

Company presentation

May 2020

NASDAQ: ASLN
TPEx: 6497



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Clinical-stage biopharma with immunology and oncology focus

Portfolio led by ASLAN004, a monoclonal antibody targeting IL-13R α 1, that has the potential to be best-in-disease for atopic dermatitis and asthma

Programs	Discovery	Preclinical	Phase 1	Phase 2	Anticipated milestones
Immunology					
ASLAN004 <i>IL-4/IL-13</i> <i>Receptor inhibitor</i>	Atopic dermatitis				<ul style="list-style-type: none">• MAD interim data 2H 2020• MAD completion 1H 2021
	Asthma				
Oncology ¹					
ASLAN003 <i>DHODH inhibitor</i>	AML				
Discovery programs					
AhR antagonist ²	Oncology				

¹ ASLAN completed a phase 2 trial of *varlitinib* in 2nd line biliary tract cancer in 2019. The trial did not meet its primary endpoints but exploratory analyses identified a sub-group of patients that appeared to respond to the drug. Further analysis of the data is ongoing.

² Aryl hydrocarbon receptor, or AhR, program is being developed in an ASLAN majority-owned joint venture with Bukwang Pharmaceutical Co., Ltd.



ASLAN004



Atopic dermatitis (AD) is a chronic disease that can severely impact quality of life

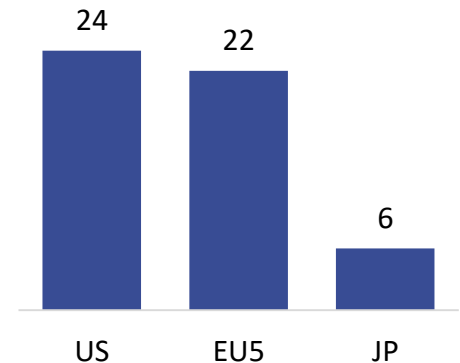
AD is a chronic inflammatory skin condition

- Atopic dermatitis is the most common form of eczema
- Characterised by red inflamed skin and severe daytime and night-time itching
- Over 200 million AD patients worldwide
 - Prevalence estimated at 1-3% of adults worldwide
- Up to 50% are moderate-to-severe patients

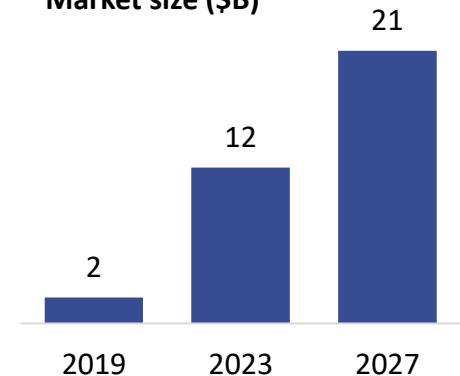
Substantial market opportunity

- Treatment options traditionally focused on topical corticosteroids
- *Dupilumab* (approved in 2017) is the only approved biologic therapy available
- Drugs in late stage development include *lebrikizumab* and JAK inhibitors
- Experience with biologics in psoriasis is driving rapid uptake in AD
- Market expected to exceed \$20B by 2027

Total AD prevalent cases (M)



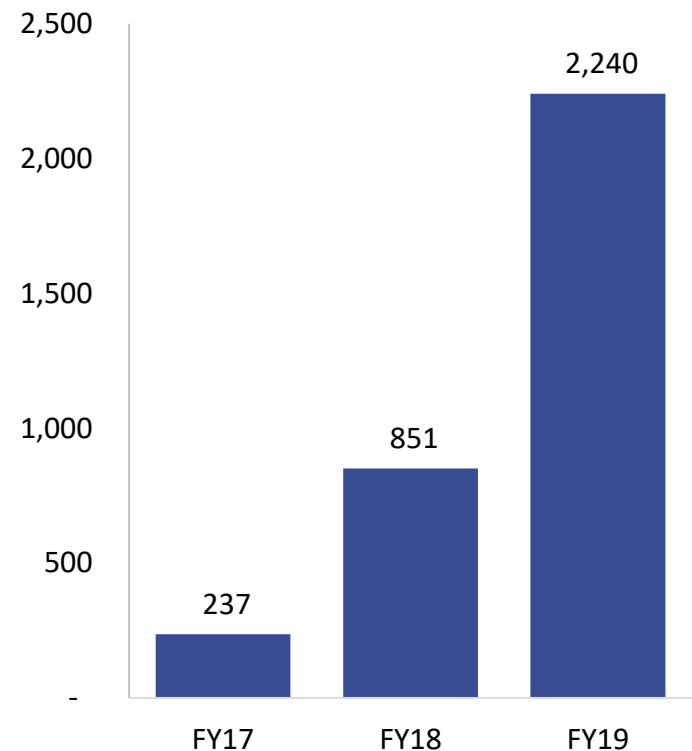
Market size (\$B)



Dupilumab has advanced the standard of care for AD, but a significant unmet need remains

- Launch of *dupilumab* in 2017 helped drive a large market for systemic AD therapy
- *Dupilumab* establishing dual blockade of IL4/IL13 biologic therapy as the new standard of care (broad efficacy, no serious adverse effects)
- Sanofi intends to grow sales to over \$11B
- However, there remains a significant unmet need
 - Only 35% of patients treated with *dupilumab* achieved an optimal response¹
 - Real world data suggests 25% to 50% of patients report symptoms of conjunctivitis²
 - Opportunity to improve dosing convenience

Dupilumab sales (\$M)



¹ Spherix (2018) Atopic dermatitis ATU study

² Reported 25-50% conjunctivitis: Wollenberg et al (2018), Conjunctivitis occurring in atopic dermatitis patients treated with dupilumab-clinical characteristics and treatment.



ASLAN004 has the potential to be best-in-disease

IL-13R α 1 inhibitor

ASLAN004 is the only monoclonal antibody targeting IL-13R α 1, and has the potential to be best-in-disease for atopic dermatitis and asthma

Validated mechanism

Targets the same pathway and receptor complex as *dupilumab*

Targeting
differentiated profile

Potential for improved efficacy, fewer adverse events (conjunctivitis), monthly dosing

SAD completed

Phase 1 SAD in healthy volunteers completed. No significant adverse events noted to date. Profile may allow for monthly dosing.

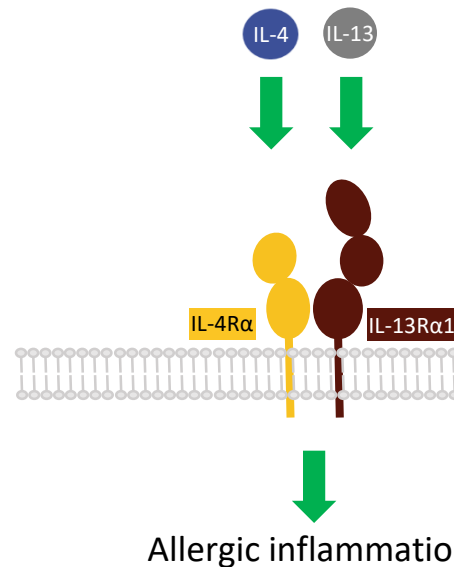
MAD/PoC ongoing

Currently recruiting second cohort in MAD / PoC study. Early efficacy data encouraging. Expected completion in 1H 21.



ASLAN004 is the only drug besides *dupilumab* to provide dual IL-4 / IL-13 blockade

- Both IL-4 and IL-13 can activate the Type II receptor leading to allergic inflammation
- *Dupilumab* and ASLAN004 block the receptor, blocking signalling through both IL-4 and IL-13 at the same time
- Drugs like *lebrikizumab* and *tralokinumab* only block signalling through IL-13



Type II receptor

Comprises two subunits:
Dupilumab can bind IL-4Rα,
ASLAN004 can bind IL-13Rα1.
Binding either subunit will
block receptor activation.



Dual-blockade appears to be more effective

IL4/IL13 receptor targeting

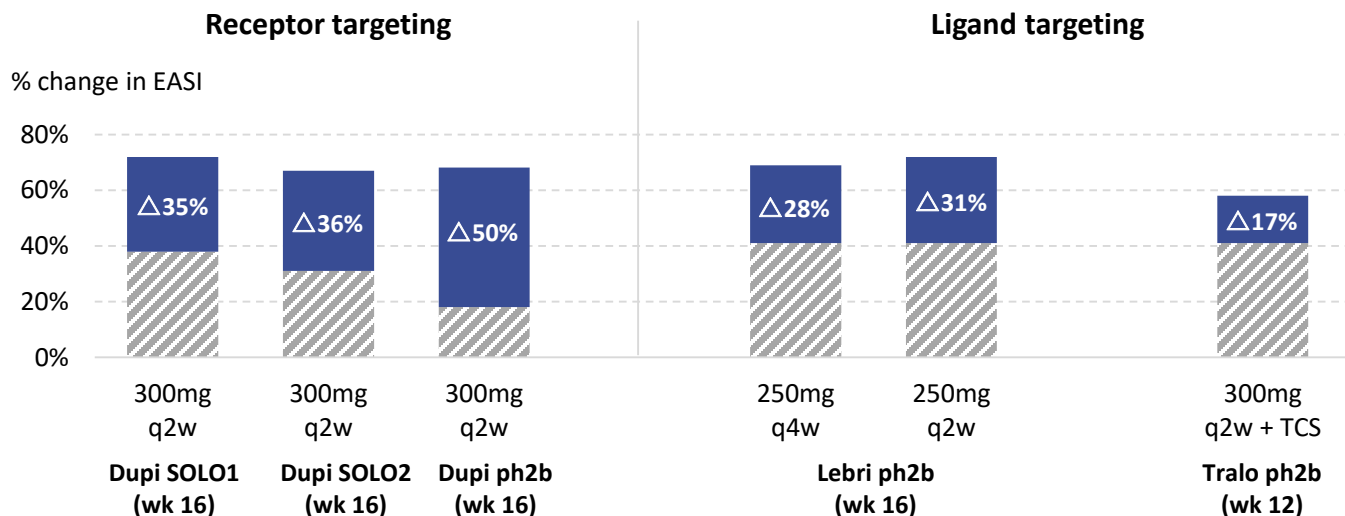
ASLAN004	IL-13R α 1	Phase 1 / POC in atopic dermatitis
<i>Dupilumab</i>	IL-4R α	Approved in atopic dermatitis and allergic asthma

IL4/IL13 ligand targeting

<i>Lebrikizumab</i>	IL-13	Discontinued in asthma, phase 3 in atopic dermatitis
<i>Tralokinumab</i>	IL-13	Discontinued in asthma, phase 3 in atopic dermatitis
<i>Altrakincept</i>	IL-4	Discontinued
<i>Pascolizumab</i>	IL-4	Discontinued

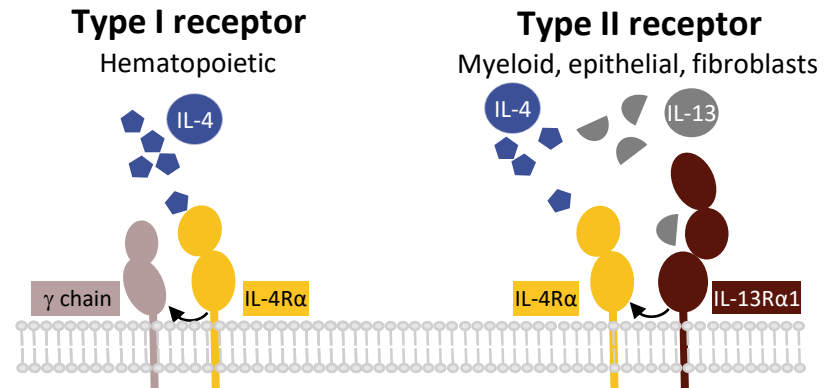
Other targets

<i>Etokimab</i>	IL-33	Discontinued in atopic dermatitis
MOR106	IL-17C	Discontinued in atopic dermatitis



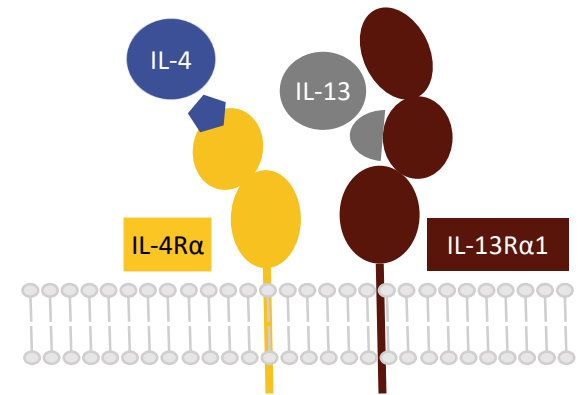
Unlike *dupilumab*, ASLAN004 does not block the Type I receptor

- Type I receptor is the early trigger of Th2 cell differentiation at the start of atopy
- Type II receptor is broadly expressed and drives allergy, so efficacy is driven by the Type II receptor
- Implications of blocking the Type I receptor unclear, but could explain increased risk of conjunctivitis with *dupilumab*



ASLAN004 binds more strongly to receptor than *dupilumab* relative to its respective ligand

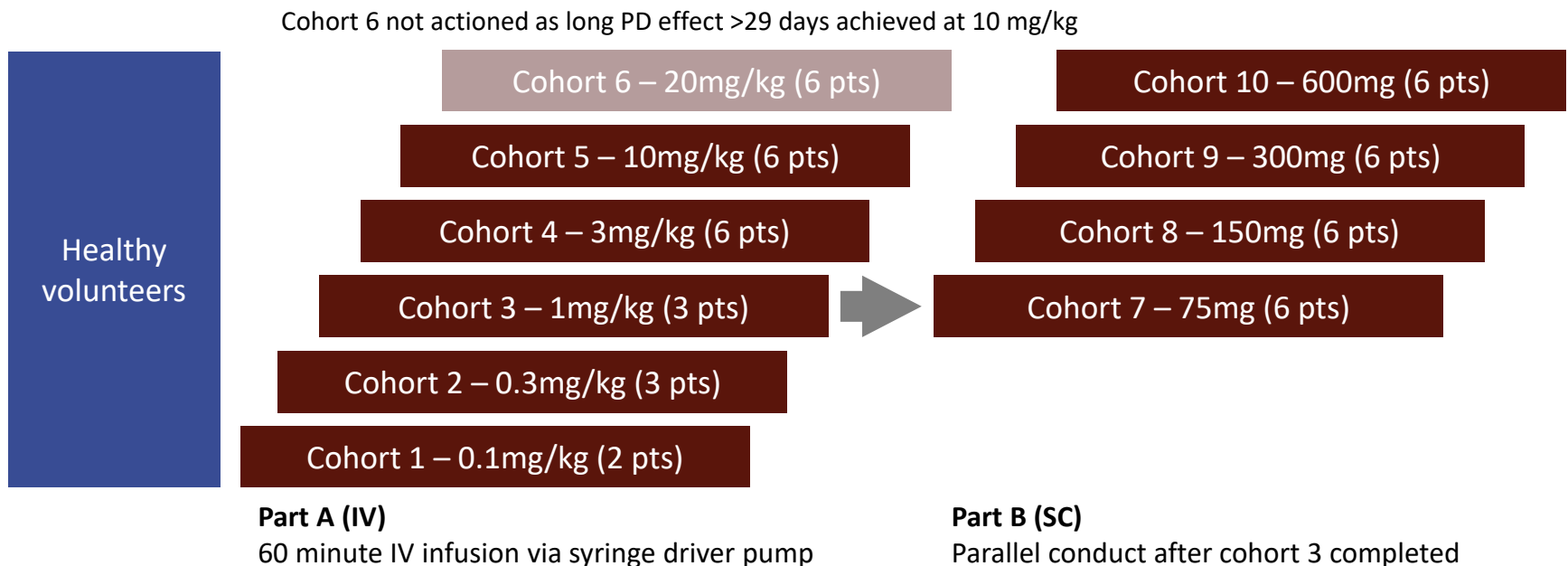
Receptor	Ligand	Kd (nM)	Comments
IL-13R α 1	IL-13	30 ¹	ASLAN004 has a 60 fold higher affinity for receptor than IL-13
IL-13R α 1	ASLAN004	0.5	
IL-4R α	IL-4	0.1 ¹	<i>Dupilumab</i> only has a 3 fold higher affinity for receptor than IL-4
IL-4R α	<i>Dupilumab</i>	0.03	



ASLAN004 offers a greater affinity difference between ligand and receptor binding which may translate to lower required concentration *in vivo*

Phase 1 SAD study in healthy volunteers completed

- Well tolerated at all doses when administered IV and subcutaneous (SC)
 - No adverse events that led to discontinuations, no significant injection site reactions
- Analysis of downstream mediators including pSTAT6 demonstrated complete inhibition within one hour of dosing with IV and maintained for more than 29 days
- PK profile may allow for monthly dosing
- Concentration required to completely inhibit signal transduction via the receptor was over an order of magnitude lower than that of existing therapies



ASLAN004 well-tolerated at all dose levels

Drug-related adverse event	N = 44				
	Any grade		Severity		
	N	(%)	Mild	Moderate	Severe
Decreased appetite	2	5	1	1	0
Alanine aminotransferase increased	1	2	1	0	0
Diarrhoea	1	2	1	0	0
Pyrexia	1	2	1	0	0
Blood lactate dehydrogenase increase	1	2	1	0	0
Weight decrease	1	2	1	0	0
Lymphocyte count decrease	1	2	1	0	0
Headache	1	2	0	1	0
C-reactive protein increase	1	2	1	0	0
Injection site pruritus (mild)	1	2	1	0	0



ASLAN004 MAD is designed to deliver PoC

- MAD / PoC study testing ASLAN004 (SC) in moderate-severe atopic dermatitis patients
- Expected to complete in 1H 21
- Double-blind, placebo-controlled study
- Patients dosed for 8 weeks with a 12-week recovery period

Moderate-to-severe atopic dermatitis patients (N = 42)

Cohort 1 – 200mg QW
(ASLAN004 N = 6, placebo N = 2)

Cohort 2 – 400mg QW
(ASLAN004 N = 6, placebo N = 2)

Cohort 3 – 600mg QW
(ASLAN004 N = 6, placebo N = 2)

Expansion cohort –
Dose 1, 2 or 3 QW
(ASLAN004 N = 12,
placebo N = 6)

Primary endpoints are safety and tolerability

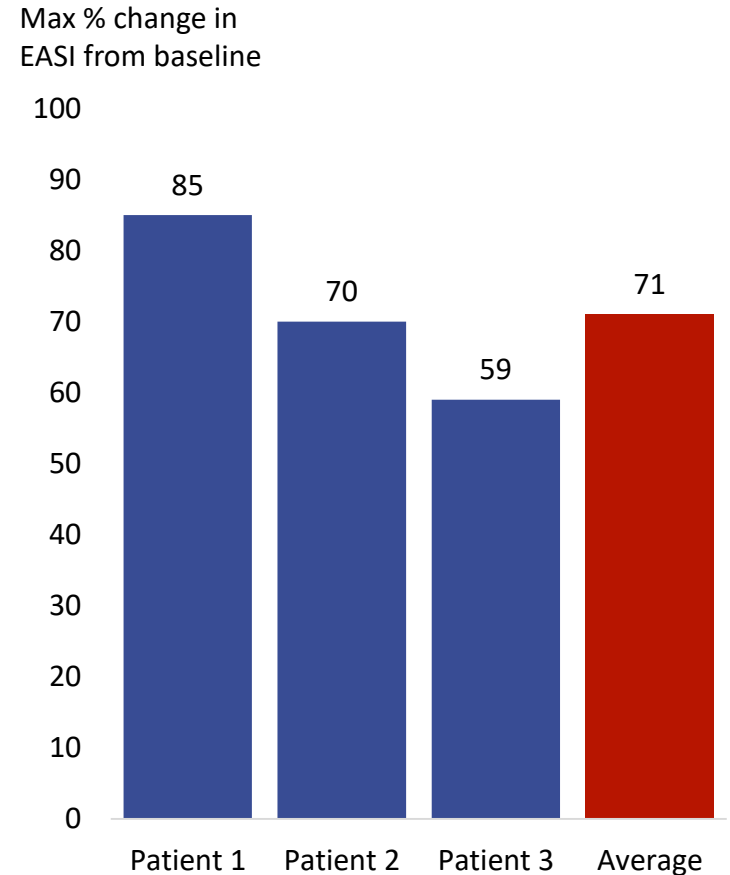
Secondary endpoints include percentage change in EASI score, EASI50, EASI75, pruritus score and IGA, TARC, IgE

Study has 80% power to detect a 39% improvement in the percentage change in EASI score from baseline based on a one-sided 5% significance level



Early signs of efficacy in low dose cohort

- First patient enrolled on 22 October 2019
- As of 29 November 2019, 6 patients treated in low dose (200mg) cohort
- Currently recruiting 2nd dose cohort
- ASLAN004 well-tolerated, with no serious AEs or treatment discontinuation
- 3 patients completed at least 1 month of dosing with average reduction in EASI of 71%
- Maximal efficacy expected at 6 to 8 weeks



ASLAN004 is a first-in-class IL-13R antibody and has the potential to be best-in-disease

Efficacy

- Dual signaling blockade through IL-4 and IL-13
- Low concentration needed for full target inhibition, which may translate to better efficacy
- Encouraging early signs of efficacy in MAD / PoC study

Dosing

- Complete inhibition of pSTAT6 to 29 days after a single IV dose
- Potential for 4 weekly dosing

Safety

- No conjunctivitis seen to date in phase 1
- No significant injection site reactions to date



Financials



Financials

Shares outstanding	Overall	NASDAQ: ASLN	TPEX: 6497 (Taiwan)
Ordinary shares	190M	59M	130M
ADS equivalent (5:1)	38M	12M	26M
Net loss	US\$ 3.0M (1Q 20)		
Cash balance	US\$ 16.9M (1Q 20)		
Recent financing	US\$ 14.7M raised in Dec 2019 (NASDAQ follow-on)		

