Ligelizumab Achieves Sustained Control Of Chronic Spontaneous Urticaria Symptoms Of Hives, Itch And Angioedema: 1-year Treatment Results

Bernstein J.A.¹, Baker D.², Maurer M.³, Giménez-Arnau A.⁴, Sussman G.⁵, Barve A.⁶, Hua E.⁷, Severin T.⁸, Janocha R.⁸

¹University of Cincinnati College of Medicine and Bernstein Clinical Research Center. ²Baker Allergy Asthma and Dermatology Clinic, Portland, OR, USA. ³Department of Dermatology and Allergy, Charité - Universitätsmedizin Berlin, Germany. ⁴Dermatology Department, Hospital del Mar-Parc de Salut Mar, Universitat Autònoma Barcelona, Spain. ⁵Division of Allergy and Clinical Immunology, University of Toronto, Canada. ⁶Novartis Pharmaceuticals Corporation, East Hanover, NJ, United States. ⁷Shanghai Novartis Trading Ltd., Shanghai, China. ⁸Novartis Pharma AG, Basel, Switzerland

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<td>Bernstein Allergy Group and Clinical Research Center; University of Cincinnati College of Medicine</td>
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Introduction

- Ligelizumab is a next generation high affinity humanized monoclonal anti-IgE antibody
- Ligelizumab achieved greater control of symptoms of hives, itch and angioedema versus omalizumab and placebo in patients with CSU up to Week 20 in the core Phase 2b study¹
- Here, we report the efficacy of ligelizumab 240 mg q4w up to 1 year in an open-label, single-arm extension study in patients who completed the core Phase 2b study and presented with active disease (UAS7 ≥12) during the follow-up

CSU, chronic spontaneous urticaria; IgE, immunoglobulin E; q4w, every 4 weeks; UAS7, 7-day urticaria activity score
¹Maurer M. et al., Poster presented at EADV 2018 (12-16 September, Paris, France)
Phase 2b trial and open-label extension study of ligelizumab in patients with CSU inadequately controlled with \( H_1 \)-antihistamines

q4w, every 4 weeks; sc, subcutaneous; SD, single dose; Wk, week

The 120 mg single-dose (SD) arm was chosen to characterise the pharmacokinetics/pharmacodynamics. Data from this arm assesses the duration of the response and correlates this with the concentration of drug in the serum at the time when symptoms reappear.

Patients who remained in the follow-up period for at least 12 weeks and had active disease (UAS7 ≥ 12), could enter the extension study from Week 32 onwards.

Following the 52-week open label period, patients entered a 52-week treatment free follow up period to assess durability of treatment effect, including potential for disease modification.
Patient disposition during the core Phase 2b trial and the open-label, single dosing regimen extension study

### Core Study
- **382 patients randomised**
- **226 patients with UAS7 ≥ 12** entered the extension

### Extension Study
- **201 patients completed open-label treatment**
- **29 patients discontinued the post-treatment follow-up period:**
  - Subject/guardian decision (n = 15)
  - Lack of efficacy (n = 8)
  - Lost to follow-up (n = 3)
  - Physician decision (n = 3)
  - New therapy for CSU (n = 1)
  - Non-compliance with medication (n = 2)

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### Discontinuations
- **Double-blind treatment period:**
  - Protocol deviation (n = 10)
  - Lack of efficacy (n = 8)
  - Adverse event (n = 7)
  - Subject/guardian decision (n = 7)
  - Physician decision (n = 5)
  - Non-compliance with medication (n = 3)
  - Lost to follow-up (n = 2)
  - Pregnancy (n = 1)
  - Technical problems (n = 1)

- **Post-treatment follow-up period:**
  - Protocol deviation (n = 10)
  - Lack of efficacy (n = 8)
  - Adverse event (n = 7)
  - Subject/guardian decision (n = 7)
  - Physician decision (n = 5)
  - Non-compliance with medication (n = 3)
  - Pregnancy (n = 1)
  - Technical problems (n = 1)

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*aPatients who discontinued treatment during the double-blind period were encouraged to remain in the study for the safety analysis and enter the post-treatment follow-up.*
High complete and well controlled response with ligelizumab at Week 12\(^a\) during the core study

![Proportion of patients achieving UAS7=0 at Week 12](image)

![Proportion of patients achieving UAS7≤ 6 at Week 12](image)

**UAS7, 7-day urticaria activity score**

\(^a\)The proportion of patients achieving UAS7=0 at Week12 was a key secondary endpoint of the core study
High rate of complete and sustained symptom control was achieved with ligelizumab 240 mg q4w up to 1 year

- Complete responses were sustained and over 50% of patients achieved UAS7=0 at the end of Week 52
- Over 60% of patients were well-controlled and achieved UAS7≤6 at the end of Week 52

CSU, chronic spontaneous urticaria; q4w, every 4 weeks; UAS7, 7-day urticaria activity score
The majority of patients cumulatively experienced symptom control with ligelizumab 240 mg q4w during the 1-year treatment phase.

- **75.8% of patients** (95% CI, 69.9, 81.3) experienced UAS7=0 at least once over the 1 year.
- **84.2% of patients** (95% CI, 79.0, 88.7) experienced UAS7≤6 at least once over the 1 year.
Early onset and sustained angioedema control was achieved with ligelizumab 240 mg q4w for up to 1 year

- Angioedema was reported by 45.9% of patients at baseline of the core study, 33.2% of patients at baseline of the extension study* and 10.8% at Week 4
- **93.0 %** of patients were **angioedema free** by Week 52

### Change from baseline in AAS7*,¹ Scores

<table>
<thead>
<tr>
<th>n</th>
<th>Mean (SD)</th>
<th>Change from baseline¹</th>
<th>% change from baseline²</th>
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<tbody>
<tr>
<td>E1 Week 4 82</td>
<td>-23.2 (23.7)</td>
<td>-71.9 ( 69.5)</td>
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</tr>
<tr>
<td>E1 Week 12 81</td>
<td>-23.5 (25.3)</td>
<td>-68.1 (103.6)</td>
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<tr>
<td>E1 Week 20 75</td>
<td>-25.5 (23.8)</td>
<td>-85.5 ( 41.2)</td>
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</tr>
<tr>
<td>E1 Week 24 74</td>
<td>-27.3 (25.7)</td>
<td>-84.6 ( 59.7)</td>
<td></td>
</tr>
<tr>
<td>E1 Week 52 69</td>
<td>-27.4 (24.6)</td>
<td>-86.3 ( 35.4)</td>
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</tbody>
</table>

*Angioedema Activity Score measured over 7 days on a scale ranging 0–105.
¹Only patients with angioedema at baseline were included
²For each post-baseline week only patients with a value at both baseline and the respective week were included.
Conclusions

1-year open-label treatment with ligelizumab 240 mg q4w (extension study)

• Ligelizumab is a next generation high affinity humanized monoclonal anti-IgE antibody

• High rates of complete control of hives and itch (>50%; UAS7=0) and angioedema (93%) were achieved and sustained up to 1 year

• 75.8% of patients experienced complete symptom control (UAS7=0) and 84.2% of patients were well-controlled (UAS7≤6) at least once during the study