A phase 2 study investigating the effect of EDP1815

An orally-delivered, anti-inflammatory, gut-restricted commensal microbe in the treatment of mild and moderate plaque psoriasis


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DISCLOSURE OF RELATIONSHIPS WITH INDUSTRY

Douglas Maslin, MD
S026 Late-Breaking Research: Clinical Trials

DISCLOSURES
Evelo Biosciences: Employee – Compensation
The potential of EDP1815

Patient with moderate psoriasis enrolled in Phase 2 trial who achieved PASI-50 response at week 16 on EDP1815 – skin lesions improved further at follow-up
Section 1. EDP1815: Background

Section 2. Phase 2 Study Design

Section 3. Phase 2 Results

Section 4. EDP1815: Conclusion
The small intestine controls systemic inflammation

- The immune system of the small intestine is connected to the rest of the body via mesenteric lymph nodes.
- This is the small intestinal axis - SINTAX
- Gut-restricted medicines that harness SINTAX could send inflammation resolving signals throughout the body.
- SINTAX medicines have the potential to be
  - Oral
  - Effective
  - Safe
  - Affordable
- EDP1815 is non-living preparation of a strain of *Prevotella histicola* sourced from a human duodenal biopsy.
Cells in the Small Intestine are Therapeutic Targets for SINTAX Medicines

**Evelo’s focus - Small Intestine**
- Abundance of immune cells
- Sensing of signals and governing of inflammation throughout the body

**EDP1815**
- Targets the small intestine
- No modification or colonization of microbiome
- No systemic absorption
Mechanism of Action

1. Sensing of SINTAX medicines by receptors and cells in the small intestine

2. Conditioning of T cells by dendritic cells and macrophages in lymph nodes

3. Migration of conditioned T-cells throughout the body
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EDP1815 Phase 2 Trial in Mild and Moderate Psoriasis

16-WEEK TREATMENT PERIOD

SCREENING PERIOD (up to 4 weeks)

TREATMENT PERIOD (16 weeks)

- Cohort 1: 1 capsule
- Cohort 2: 4 capsules
- Cohort 3: 10 capsules

Randomized 2:1 in each arm (active:placebo)

Key Inclusion Criteria:
- BSA of $\geq 3\%$ and $\leq 10\%$
- PASI score of $\geq 6$ and $\leq 15$
- PGA score of 2 or 3

24-WEEK POST-TREATMENT PERIOD

POST-TREATMENT FOLLOW-UP (up to 4 weeks)

OPTIONAL FOLLOW-UP PERIOD (up to 20 weeks)

- Week 20
- Week 24
- Week 28
- Week 40

Part B
Section 1. EDP1815: Background

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Robust PASI-50 Responses with EDP1815 at Week 16 across all 3 groups

No evidence of a dose response

*PASI-50

No evidence of a dose response
EDP1815 led to clinically meaningful responses

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<thead>
<tr>
<th>TREATMENT PERIOD</th>
<th>FOLLOW UP</th>
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<tbody>
<tr>
<td>Baseline</td>
<td>Week 20</td>
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<td>Week 8</td>
<td>Week 16</td>
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<tr>
<th>PASI</th>
<th>PGA</th>
<th>DLQI</th>
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<tr>
<td>Baseline</td>
<td>10.3</td>
<td>3</td>
<td>12</td>
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<tr>
<td>Week 16</td>
<td>3.1</td>
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Durability and Deepening of Clinical Responses Observed in 24-Week Post-Treatment Period

16-Week Treatment Period

Baseline

18/30 MAINTAINED

Baseline

PASI-50 or greater

24-Week Post-Treatment Period

PASI-50 or greater

9/20 DEEPENED

PASI-50-74

during 24-weeks post-treatment

PASI-75 or greater

or greater

or greater
Deepening of Responses to PASI-75 or Greater During Post-Treatment Period

**BASELINE**
- PASI 7.2, DLQI 3
- PASI 11.8, DLQI 6,
- PASI 10.5, DLQI 3

**WEEK 16**
- PASI-50 PASI 3.6, DLQI 0
- PASI-90 PASI 1.1, DLQI 2
- PASI-50 PASI 5.7, DLQI 0

**PEAK RESPONSE**
- Week 24: PASI-100
- Week 40: >PASI-75
- Week 28: >PASI-75

**WK 16 RESPONDER**
- PASI 7.2, DLQI 3
- PASI 11.8, DLQI 6,
- PASI 10.5, DLQI 3

**WK 16 NON RESPONDER**
- PASI 11.8, DLQI 6,
EDP1815: Placebo-like Safety and Tolerability

- AE profile of EDP1815 is comparable to placebo
- No related SAEs. No ‘expected’ AEs
- Gastrointestinal or Infection AE rate comparable to placebo
- AE profile no different in the drug responders (≥PASI-50)
Section 1. EDP1815: Background

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Section 4. Conclusion
Phase 2 data demonstrate potential of EDP1815 as a foundational psoriasis treatment for all stages of disease

- Statistically significant and clinically meaningful improvements in PASI-50 and PGA-0/1
- Evidence of durability and deepening of response to PASI-75 or greater off treatment
- Oral EDP1815 can drive potent effects with placebo-like safety and tolerability
- Coordinated reduction of disease-relevant inflammatory cytokines