Phase 2 Trial in Progress: Lirentelimab in Adults with Moderate-to-Severe Atopic Dermatitis Inadequately Controlled by Topical Treatments

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**REFERENCES**

1. Lirentelimab is an investigational medicine. Its efficacy and safety profile have not been established, and it has not been approved by the FDA.

**BACKGROUND**

- Atopic dermatitis (AD) is a chronic pruritic inflammatory dermatitis that affects approximately 16.5 million (7.3%) adults in the US, of which around 6.6 million (40%) have moderate-to-severe disease.
- The current standard of care includes topical treatments supplemented with corticosteroids and with and without immunosuppressants. Patients with AD inadequately controlled by topical treatments and immunosuppressants are often treated with biologics and/or JAK inhibitors (JAKi).
- Some patients do not have an adequate clinical response or are unable to tolerate JAKi or available biologics.

**STUDY RATIONALE**

- Lirentelimab is a humanized IgG1 mAb directed against Siglec-8, which is expressed selectively on MCs and eosinophils.
- Mast cells (MCs) and eosinophils are implicated in the pathogenesis of AD.
- In a phase 1 study, a subcutaneous (SC) formulation of lirentelimab was well-tolerated with no IRRs.
- Overall, lirentelimab IV has been well-tolerated, the most common AE being infusion related reactions (IRR) typically associated with the initial infusion.

**STUDY POPULATION**

- Adult (18-80 years) with moderate-to-severe AD inadequately controlled by topical treatments are eligible for screening.
- Male or female aged 18 - 80 years
- Chronic AD present for at least 3 years with moderate-to-severe symptoms
- %EASI at screening < 50%
- %IGA at screening > 5
- %EASI at screening ≥15%
- %IGA at screening > 3
- %EASI at screening ≥10%
- %IGA at screening > 2

**KEY INCLUDED MEASURES IN ATLAS**

- **EASI**: Eczema Area and Severity Index
- **IGA**: Investigator Global Assessment
- **SCORAD**: Scoring Atopic Dermatitis Index
- **VAS**: Visual Analog Scale
- **NRS**: Numerical Rating Scale
- **DLQI**: Dermatology Life Quality Index
- **ppNRS**: Peak Pruritus Numeric Rating Scale

**STUDY DESIGN**

- 130 patients will be randomized 1:1 to receive either:
  - Lirentelimab 300 mg SC Q2W
  - Placebo SC Q2W
- Patients who complete the double-blind period of the study, will have the option to enroll in an open-label extension (OLE)
- Concomitant use of biologics and/or JAK inhibitors is allowed.

**CONCLUSIONS/DISCUSSION**

- Mast cells and eosinophils are key effector cells in the pathogenesis of AD.
- Lirentelimab (AK002) is a humanized IgG1 mAb directed against Siglec-8, which is expressed selectively on MCs and eosinophils.
- Preclinical data demonstrates that lirentelimab can broadly inhibit multiple modes of MC activation that drives AD pathology.
- **Table 1. Key Efficacy Measures in ATLAS**
<table>
<thead>
<tr>
<th>Full Name of Measure Approach</th>
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<tbody>
<tr>
<td>EASI: Eczema Area and Severity Index: Physician evaluation</td>
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*Please visit clinicaltrials.gov (NCT05155085) or email atlas.info@allakos.com to learn more.*