# A Phase 2b Study Evaluating the Efficacy and Safety of Single Agent Rezpegaldesleukin, an Interleukin-2 Receptor (IL-2R) Pathway Agonist, in the Treatment of Severe to Very Severe Alopecia Areata

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## BACKGROUND

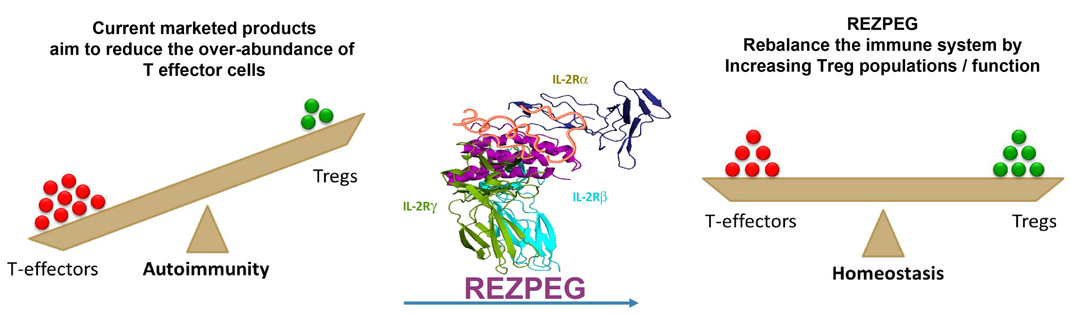
- Prevalence of alopecia areata (AA) is 0.1-0.2% with calculated lifetime risk of 2%[1]
- 6.7 million people in the US and 160 million worldwide have AA[1]
- AA can start at any age and 80% of patients are younger than age 40[2]
- Patchy alopecia areata, alopecia totalis, and alopecia universalis are the predominant types of alopecia areata[3]
- 10–20% of the patients will develop alopecia totalis[2]
- AA causes substantial emotional and psychosocial distress[1]
- Alopecia areata often occurs with other autoimmune conditions such as thyroid disease, atopic dermatitis, inflammatory bowel disease, rheumatoid arthritis, psoriasis, systemic lupus erythematosus and vitiligo[1]
- Biopsies from patients with AA show perifollicular lymphocytic infiltrate (CD4+ and CD8+ T cells) around the anagen phase hair follicle[4] and a significant reduction in regulatory T-cells (Treg)[5]

### Why We Need Additional Therapies for Severe Alopecia Areata

- Majority of patients do not achieve adequate disease control with the standard of care therapies (baricitinib and ritlecitinib)[6]
- Currently available systemic therapies may be limited by their safety profile
  - JAK inhibitors (like baricitinib, ritlecitinib) carry multiple black boxed warnings[7]
- AA frequently recurs after a patient stops taking oral JAK inhibitors[8]
- The limited armamentarium of approved drugs with an adequate benefit–risk ratio represent major challenges in the field[9]
- New strategies aimed at inducing deep and potentially therapy-free remission are needed[9]

**Figure 1: Rezpegaldesleukin (REZPEG): Novel Treatment Approach for Auto-immune Disorders**

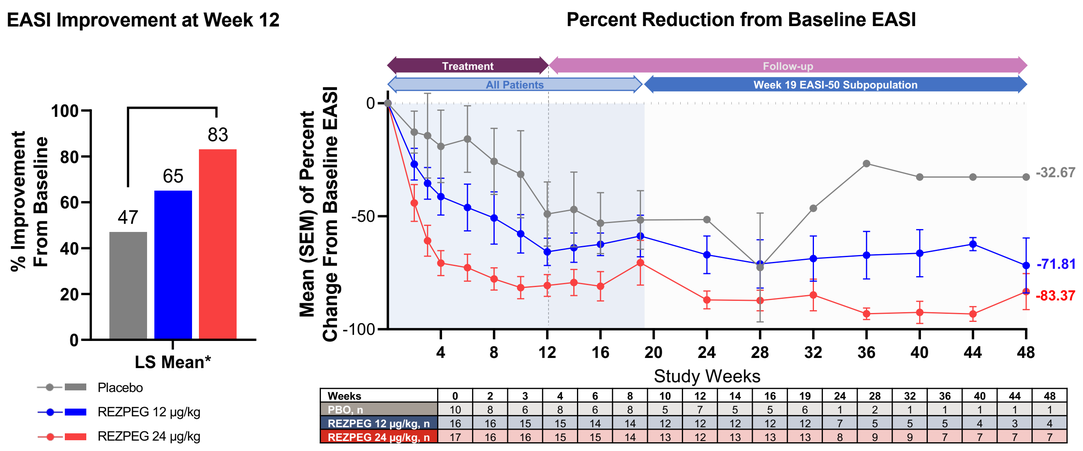
**Novel mechanistic approach:** Resolution/restoration of immune system




REZPEG preferentially stimulates expansion of regulatory T cells with minimal effects on T-effectors[10]

**Figure 2: Phase 1b Study of REZPEG in Atopic Dermatitis (AD)**

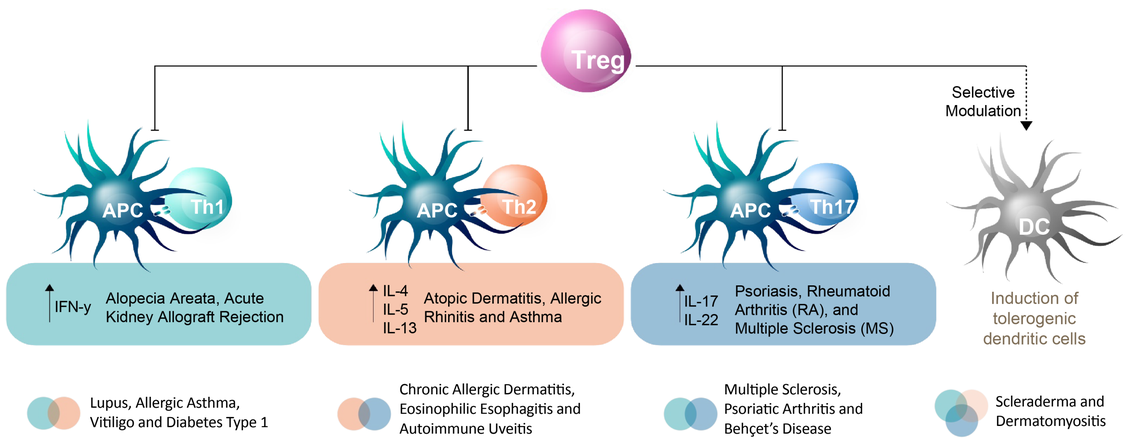
*Sustained Benefit Observed After 12-Weeks of Therapy[11]*




| Weeks | 0 | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 19 | 24 | 28 | 32 | 36 | 40 | 44 | 48 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PBO, n | 10 | 8 | 6 | 8 | 6 | 8 | 5 | 7 | 5 | 5 | 6 | 1 | 2 | 1 | 1 | 1 | 1 | 1 |
| REZPEG 12 µg/kg, n | 16 | 16 | 15 | 15 | 14 | 14 | 12 | 12 | 12 | 12 | 12 | 7 | 5 | 5 | 5 | 4 | 3 | 4 |
| REZPEG 24 µg/kg, n | 17 | 16 | 16 | 15 | 15 | 14 | 13 | 12 | 13 | 13 | 13 | 8 | 9 | 9 | 7 | 7 | 7 | 7 |

Phase 2b Study Evaluating REZPEG Potential in Patients with Moderate-to-Severe AD is Ongoing (NCT06136741)

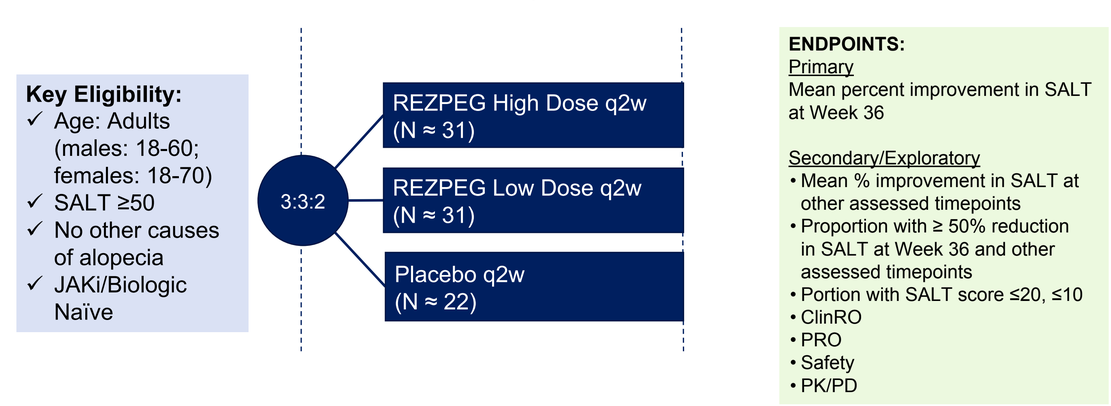
**Figure 3. Central Role of T Regulatory Cells in Immune Homeostasis**




Tregs are crucial for immune homoeostasis and the prevention of autoimmune conditions[12]

## STUDY DESIGN

**Figure 4: Phase 2b Study for Patients with Severe Alopecia Areata**




### Phase 2b Study for Patients with Alopecia Areata

- This trial is a Phase 2b, randomized, double-blinded, placebo-controlled, international, multicenter study of REZPEG vs placebo for JAK-inhibitor and biologic-naïve patients with severe to very-severe AA
- Patients will be randomly assigned in a 3:3:2 ratio to 2 different REZPEG dosing regimens vs. placebo, administered subcutaneously, during the 36-week treatment period
- All patients will be followed for 24-weeks following the treatment period

#### Key eligibility criteria

- ✓ Adult patients (males aged 18-60 years; females aged 18-70 years)
- ✓ Stable extent of hair loss over the last 6-months
- ✓ Severe to very-severe AA:
  - SALT ≥50
  - No other causes of alopecia
- ✓ Systemic Biologic and JAK-inhibitor naïve

### Primary Endpoints

- The primary endpoint for this study is the least-square mean percent change from baseline in Severity of Alopecia Tool (SALT) score at Week 36.

### Secondary Endpoints

- Percent change from baseline in SALT score at other timepoints
- Proportion of patients achieving improvement in Severity of Alopecia Tool (SALT) ≥ 50%, ≥ 75%, ≥ 90%
- Proportion of patients achieving an absolute SALT score ≤ 10, ≤ 20, ≤ 30
- Safety and tolerability

## STUDY STATUS

### Location of Planned Study Sites

- International multicenter study
- Approximately 26 clinical sites

- This study is initiating in North America and other parts of the world:
  - North America (Canada, United States)
  - Europe (Poland)
- Additional details are available at clinicaltrials.gov: NCT06340360
- Please contact the Sponsor (Nektar) with any questions

### ACKNOWLEDGMENTS

This study is funded by Nektar Therapeutics, San Francisco, CA.
The study was or will be approved by the institutional review board of each participating site, and informed consent from all patients is required for study participation.

### ABBREVIATIONS

Treg, T-regulatory; SEM, Standard error of the mean (continuous endpoint using observed data); LS Mean, least square mean; MMRM, Mixed Model for Repeated Measures; SAP, statistical analysis plan *EASI Improvement results are LS mean percent change from baseline obtained from MMRM as specified in the SAP defined in the protocol (generated by independent statistical audit firm)

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