Results for an Open-Label Phase 2a Trial (SIGNAL-AA Part B) of Bempikibart, a Novel IL-7Rα Antibody in Patients with Severe or Very Severe Alopecia Areata (AA)

Abstract AS-726

Data cut-off: 24 September 2026

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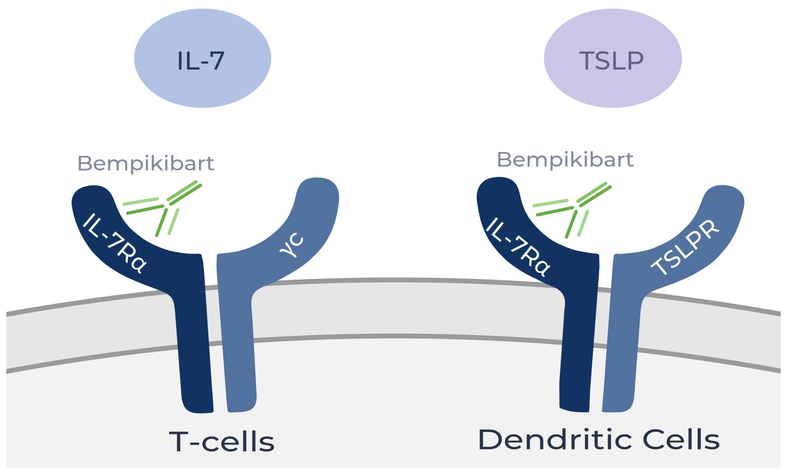
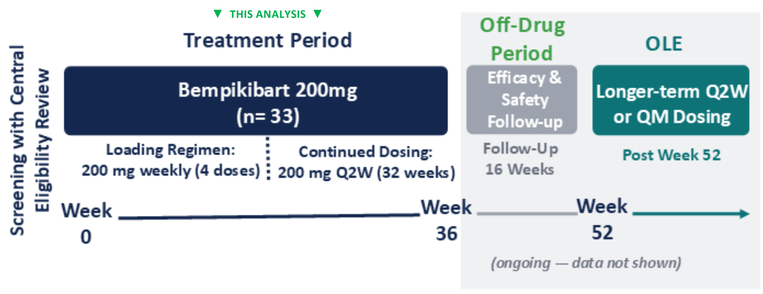
More Information

Bempikibart IL-7Rα blockade targets pathogenic memory T-cells and type 2 inflammation

- Alopecia areata (AA) is a T-cell-mediated autoimmune disease of the hair follicle.
- Approved oral JAK inhibitors require daily administration; relapse is common shortly after discontinuation.
- Bempikibart (ADX-914) is a monoclonal antibody against IL-7Rα that potently blocks both IL-7 and TSLP signaling.
- SIGNAL-AA Part A established proof of concept versus placebo[1]; Part B presented here tested an optimized dosing regimen



SIGNAL-AA Part B: optimized regimen of 4 weekly SC loading doses, then Q2W through Week 36



- Ongoing open-label Phase 2a study; N = 33 patients with severe (SALT 50–94) or very severe (SALT 95–100) AA; current-episode duration ≤ 4 years.
- Prior oral JAK inhibitor exposure permitted. Central confirmation of diagnosis.
- Primary analysis: mITT mean % change from baseline SALT score at Week 36.
  - Prespecified mITT required >18 weeks of treatment (>50%) and stable disease on enrollment
  - mITT and ITT presented for all endpoints

Severe and very severe alopecia areata patient population from North America with established disease; Oral JAK inhibitor experienced

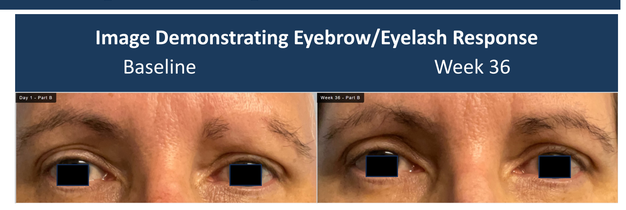
	mITT (N = 25)	ITT (N = 33)
Demographics		
Age, years, mean (SD)	41.92 (15.0)	40.7 (14.0)
Female, n (%)	19 (76.0)	24 (72.7)
Race White/Black/Asian/Other, n	19 / 2 / 1 / 3	25 / 3 / 1 / 4
Country United States / Canada, n	21 / 4	27 / 6
Baseline Characteristics		
Baseline SALT, mean (SD)	76.9 (17.2)	75.6 (17.8)
Baseline SALT, median (min-max)	79.9 (50.9–100)	72.7 (50.9–100)
SALT≥50 - <95 (severe), n (%)	19 (76.0)	25 (75.8)
SALT≥95 - 100 (very severe), n(%)	6 (24.0)	8 (24.2)
Current episode, years, mean (SD)	2.07 (1.1)	2.07 (1.2)
Prior oral JAK inhibitor, n (%)	10 (40.0)	12 (36.4)

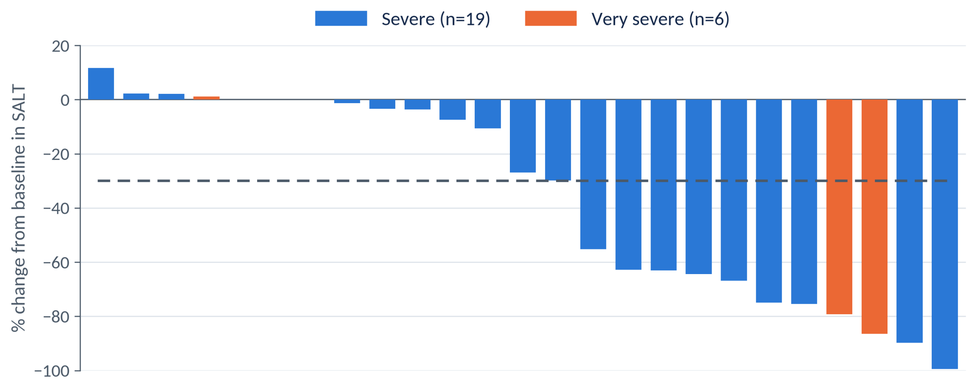
Note: Abstract AS-726 (as submitted) reported on an earlier data cut; figures and tables above reflect the current data cut.

SALT reduction observed across severity, IgE strata, and in oral JAK inhibitor-experienced patients

32-year-old patient with very severe AA; SALT-20 response at Wk 36

48-year-old patient with severe AA; SALT-10 response at Wk 36 (score=0.5)



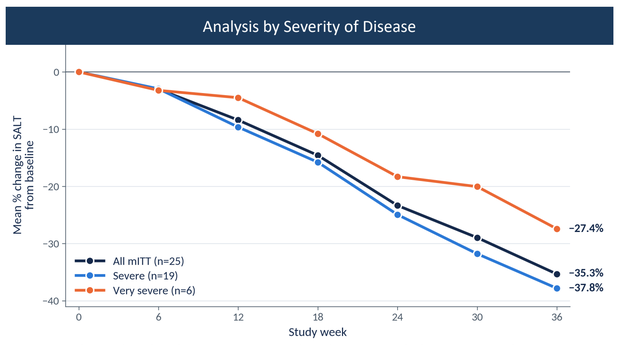


- SALT≤20 responses observed in both severe and very severe disease
- SALT≤20 responses in IgE-high (≥200 IU/mL) and IgE-low (<200 IU/mL) patients
- Prior oral JAKi responders: ≥30% improvement in SALT from baseline on most recent JAKi
- Prior oral JAKi non-responder: does not achieve ≥30% improvement with most recent JAKi treatment

35.3%

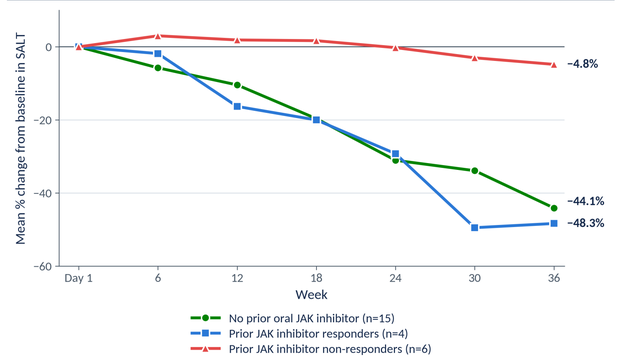
Mean % SALT reduction
All mITT
(n=25)

Analysis by Severity of Disease



LS mean change from baseline in SALT = 39.1% based on prespecified sensitivity analysis MMRM.

Analysis by Prior JAKi Experience



SALT≤20 achieved by 40.0% of mITT and 30.3% of ITT patients at Week 36*

Response, n (%)	mITT (n=25)	ITT (n=33)
SALT≤20	40.0% (10/25)	30.3% (10/33)
SALT30	44.0% (11/25)	33.3% (11/33)
SALT50	44.0% (11/25)	33.3% (11/33)

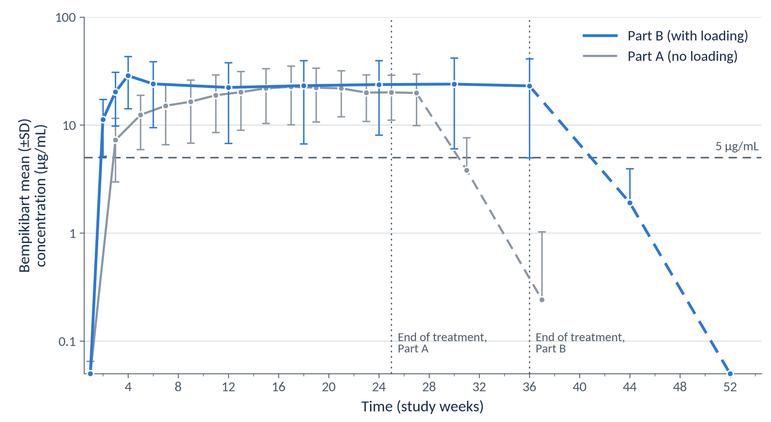
**Responders distributed across 6 sites and 2 countries. Missing SALT values imputed by LOCF.*

Pharmacokinetics: Loading produced ~3-fold higher early exposure and steady state conc. ~10 wks earlier

28.8 µg/mL
Mean trough at Day 22

Steady State by Wk 3
vs 12–14 weeks w/out loading

Negligible ADA
No impact on PK



Near-complete IL-7Rα occupancy on circulating CD3+ T cells in >90% of patients by Day 15.

Efficacy Was Independent of Duration of Episode

Duration (n)	Mean Duration (yr)	SALT≤20 (n)	Mean Salt Change Wk 36 (%)
< 2 Years (12)	1.01	5	-35.8%
> 2 Years (13)	3.04	5	-34.9%

All drug-related adverse events were mild or moderate; no Grade ≥3 events

0
Grade 3 or higher adverse events

4% ISR
(As % of all administrations)
All mild in severity

0
Discontinuations due to adverse events

Safety Summary by Preferred Term (n=33)

	Patients reporting at least one TEAE	
Preferred Term	Gr1 (Mild), n (%)	Gr2 (Mod), n (%)
Injection site reaction	12 (36.3)	0 (0.0)
Upper respiratory tract infection	7 (21.2)	5 (15.1)
Gastroenteritis	1 (3.0)	4 (12.0)
Urinary tract infection	0 (0.0)	3 (9.0)
Lymphocyte count decreased	3 (9.0)	0 (0.0)

Of 12 patients with an ISR, 8 had a single event. Subject is counted only for the max severity. 4% of total injections administered were ISRs.

On-target reduction of absolute lymphocyte count (ALC) with no correlation to infection

- Consistent with mechanism of action of IL-7Rα blockade
- Mean ALC reduction ~40% that flattened at Week 27-28
- No correlation of infections with ALC decrease; no confirmed absolute ALC <500 cells/µL

Conclusions

Exposure – An optimized loading plus Q2W regimen achieved ~3-fold higher early exposure and steady state concentration ~10 weeks earlier than dosing without loading.

Efficacy – At Week 36, 40.0% of mITT and 30.3% of ITT achieved SALT≤20, with a 35.3% mean reduction in SALT, in a severe/very severe population with AA that included oral JAK inhibitor-experienced patients.

Safety & Tolerability – All drug-related adverse events were mild or moderate in severity, with no Grade ≥3 events. 4% ISRs; all mild.

These efficacy, safety and tolerability findings support advancement of bempikibart into registrational development in patients with severe and very severe alopecia areata.

Limitations: open-label, single-arm design (n=33); missing values imputed by LOCF; efficacy of Open Label Extension are ongoing and not reported here.

Abbreviations: AA, alopecia areata; ADA, anti-drug antibody; ALC, absolute lymphocyte count; IgE, immunoglobulin E; IL-7Rα, interleukin 7 receptor subunit alpha; ISR, injection site reaction; ITT, intention-to-treat; JAK, Janus kinase; LOCF, last observation carried forward; mITT, modified intention-to-treat; MMRM, mixed model for repeated measures; OLE, open-label extension; PK, pharmacokinetics; QM, monthly; Q2W, every 2 weeks; QW, weekly; SALT, Severity of Alopecia Tool; SC, subcutaneous; TEAE, treatment-emergent adverse event; TSLP, thymic stromal lymphopoietin.

Reference: King B, et al. SIGNAL-AA Part A. Presented at AAD 2025.

Note: The abstract was submitted on an earlier data cut, before all patients had reached Week 36; results here reflect the Week 36 primary endpoint analysis.

Clinical Trial Registration: NCT06018428

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