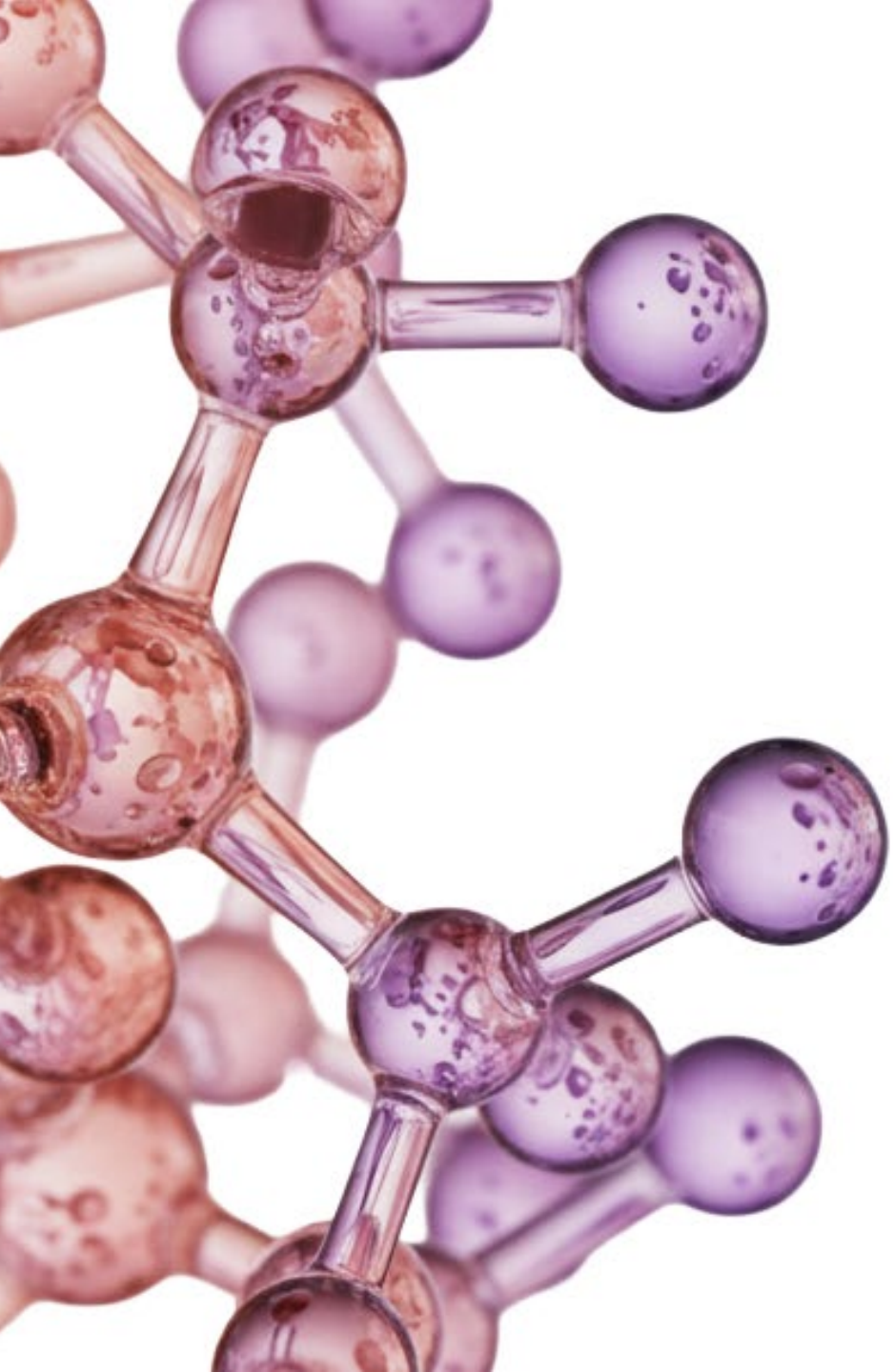

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Clinical Pipeline Update:

ATI-052: Full SAD MAD Results

ATI-2138: Potential Mechanistically Complete Therapy for Lichen Planus

April 28, 2026

Disclaimer and Cautionary Note Regarding Forward-Looking Statements

Any statements contained in this press release that do not describe historical facts may constitute forward-looking statements as that term is defined in the Private Securities Litigation Reform Act of 1995. These statements may be identified by words such as "anticipate," "believe," "expect," "intend," "may," "plan," "potential," "will," and similar expressions, and are based on Aclaris' current beliefs and expectations. These forward-looking statements include expectations regarding its development plans for ATI-052 and ATI-2138, including the timing to report results from its Phase 1b trials of ATI-052 in asthma and atopic dermatitis, the timing to initiate a Phase 2b trial of ATI-052 in asthma, and the timing and plans to initiate a Phase 2b basket study of ATI-2138 in LP, the therapeutic potential for ATI-052 and ATI-2138, including the potential for ATI-052 to be best-in-class and a first-in-line therapy, and the potential for ATI-052 to support dosing of up to three months, and the potential for ATI-052 to treat atopic, immunologic, and respiratory diseases and ATI-2138 to treat atopic and autoimmune diseases. These statements involve risks and uncertainties that could cause actual results to differ materially from those reflected in such statements. Risks and uncertainties that may cause actual results to differ materially include uncertainties inherent in the conduct of clinical trials, Aclaris' reliance on third parties over which it may not always have full control, Aclaris' ability to enter into strategic partnerships on commercially reasonable terms, the uncertainty regarding the macroeconomic environment and other risks and uncertainties that are described in the "Risk Factors" section of Aclaris' Annual Report on Form 10-K for the year ended December 31, 2025, and other filings Aclaris makes with the U.S. Securities and Exchange Commission (the "SEC") from time to time. These documents are available under the "SEC Filings" page of the "Investors" section of Aclaris' website at www.aclaristx.com. Any forward-looking statements speak only as of the date of this press release and are based on information available to Aclaris as of the date of this release, and Aclaris assumes no obligation to, and does not intend to, update any forward-looking statements, whether as a result of new information, future events or otherwise.

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This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and other data about our industry. These data involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

All future development, clinical, and regulatory timelines are expectations, are based on current beliefs and assumptions, and are subject to change based on a variety of factors.

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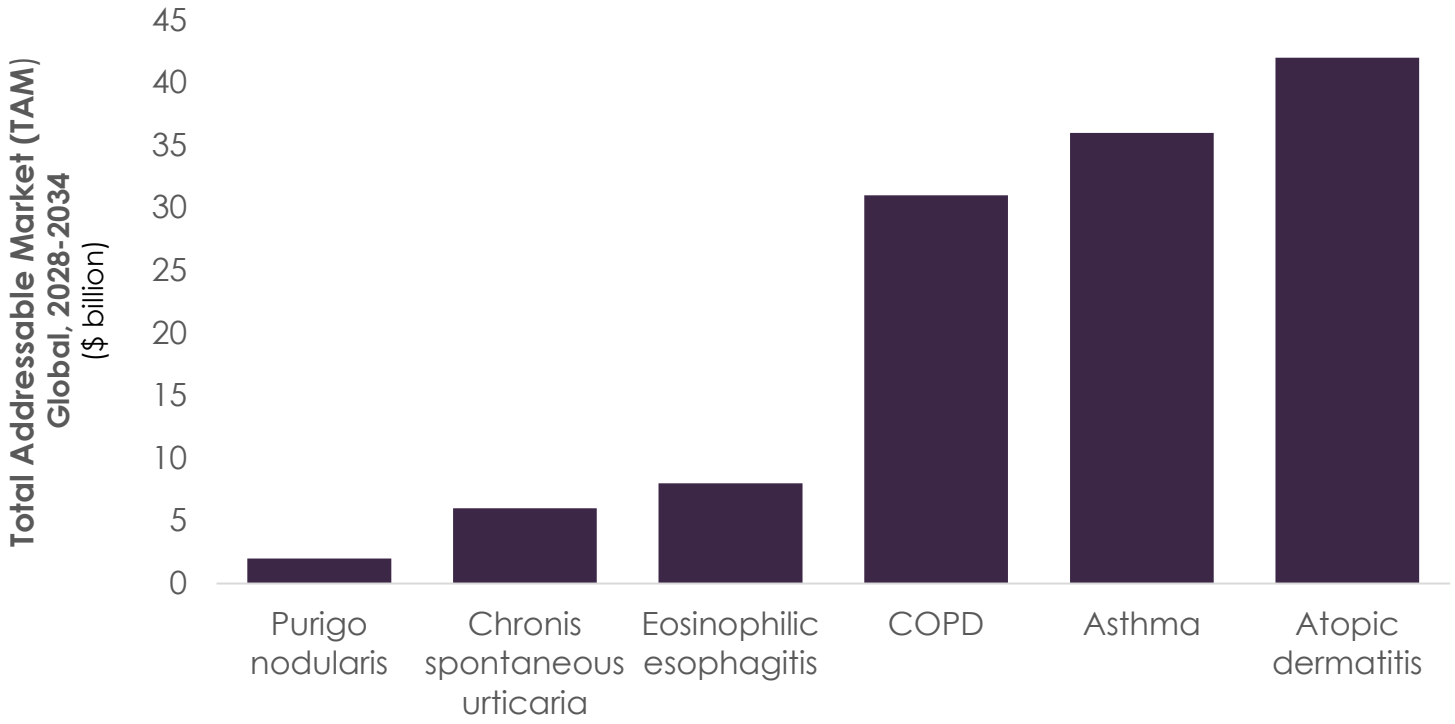
Addressing Significant Markets

Th2 Driven Indications



Significant opportunity for new innovative biologics targeting indications with heterogeneous subtypes

Sources: Eczema stats: National Eczema Association (accessed 07/31/25); Precedence Research; Forbes Business Insights; American Medical Association; American Lung Association; Global Initiative for Asthma; World Health Organization; The Centers for Disease Control and Prevention (CDC); Business Research Company; peer research; Delveinsight; Cowen Categories Outlook 2024

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Opportunity to Redefine the Standard in Th2 Disease

- **ATI-052: Harnesses the power of TSLP and IL-4Rα inhibition to create a potential best-in-class bispecific**
  - Tezepelumab and Dupilumab drive multibillion dollar annual revenues across numerous indications
  - Combining mechanisms has the potential to better address the unmet needs across approved indications
- **Potential opportunities for ATI-052**
  - Potential first line therapy
  - Raise efficacy ceiling
    - Inhibition upstream and downstream of Th2 cascade
      - Faster onset, better symptom control, durable, deeper, and more consistent effect
      - Better address breadth of inflammatory mediators involved in Th2 diseases
  - Improved convenience and practical dosing schedule
    - Potential Q3 month dosing

ATI-052: Potential Best-in-Class Bispecific mAb

Effective Dual Binding of TSLP and IL-4Rα

Anti-IL4Rα scFV

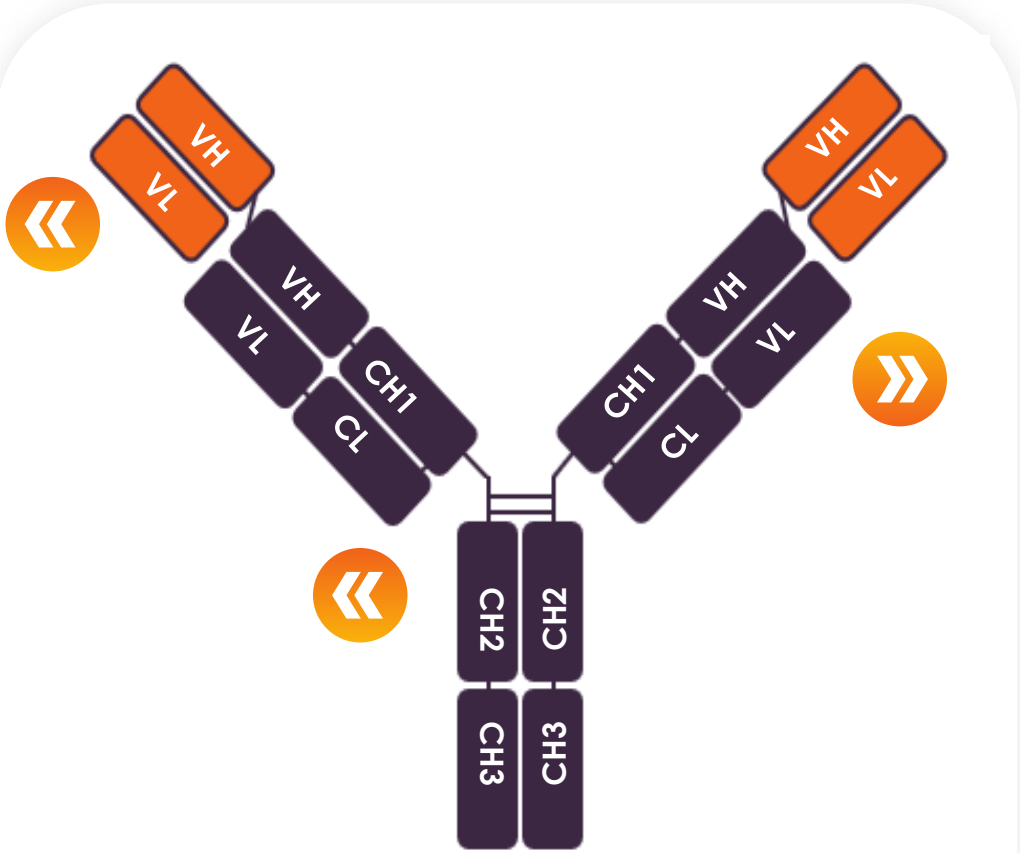
Designed to inhibit immune cells downstream of the Th2 cascade

YTE Mutation

Fc engineered to bind more tightly to FcRn, potentially extending half-life

AQQ Mutation

Fc mutation limits effector functionality, potentially reducing off-target binding and potential toxicity



ATI-052

Anti-TSLP Fab

Same anti-TSLP antibody binding regions of Bosakitug, **designed to inhibit TSLP upstream of the Th2 cascade**

- Retains dissociation kinetics, residence time, and potency advantages of bosakitug over comparator antibodies

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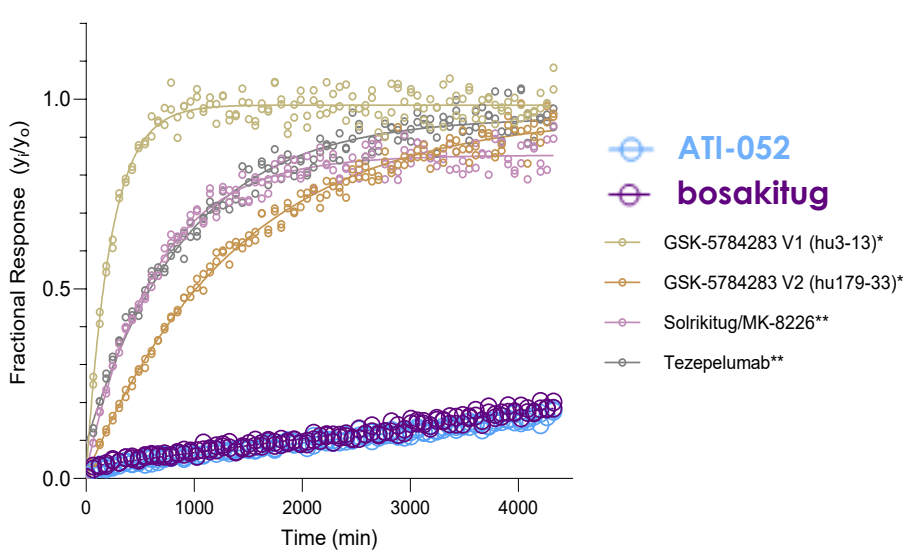
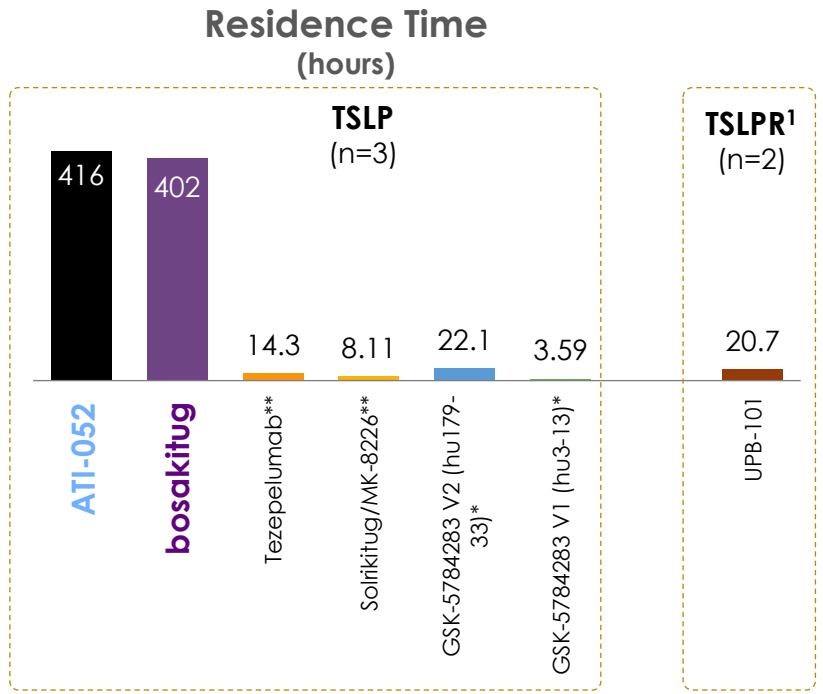
ATI-052: Longest Residence Time on TSLP

Lower Dissociation Rate Drives Longer Residence Time





ATI-052 demonstrates very slow dissociation kinetics from TSLP

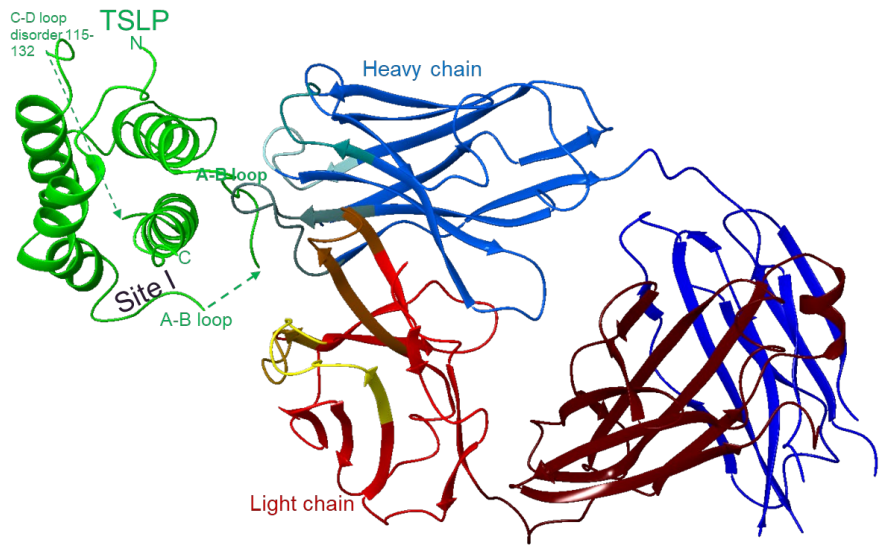
Residence time for ATI-052 is ~30-116x longer than comparator antibodies

1. SPR: Residence Time based on apparent kd (dissociation constant) using standard TSLPR immobilization density and bivalent fit; *Analog mAb; **Biosimilar mAb

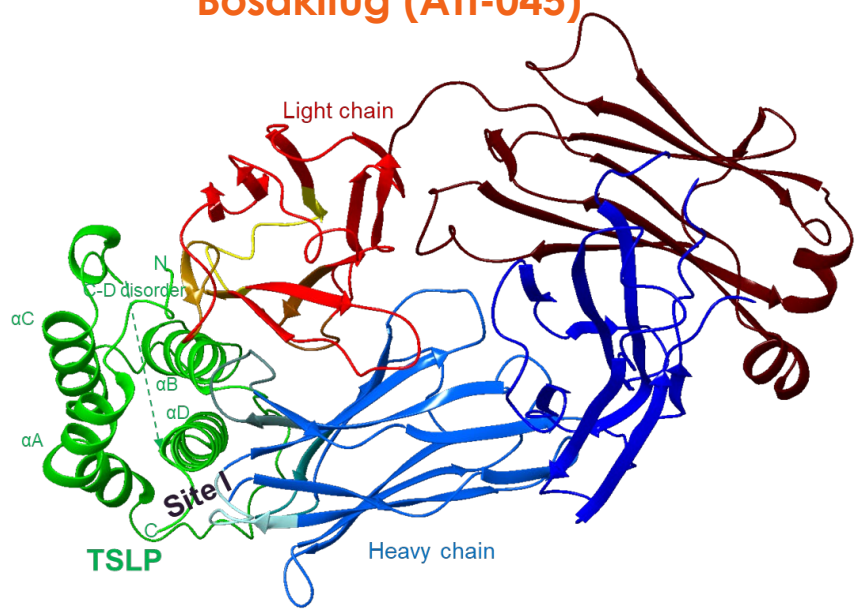
Bosakitug Extensively Binds TSLP Binding Interface

ATI-052 Has the Same Anti-TSLP Antibody Binding Regions of Bosakitug

Tezepelumab



Bosakitug (ATI-045)



Bosakitug: Extensive Binding Interface Drives Higher Retention Time and Neutralization Duration of TSLP

Only Bosakitug binds all six Light Chain and Heavy Chain CDRs

Bosakitug interface uniquely spans from TSLP N-terminal Y29 to C-terminal P154

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Concurrent Binding of TSLP and sIL-4Rα to ATI-052

Simultaneous Binding of TSLP and IL-4Rα

Binding Sequence	TSLP:ATI-052 Stoichiometry*	sIL-4Ra:ATI-052 Stoichiometry*
ATI-052 capture / sIL-4Ra dose-response	n/a	2.25
ATI-052 capture / TSLP load / sIL-4Ra dose-response	1.82	2.10
ATI-052 capture / TSLP dose-response	2.04	n/a
ATI-052 capture / sIL-4Ra load / TSLP dose-response	1.83	1.97

** determined using molecular weights based on amino acid sequence, does not account for glycosylated species*

- ~2 molecules of sIL-4Rα bound to ATI-052 in the absence (2.25:1) and presence (2.10:1) of TSLP
- ~2 molecules of TSLP bound to ATI-052 in the absence (2.04:1) and presence (1.82:1) of sIL-4Rα

ATI-052 Demonstrates High Affinity to Both Targets Simultaneously:

ATI-052 binds ~two molecules of TSLP and sIL-4Rα with the potential to saturate all 4 binding sites at the same time

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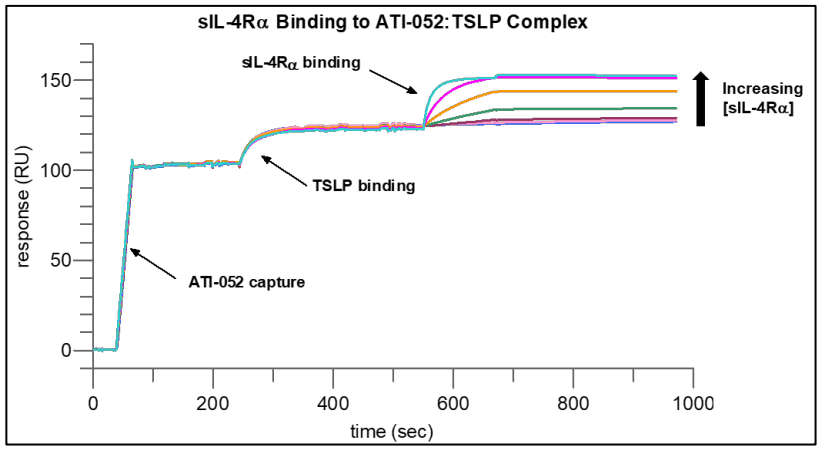
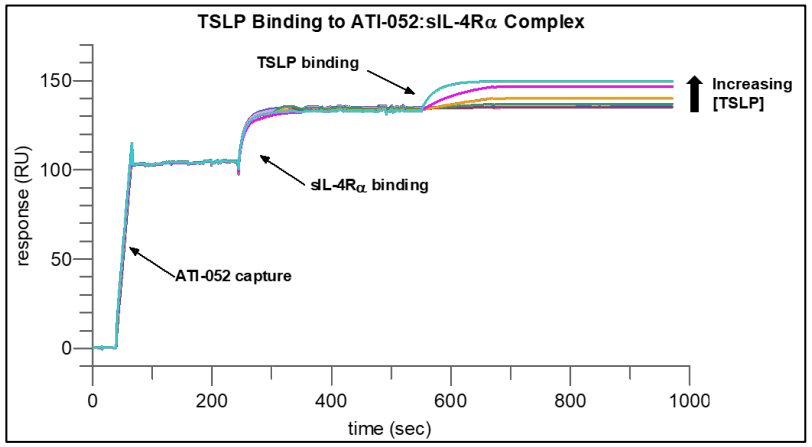
Concurrent Binding of TSLP and sIL-4Rα to ATI-052

High Affinity to Both TSLP and IL-4Rα





Comparison of Affinity for sIL-4Rα Binding to ATI-052 or ATI-052:TSLP Complex

Parameter	ATI-052	ATI-052:TSLP
K_D (pM)	348	215

Comparison of Affinity for TSLP Binding to ATI-052 or ATI-052:sIL-4Rα Complex

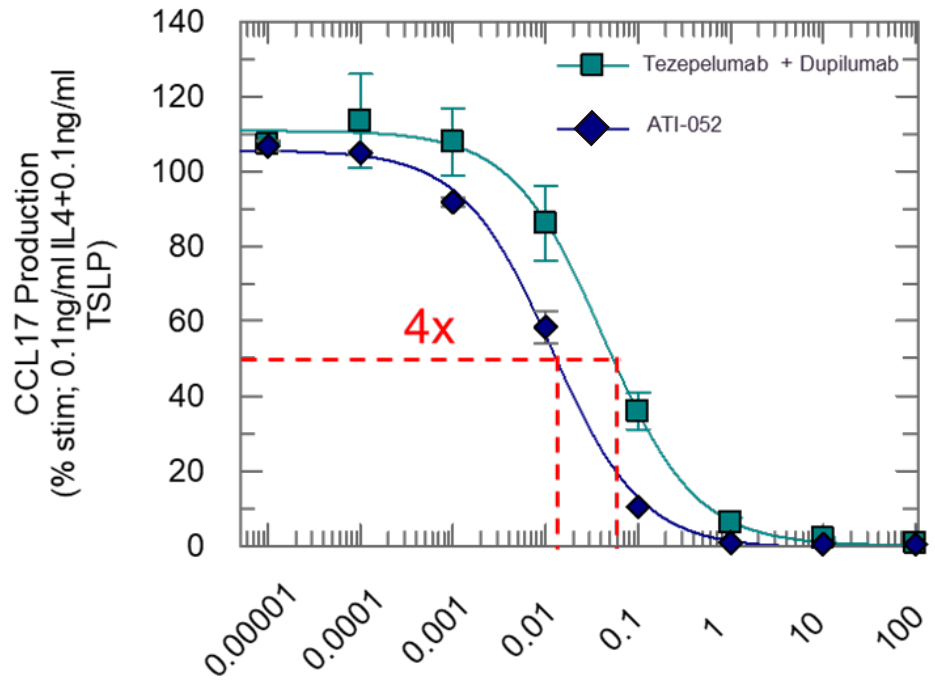
Parameter	ATI-052	ATI-052:sIL-4Rα
K_D (pM)	41.2	33.9

ATI-052 Binds Both Targets Effectively

High affinity to either target is not altered by the binding to the other

Comparison of ATI-052 vs Dupilumab + Tezepelumab

ATI-052 Demonstrates Greater Potency than the mAb Combination



mAb Concentration	
Antibody	**IC50 (nM)**
ATI-052	0.016
Dupilumab + Tezepelumab	0.069
Fold change	4.3

ATI-052 is Substantially More Potent than the Combination of Dupilumab and Tezepelumab

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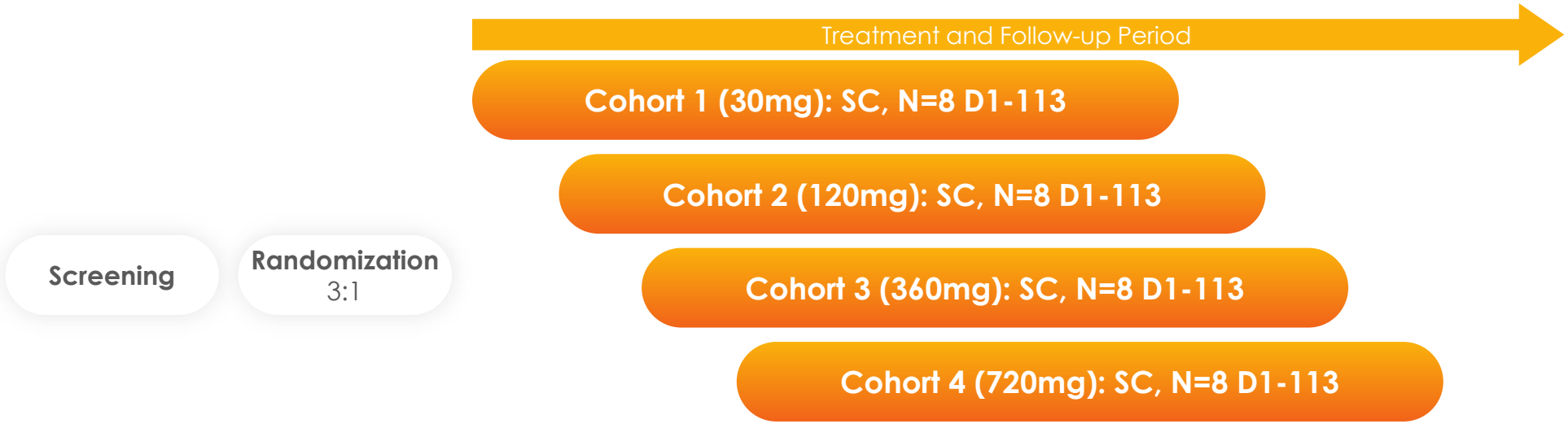
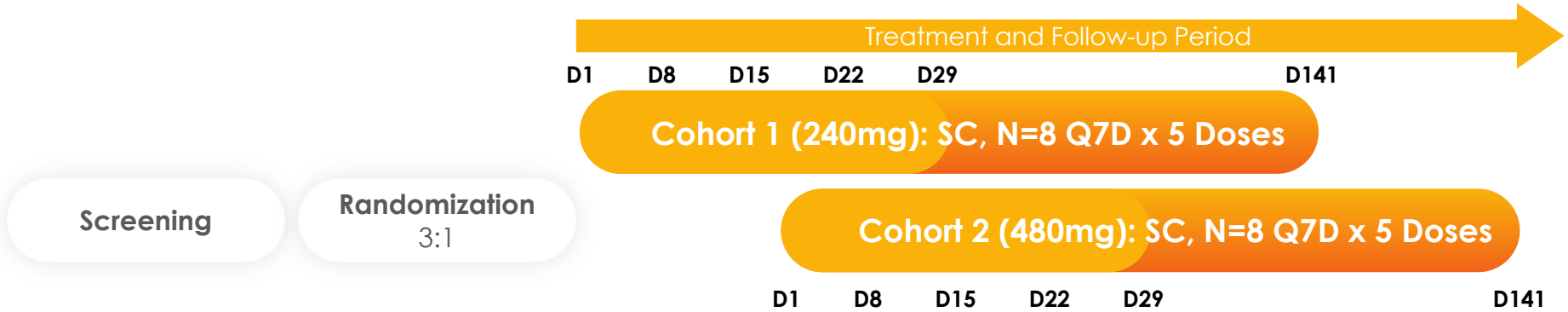
ATI-052 Placebo Controlled Phase 1a Program

Part A Single Ascending Dose (SAD) in Healthy Volunteers (HV)

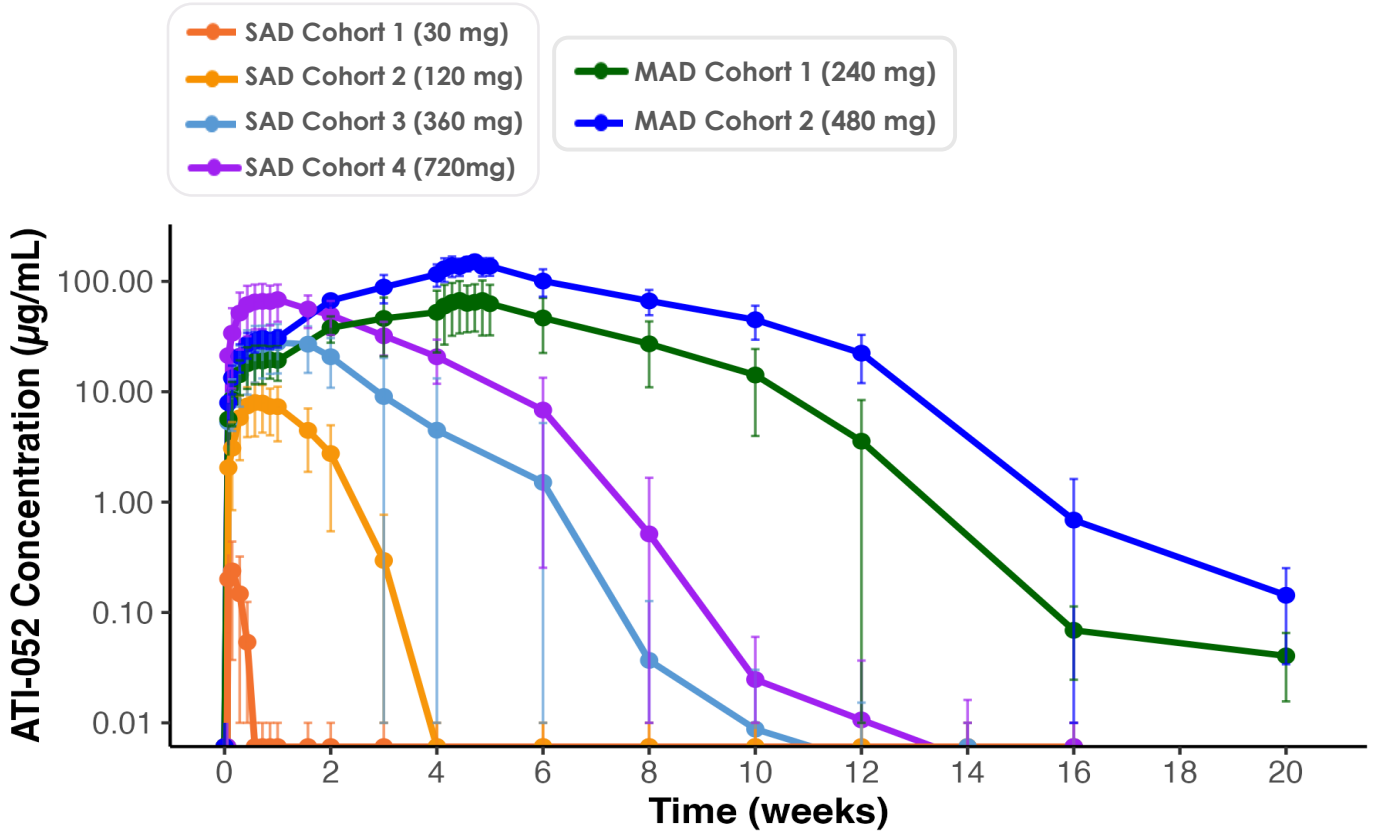


Part B Multiple Ascending Dose (MAD) in Healthy Volunteers



Potential Best-in-Class Pharmacokinetic Profile

Supports Potential for Up to Every 3-Month Dosing



Mean ± SD profiles; BLQ values imputed as zero.

Dose proportional PK observed across pharmacologic dose range

PK results provided an estimated half-life of 45 days[1]

1, Based on accumulation ratio at 240 mg weekly dosing

Ex-Vivo Stimulated PD Assay

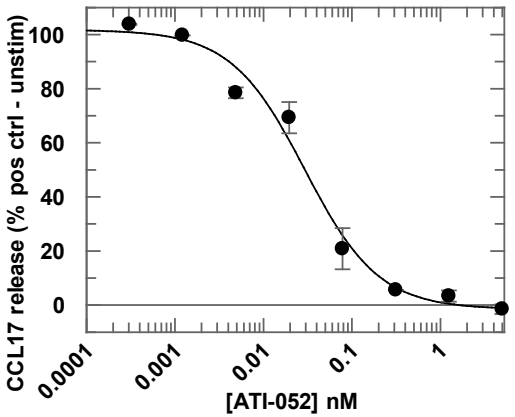
High Hurdle for Complete Inhibition

Robust PD activity ex vivo hWB closely reflects the real biological environment in patients with disease by maintaining the complex composition of fluids and cells present in circulation

- Assay in human whole blood (hWB) designed to assess the following:
  - TSLP stimulated CCL17 in whole blood
  - IL-4 stimulated CCL17 in whole blood
- hWB assay sets high biological bar: Assesses inhibition of up to 500-fold more TSLP and IL-4 than endogenous levels

hWB Assays

0.5 ng/mL TSLP stimulation—48 hours

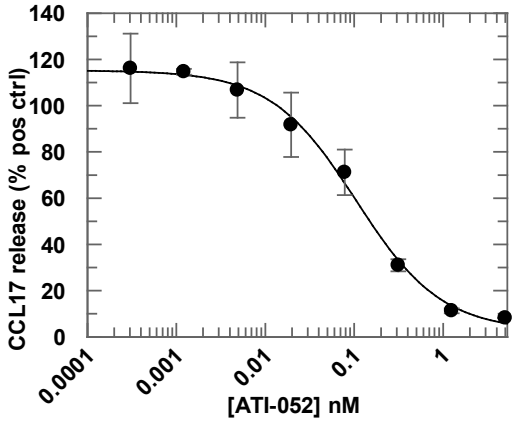


IC50 (nM) ± SEM	0.025 ±0.0042
n	5
S/N	3

5 ng/ml*

*IC50 for the inhibition of TSLP-stimulated CCL17 in whole blood was lower than the Lower Limit Of Quantitation (LLOQ) for the PK analysis of ATI-052 (LLOQ is 25 ng/ml)

2 ng/mL IL-4 stimulation—48 hours



IC50 (nM) ± SEM	0.203 ±0.039
n	6
S/N	15

41 ng/ml

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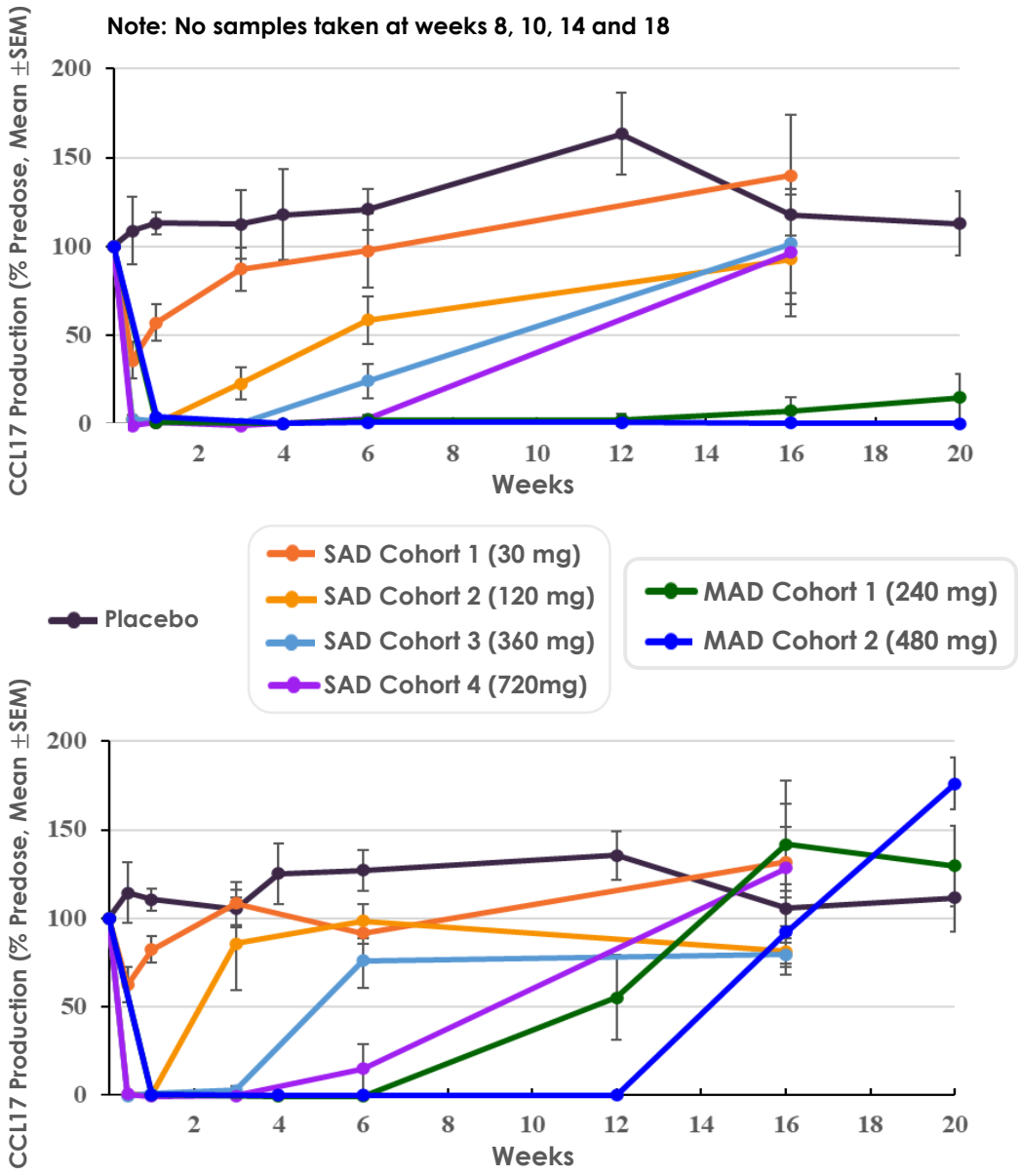
Potential Best-in-Class Pharmacodynamic Effect of ATI-052

TSLP Stimulated CCL17 (TARC):

Sustained, complete / near complete inhibition observed for **at least five months at 240 and 480 mg MAD dose**

Potential best-in-class residence time and potency



IL-4 Stimulated CCL17 (TARC):

Sustained complete inhibition observed for **at least three months at 480 mg MAD dose**

ATI-052 binds both targets effectively with complete inhibition at pharmacologically relevant doses beyond the PK profile

Evidence of sustained inhibition of TSLP corroborate long residence time

The combination of PK duration and the strong and sustained PD effect support the potential for **up to every three-month dosing**

Exceptional Pharmacodynamic Response

Robust Target Engagement + Sustained Complete Inhibition in MAD Cohorts

ATI-052 exhibited a **potential best-in-class PD profile**:

- Dose and concentration dependent inhibition of IL-4 and TSLP-stimulated CCL17 (TARC) release observed across all SAD and MAD cohorts
- Near complete inhibition of TSLP stimulated CCL17 observed for **at least 5 months** in 240 mg MAD Cohort
- Complete inhibition of TSLP stimulated CCL17 observed for **at least 5 months** in 480 mg MAD Cohort
- 480 mg MAD Cohort results demonstrated complete and sustained inhibition of IL-4 stimulated CCL17 for **at least three months**
- PK/PD package support the potential to **raise the efficacy ceiling** and an **extended dosing schedule of up to every three months**

Observed inhibitory results **further validate the potency of ATI-052**

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Favorable Tolerability and Safety Profile of ATI-052

Update Provides Confidence in Continued Development

- Low rate of drug related treatment emergent adverse events; predominantly Grade 1
- No SAEs; no adverse events led to study discontinuation
- No Grade 3 drug-related TEAEs
- No conjunctivitis

Full results confirm strong safety profile observed at interim analysis

Favorable tolerability and safety profile demonstrated across all ATI-052 SAD and MAD cohorts

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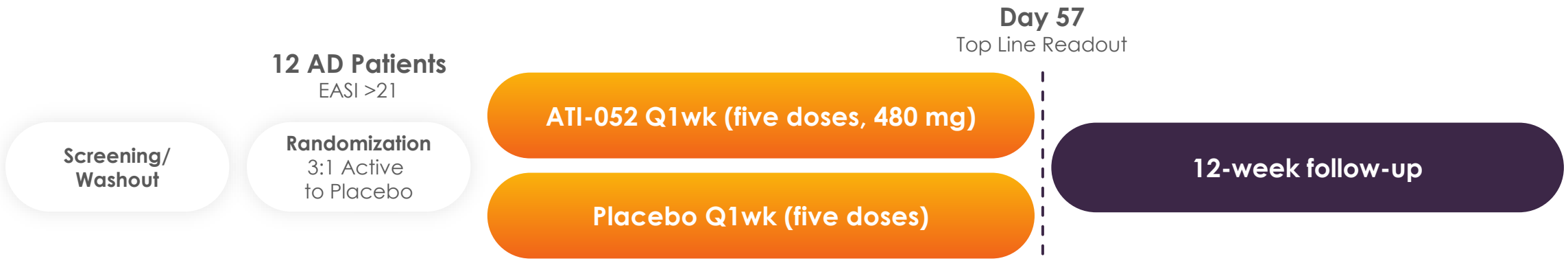
Phase 1b POC Trial in Atopic Dermatitis

Enrollment and Dosing Ongoing



Patient Screening	Central photography to confirm diagnosis and extent of disease
Primary Endpoint	Safety and tolerability
Other Endpoints	AD clinical efficacy assessments (EASI, BSA, IGA, PP-NRS) PD endpoints measured by assays including lesional and non-lesional skin tape strips

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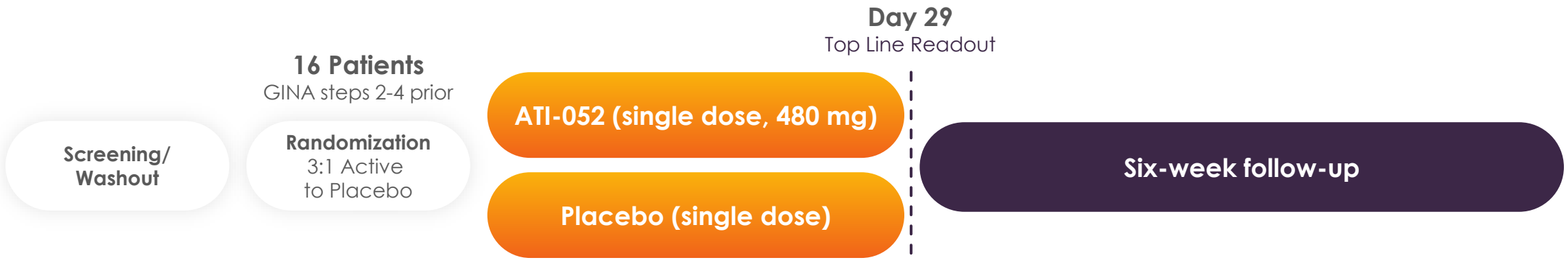
Phase 1b POC Trial in Asthma

Enrollment and Dosing Ongoing



Patient Selection	Adult asthmatics on GINA steps 2-4 treatment prior to screening; excluding prior biologics	Type 2 asthma with active inflammation: FeNO baseline >35 ppb, Blood Eos ≥ 150
Primary Endpoint	Safety and tolerability	
Other endpoints	Key Clinical Efficacy Assessment	Emphasis on PD assessments: FeNO, FEV1, Blood Eos, TARC (CCL17), Periostin, IGE, Cytokines (IL-4,IL-5,IL-13)

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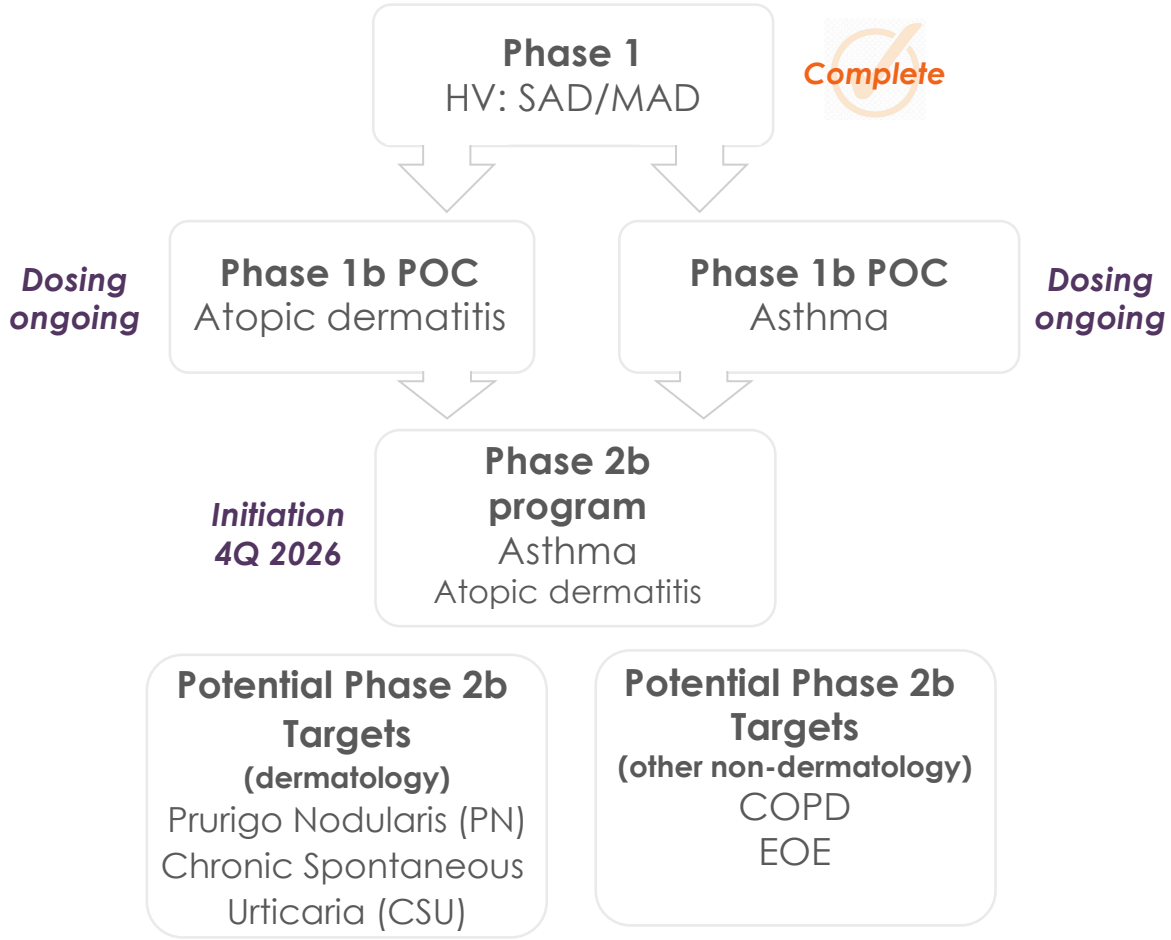
ATI-052: Next Steps

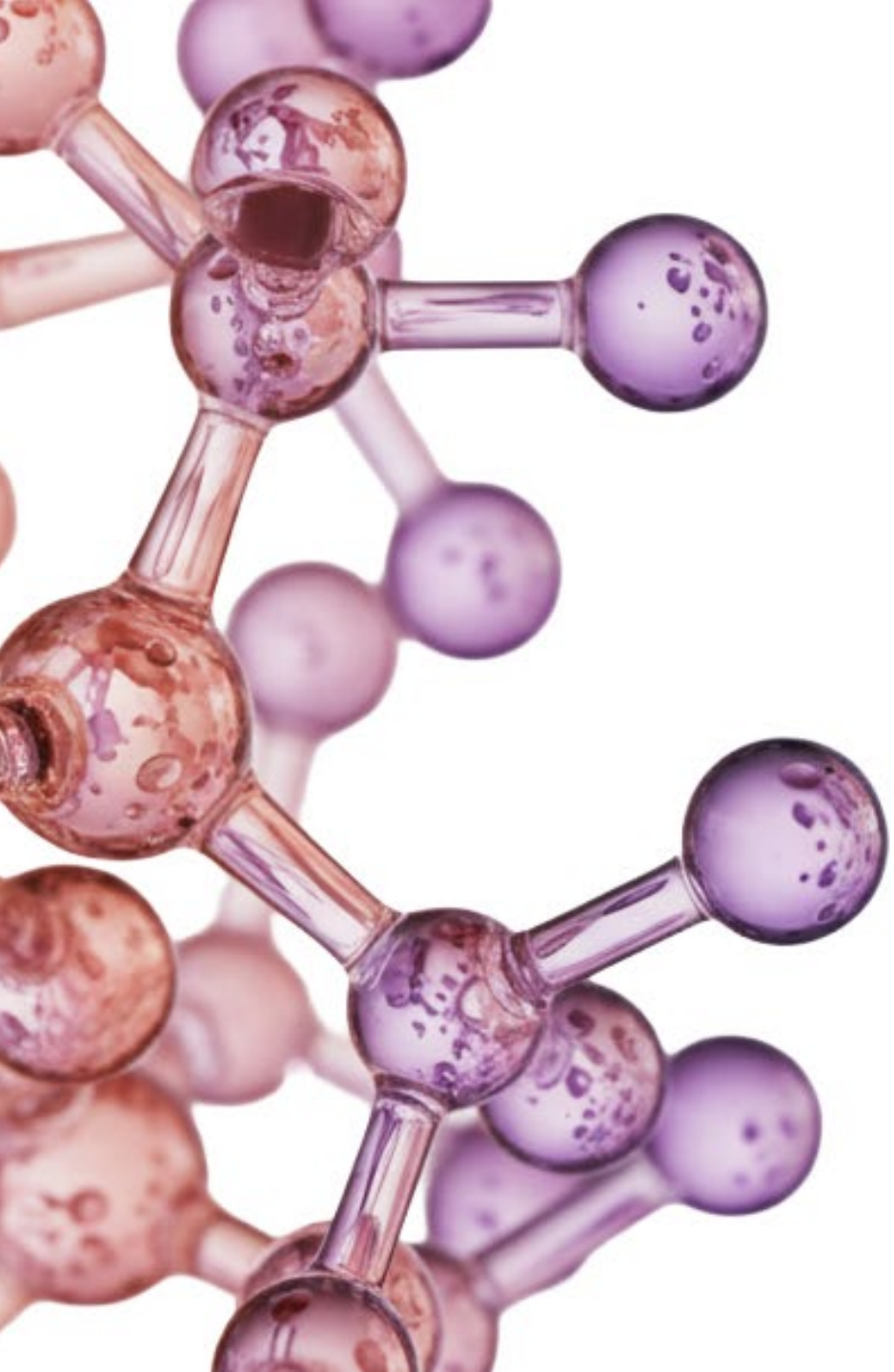
Positive SAD/MAD Results Validate ATI-052; Clinical Program Rapidly Advancing



Ongoing / Next Steps

- Phase 1b Asthma and AD POC trials ongoing; dosing underway
- Phase 1b top line POC results: 2H 2026
- Initiate Phase 2b program (initial target = asthma): 4Q 2026

 All future development, clinical, and regulatory timelines are expectations, are based on current beliefs and assumptions, and are subject to change based on a variety of factors



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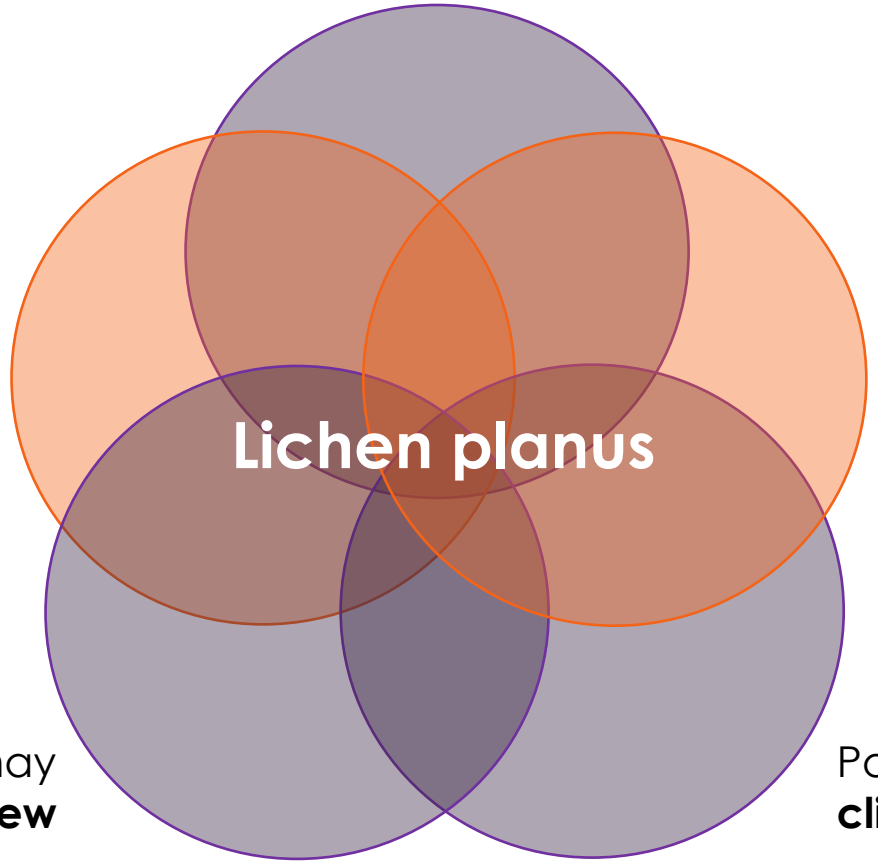
Clinical Pipeline Update:

ATI-2138: Potential Mechanistically Complete Therapy for Lichen Planus

ATI-2138: The Lichen Planus Opportunity

Mechanistically well matched
JAK3 and cyclosporin provide POC

Important unmet medical need:
White space opportunity



Significant market size
and revenue potential

Regulatory pathways may
allow for **expedited review**

Potential for **cost-effective clinical trial design**

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Lichen Planus

An Unaddressed Chronic, Inflammatory, Immune-Mediated Disorder

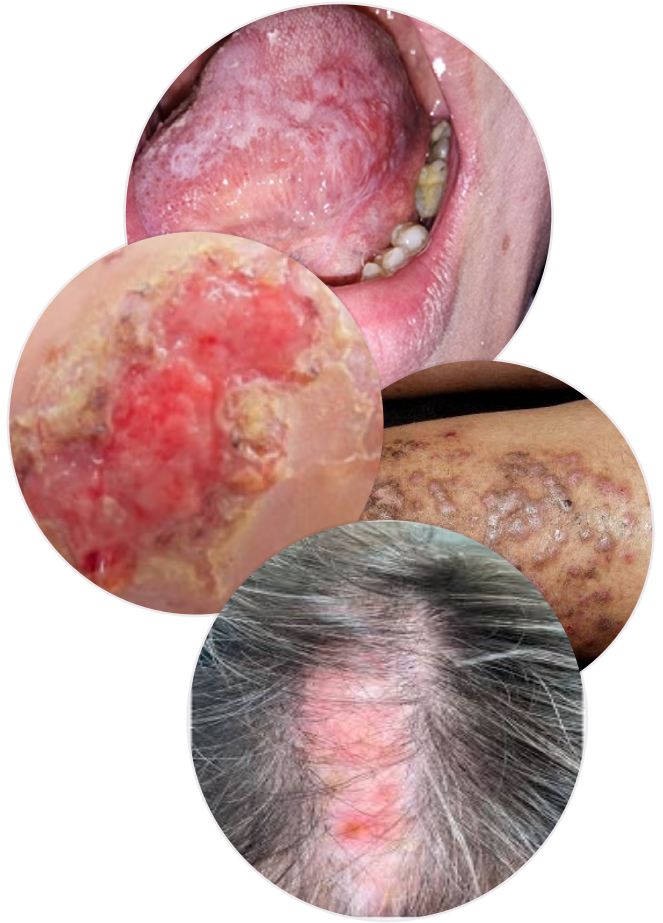
Multiple impactful clinical subtypes
Most common are erosive mucosal (oral), cutaneous, and lichen planopilaris

Typical symptoms are debilitating
Include pain, sores, severe itch, scales/plaques, hair loss, fatigue

Affects quality of life
Anxiety, depression; impact from chronic pain and severe itch

Clinically concerning
Malignant potential in oral lichen planus

Prevalence suggests large opportunity
Impacts 0.1% to 1.0% of the population



Lichen Planus is a Large and Unsatisfied Market

Significant "White Space" US Opportunity

- Prevalence of between 0.1% and 1.0% of the population
  - Up to 40% of patients seek treatment despite no FDA-approved targeted therapeutic interventions
  - ~25% of patients have moderate-to-severe disease
    - Steroid failure rate of up to 60%
- No approved therapy; unsatisfied market
  - Disease management has focused on immunosuppression and topical symptom control (TCS, tacrolimus, etc.)
- Opportunity for biologics-like pricing
- New, targeted therapeutics have the potential to:
  - Increase diagnosis rates and % of patients seeking Tx
  - Provide rapid itch relief; minimize flares
  - Address multi-site disease involvement
  - Provide more practical Tx than topical for widespread lesions

Estimated Peak U.S. revenue potential: $1B - $4B

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ATI-2138: Unique "Bispecific-Like" Mechanism

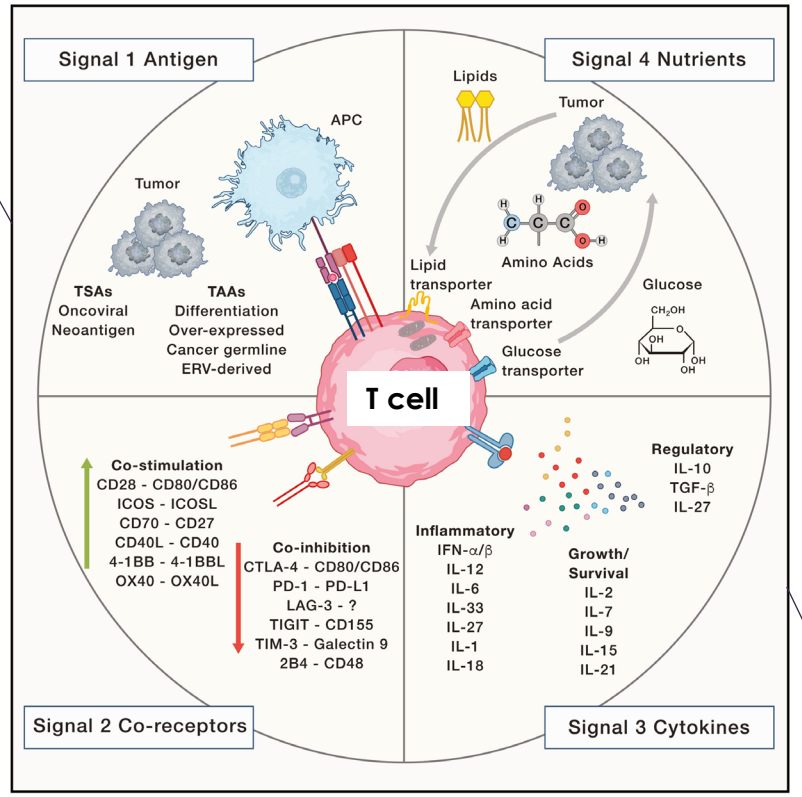
First & Only Known Drug Inhibiting TCR Activation Upstream + Effector Cytokines Downstream

ITK Inhibition

Inhibition of T Cell Receptor (TCR) Signaling (Antigen-Driven; Signal 1)

- Potent inhibition of ITK downstream of the TCR inhibits auto-antigen and allergen mediated T cell activation
- Inhibits cytotoxic destruction of targets by CD8 T cells
- Inhibits production of inflammatory cytokines (IFN-γ, IL-4, IL-13, IL-17, IL-31)

Other JAK inhibitors do not inhibit TCR activation



Modified from Giles JR et al., Immunity, 2023

Inhibition of Cytokine Signaling (Cytokine-Driven; Signal 3)

- Potent inhibition of JAK3 downstream of the IL-2 receptor common γ chain inhibits IL-2, IL-4, IL-7, IL-9, IL-15 and IL-21 signaling
- Inhibits T cell proliferation, activation and survival
- Inhibits cytotoxic activity of CD8 T-cells and Natural Killer cells (NK-cells)

JAK3 Inhibition

ATI-2138 Has the Potential to Be The First Mechanistically Complete Oral Therapy for Lichen Planus

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ATI-2138: Well Positioned in Lichen Planus

Dual Pharmacology Creates Ideal Mechanistic Fit

	Lichen planus	ATI-2138
Signal 1 *Antigen*	• CD8-driven interface dermatitis; involvement of TCR/T cells • Aberrant activation cytotoxic CD8 T cells • IFN mediated pathology in affected skin	• Modulates TCR signaling and CD8 cytotoxic T cell suppression • Inhibition of IFNy production biomarkers down-stream of IFNy
Signal 3 *Cytokine*	• Cytokine mediated disorder; severe itch associated with IL-31 up-regulation • Fibrosis common	• Inhibits proinflammatory cytokines; significant reductions in itch observed in AD • Strong downregulation of fibrosis markers
	• Th1/2/17 immunology	• Downregulation of Th1/2/17 activation markers

Efficacy of calcineurin inhibitors in LP supports T-cell mediated pathology; JAK3 and cyclosporin provide additional POC

Potential for broad/deep efficacy in LP; may address root inflammation and symptomology

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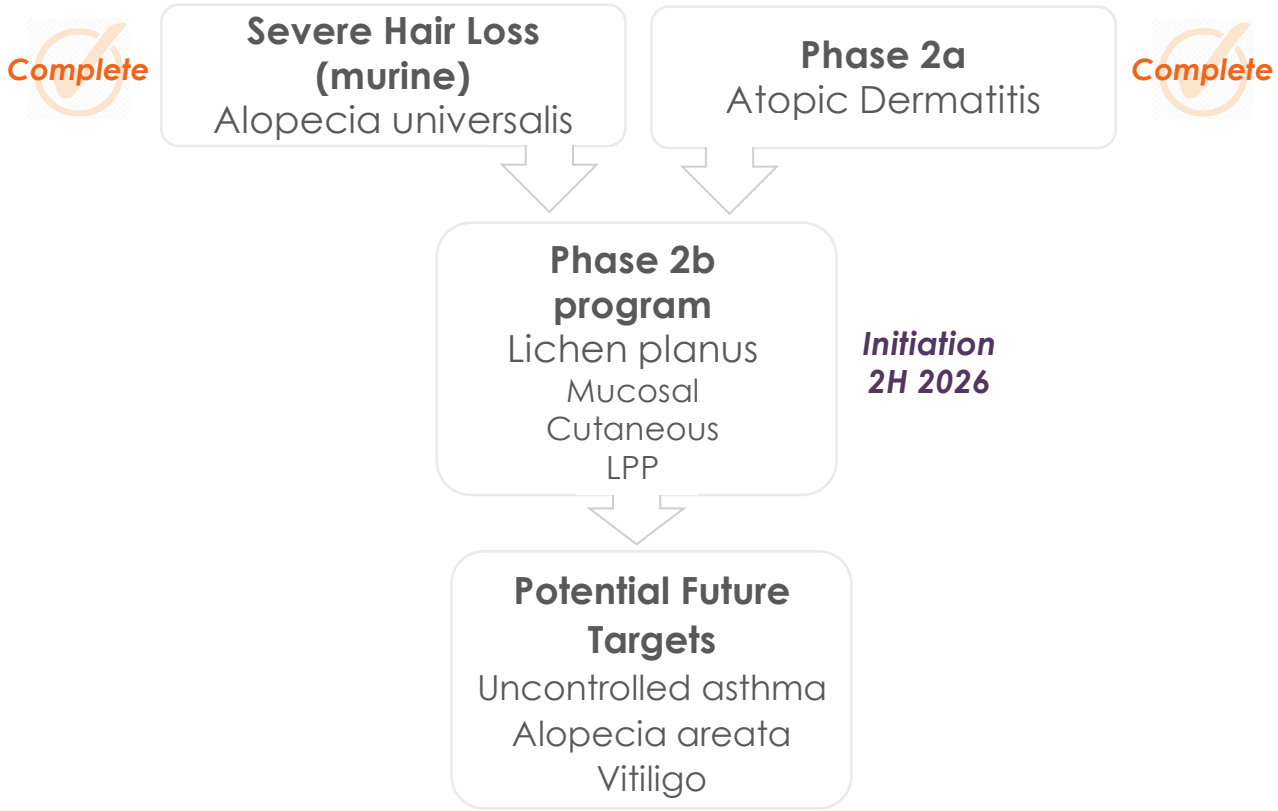
ATI-2138: Next Steps

Mechanistically Fit for Lichen Planus and Other I&I Disorders



Ongoing / Next Steps

- Lichen planus selected as Phase 2b indication
- Initiate Phase 2b trial in 2H 2026
- Complete assessment of additional targets

 All future development, clinical, and regulatory timelines are expectations, are based on current beliefs and assumptions, and are subject to change based on a variety of factors

ATI-052 SAD/MAD Results Exceeded Expectations

Pharmacokinetic Profile Supports Potential for **Extended Dosing**	• **Dose proportional PK** observed across pharmacologic dose range • Linear half-life exceeds prior estimate of **26 days**
Strong Pharmacodynamic Response	• Robust target engagement + **complete/near complete target occupancy** • **Complete and sustained inhibition** of ex vivo IL-4 or TSLP stimulated CCL17 • Results support potential for **up to every 3-month dosing interval**
Efficient Inhibition of Both TSLP and IL-4Rα	• **Potential to raise the efficacy ceiling**
Favorable Tolerability and Safety Profile	• Well tolerated with a **favorable safety profile across SAD and MAD cohorts** • **No conjunctivitis**

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ATI-2138 May be Ideal Therapy for Lichen Planus

Mechanistically Well Matched	• First and only known drug inhibiting **TCR activation upstream + effector cytokines downstream** • Observed in AD to **impact itch** • Strong **downregulation of fibrosis and Th1/2/17 activation markers**
Important Unmet Medical Need: **White Space Opportunity**	• **Debilitating symptoms** include severe itch, hair loss, sores, fatigue, QoL impacts • Unsatisfied market; disease management has focused on immunosuppression and topical symptom control; **No FDA-approved therapy**
Significant Market Size and Revenue Potential	• Despite lack of Tx options, approximately 40% seek medical advice • Provides estimated **peak US revenue potential of $1B to $4B**
Potential for **Cost-effective Clinical Trial Design**	• Clinical design planned to be phased and multi-part, **enabling cost effective development** • Regulatory pathways may allow for **expedited review**

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Continued Clinical Momentum in 2026 & 2027

Three Clinical Programs Ongoing; IND Expected in 2026

Innovation Driven

Patient Focused

ATI-052

AD and Asthma POCs ongoing

Top line POC results in AD and Asthma in 2H 2026

Phase 2b program: 2H 2026

Bosakitug (ATI-045)

Enrollment in Phase 2 in AD complete

Top line results in 4Q 2026

ATI-2138

Next clinical indication: Lichen planus

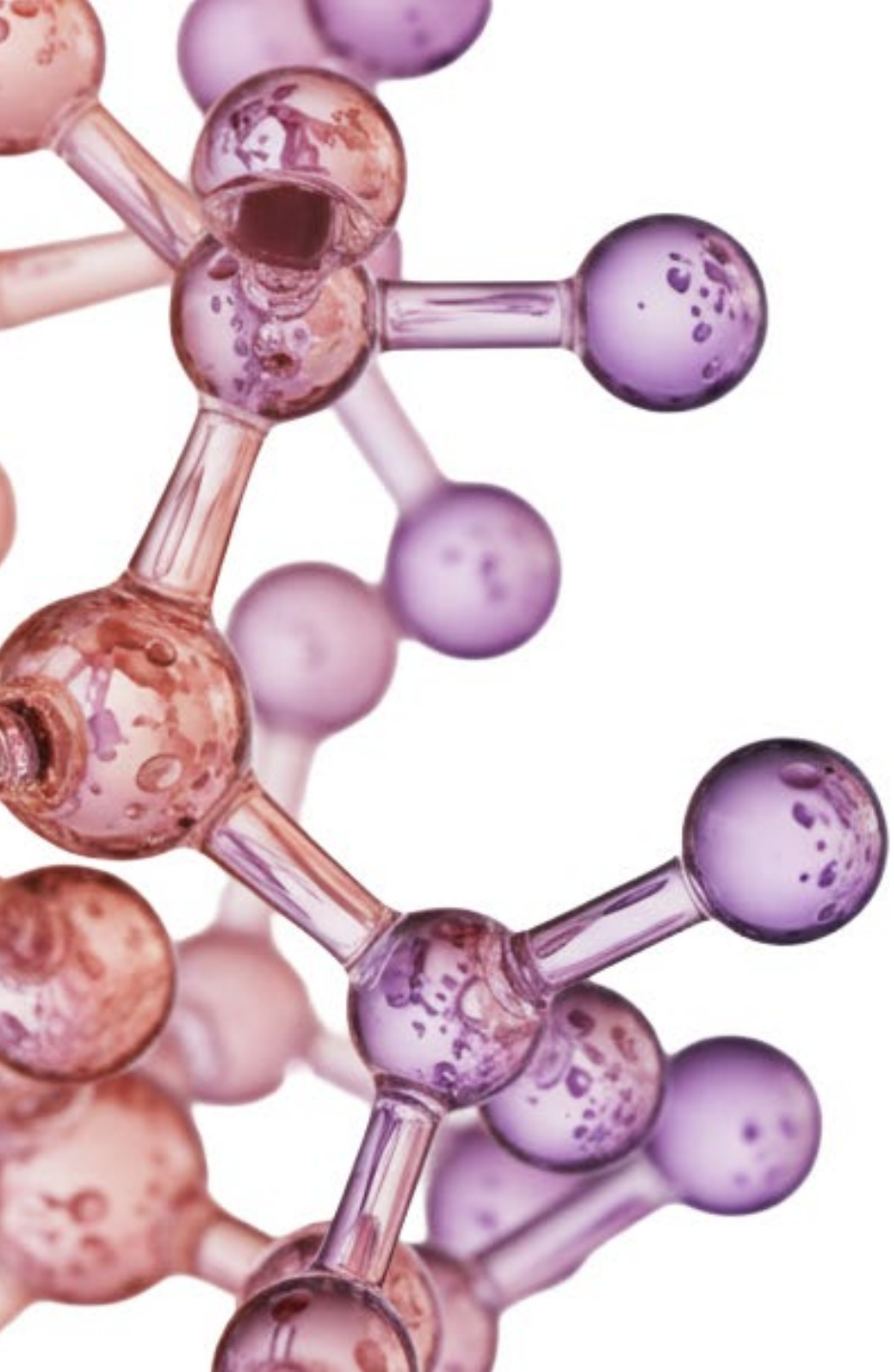
Phase 2b trial to initiate in 2H 2026

Next Generation Therapeutics

IND for ITK inhibitor ATI-9494 in 2H 2026

Advancing potentially industry-leading inhibitor franchises designed to address validated, therapeutically-relevant immune targets

 All future development, clinical, and regulatory timelines are expectations, are based on current beliefs and assumptions, and are subject to change based on a variety of factors



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Clinical Pipeline Update:

ATI-052: Full SAD MAD Results

ATI-2138: Potential Mechanistically-Complete Therapy for Lichen Planus

April 28, 2026