Developing Therapeutic Antibodies Targeting Allergic, Inflammatory and Proliferative Diseases

Phase 2 Eosinophil Gastritis and Gastroenteritis Study Results
Aug 5, 2019
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<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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</thead>
</table>
| 5:00 – 5:15 AM | **Robert Alexander, PhD**  
|              | Overview                                    |
| 5:15 – 5:45 AM | **Henrik Rasmussen, MD PhD**  
|              | Results of the ENIGMA Phase 2 Study         |
| 5:45 – 5:55 AM | **Evan Dellon, MD MPH**  
|              | Physician Perspective                        |
| 5:55 AM       | **Q&A**                                     |
Overview

Robert Alexander, PhD
CEO – Allakos
**Executive Summary**

- AK002 met all prespecified primary and secondary endpoints in EG/EGE

- Randomized, double-blind, placebo-controlled study results showed:
  - 95% reduction in tissue eosinophils vs. placebo +10% \( (p < 0.0001) \)
  - 69% treatment response rate vs. placebo 5% \( (p = 0.0008) \)
  - 53% decrease in symptom score vs. placebo 24% \( (p = 0.0012) \)

- Strong proof of concept in EoE
  - 13/14 (93%) of patients had eosinophils < 5 /hpf
  - 53% decrease in dysphagia vs. placebo 17%

*Today’s data builds on robust results in multiple other diseases*
Mast Cells and Eosinophils: Effector Cells Central to Initiating and Maintaining Inflammatory Responses

- Found at the Internal/External Interface of the Body
  - In particular, in tissues and surrounding blood vessels and peripheral nerves
- Produce a Broad Range of Inflammatory Mediators
  - Vasoactive amines, lipid mediators, proteases, cytokines and chemokines
- Participate in Acute and Chronic Inflammation
  - Including both innate and adaptive immune responses
- Key Drivers in Many Serious Diseases
  - Including gastrointestinal, ophthalmic, dermatologic, respiratory, and proliferative diseases
AK002 Developed to Target Siglec-8 on Mast Cells and Eosinophils

- Activating Receptors
- Siglec-8
- Mast cell
- Eosinophil
- Inflammatory response

AK002

- Inhibition
- Mast cell
- Eosinophil
- ADCC/Apoptosis
Mast Cells and Eosinophils are Key Drivers of Inflammatory Disease

**SENSITIZATION**
- T Cell
- B Cell
- Activated B Cell
- IgE
- Allergens
  - IL-4
  - IL-13

**ACTIVATION AND RECRUITMENT OF OTHER IMMUNE CELLS AND TISSUE INFLAMMATION**
- Mast Cell
  - Histamine, LTC₄, PGD₂, and proteases
- Eosinophil
  - ECP, MBP, elastase, MMP, TNFα, IL-1β, TGFβ
- Neutrophil
- Macrophage
- Smooth Muscle
- Neuron

**ACUTE AND CHRONIC INFLAMMATION**
- IL-5
- IL-8
- IL-6, TNFα
- Histamine
- Substance P

- Bronchoconstriction, increased GI motility, pain, itch
- Tissue damage, fibrosis

**Epithelium**
Eosinophils and Mast Cells Play a Significant Role in Many Diseases

- Eosinophilic Gastritis
- Eosinophilic Gastroenteritis
- Eosinophilic Esophagitis
- Ulcerative Colitis
- Crohn’s Disease
- Irritable Bowel Syndrome
- Chronic Urticaria
- Atopic Dermatitis
- Indolent Systemic Mastocytosis
- Mast Cell Activation Syndrome
- Vernal Keratoconjunctivitis
- Atopic Keratoconjunctivitis
- Perennial Allergic Conjunctivitis
- Asthma
- Eosinophilic Asthma
- Idiopathic Pulmonary Fibrosis
- Eosinophilic Gastritis
- Eosinophilic Gastroenteritis
- Eosinophilic Esophagitis
- Ulcerative Colitis
- Crohn’s Disease
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- Eosinophilic Asthma
- Idiopathic Pulmonary Fibrosis
Eosinophilic Gastrointestinal Diseases (EGIDs)

EG, EGE, EoE
Chronic Eosinophilic Inflammation of the Stomach, Small Intestine, or Esophagus

- Eosinophils and mast cells are important drivers of disease
- Symptoms: abdominal pain, nausea, early satiety, loss of appetite, bloating, abdominal cramping, vomiting, diarrhea, and dysphagia
- No FDA-approved treatment for EG, EGE, or EoE
- Current standard of care: diet and/or steroids
- Potential multi-billion dollar market opportunity
Eosinophilic Gastritis and/or Eosinophilic Gastroenteritis Phase 2 Study

Henrik S. Rasmussen, MD PhD
Chief Medical Officer - Allakos
ENIGMA Phase 2 Study

Study Design

- Randomized, double-blind, placebo-controlled study in EG/EGE
- Active moderate to severe symptoms
- Biopsy confirmed EG/EGE
  - Stomach: ≥30 eos/high powered field (hpf) in 5 hpfs
  - Duodenum: ≥30 eos/hpf in 3 hpfs
- 65 Patients – 3 arms
  - 22 patients 0.3, 1.0, 1.0, 1.0 mg/kg
  - 21 patients 0.3, 1.0, 3.0, 3.0 mg/kg
  - 22 patients placebo
- 4 monthly doses
- Endpoints assessed two weeks after last dose
Symptoms Assessed Using Proprietary PRO

**EG/EGE-SQ® Questionnaire**

- Developed in accordance with FDA guidance on PRO development
- Captures the symptoms of EG/EGE patients on a daily basis
- Measures 8 symptoms each on a scale of 0-10 (Total Symptom Score 80 points):
  - Abdominal pain
  - Nausea
  - Vomiting
  - Early satiety
  - Loss of appetite
  - Abdominal cramping
  - Bloating
  - Diarrhea
Prespecified Hierarchical Analysis Per Protocol

Primary Endpoint
• Mean percent change in gastrointestinal eosinophil counts from baseline

Responder Secondary Endpoint
• Proportion of patients who have:
  - >75% decrease in tissue eosinophils AND >30% benefit in Total Symptom Score (TSS)

Symptoms Secondary Endpoint
• Mean percent change in TSS from baseline

Endpoints designed to show (1) tissue eosinophil depletion, (2) symptom improvement, and (3) that these effects occur in the same individuals
## Baseline Characteristics

<table>
<thead>
<tr>
<th></th>
<th>AK002 (n=39)</th>
<th>Placebo (n=20)</th>
<th>Total (N=59)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, Median (Range)</td>
<td>43 (18-74)</td>
<td>40 (18-67)</td>
<td>42 (18-74)</td>
</tr>
<tr>
<td>Female</td>
<td>72%</td>
<td>50%</td>
<td>64%</td>
</tr>
<tr>
<td>EoE with Dysphagia</td>
<td>38% (15)</td>
<td>50% (10)</td>
<td>42% (25)</td>
</tr>
<tr>
<td>% of Patients with AEC(^1) &lt;500 eos/µL</td>
<td>74%</td>
<td>60%</td>
<td>69%</td>
</tr>
<tr>
<td>% of Patients with AEC(^1) &lt;1500 eos/µL</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
</tr>
<tr>
<td>Mean Baseline Gastrointestinal Eosinophils/hpf</td>
<td>78</td>
<td>75</td>
<td>77</td>
</tr>
<tr>
<td>Mean Baseline Gastrointestinal Mast Cells/hpf</td>
<td>64</td>
<td>56</td>
<td>62</td>
</tr>
<tr>
<td>Mean Baseline Total Symptom Score (TSS)</td>
<td>34</td>
<td>30</td>
<td>33</td>
</tr>
</tbody>
</table>

1 AEC: Blood Absolute Eosinophil Count
Primary Endpoint Met for All AK002 Groups

<table>
<thead>
<tr>
<th>Treatment Arm</th>
<th>Baseline Eosinophil Counts / hpf</th>
<th>Mean %Δ in Eosinophil Counts</th>
<th>p - value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Dose AK002 (n=20)</td>
<td>76</td>
<td>-97%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Low Dose AK002 (n=19)</td>
<td>80</td>
<td>-92%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Combined AK002 (n=39)</td>
<td>78</td>
<td>-95%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Placebo (n=20)</td>
<td>75</td>
<td>+10%</td>
<td>-</td>
</tr>
</tbody>
</table>
AK002 Demonstrates Potent Tissue Eosinophil Depletion

Stomach/Duodenal Eos < 5/HPF

<table>
<thead>
<tr>
<th>% of Patients</th>
<th>AK002</th>
<th>Placebo</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>0% (0/20)</td>
<td></td>
</tr>
<tr>
<td>25%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>75%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>95% (37/39)</td>
<td></td>
</tr>
</tbody>
</table>

37 of 39 patients had < 5 eos/hpf
## AK002 Met Patient Reported Symptoms Secondary Endpoint

<table>
<thead>
<tr>
<th>Treatment Arm</th>
<th>Baseline TSS</th>
<th>Mean % Change in TSS</th>
<th>p - value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Dose AK002 (n=20)</td>
<td>34</td>
<td>-58%</td>
<td>0.0012</td>
</tr>
<tr>
<td>Low Dose AK002 (n=19)</td>
<td>35</td>
<td>-49%</td>
<td>0.0150</td>
</tr>
<tr>
<td>Combined AK002 (n=39)</td>
<td>34</td>
<td>-53%</td>
<td>0.0012</td>
</tr>
<tr>
<td>Placebo (n=20)</td>
<td>30</td>
<td>-24%</td>
<td>-</td>
</tr>
</tbody>
</table>

Statistically significant improvements in symptoms observed 1 day after first infusion and maintained throughout the study.
Higher Proportion of Patients with >50% Reduction in TSS on AK002 vs. Placebo

EG/EGE-PRO Total Symptom Score: >50% Reduction

- **High Dose AK002**: 65% (13/20)
- **Low Dose AK002**: 63% (12/19)
- **High/Low**: 64% (25/39)
- **Placebo**: 15% (3/20)
Improvement Across All Symptoms Measured on AK002

EG/EGE-PRO Symptom Score
AK002 (n=39)

- Abdominal Pain: Baseline Median Score = 5, End of Tx Median Score = 0, Improvement = -100%
- Nausea: Baseline Median Score = 4, End of Tx Median Score = 1, Improvement = -79%
- Vomiting: Baseline Median Score = 5, End of Tx Median Score = 2, Improvement = -65%
- Early Satiety: Baseline Median Score = 5, End of Tx Median Score = 1, Improvement = -61%
- Loss of Appetite: Baseline Median Score = 5, End of Tx Median Score = 2, Improvement = -57%
- Abdominal Cramping: Baseline Median Score = 4, End of Tx Median Score = 1, Improvement = -47%
- Bloating: Baseline Median Score = 4, End of Tx Median Score = 1, Improvement = -55%
## AK002 Met Treatment Responder Secondary Endpoint

<table>
<thead>
<tr>
<th>Treatment Arm</th>
<th>Treatment Responders</th>
<th>$p$ - value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Dose AK002 (n=20)</td>
<td>70%</td>
<td>0.0009</td>
</tr>
<tr>
<td>Low Dose AK002 (n=19)</td>
<td>68%</td>
<td>0.0019</td>
</tr>
<tr>
<td>Combined AK002 (n=39)</td>
<td>69%</td>
<td>0.0008</td>
</tr>
<tr>
<td>Placebo (n=20)</td>
<td>5%</td>
<td>-</td>
</tr>
</tbody>
</table>

Treatment responder defined as: >75% reduction in tissue eosinophil counts AND >30% reduction in symptoms (TSS)
Additional Analyses
Endpoint Sensitivity Analyses

**Study Population**

- **Intent to Treat (ITT):**
  - All patients randomized (n=65)
  - Includes Per Protocol (n=59) population plus:
    - 2 patients only received 1 dose of drug
    - 1 patient did not complete PRO
    - 3 patients had their daily steroid dose altered

- **Safety** evaluated on the ITT population

**Acute Steroid Use**

- **Protocol allowed steroid use:**
  - $\leq 10\text{mg}$ daily oral prednisone
    - Must be preexisting prior to screening start and stable throughout screening, baseline and study periods
  - Acute steroid use
    - Premedication before infusion
    - Therapeutically to manage IRR

- **Protocol violation:**
  - Increase or decrease in daily steroid amount

- **Acute steroid use across both groups:**
  - 28% AK002, 35% placebo
All Analyses Show Consistent Results

<table>
<thead>
<tr>
<th>Primary and Secondary Endpoint</th>
<th>AK002 Dose Groups</th>
<th>Placebo</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Per Protocol</td>
<td>No Steroids</td>
</tr>
<tr>
<td></td>
<td>&lt;0.0001</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td><strong>1° - Tissue Eosinophils</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Δ from BL to Day 99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per Protocol</td>
<td>&lt;0.0001</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>No Steroids</td>
<td>&lt;0.0001</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>ITT</td>
<td>&lt;0.0001</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td><strong>2° - Treatment Responders</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Eos Δ &gt; -75% &amp; TSS Δ &gt; -30%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per Protocol</td>
<td>0.0009</td>
<td>0.0019</td>
</tr>
<tr>
<td>No Steroids</td>
<td>&lt;0.0001</td>
<td>0.0001</td>
</tr>
<tr>
<td>ITT</td>
<td>0.0008</td>
<td>0.0017</td>
</tr>
<tr>
<td><strong>2° - Total Symptom Score</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Δ from BL to End of Study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per Protocol</td>
<td>0.0012</td>
<td>0.0150</td>
</tr>
<tr>
<td>No Steroids</td>
<td>0.0016</td>
<td>0.0313</td>
</tr>
<tr>
<td>ITT</td>
<td>0.0260</td>
<td>0.1556</td>
</tr>
</tbody>
</table>

AK002 Dose Groups (n=20/16/21), Placebo (n=20/13/22)
## Eosinophilic Esophagitis Patients

<table>
<thead>
<tr>
<th></th>
<th>AK002 (n=15)</th>
<th>Placebo (n=10)</th>
<th>Total (N=25)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, Median (Range)</td>
<td>34 (18-68)</td>
<td>34 (21-53)</td>
<td>34 (18-68)</td>
</tr>
<tr>
<td>Female</td>
<td>67%</td>
<td>40%</td>
<td>56%</td>
</tr>
<tr>
<td>Mean Baseline Esophageal Eosinophils/hpf</td>
<td>43</td>
<td>79</td>
<td>56</td>
</tr>
<tr>
<td>Mean Baseline Esophageal Mast Cells/hpf</td>
<td>28</td>
<td>36</td>
<td>31</td>
</tr>
<tr>
<td>Mean Baseline Dysphagia Score</td>
<td>4.0</td>
<td>4.4</td>
<td>4.2</td>
</tr>
</tbody>
</table>
Significant Eosinophil Reductions in Patients With EoE

13 of 14 patients had < 5 eos/hpf

1 Excludes patients with eos < 5/hpf at baseline
Substantial Improvement in Dysphagia

Severity of Dysphagia¹

- AK002 (n=12)
  - -53%

- Placebo (n=8)
  - -17%

Histological and symptomatic improvement provides strong proof of concept in EoE

¹ All EoE patients with end of treatment dysphagia scores
Mast Cell Counts Decrease on AK002

Mast Cells in Gastric, Duodenal, and Esophageal Biopsies

**Mean Peak Cell Count / hpf**

<table>
<thead>
<tr>
<th></th>
<th>Gastric</th>
<th>Duodenal</th>
<th>Esophageal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AK002</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>40</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Day 99</td>
<td>26% *</td>
<td>26% *</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Placebo</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>3%</td>
<td>-3%</td>
<td>-9%</td>
</tr>
<tr>
<td>Day 99</td>
<td>+1%</td>
<td></td>
<td>-9%</td>
</tr>
</tbody>
</table>

*p <0.05

n = 39, BL = 22, Day 99 = 21

n = 20, BL = 12, Day 99 = 10

*Percent change from Baseline.
Safety Summary
## Safety: Treatment-Emergent AEs in ≥5% of Patients

<table>
<thead>
<tr>
<th>% of Patients, (n)</th>
<th>AK002 (n=43)</th>
<th>Placebo (n=22)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infusion related reaction</td>
<td>60% (26)</td>
<td>23% (5)</td>
</tr>
<tr>
<td>Headache</td>
<td>9% (4)</td>
<td>9% (2)</td>
</tr>
<tr>
<td>Upper respiratory tract infection</td>
<td>9% (4)</td>
<td>9% (2)</td>
</tr>
<tr>
<td>Urinary tract infection</td>
<td>9% (4)</td>
<td>5% (1)</td>
</tr>
<tr>
<td>Nausea</td>
<td>7% (3)</td>
<td>14% (1)</td>
</tr>
<tr>
<td>Fatigue</td>
<td>7% (3)</td>
<td>9% (2)</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>5% (2)</td>
<td>9% (2)</td>
</tr>
<tr>
<td>Nasopharyngitis</td>
<td>5% (2)</td>
<td>9% (2)</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>2% (1)</td>
<td>9% (2)</td>
</tr>
<tr>
<td>Dehydration</td>
<td>2% (1)</td>
<td>9% (2)</td>
</tr>
<tr>
<td>Gastroenteritis viral</td>
<td>2% (1)</td>
<td>9% (2)</td>
</tr>
<tr>
<td>Pyrexia</td>
<td>2% (1)</td>
<td>9% (2)</td>
</tr>
<tr>
<td>Sinusitis</td>
<td>2% (1)</td>
<td>9% (2)</td>
</tr>
<tr>
<td>Cough</td>
<td>0% (0)</td>
<td>9% (2)</td>
</tr>
<tr>
<td>Influenza</td>
<td>0% (0)</td>
<td>9% (2)</td>
</tr>
<tr>
<td>White blood cell count increased</td>
<td>0% (0)</td>
<td>9% (2)</td>
</tr>
</tbody>
</table>
Safety Summary

• Generally well tolerated
• Most common AE was mild to moderate infusion related reactions (IRR)
  – 60% of AK002 patients vs 23% placebo
  – 93% mild to moderate (flushing, feeling of warmth, headache, nausea, dizziness)
  – Mostly on first infusion, greatly reduced or does not occur on subsequent infusions
  – 1 drug-related serious adverse event, an IRR which recovered within 24 hours with no further sequelae
• Treatment-emergent SAEs: 9% on AK002, 14% on Placebo
• No other significant AEs
Open-Label Extension & Next Steps
Extension Study Status

• 92% of patients elected to enter long-term extension study
  – Current median duration of treatment 3 months
  – Efficacy appears to improve with continued dosing

• Optimizing dose administration
  – Pre-dose with oral prednisone 1 day prior to first and second AK002 doses
  – No IRRs observed in patients using steroid pre-dose
  – Allows administration of 1mg/kg as first dose
  – Infusion time can be reduced to < 2 hours on second and subsequent doses
EG/EGE and EoE Next Steps

- Q4 2019/Q1 2020 End of phase 2 meeting
- Q1 2020 Estimated phase 3 study start eosinophilic gastritis and/or eosinophilic gastroenteritis
- Q1 2020 Estimated phase 2/3 study start in eosinophilic esophagitis
Evan S. Dellon, MD MPH

**TITLE:** Professor of Medicine, Gastroenterology & Epidemiology
Director, Center for Esophageal Diseases and Swallowing
Director, CGIBD Biostatistics and Clinical Research Core

**INSTITUTION:** University of North Carolina School of Medicine

**SPECIALTY:** Gastroenterology

**FOCUS:** Epidemiology, pathogenesis, diagnosis, treatment, and outcomes of Eosinophilic Gastrointestinal Disorders

- Investigator and member of NIH-funded Consortium of Eosinophilic Gastrointestinal Disease Researchers (CEGIR)
- Editorial Board: Clinical Gastroenterology and Hepatology
- Author/Co-Author: >200 peer reviewed publications
- Investigator for multiple EGID studies including EoE
Corporate Updates
## Strong Balance Sheet and Significant IP Protection

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash, Cash Equivalents and Investments in Marketable Securities as of June 30, 2019</td>
<td>$153.1M</td>
</tr>
<tr>
<td>Q2 2019 Operating Expenses</td>
<td>$20.1M</td>
</tr>
</tbody>
</table>

- AK002 US patents run until 2035
- Lonza currently manufactures AK002
Anticipated Near-term Milestones

- **Q1’20**
  - Phase 1 Data in Mast Cell GI

- **Q4’19/Q1’20**
  - End of Phase 2 Meeting

- **Q1’20**
  - Phase 3 EG/EGE and EoE Study starts

- **H1’20**
  - Phase 2 Extension Data in EG and/or EGE

- **H2’20**
  - Phase 1 Data For subcutaneous AK002
## Experienced Management Team

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Previous Experience</th>
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</thead>
</table>
| Robert Alexander, PhD       | Chief Executive Officer                    | • CEO, ZS Pharma  
• Director Alta Partners; Business Development, Genentech                                                                                     |
| Adam Tomasi, PhD            | President & COO                            | • CSO & Head of Corporate Development, ZS Pharma  
• Principal Alta Partners, Drug Discovery, Gilead, Cytokinetics                                                                                |
| Henrik Rasmussen, MD, PhD   | Chief Medical Officer                      | • CMO, ZS Pharma  
• Head of Clinical Development, Medical and Regulatory Affairs, Novo Nordisk                                                                  |
| Leo Redmond                 | Chief Financial Officer                    | • President & CFO, Presidio Pharmaceuticals  
• Senior Director Finance; Genentech                                                                                                            |
| Simon Greenwood, PhD        | Chief Business Officer                     | • Director Roche Venture Fund  
• Head Genenfund; Business Development and Research, Genentech                                                                                   |
| Tim Varacek                 | Chief Commercial Officer                   | • SVP, Sales and Commercial Operations, ZS Pharma  
• VP, Sales, InterMune                                                                                                                           |
| Mark Asbury                 | Chief Legal Officer                        | • Chief Legal Officer, ZS Pharma, Pharmacyclics  
• Associate General Council, Genentech                                                                                                           |
| Ruby Casareno, PhD          | VP CMC                                      | • Director, Manufacturing, Portola  
• Director of Process Development and Manufacturing, OncoMed                                                                                     |
| Sally Bolmer, PhD           | VP, Reg. Affairs and Drug Development      | • Senior Vice President, Development and Regulatory Affairs, Human Genome Sciences  
• Executive Director, Regulatory Affairs, Centocor                                                                                               |
Executive Summary

• AK002 met all prespecified primary and secondary endpoints in EG/EGE

• Randomized, double-blind, placebo-controlled study results showed:
  – 95% reduction in tissue eosinophils vs. placebo +10% (p < 0.0001)
  – 69% treatment response rate vs. placebo 5% (p = 0.0008)
  – 53% decrease in symptom score vs. placebo 24% (p = 0.0012)

• Strong proof of concept in EoE
  – 13/14 (93%) of patients had eosinophils < 5 /hpf
  – 53% decrease in dysphagia vs. placebo 17%

Today’s data builds on robust results in multiple other diseases