Company presentation

April 2024

NASDAQ: ASLN

ASLAN PHARMACEUTICALS

Legal disclaimer

This presentation contains forward-looking statements. These statements are based on the current beliefs and expectations of the management of ASLAN Pharmaceuticals Limited and/or its affiliates (the "Company"). These forward-looking statements may include, but are not limited to statements regarding the Company's plans to develop and commercialize *eblasakimab* and *farudodstat*; the potential of *eblasakimab* as a first-in-class treatment for atopic dermatitis and other allergic diseases, and of *farudodstat* as a first-in-class treatment for alopecia areata; the Company's plans and expected timing with respect to clinical trials, clinical trial enrollment and clinical trial results for *eblasakimab* and *farudodstat*; the Company's cash runway; expectations regarding the terms of patents and ability to obtain and maintain intellectual property protection for product candidates; and the anticipated selection of a development partner to advance *eblasakimab* into Phase 3 testing in AD and other indications. The Company's estimates, projections and other forward-looking statements are based on management's current assumptions and expectations of future events and trends, which affect or may affect the Company's business, strategy, operations, or financial performance, and inherently involve significant known and unknown risks and uncertainties. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of many risks and uncertainties, which include, unexpected safety or efficacy data observed during preclinical or clinical studies; risks that future clinical trial results may not be consistent with interim, initial or preliminary results or results from prior preclinical studies or clinical trials; clinical site activation rates or clinical trial enrollment rates that are lower than expected; the impact of health epidemics or pandemics, or geopolitical conflicts on the Company's operations, research and development and clinical trials and potential disruption in the operations and business of third-party manufacturers, contract research organizations, other service providers and collaborators with whom the Company conducts business; general market conditions; changes in the competitive landscape; and the Company's ability to obtain sufficient financing to fund its strategic and clinical development plans. Other factors that may cause actual results to differ from those expressed or implied in such forward-looking statements are described in the Company's US Securities and Exchange Commission filings and reports (Commission File No. 001- 38475), including the Company's Annual Report on Form 20-F filed with the US Securities and Exchange Commission on April 12, 2024. All statements other than statements of historical fact are forward-looking statements. The words "believe," "may," "might," "could," "will," "aim," "estimate," "continue," "anticipate," "intend," "expect," "plan," or the negative of those terms, and similar expressions that convey uncertainty of future events or outcomes are intended to identify estimates, projections, and other forward-looking statements. Estimates, projections, and other forward-looking statements speak only as of the date they were made, and, except to the extent required by law, the Company undertakes no obligation to update or review any estimate, projection, or forward-looking statement.

Targeting major inflammatory disease markets with significant unmet need

Eblasakimab	**Potential first-in-class antibody that targets the IL-13 receptor** with potential to become a **leading therapy** in treating atopic dermatitis (AD) and other indications eg COPD • AD expected to be a $24B market by 2029 [1], **only 2 approved biologics** in US to date • **Positive phase 2b** study of *eblasakimab* in AD in July 2023, phase 3 preparation underway • **Positive phase 2 interim data in *dupilumab*-experienced patients: unprecedented efficacy data** compared to other biologics after just 16 weeks – 60.0% achieved EASI-90 and 66.7% vIGA score of 0 or 1 – Initial positioning as therapy of choice for patients that have **inadequate response to *dupilumab*** • Translational data indicates the potential for **improved efficacy over *dupilumab* in COPD**
Farudodstat	**Novel DHODH inhibitor with the potential to be first-in-class** for alopecia areata (AA) • Phase 2 proof-of-concept study in AA initiated, interim topline readout expected mid-2024
Financials	**Cash position $21.3M** as of December 31, 2023 • $5M registered direct offering closed on March 14, 2024

1 Decision Resources Group, June 2021

Multiple catalysts in upcoming 12 months

Program	Target	Indication	Preclinical	Phase 1	Phase 2	Phase 3	Anticipated milestones in 2024
Eblasakimab	IL-13Rα1	Atopic dermatitis	Biologic naïve				• Selection of partner to advance *eblasakimab* into Phase 3 • Topline readout from *dupilumab*-experienced trial end 2024
			Dupilumab experienced				
		COPD					• Translational data in COPD to be presented Q2 2024
Farudodstat	DHODH	Alopecia areata					• Phase 2a interim topline data Q3 2024

Management and advisory team with global development experience in dermatology

Management team

Dr Carl Firth
CEO
Board Director

AstraZeneca
Bank of America Merrill Lynch

Stephen Doyle
Chief Business Officer

Boehringer Ingelheim
sanofi
NOVARTIS

Dr Alex Kaoukhov
Chief Medical Officer

almirall
Allergan
BIONIZ THERAPEUTICS
(Acquired by Equillium)

Dr Karen Veverka
VP Medical

LEO
NOVARTIS

Dr Ferda Cevikbas
Head Translational Sciences

Lilly
Dermira

Board of Directors

Andrew Howden
Chairman

AstraZeneca

Dr Neil Graham
Board Director

REGENERON

Robert Hoffman
Board Director

ARENA PHARMACEUTICALS
KURA ONCOLOGY
AnaptysBio

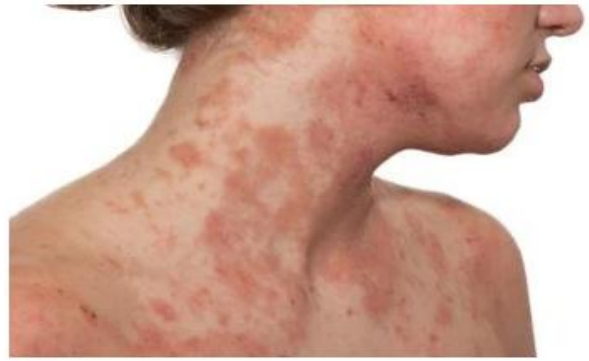
Dr Kathleen Metters
Board Director

MERCK
LYCERA

Eblasakimab

Targeting atopic dermatitis, a highly prevalent disease with only 2 approved biologics

AD is a devastating disease that causes massive suffering for both patient and family



- Chronic, incessant itch
- Long term changes in skin barrier
- Sleep deprivation
- Severe impact on quality of life
- Allergic comorbidities
- Rising prevalence

AD is a global disease, and affects up to 13% of children and 7% of adults in developed countries [1]

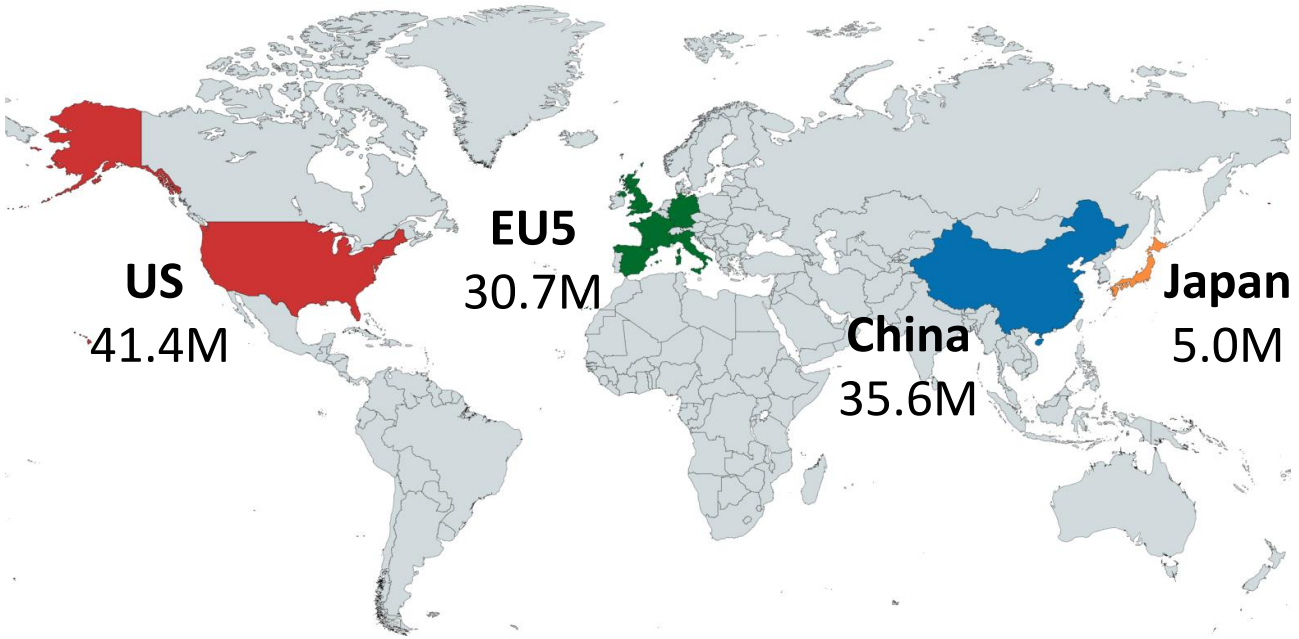
200M

AD patients worldwide [2]

30%

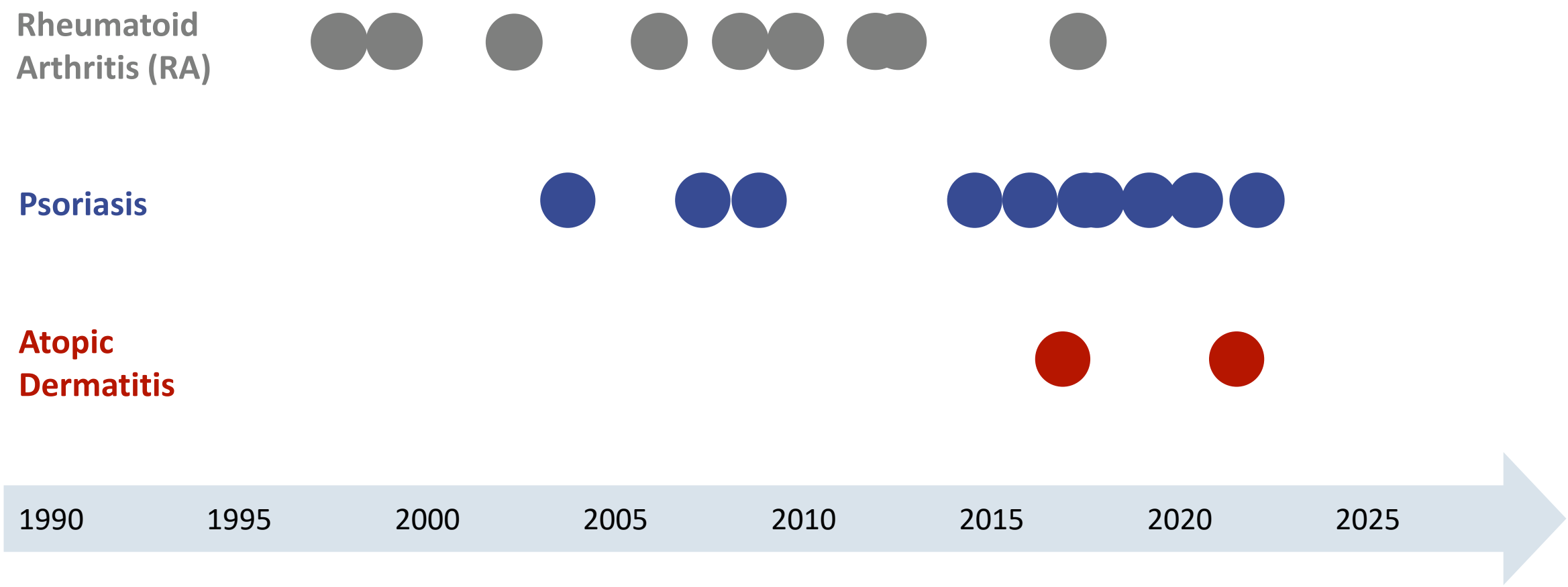
with moderate-to-severe disease [1]

Total AD prevalent cases, 2019 [3,4]



1 Silverberg (2017) Dermatol Clin 35: 283–289
2 Weidinger et al (2018) Nat Rev Dis Prim 4:1
3 Divekar et al (2021) Atopic Dermatitis/Atopic Eczema: Disease Landscape & Forecast. Decision Resources Group (DRG)
4 Wen-Ian Dong et al (2021) WAO Journal 14(11):100604.

Only 2 biologics have been launched for AD, yet there are double the number of patients compared to psoriasis



Circles represent marketed biologic approvals in AD, psoriasis and RA in US
Sources: Biomedtracker database, Decision Resources Group, June 2021

There are few safe and effective treatments for moderate-to-severe AD

Topical agents
TCS, TCI, topical PDE4/JAK

- Treatment has been traditionally focused on topical corticosteroids but steroid use is associated with long term safety risks

Biologics
dupilumab, lebrikizumab

- *Dupilumab* was launched in 2017 as the first biologics and has established biologics as the cornerstone for AD treatment

JAKi systemic immunosuppressants
abrocitinib, upadacitinib

- JAK inhibitors (JAKi) received recent approval in AD
- Whilst effective, they carry black box warnings for higher risk of: cardiovascular death, stroke, serious infections (including tuberculosis) and cancer

Dupilumab has advanced the standard of care for atopic dermatitis but a significant unmet need remains

Topical agents
TCS, TCI, topical PDE4/JAK

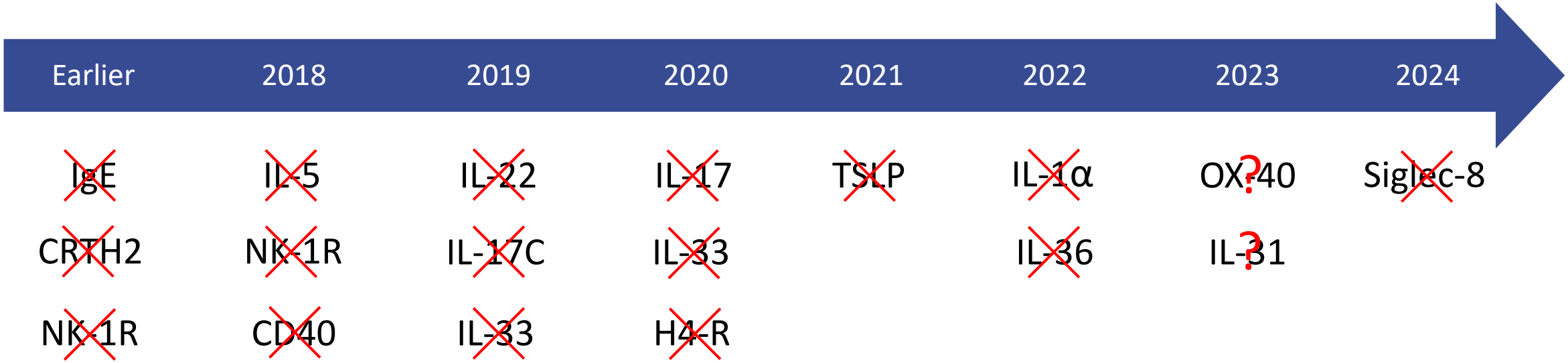
Biologics
dupilumab, lebrikizumab

JAKi systemic immunosuppressants
abrocitinib, upadacitinib

- Launch of *dupilumab* in 2017 **established new standard of care**
  - 2023 sales of $12B, dominated by AD [1]
  - Following phase 3 wins, analysts including COPD in forecasts, suggesting total $20B peak sales [2]
- However, **market still nascent** - only 9% of eligible patients receive *dupilumab* today [1]
- **Patients looking for improved treatment options** – majority of *dupilumab* patients would switch to a biologic with an incrementally improved profile [3]
  - Opportunity to improve upon biweekly dosing regimen
  - Only 30-40% of patients treated with *dupilumab* achieved an optimal response [4,5]
  - Conjunctivitis is common and can lead to treatment discontinuations
- *Lebrikizumab* approval in US delayed due to CRL from FDA, lack of meaningful differentiation and inability to address allergic comorbidities will **likely position it behind *dupilumab***

1 Sanofi's quarterly financials, annual reports and investor presentations
2 FiercePharma article "Sanofi, Regeneron's Dupixent could hit $20B in peak sales with COPD expansion: analyst" published 24 March 2023
3 Market research conducted by ASLAN from May-Aug 2023 with 83 AD patients in US (27% patients severe, 69% moderate, 5% mild), 32 patients current Dupixent users. 56% of current Dupixent users willing to switch
4 Spherix (2018) Atopic dermatitis ATU study
5 IGA 0/1 response rate at week 16, Simpson et al (2016) NEJM 375(24):2334-2348

Recent years have seen many disappointments with new mechanisms

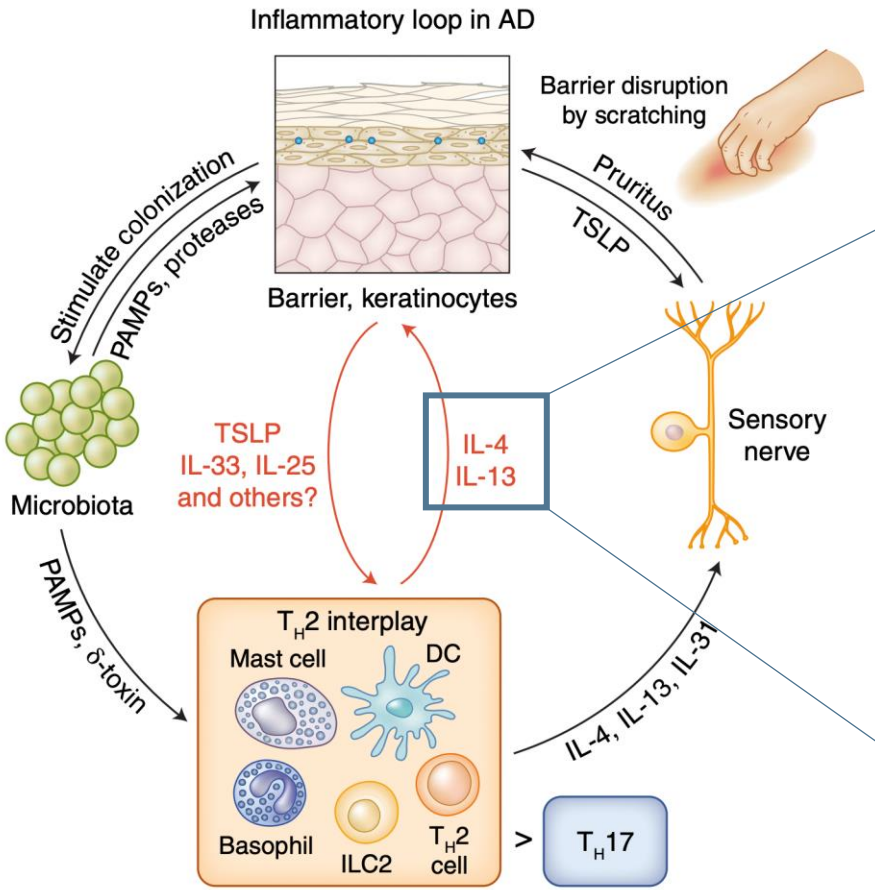


Besides several unproven mechanisms, *dupilumab* and *lebrikizumab* remain the only significant competitors in late phase development

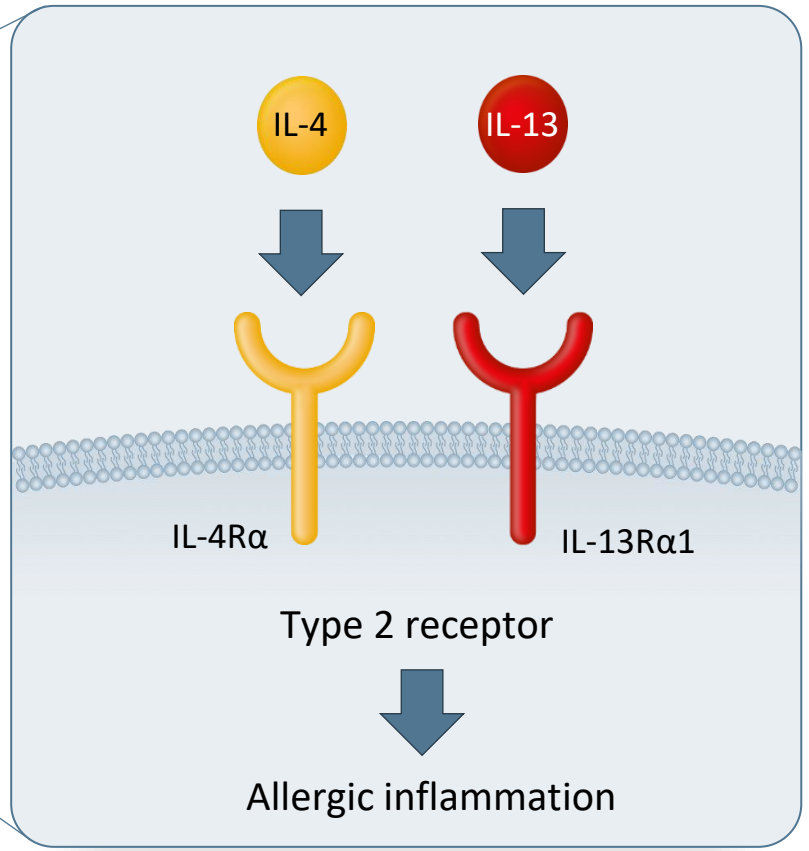
Years refer to announcement of discontinuation of development in AD or of the completion date of last study, all studies having completed a Phase 2 randomized trial
Not intended to be an exhaustive list of all targets tested in AD

Eblasakimab
A novel mechanism for treatment of AD

IL-4 and IL-13 are the central drivers of the itch-scratch cycle in AD

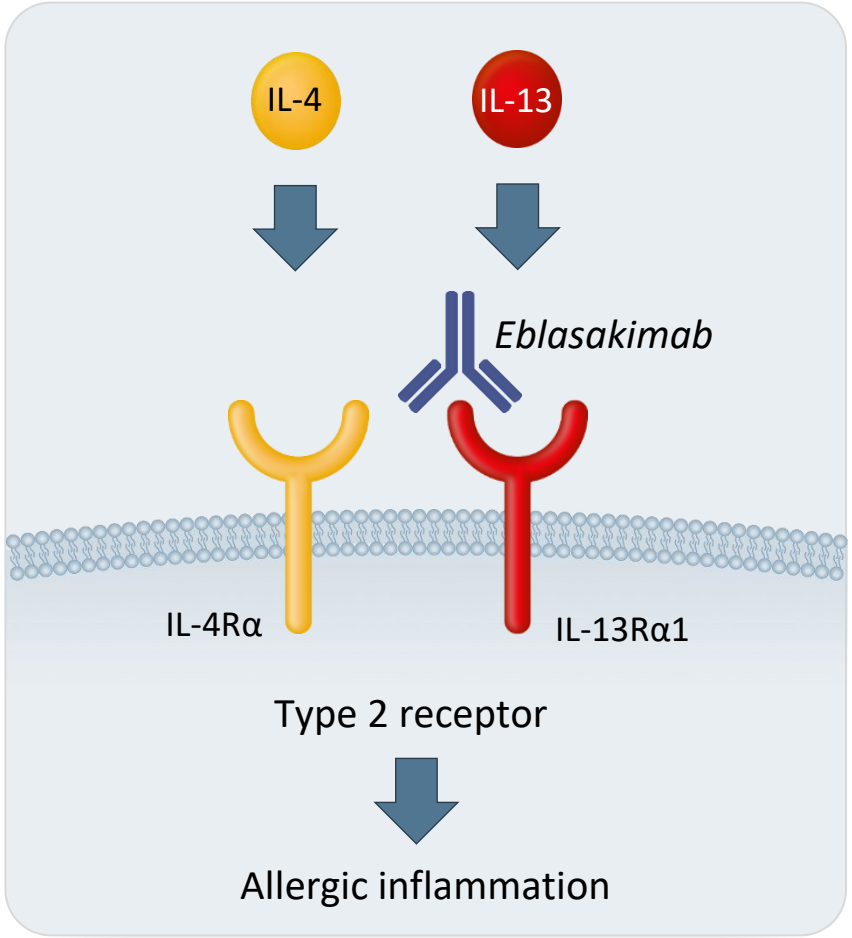


IL-4 and IL-13 signal through the Type 2 receptor



Dianichi et al (2018) Nat Immunol 19:1286-1298

Eblasakimab is the only monoclonal antibody in the clinic targeting the IL-13 receptor[1]



IL-4 and IL-13 are central to triggering allergy and symptoms of AD

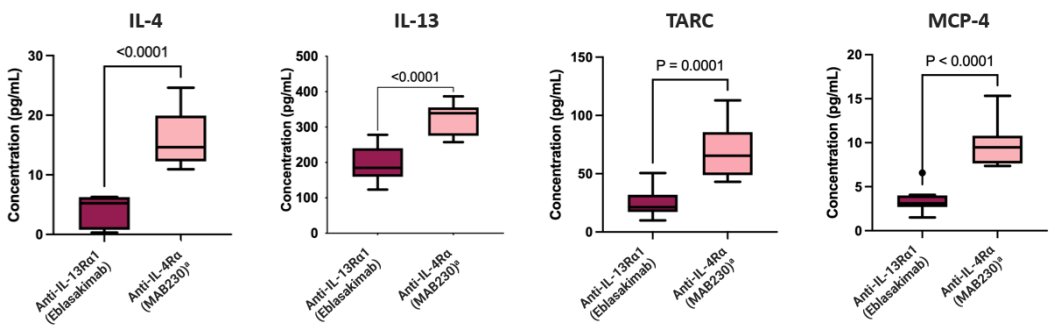
By targeting the IL-13 receptor, *eblasakimab*'s novel approach efficiently blocks the Type 2 receptor, preventing signaling through **both** IL-4 and IL-13, while sparing the Type 1 receptor

1 Based on search of Clarivate and BiomedTracker databases

Recent translational data highlights advantages of targeting the IL-13R over IL-4R in AD patient cells

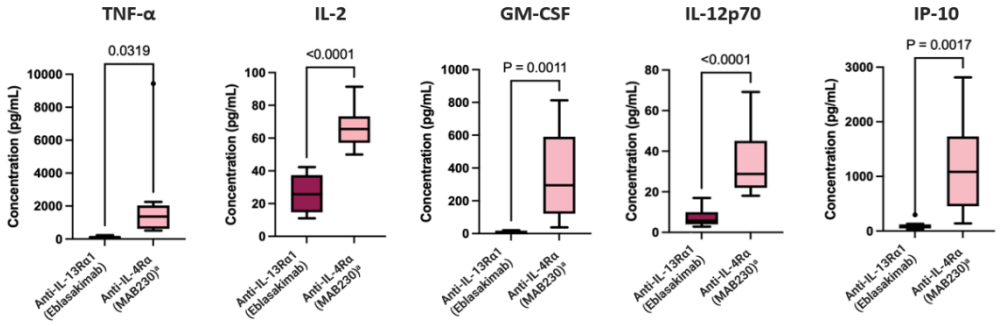
Th2 cytokines

IL-13R blockade resulted in lower levels of key cytokines implicated in Th2-driven (allergic) inflammation compared to IL-4R blockade



Th1 cytokines

Levels of pro-inflammatory Th1 cytokines were lower with IL-13R blockade compared to IL-4R blockade



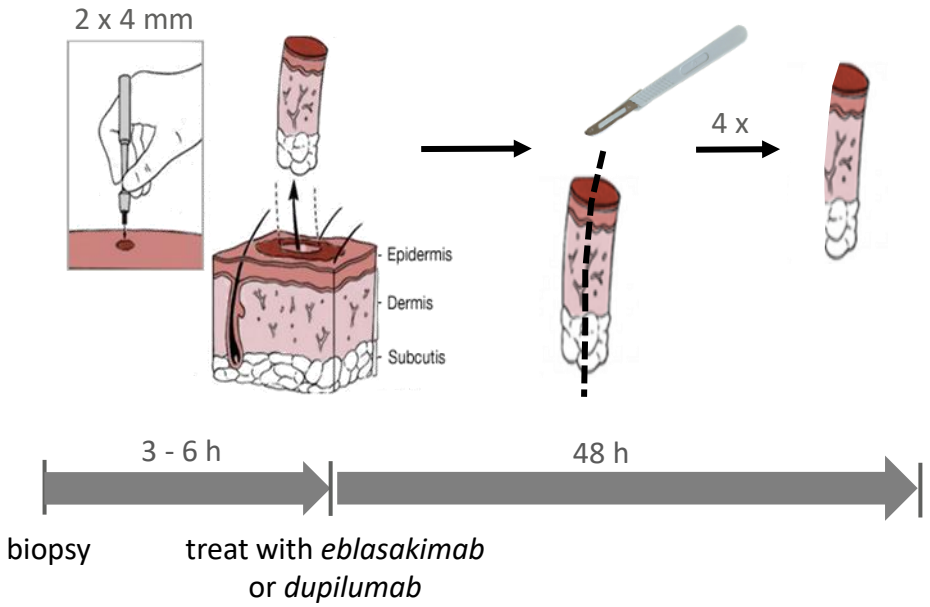
Selective blockade of IL-13R offers a potentially differentiated approach:

- More efficient reduction of Th2 inflammation
- No increase in Th1 cytokines, compared to IL-4R blockade

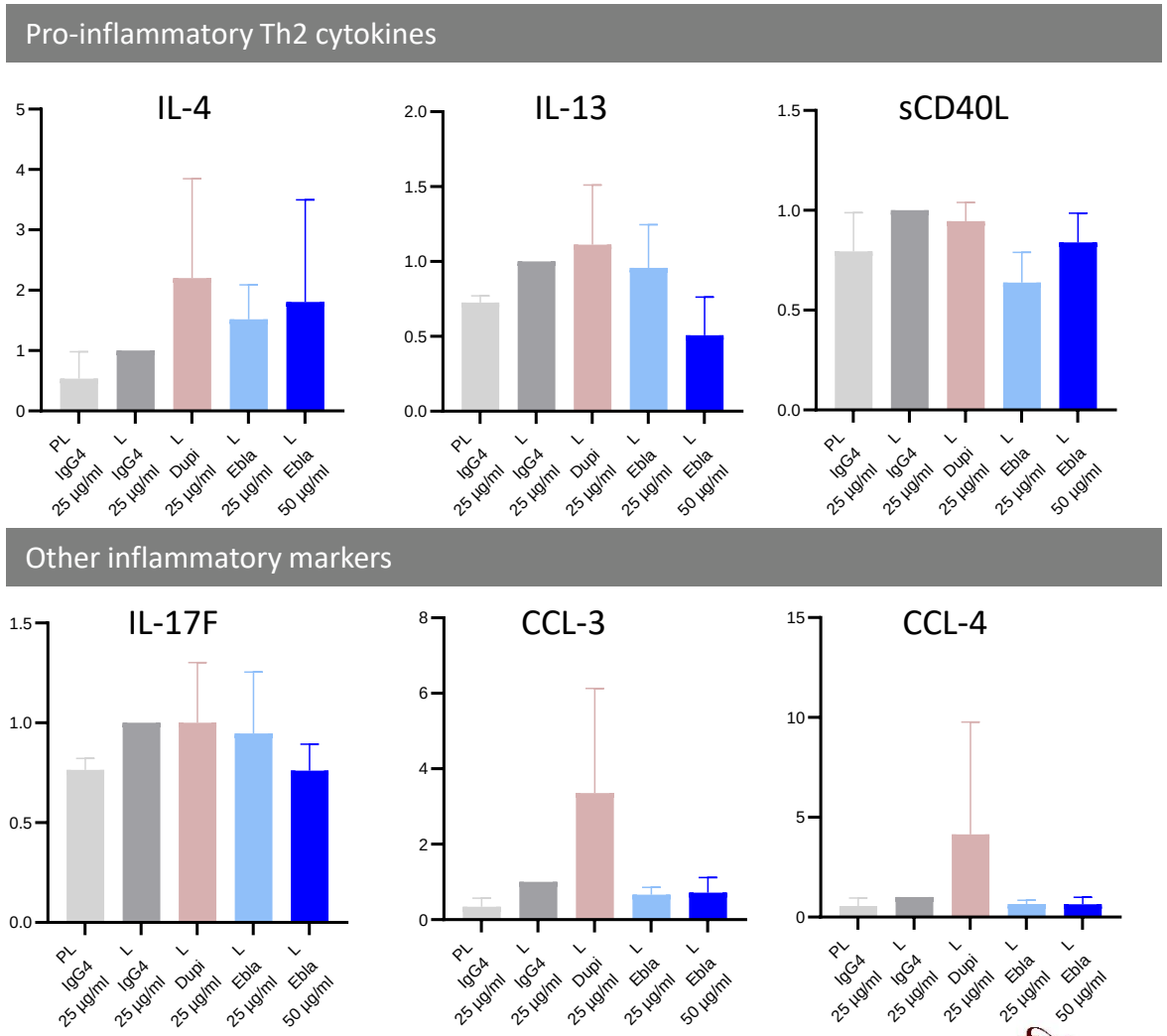
Data from *In vitro* studies conducted in PBMCs of moderate-to-severe AD patients, cells were cultured with anti-IL-13Rα1 (*eblasakimab*) or anti-IL-4Rα (R&D Systems antibody) and supernatants assayed for cytokine panel using electrochemiluminescence.

Data presented at the 1st International Society of Investigative Dermatology Meeting, May 10-14, 2023, in Tokyo, Japan, in late-breaker minisymposium (Cevikbas et al)

Head-to-head study between *eblasakimab* and *dupilumab* in skin biopsies confirm differentiated effects of targeting IL-13R vs IL-4R



In AD lesional skin biopsies, *eblasakimab* reduced secretion of pro-inflammatory Th2 cytokines as well as other AD relevant mediators more efficiently than *dupilumab*

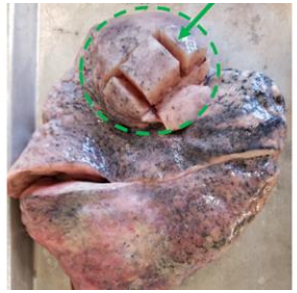


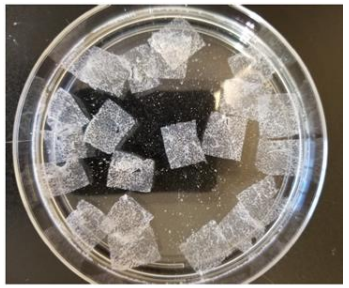
Data from *ex vivo* AD lesional (L) or peri-lesional (PL) skin cultured with control IgG4 antibody, anti-IL-13Rα1 (*eblasakimab*) at different concentrations or anti-IL-4Rα (*dupilumab*)

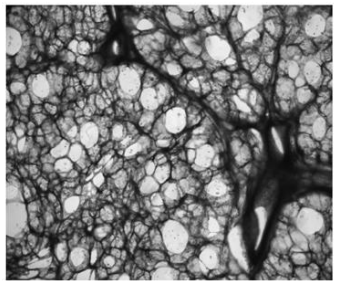
New translational work in COPD reinforces *eblasakimab*'s differentiation in treating comorbidities

COPD is a heterogeneous lung condition characterized by chronic respiratory symptoms due to abnormalities of the airways and/or alveoli which causes persistent, often progressive, airflow obstruction

Precision Cut Lung Slices (PCLS): human *ex vivo* model of COPD[1]

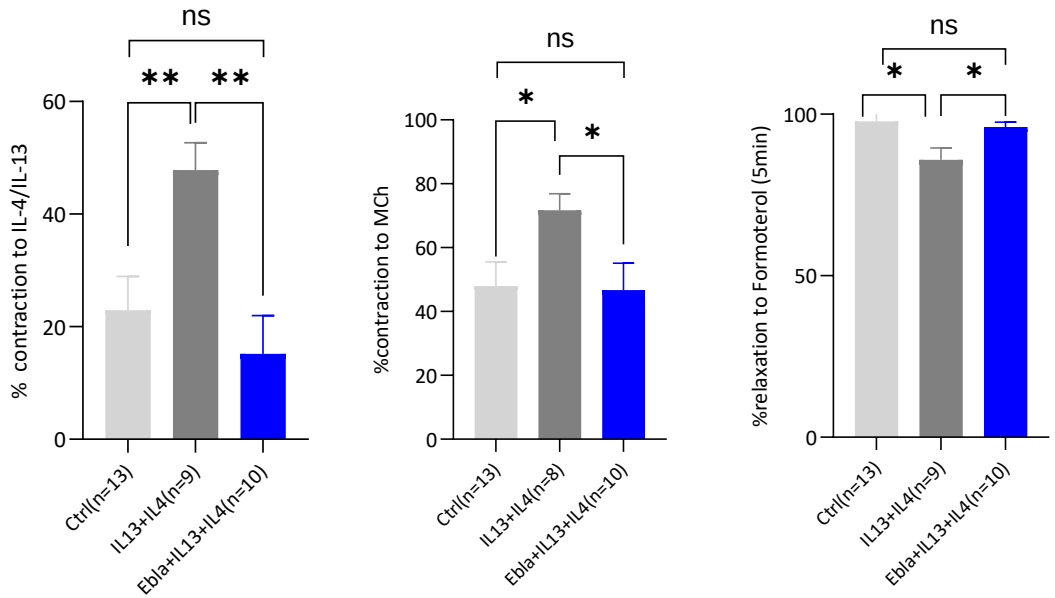






Human PCLS were treated for 48 hours with cytokines IL-4, IL-13 and/or *eblasakimab*. Airway responsiveness was tested with increasing doses of methacholine (MCh), followed by a single dose of formoterol (induces dilation)

Eblasakimab performed better than *dupilumab* in improving airway function and enhancing bronchodilation in both healthy and COPD lung tissue in a head-to-head study at the same concentrations

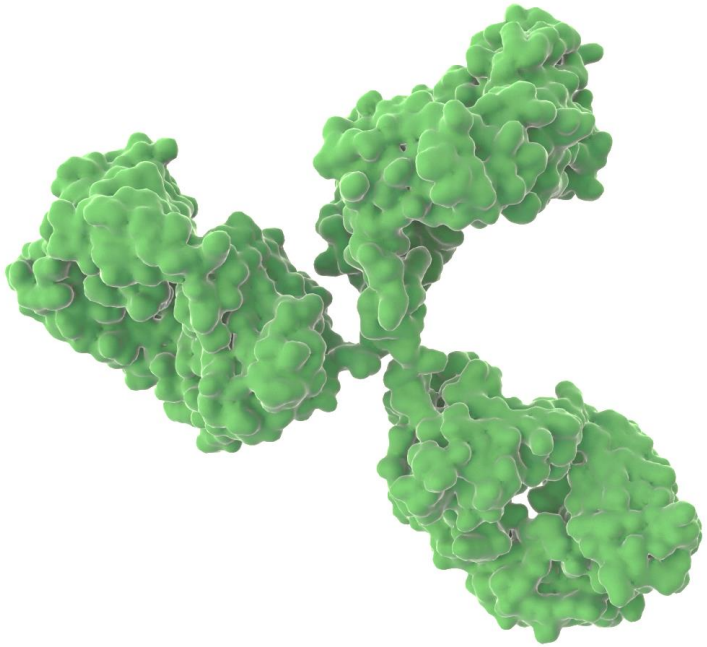


All data from healthy donor tissue

Eblasakimab significantly reduced IL-4/IL-13 driven airway constriction and reversed effects of cytokines to limit dilation by formoterol

1 Kim et al (2023) Science Advances 9 (20)

Eblasakimab's unique approach, supported by translational data, may deliver a differentiated clinical profile



Unique mechanism of action targeting IL-13R

Efficient inhibition of IL-4 and IL-13 signalling through the Type 1 receptor while sparing the Type 2 receptor

Differentiated cytokine profile compared to *dupilumab*

- More efficient reduction of Th2 inflammation
- No increase in Th1 cytokines

Effective in models of AD and COPD

Potential to be effective even when there is inadequate response to *dupilumab*

Eblasakimab
Positive readout from phase 2b TREK-AD

Phase 2b TREK-AD demonstrated monthly dosing regimen without compromising on efficacy

- TREK-AD is a **global dose-ranging study** testing *eblasakimab* conducted across 8 countries with around 300 moderate-to-severe AD patients

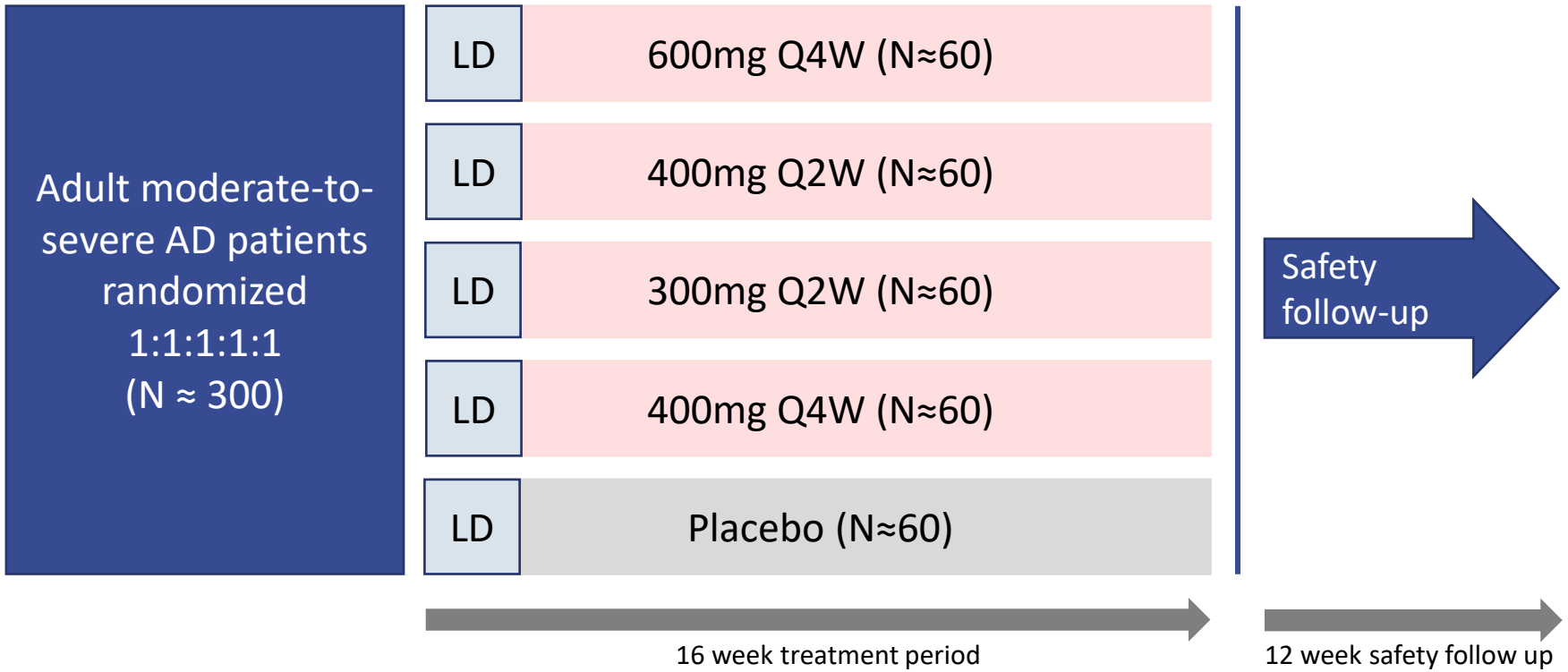
- The **study was positive** and demonstrated **potential for monthly dosing**
  - The study met the primary endpoint and key secondary endpoints in the ITT population in the 3 key doses [1]
  - The 600mg Q4W arm was numerically the best performing arm (73% reduction in EASI score, p=0.001)
  - *Eblasakimab* showed a rapid onset of action in the first few weeks of treatment and was generally well tolerated with low rates of conjunctivitis and injection site reactions

- Post-hoc analyses demonstrated the possibility for **further widening in the placebo-adjusted scores**
  - In keeping with several other recent studies, the placebo response was higher than *dupilumab* studies conducted a decade ago
  - High proportion of milder patients in the US contributed to the high placebo response (over a third of patients in the US had an EASI score less than 18)
  - *Eblasakimab* performed equally well in more severe patients, however placebo scores greatly reduced

1 Refers to the 3 highest dose groups out of a total 4 doses that were tested

TREK-AD: Phase 2b in biologic naïve patients

90 sites from 8 countries, over half the patients enrolled in North America



Key inclusion criteria

- Chronic AD present for ≥3 years
- EASI score ≥16
- vIGA-AD score ≥3
- BSA (Body Surface Area) ≥10%

Primary endpoint

- % change in EASI from baseline

Key secondary endpoints

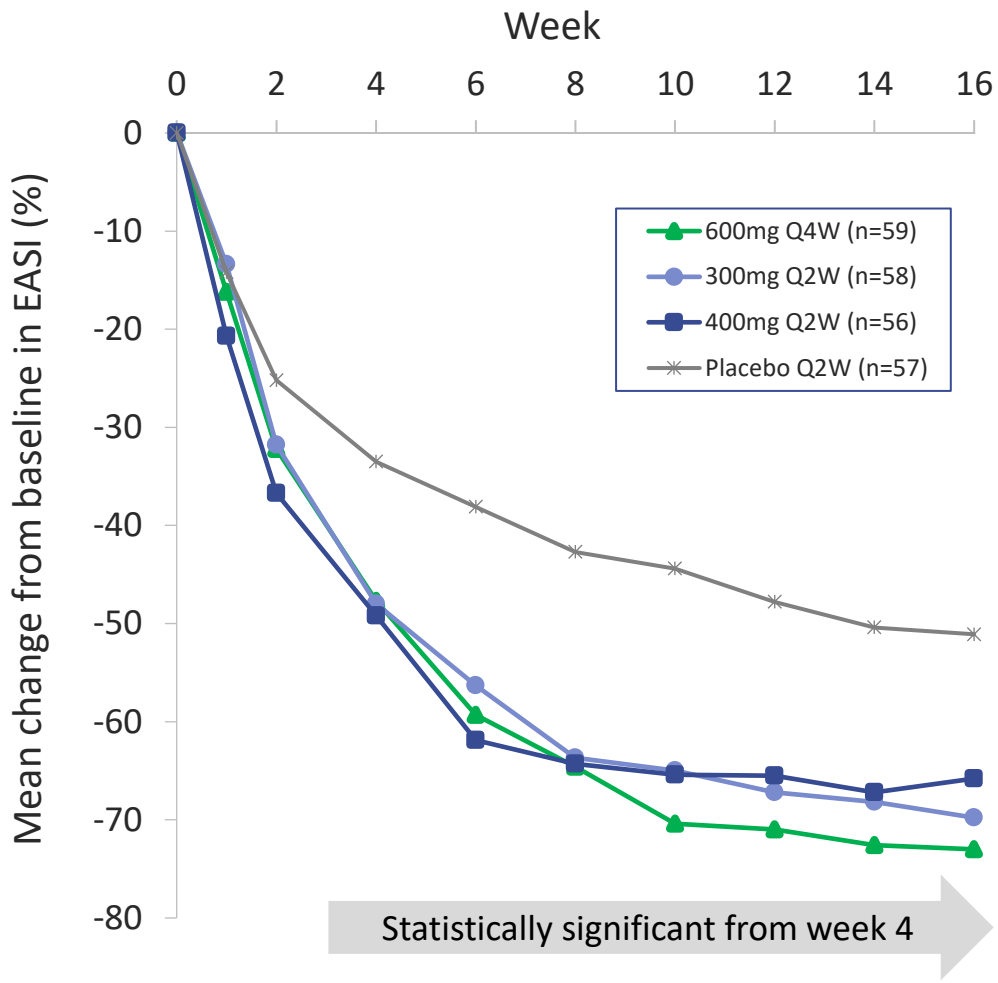
- EASI-75
- EASI-90
- vIGA-AD 0/1
- PROs
- BSA
- SCORAD

- Loading dose of 600mg for the Q2W dose groups at week 0 and week 1
- Loading dose of 600mg for the Q4W dose groups at week 0, week 1 and week 2

Monthly dosing with 600mg led to 73% improvement in disease after 16 weeks and was statistically significant from week 4

Eblasakimab **met the primary endpoint** in three dose groups*

Dose	LS Mean (%)	P value	Statistically significant
600mg Q4W	-73.0	0.0010	✓
400mg Q2W	-65.8	0.0294	✓
300mg Q2W	-69.8	0.0050	✓
Placebo	-51.1		

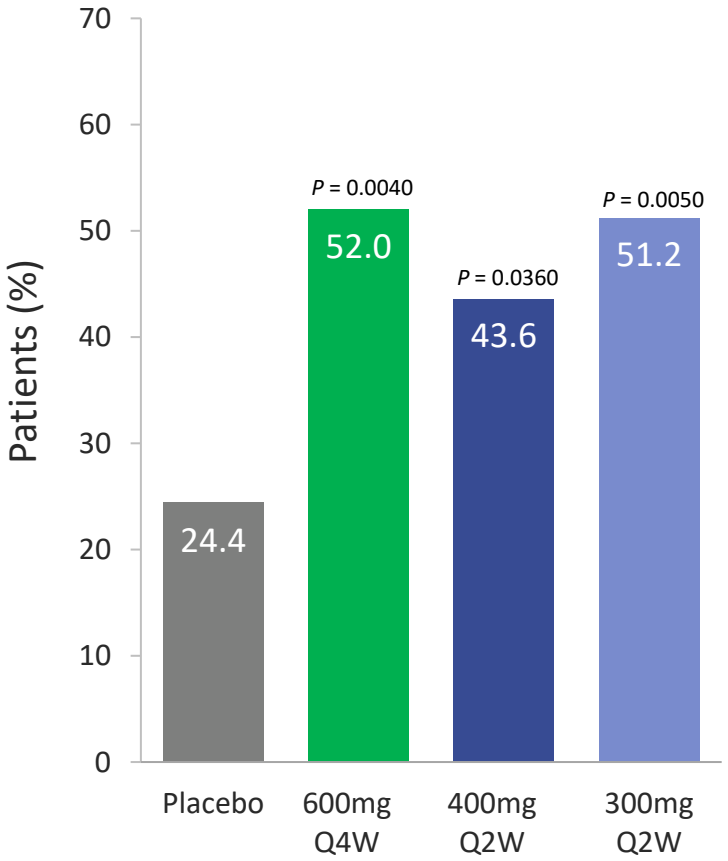


P value is calculated versus placebo for least squares mean values by MMRM method

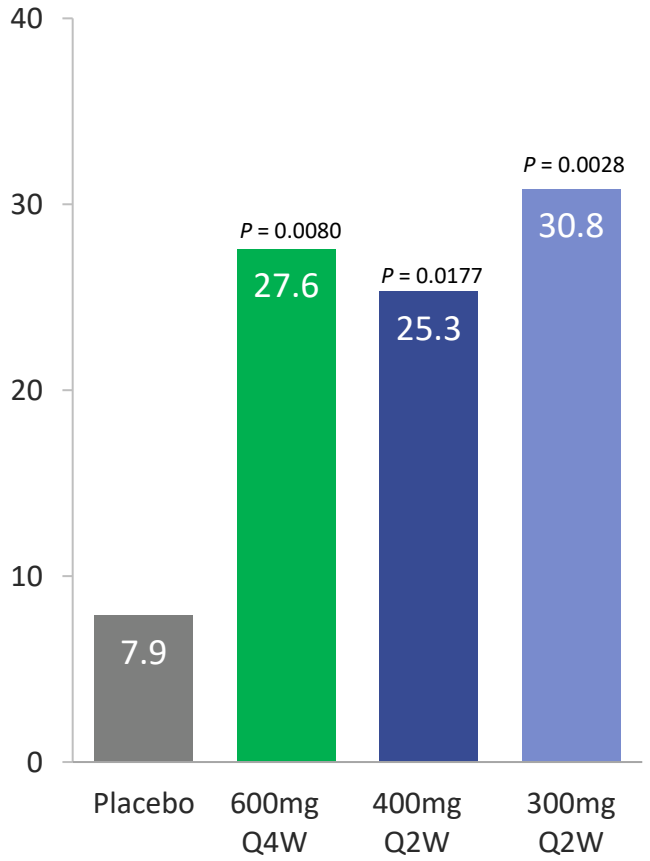
* The lowest dose group (400mg Q4W) had a LS mean change of 62% improvement in disease after 16 weeks and did not reach statistical significance

Robust efficacy across key secondary endpoints

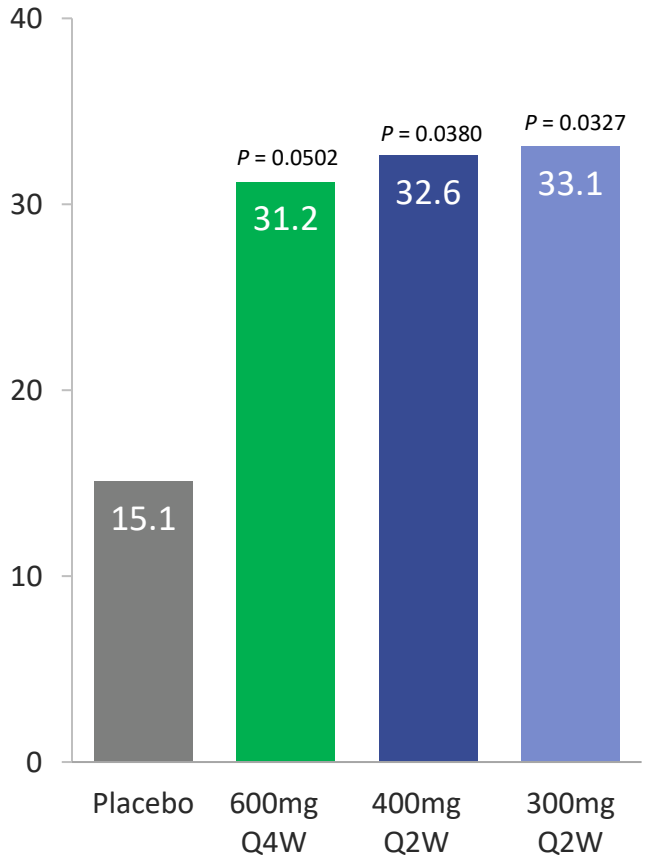
EASI-75



EASI-90



vIGA-0/1



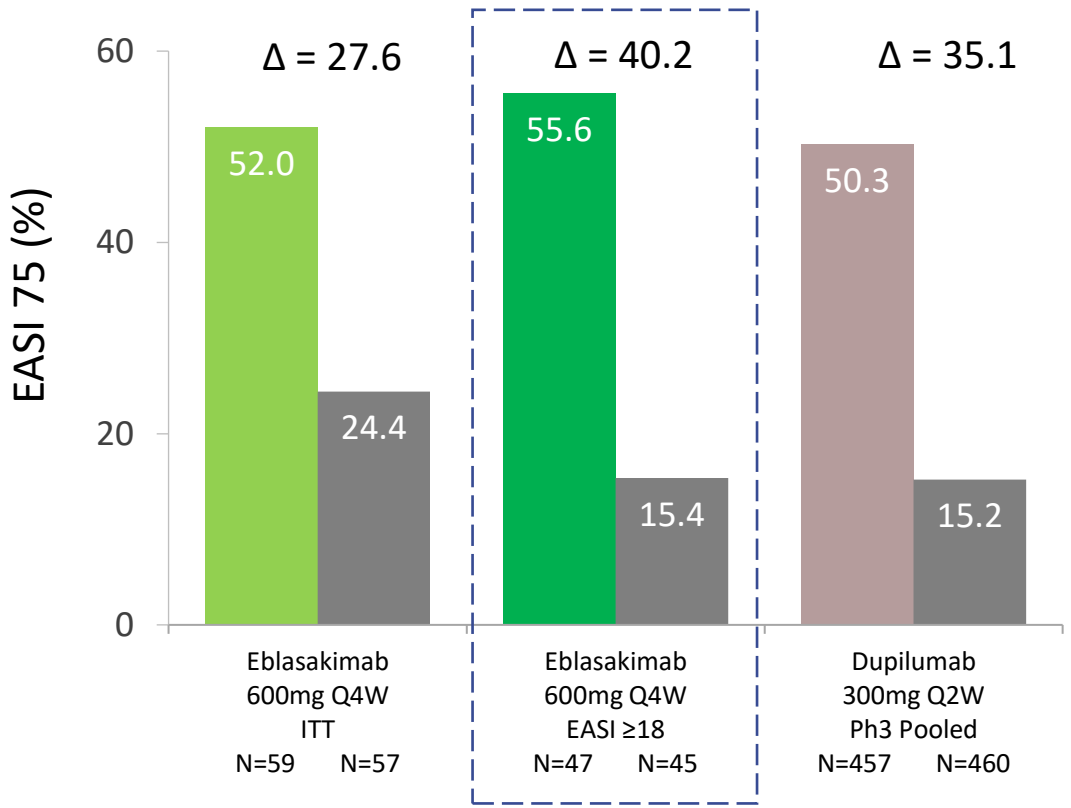
P value is calculated versus placebo by MCMC-MI

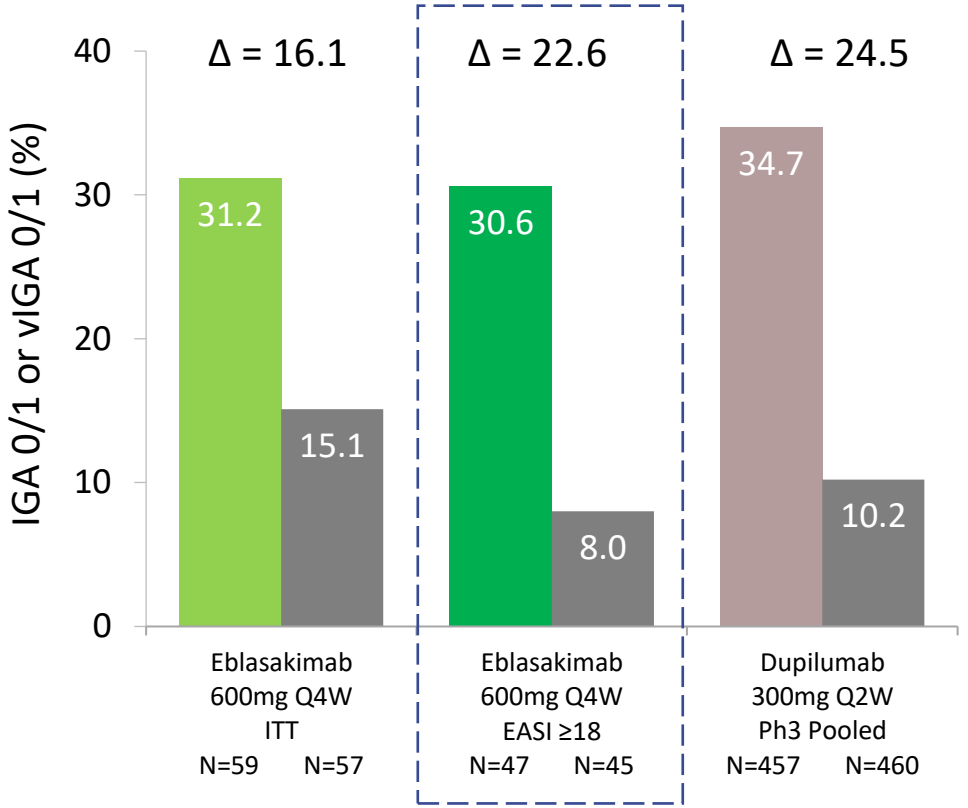
Eblasakimab was generally well-tolerated, consistent with previous studies

Treatment Emergent Adverse Event (TEAE)[1] by category - n (%)	Placebo (n=57)	All Ebla (n=232)	600mg Q4W (n=59)	400mg Q2W (n=56)	300mg Q2W (n=58)	400mg Q4W (n=59)
Any	33 (57.9)	164 (70.7)	41 (69.5)	43 (76.8)	32 (55.2)	48 (81.4)
Serious Adverse Event (SAE)[2]	1 (1.8)	3 (1.3)	0	1 (1.8)	1 (1.7)	1 (1.7)
AEs with frequency of 5% or more across treatment arms:[3]						
• Nasopharyngitis	5 (8.8)	31 (13.4)	8 (13.6)	8 (14.3)	5 (8.6)	10 (16.9)
• Atopic dermatitis	4 (7.0)	20 (8.6)	3 (5.1)	5 (8.9)	4 (6.9)	8 (13.6)
• Headache	4 (7.0)	16 (6.9)	8 (13.6)	1 (1.8)	1 (1.7)	6 (10.2)
• Upper respiratory tract infection	3 (5.3)	15 (6.5)	3 (5.1)	2 (3.6)	6 (10.3)	4 (6.8)
AEs of interest:						
• Injection site reactions	1 (1.8)	11 (4.7)	4 (6.8)	3 (5.4)	0	4 (6.8)
• Conjunctivitis[4]	1 (1.8)	12 (5.2)	4 (6.8)	5 (8.9)	1 (1.7)	2 (3.4)
• Herpes infections	2 (3.5)	7 (3.0)	3 (5.1)	0	1 (1.7)	3 (5.1)
- Herpes simplex infection[5]	2 (3.5)	6 (2.6)	3 (5.1)	0	0	3 (5.1)
- Herpes zoster infection	0	1 (0.4)	0	0	1 (1.7)	0

1 This includes all adverse events recorded through to week 16 or last dose for completed patients
2 None were deemed as being drug related, all three across active arms were related to worsening of AD
3 Applies to AEs that map to the Medical Dictionary for Regulatory Activities dictionary term
4 Includes conjunctivitis, noninfectious conjunctivitis and conjunctivitis allergic
5 Includes oral herpes, herpes simplex infection, herpes virus infection, nasal herpes and herpes ophthalmic

Eblasakimab delivers competitive placebo-adjusted deltas in key secondary endpoints





For illustrative purposes only. Not a head-to-head comparison. Caution should be exercised when comparing data across trials of different products and product candidates. Differences exist between trial designs and patient populations and characteristics. The results across such trials may not have interpretative value on our existing or future results.

Post-hoc analyses were conducted in patients with baseline EASI score ≥ 18. In keeping with several other recent studies, the placebo response was higher in TREK-AD than *dupilumab* studies conducted a decade ago. A high proportion of patients with milder disease in the US contributed to the high placebo response (over a third of patients in the US had an EASI score between 16 and 18). Average baseline disease severity of EASI ≥ 18 population is comparable to historical dupilumab studies. For more information, refer to: Changes in clinical trial and treatment landscape for AD

Simpson et al (2016) NEJM 375(24):2334-2348

Eblasakimab
Positioning in the rapidly evolving AD market

Eblasakimab has the potential to be a leading therapy in AD

		Eblasakimab	*Dupilumab*	*Tralokinumab*	*Lebrikizumab* [1]
Dosing	Once monthly regimen from start of treatment [2]	✓			
Efficacy attributes	Over half of patients see 75% improvement in disease within 16 weeks [3]	✓	✓		✓
	Significant reduction in EASI score by week 2 [3]	✓			
Safety attributes	Low rates of conjunctivitis and injection site reactions [4]	✓			
Treats comorbidities	Potential to be effective in broad range of allergic diseases [5]	✓	✓		

For illustrative purposes only. Not a head-to-head comparison. Caution should be exercised when comparing data across trials of different products and product candidates. Differences exist between trial designs and patient populations and characteristics. The results across such trials may not have interpretative value on our existing or future results.

1 *Lebrikizumab* is approved for AD only in EU and Japan, not in US
2 For approved drugs, based on approved dosing regimens. For candidate drugs, based on regimens tested in phase 3 program at initiation of treatment (after loading doses)
3 For approved drugs, based on label. For candidate drug, based on published results and potential of establishing a claim in future studies
4 For all, based on monotherapy phase 3 showing conjunctivitis and injection site reaction rate less than 6%
5 Allergic diseases relate to Type 2 driven conditions including allergic rhinitis, allergy, asthma, food allergies

We believe *eblasakimab* can be initially positioned as the therapy of choice for patients that have inadequate response to *dupilumab*

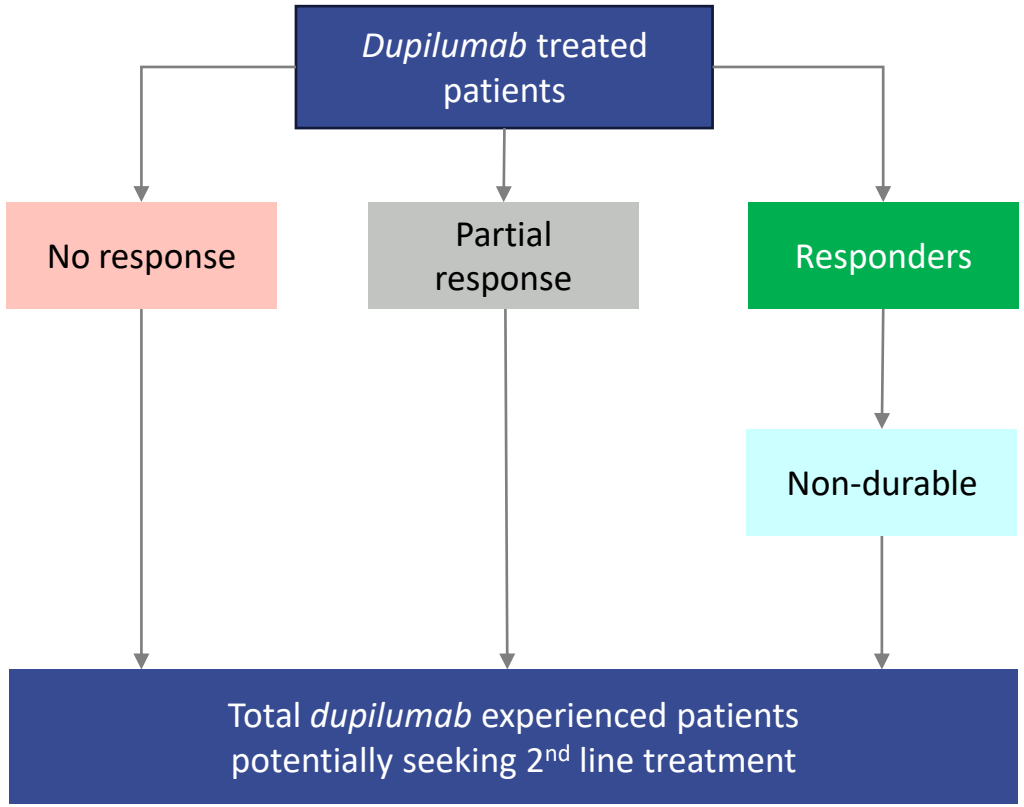
Initially targeting $10B second line market [1]	***Eblasakimab* is the first antibody to target the IL-13 receptor** with potential to become a **leading therapy** in treating atopic dermatitis (AD) and other allergic disease • **Potential to be leading second line biologic therapy** for patients with inadequate response to *dupilumab* • Second line market is substantial with potential to be **$10B by 2029** [2] • Prescriber experience in second line could enhance use in first line treatment
Pioneering trial in 2nd line with positive interim data	TREK-DX - Phase 2 study of *eblasakimab* in *dupilumab*-experienced AD patients is currently ongoing • Only randomized, placebo-controlled study of patients previously treated with *dupilumab* • Interim readout of 22 patients shows **numbers unprecedented in other AD studies** with biologics: over 60% patients treated with *eblasakimab* achieved EASI-90 and vIGA0/1
Translational data supports positioning	*Eblasakimab* has a **unique mechanism of action** compared to *dupilumab* • Translational data in AD skin biopsies demonstrates ***eblasakimab* is more effective** at downregulating inflammatory markers than *dupilumab* • *Eblasakimab*'s MoA has potential to be effective in *dupilumab* refractory patients

1 Second line market here refers to a second systemic therapy following inadequate response to *dupilumab*
2 Decision Resources Group, December 2022

Patients in need of second line treatment lack safe long-term options

- *Dupilumab* has established standard-of-care for AD patients
- Around 270,000 AD patients are being treated with *dupilumab* [1]
- However, 63% of *dupilumab*-treated patients do not achieve IGA 0/1 [2] within 16 weeks and of those that do, only 54% maintain the response at week 52 [3]
- Many of these patients may respond but may not be satisfied with their response and will seek alternative treatments
- In market research survey, 56% of current *dupilumab* users and 56% of lapsed *dupilumab* users are willing or very willing to switch to a treatment with *eblasakimab*'s target profile [4]

Based on market research [4], we believe around 150,000 patients who are currently using or have used dupilumab could switch to an alternative biologic treatment



1. Sanofi investor presentations (Dec 2023), based on prevalence numbers of uncontrolled moderate-to-severe AD patients in US, EU and JP markets, and 9% penetration rate of Dupixent
2. Thaci et al (2019) J Dermatol Sci 94(2):266-275
3. Worm et al (2020) JAMA Derm 156(2):131-143
4. Market research conducted by ASLAN from May-August 2023 with 83 AD patients in the US (27% patients severe, 69% moderate, 5% mild) in different treatment cohorts. Patients were asked to rate on a scale from 1-7, where 1= very unwilling and 7= very willing, their willingness to switch from current treatment to a treatment with *eblasakimab*'s target profile, % of patients selecting rating of 6 or 7 shown above

What do patients with inadequate response to *dupilumab* look for?

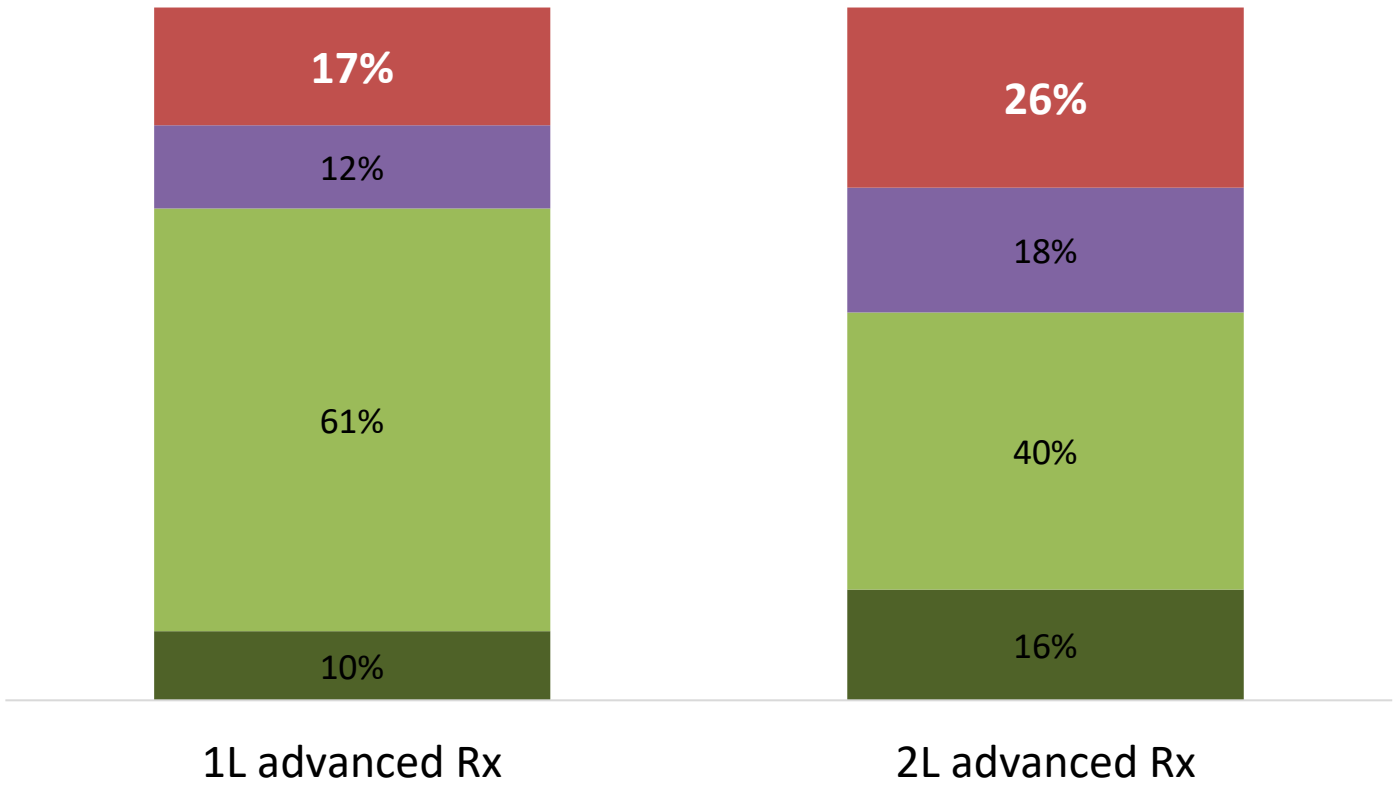
Attribute	*Eblasakimab* [1]	*Lebrikizumab* [2]	JAK inhibitors	OX-40 inhibitors [1]	APG777 [1]
Long-term safety [3] *AD is a chronic disease*	✓	✓	X	?	✓
Efficacy [4] *Better than or equal to dupilumab at week 16*	✓	✓	✓	X	?
Rapid speed of onset [5] *Potential for significant reduction in EASI score by week 2*	✓	X	✓	X	?
Potential to treat comorbidities *78% of AD patients have allergic comorbidities* [6]	✓	X	?	✓	X
Effective in target patient population *Data from placebo-controlled study* [7]	✓ (interim analysis)	X	X	X	?

For illustrative purposes only. Not a head-to-head comparison. Caution should be exercised when comparing data across trials of different products and product candidates. Differences exist between trial designs and patient populations and characteristics. The results across such trials may not have interpretative value on our existing or future results.

1 Currently in clinical development and not approved therapies
2 *Lebrikizumab* is approved for AD only in EU and Japan, not in US
3 Long term safety defined by lack of boxed warnings on FDA label or potential warnings for long term safety based on MoA
4 Efficacy defined by placebo-adjusted EASI-75 scores at week 16 in latest clinical trials in comparison to *dupilumab* Phase 3
5 Defined by significant difference in EASI score reduction between treatment and placebo at week 2. *Eblasakimab* results from EASI ≥18 population in Phase 2b study
6 Calzavara-Pinton et al (2023) Adv Ther 40:5366-5382. Based on MoAs expected to be efficacious in a broad range of co-morbidities
7 Referring to placebo-controlled study designed in *dupilumab* experienced population, interim analysis readout 22 April 2024

Eblasakimab was given the largest market share by health care providers among biologics in 1L and 2L after *dupilumab*

1L / 2L share of patients on biologics from survey [1]

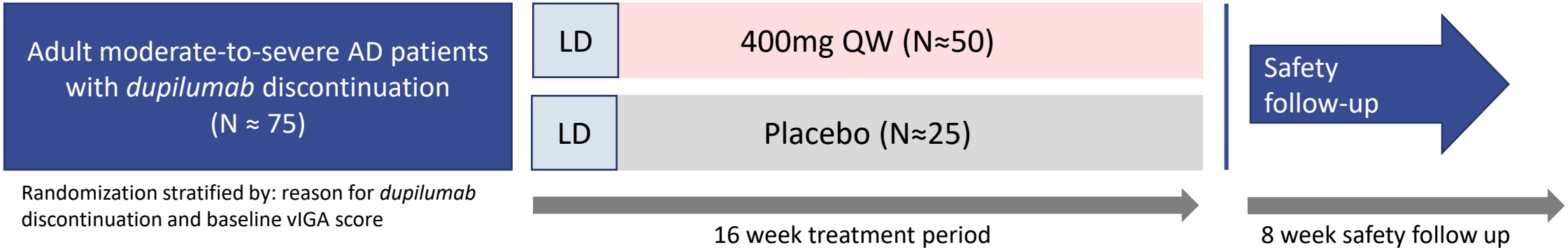


Biologics market in AD expected to be $19B by 2029 [2]

1 Market research conducted by ASLAN from August-October 2023 with 93 health care providers for AD in the US (44% dermatologists, 22% allergists and 34% physician assistants and nurse practitioners). 1L: first line of advanced treatment for moderate-to-severe AD patients following topical/ conventional therapies, 2L: second line treatment following an advanced therapy Preference share calculation uses weighted average % of moderate-severe AD patients, includes exposure to *eblasakimab* profile after *lebrikizumab* profile

2 DRG 2022 Report: AD Disease Landscape and Forecast Report

TREK-DX: Phase 2 study in *dupilumab* experienced patients testing higher dose regimen ongoing

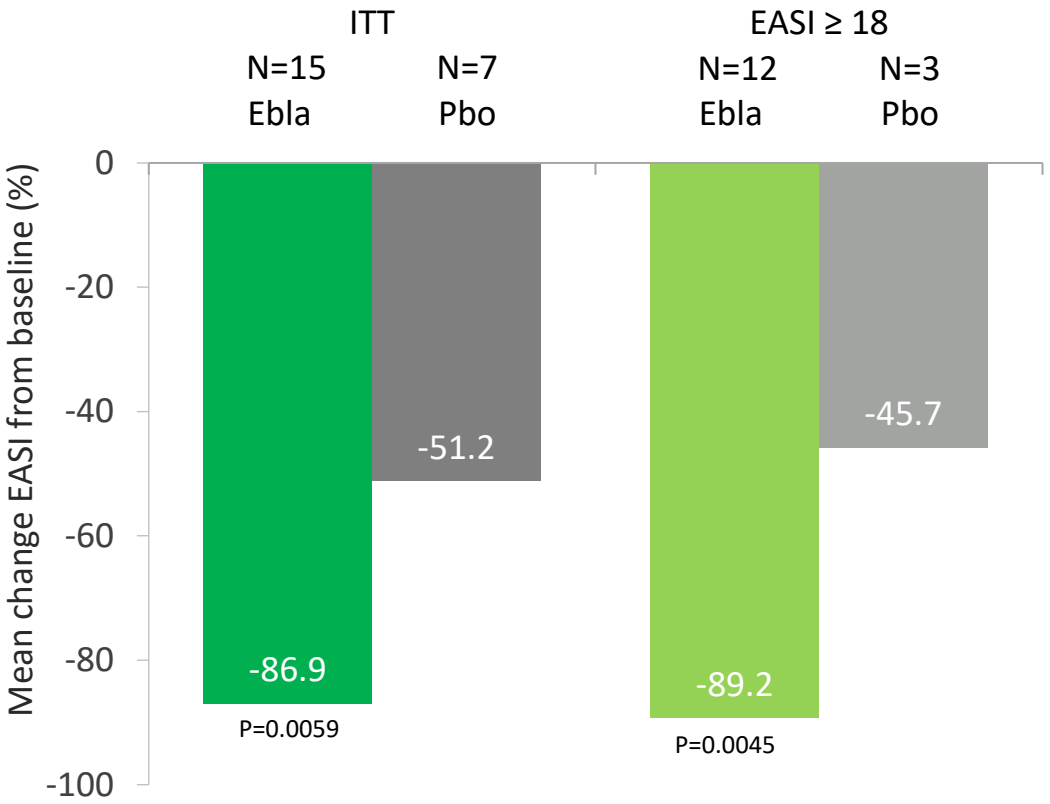


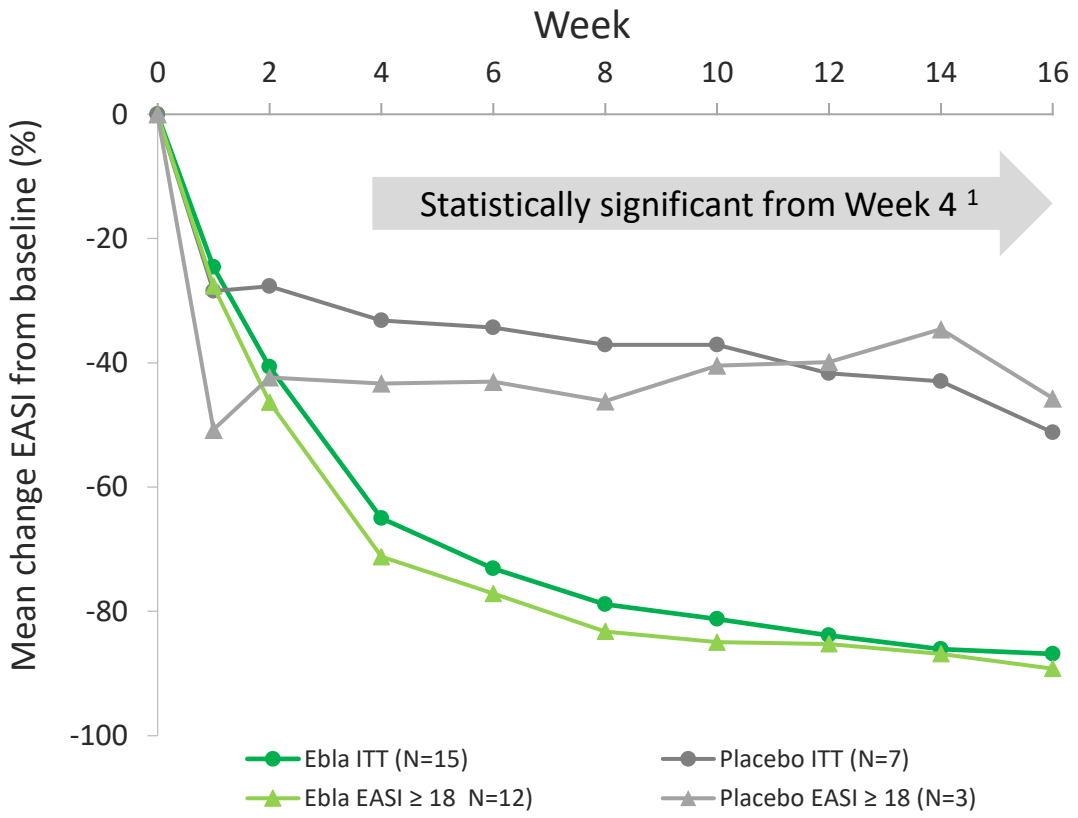
- Interim analysis of the first 22 patients enrolled [1] (ITT) conducted in April 2024
  - Most patients on *eblasakimab* achieved EASI-90 and vIGA of 0 or 1 after just 16 weeks of treatment, with numbers unprecedented in other biologics AD studies
  - Treatments were well-tolerated, no new safety signals were identified, no reports of conjunctivitis or injection site reactions
  - The TREK-DX recruitment criteria were tightened in October 2023 to enroll only patients with a baseline EASI ≥ 18. Of the 22 patients in this interim analysis, 15 meet these amended enrollment criteria and will be included in the final readout
- Study ongoing, expected readout of topline data end 2024

1 17 patients completed the 16-week treatment period and 5 patients discontinued prior to that (2 in the active arm, 3 in the placebo)

Eblasakimab achieved rapid and significant reduction of EASI scores in *dupilumab* experienced AD patients in the interim analysis

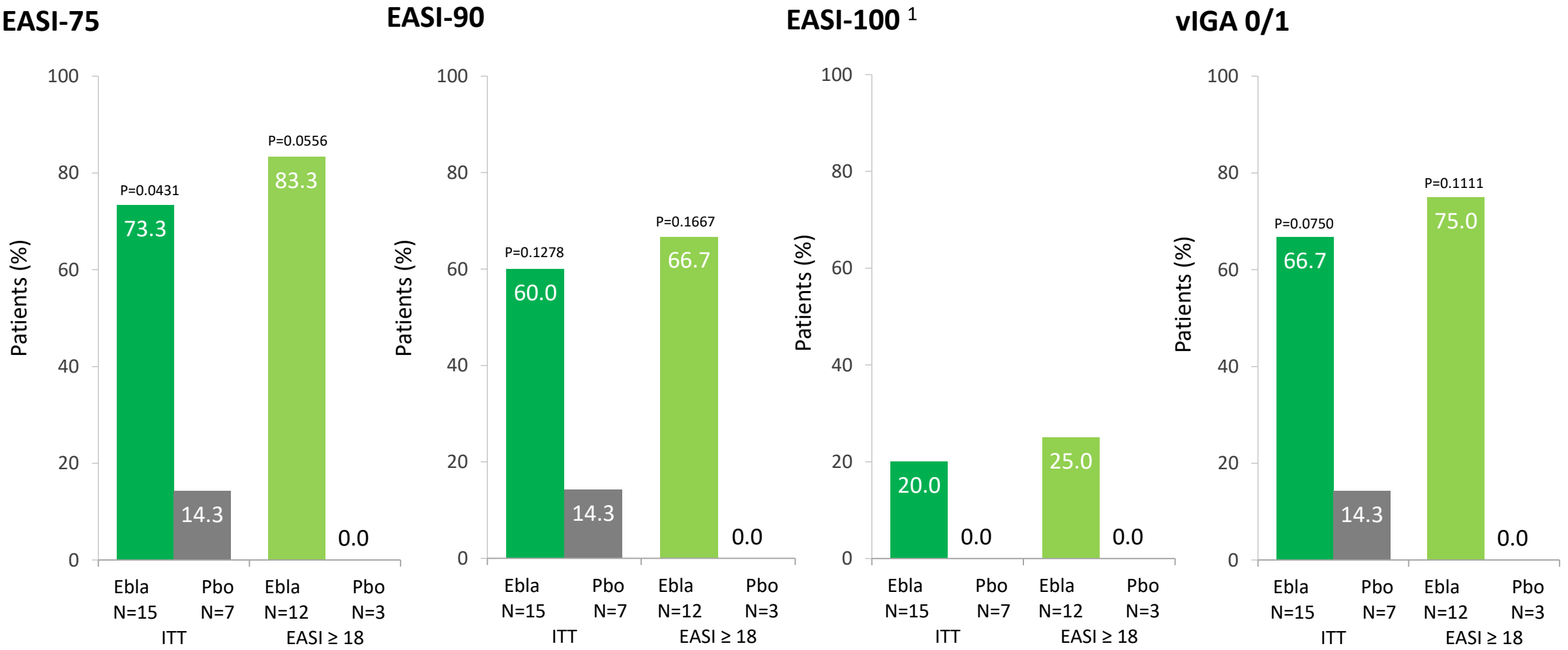
At Week 16 (primary endpoint)





1 Significant from week 4 for ITT population and from week 6 for EASI ≥ 18 population
Least squares mean values using LOCF for missing data. Pbo: Placebo
Interim analysis readout April 2024

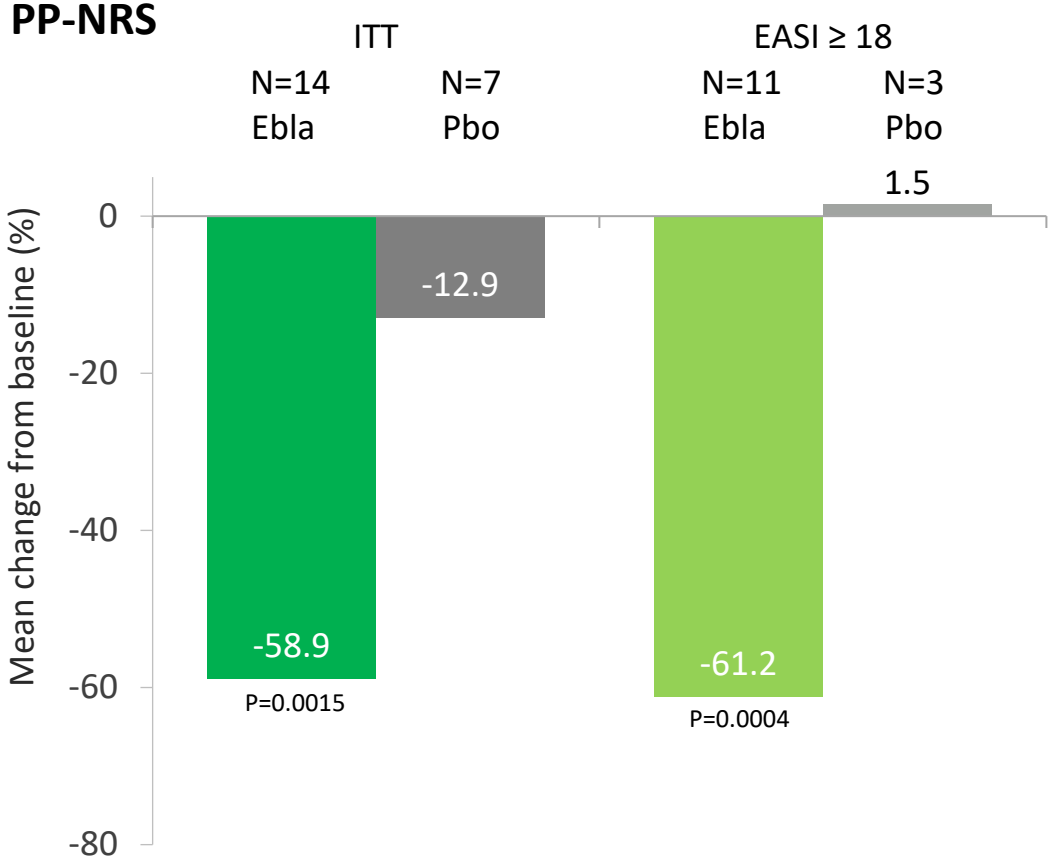
Over 60% of *eblasakimab* treated patients achieved EASI-90 and vIGA 0/1 – unprecedented in prior AD studies with biologics



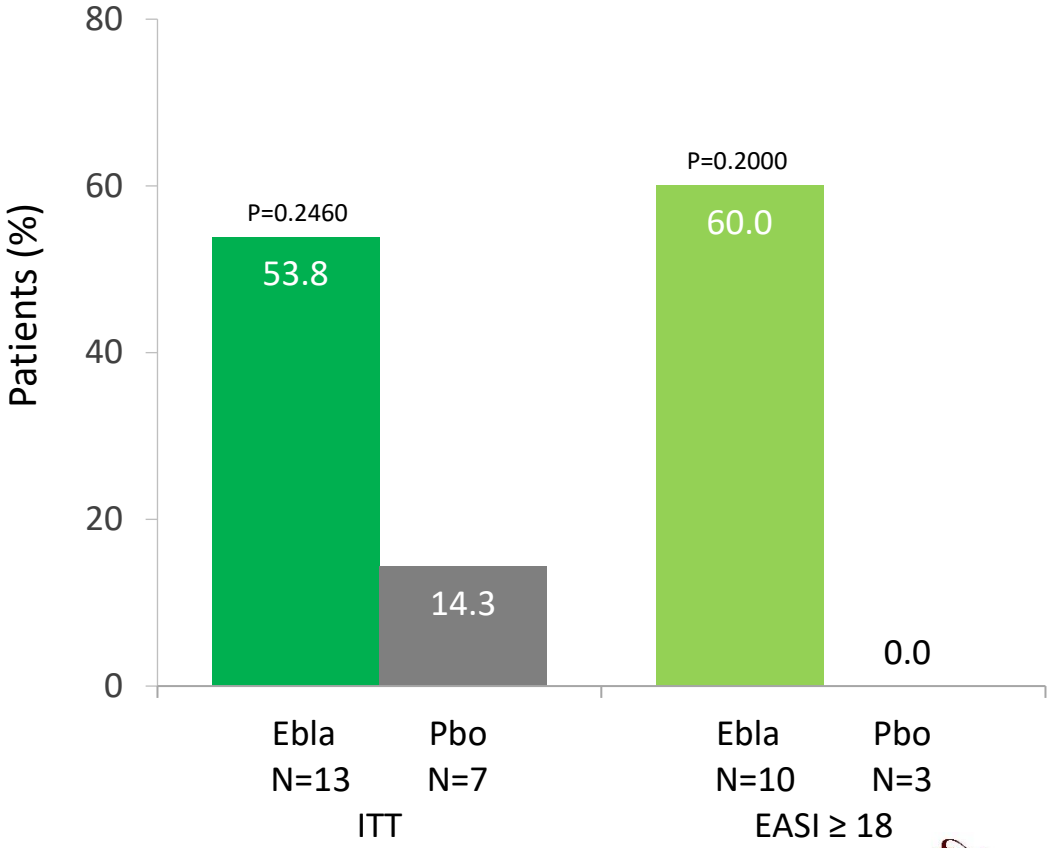
1 EASI-100 was not a prespecified endpoint and statistical tests were not performed
Binary endpoints analyzed using NRI/LOCF
Interim analysis readout April 2024

Eblasakimab produced rapid and clinically meaningful relief in itch – one of the most burdensome symptoms of AD

PP-NRS



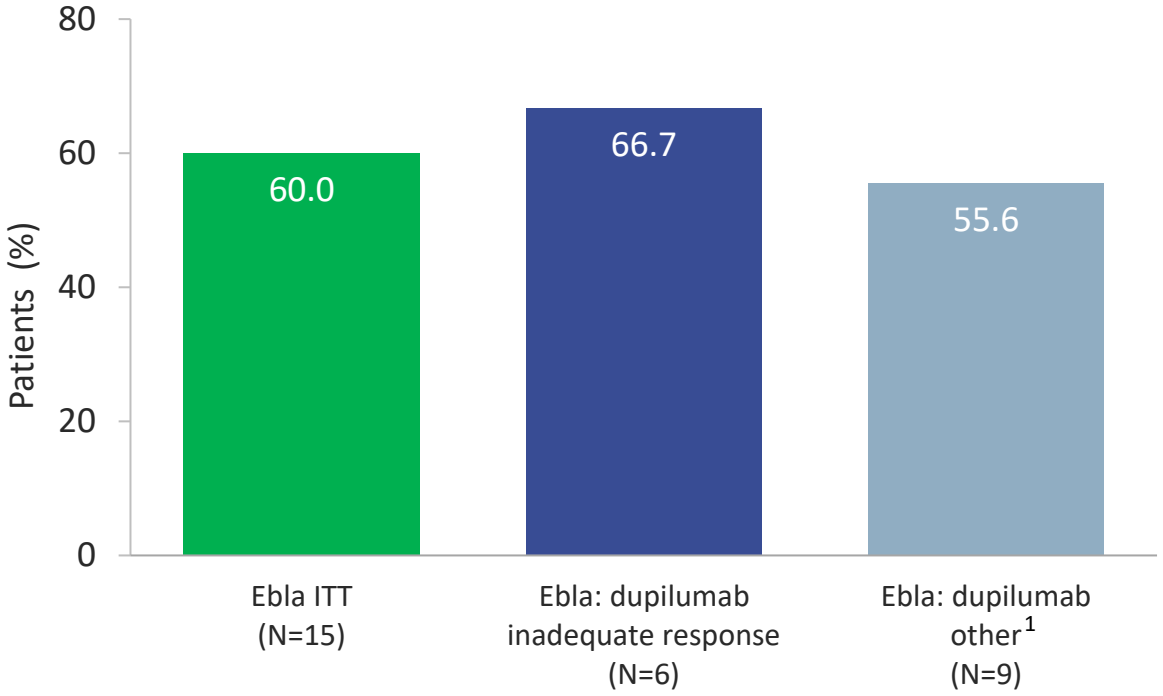
4-point improvement in PP-NRS



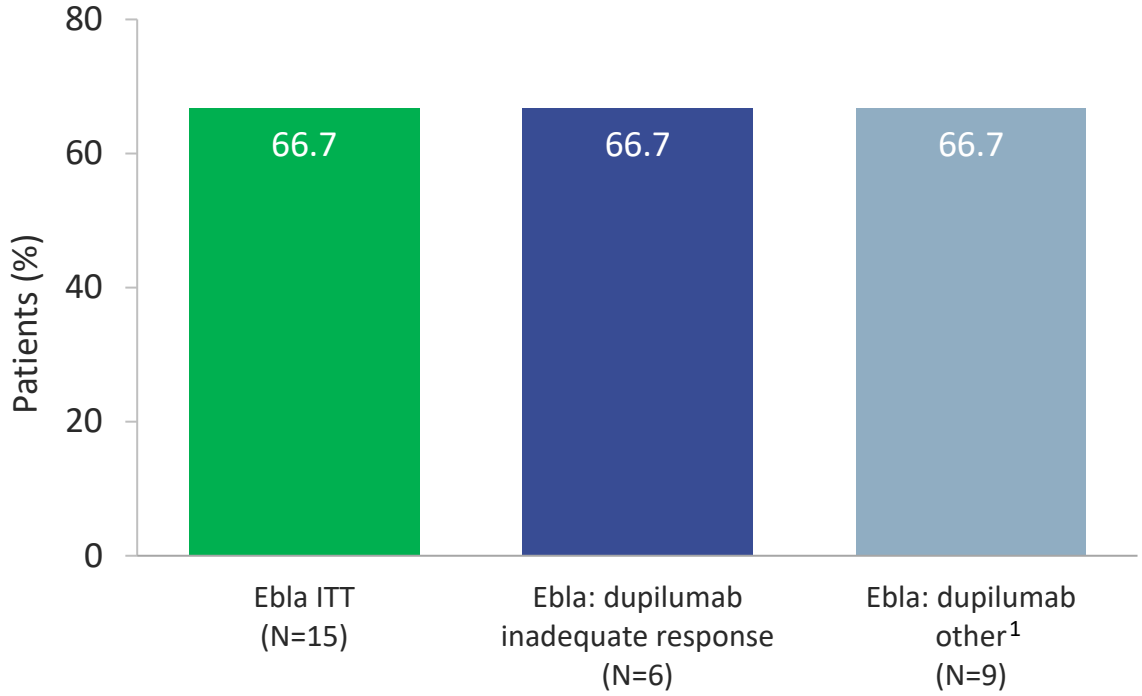
PP-NRS uses least squares mean values and LOCF for missing data. Binary endpoints analyzed using NRI/LOCF
Interim analysis readout April 2024

Eblasakimab was equally effective in patients who have an inadequate response to *dupilumab*

EASI-90



vIGA 0/1



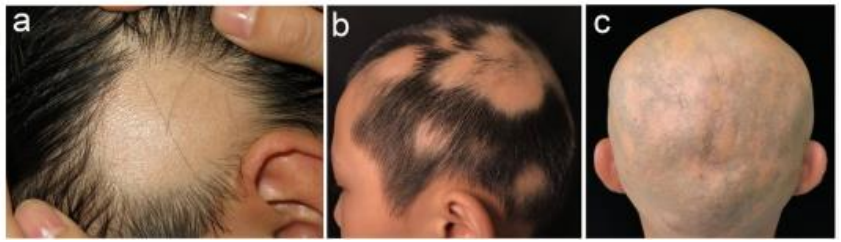
Two thirds of patients treated with *eblasakimab* achieved EASI-90 and vIGA 0/1 even after they previously had an inadequate response to *dupilumab*

1 Patients that discontinued *dupilumab* due to reasons other than inadequate response
Binary endpoints analyzed using NRI/LOCF
Interim analysis readout April 2024

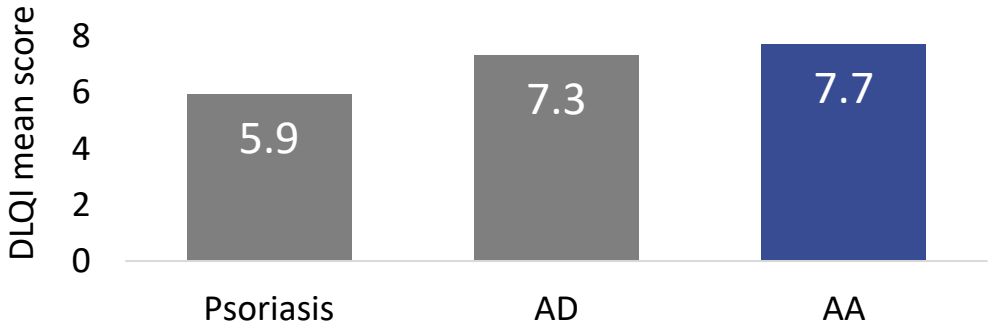
Farudodstat

High burden of disease– around 700,000 patients in the US alone

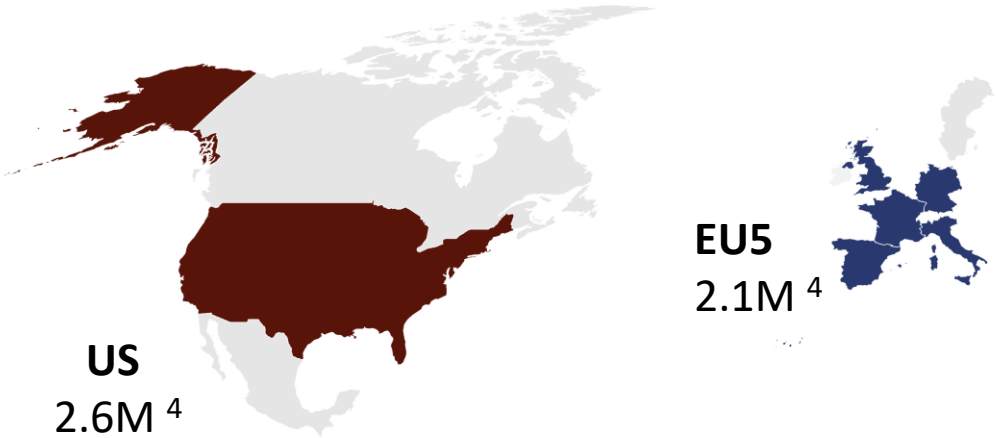
Alopecia areata (AA) is a common autoimmune disease characterised by complete or partial hair loss [1]



AA has profound negative impact on quality-of-life scores, similar or worse than other dermatologic diseases [2,3]



Total diagnosed lifetime prevalence AA cases

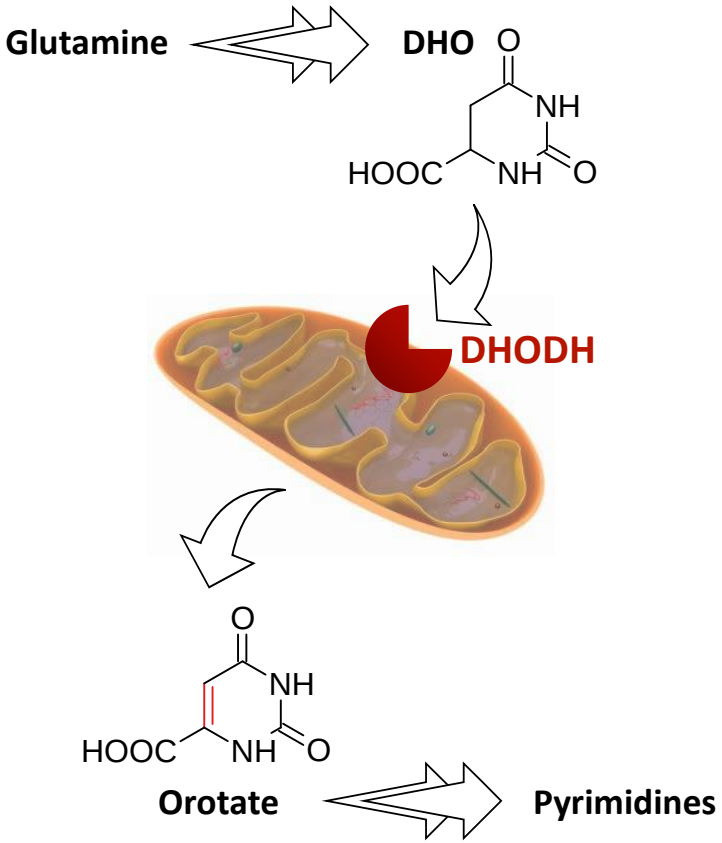


- **2.1%** of the population can develop AA at some point in their lifetime[5]
- **700k** patients in the US in 2020 [6,7]
- **25%** of patients have **severe** disease [6]
- **62%** of AA patients **receive drug** treatment [4]

1. Zhou et al (2021) Clin Rev All Imm 61:403-423
2. Liu et al (2018) JAAD 79(3):556-558
3. Lundberg et al (2000) Acta Derm Venereol 80(6):430-434
4. DRG Alopecia Areata Disease Landscape and Forecast report 2023
5. Mirzoyev et al (2014) J Inv Derm 134(4):1141-1142
6. Benigno et al (2020) Clin, Cos & Invest Derm 13:259-266
7. Mostaghimi et al (2023) JAMA Derm 159(4):411-418

DHODH is a validated target for autoimmune disease

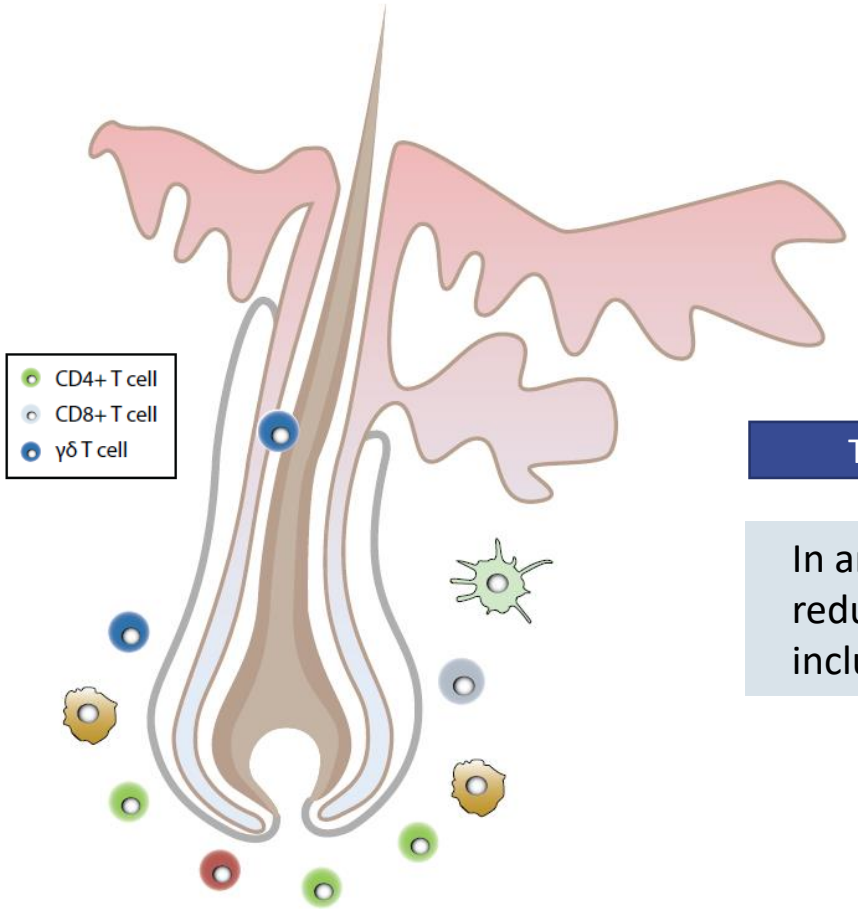
The *de novo* pathway



- DHODH inhibition will block *de novo* pathway of pyrimidines, impacting rapidly dividing cells eg T cells during autoimmune triggers
- Other cells can use salvage pathways to make pyrimidines
- DHODH inhibitors are approved in multiple sclerosis and rheumatoid arthritis
- However, first-generation DHODH inhibitors have limited potency and significant safety liabilities
- *Farudodstat* was designed to be more potent and to address the toxicities associated with first-generation inhibitors
- New Composition of Matter Patent for *farudodstat* received positive opinion from European Patent Office in February 2024, could provide commercial exclusivity until 2043

Farudodstat's mechanism of action inhibits key processes in AA

Healthy hair follicle

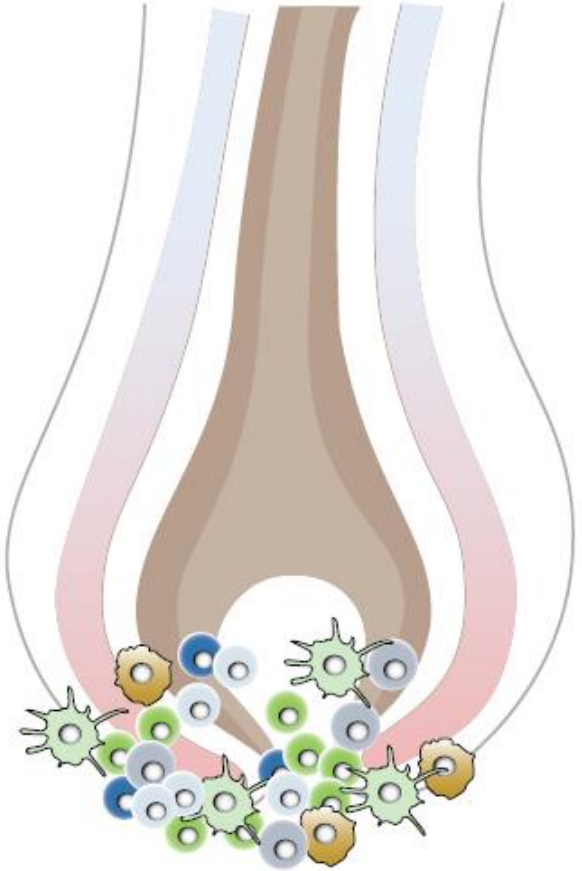


farudodstat

T cell activation and cytokine IFNγ production

In an ex vivo human model of AA, *farudodstat* reduced key drivers of AA disease pathology, including T cell expansion

Alopecia areata affected hair follicle



AA pipeline is dominated by JAKi, novel mechanisms are needed

MoA	Company	Product/Product Candidate	Stage
JAK inhibitors	Lilly	Olumiant *(baricitinib)*	Approved
	Pfizer	Litfulo *(ritlecitinib)*	Approved
	CoNCERT Pharmaceuticals Inc.	*Deuruxolitinib*	Phase 3
	Bristol Myers Squibb	*Deucravacitinib*	Phase 2
	Reistone BIOPHARMA	SHR0302	Phase 2
S1P Inhibitor	Pfizer	*Etrasimod*	Phase 2
IL2/9/15 inhibitor	equillium	EQ101 (exBNZ-1)	Phase 2 open label
Anti-ILT7	HORIZON	*Daxdilimab*	Phase 2 open label
IL-2	NEKTAR	Rezpegaldesleukin	Phase 2a
IL-7Rα antagonist	Q32 BIO	ADX-914	Phase 2a PoC
OX40/CD134	INMAGENE BORDERLESS INNOVATION	IMG-007	Phase 1b/2a, open label

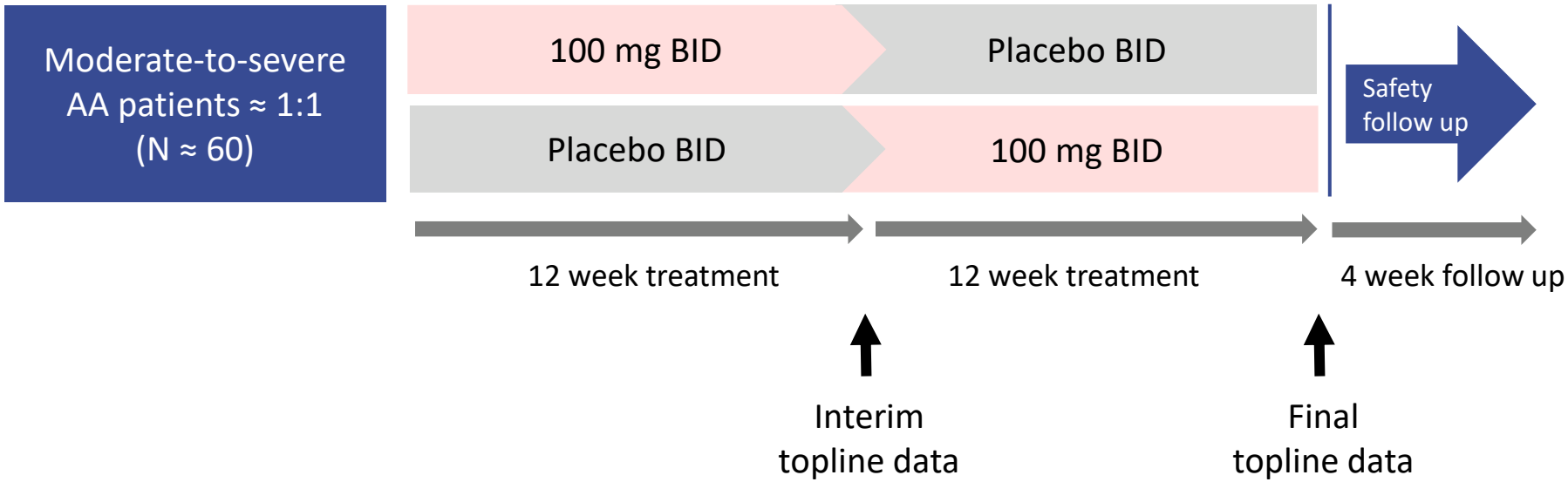
WARNING: SERIOUS INFECTIONS, MORTALITY, MALIGNANCY, MAJOR ADVERSE CARDIOVASCULAR EVENTS (MACE), and THROMBOSIS

See full prescribing information for complete boxed warning.

- Increased risk of serious bacterial, fungal, viral and opportunistic infections leading to hospitalization or death, including tuberculosis (TB). Interrupt treatment with OLUMIANT if serious infection occurs until the infection is controlled. OLUMIANT should not be given to patients with active tuberculosis. Test for latent TB before and during therapy, except for COVID-19; treat latent TB prior to use. Monitor all patients for active TB during treatment, even patients with initial negative, latent TB test. (5.1)
- Higher rate of all-cause mortality, including sudden cardiovascular death with another Janus kinase inhibitor (JAK) vs. TNF blockers in rheumatoid arthritis (RA) patients. (5.2)
- Malignancies have occurred in patients treated with OLUMIANT. Higher rate of lymphomas and lung cancers with another JAK inhibitor vs. TNF blockers in RA patients. (5.3)
- Higher rate of MACE (defined as cardiovascular death, myocardial infarction, and stroke) with another JAK inhibitor vs. TNF blockers in RA patients. (5.4)
- Thrombosis has occurred in patients treated with OLUMIANT. Increased incidence of pulmonary embolism, venous and arterial thrombosis with another JAK inhibitor vs. TNF blockers. (5.5)

Proof-of-concept not yet established

Phase 2a: Proof-of-concept trial in AA, topline expected Q3 2024

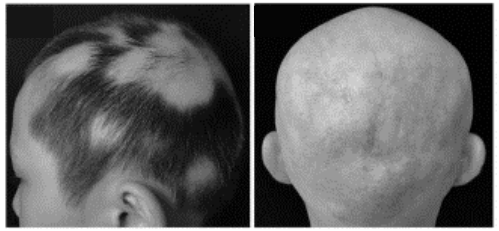


Primary efficacy endpoint: % change from baseline in SALT score

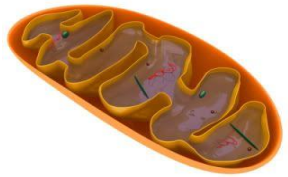
Select inclusion criteria:

- Adults with 30% or greater scalp hair loss (SALT score ≥ 30)
- Current episode of hair loss duration between 6 months to 7 years

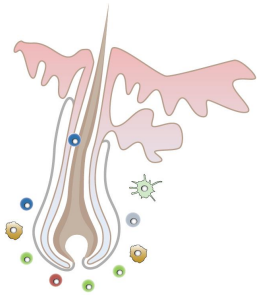
Farudodstat has the potential to be an effective, novel approach in the treatment of AA



High burden of disease and unmet need in AA with few effective treatments.



Farudodstat is approximately 30-fold **more potent** at inhibiting DHODH, a validated target, than first-generation inhibitors



Farudodstat potentially **inhibits the key drivers of AA** pathophysiology

Phase 2a proof-of-concept study in AA initiated, interim **topline readout expected Q3 2024**

Upcoming milestones

Multiple upcoming catalysts over the next 12 months

Ticker	NASDAQ: ASLN
Net operating cash used	$ 7.6M (4Q 2023)
Cash balance	$ 21.3M as of December 31, 2023 $ 5.0M registered direct offering closed March 14, 2024
Upcoming milestones expected in 2024	• *Eblasakimab* topline readout from TREK-DX trial end 2024 • Partnership selection to advance *eblasakimab* into Phase 3 • *Farudodstat* Phase 2a interim topline data Q3 2024 • Publication and presentation of further data from the TREK-AD and TREK-DX studies of *eblasakimab* and on *farudodstat* at major conferences