primary eosinophilic esophagitis: A follow-up of 30 adult patients for up to 11.5 years. Gastroenterology 2003;125:1660–9.
- Stein ML, Collins MH, Villanueva JM, et al. Anti-IL-5 (mepolizumab) therapy for eosinophilic esophagitis. J Allergy Clin Immunol 2006;118:1312–3219.
- Pentiuk SP, Miller CK, Kaul A. Eosinophilic esophagitis in infants and toddlers. Dysphagia 2007;22:44–48.
- Straumann A, Conus S, Grzonka P, et al. Anti-interleukin-5 antibody treatment (mepolizumab) in active eosinophilic oesophagitis: a randomised, placebo-controlled, double-blind trial. Gut. 2010 Jan;59(1):21-30.
- Schaefer ET, Fitzgerald JF, Molleston JP, et al. Comparison of oral prednisone and topical fluticasone in the treatment of eosinophilic esophagitis: a randomized trial in children. Clin Gastroenterol Hepatol. 2008 Feb;6(2):165-73.