



## Corporate Presentation

January 2025

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# Developing Novel, First-In-Class Medicines to Transform Immunology



**Zetomipzomib: Selective Immunoproteasome Inhibition Leads to Broad and Potent Immunomodulation without Immunosuppression**



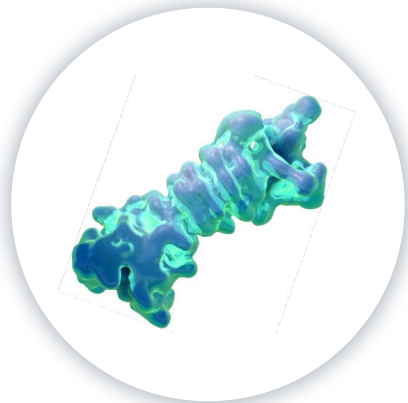
**First-In-Class Small Molecule Therapeutic with Differentiated Approach to Treating Immune-Mediated Diseases**



**Sole agent in development in Autoimmune Hepatitis (AIH) with initial data from PORTOLA study expected in 1H 2025**



**Strong, Experienced Team of Research Scientists and Drug Developers**

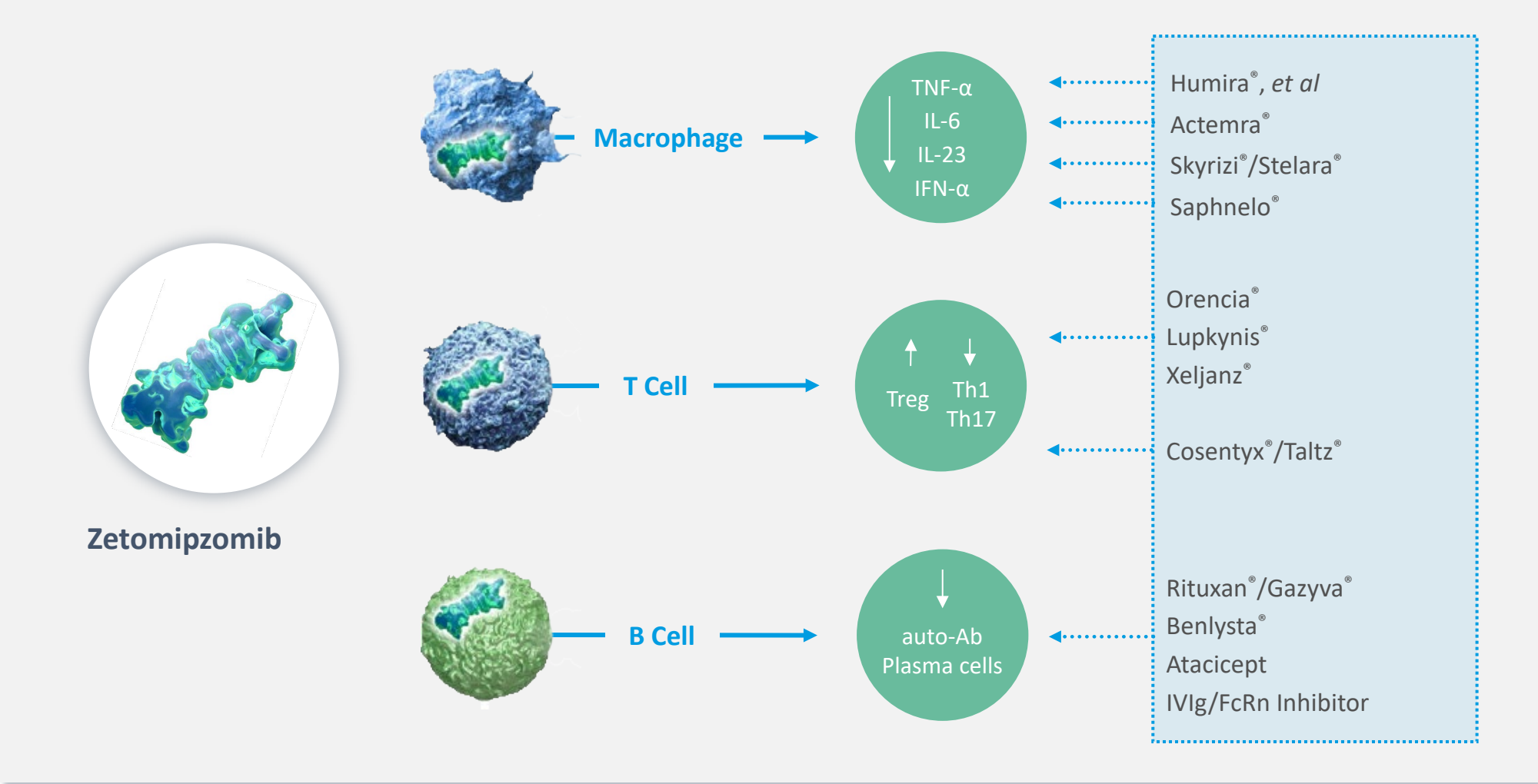


SELECTIVE  
IMMUNOPROTEASOME  
INHIBITION:

# Zetomipzomib

Targeting a Range of Autoimmune Diseases Through  
Immunomodulation Versus Direct  
Immunosuppression

# Zetomipzomib's Competitive Advantage: Immunomodulation Across the Entire Immune System



\*Some preclinical studies were conducted with ONX 0914, a first-generation selective immunoproteasome inhibitor.

# Key Attributes of Zetomipzomib, a First-in-Class Inhibitor of the Immunoproteasome

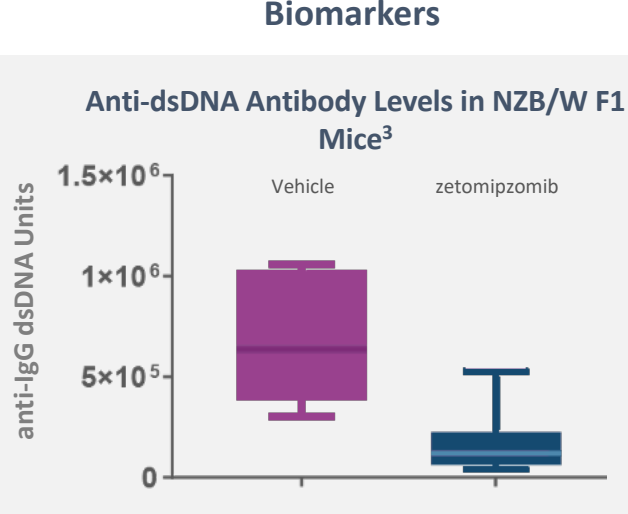
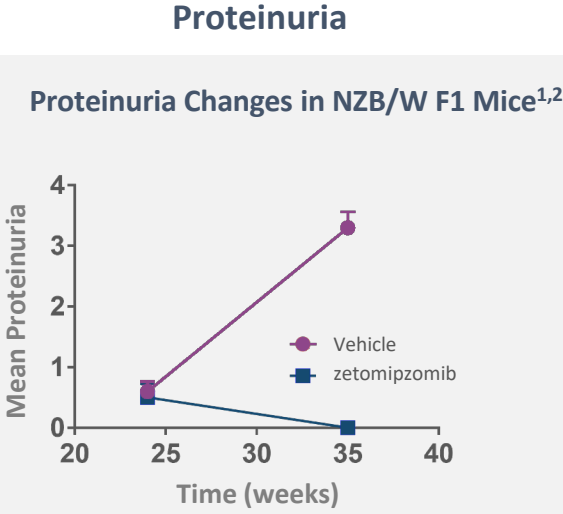
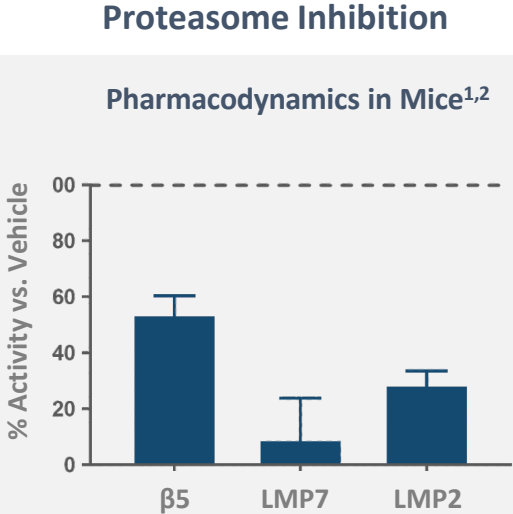
Zetomipzomib Modulates Innate and Acquired Immune Responses Without Evidence of Immunosuppression to Date



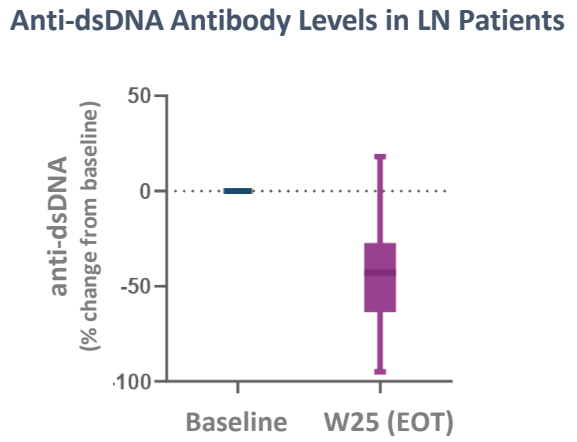
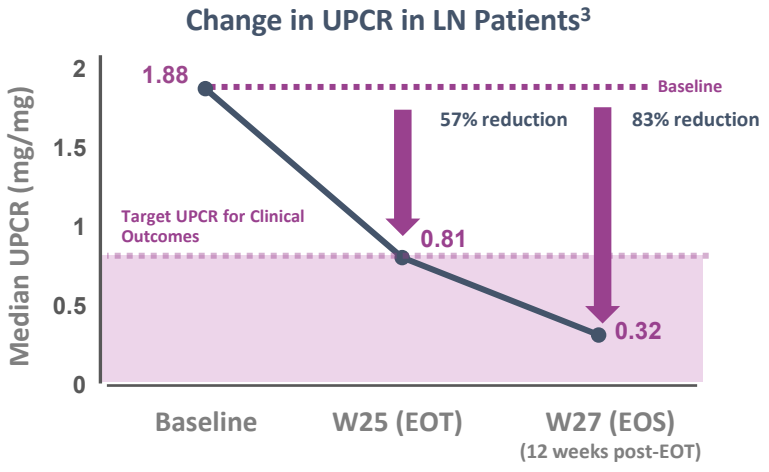
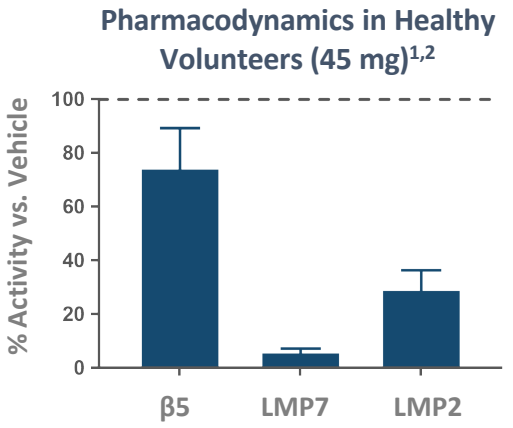
- Selective inhibition of the immunoproteasome results in broad downregulation of inflammation
- Rapid reduction of UPCR seen in the MISSION Phase 2 study with 35% of LN patients achieving CRR following only 25 weeks of treatment without induction therapy
- Promising early results in SLE demonstrating improvement in multiple measures of disease activity across organ systems
- Favorable long-term safety profile without observed signs of immunosuppression following up to two years of treatment

# Zetomipzomib Has Demonstrated Consistent Translation of Target Inhibition with Anti-Inflammatory Activity

Mouse Data



Human Data



Source: <sup>1</sup>Kirk *Et al. Cells*. 2021, 11 (1), 9. <sup>2</sup>Muchamuel *Et al. Frontiers in immunology* 2023, 14. <sup>3</sup>Saxena *Et al. Annals of the Rheumatic Diseases* 2023, 82 (Suppl 1), 891–892.

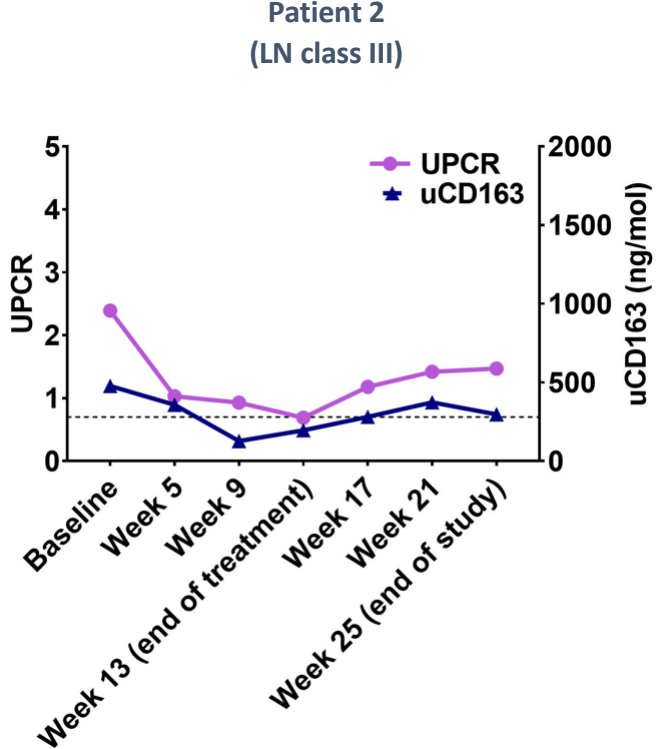
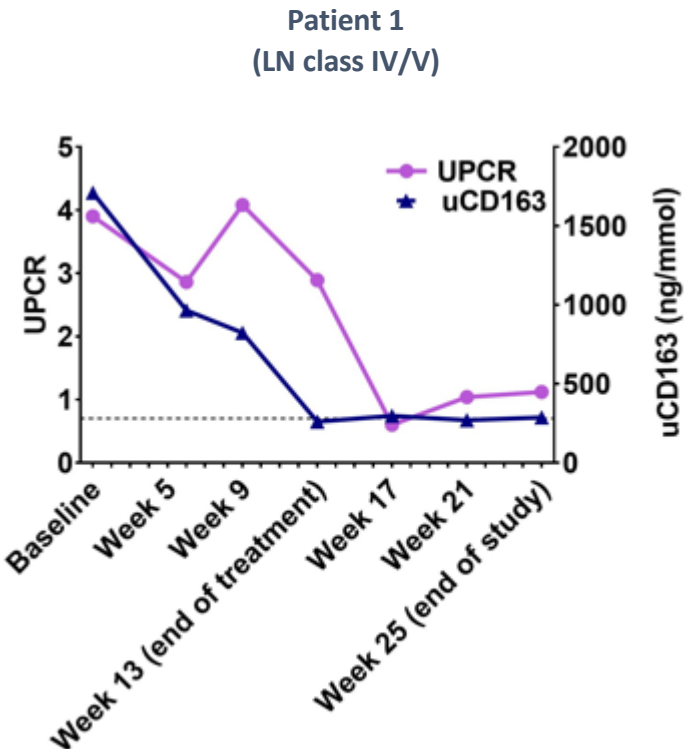


## ZETOMIPZOMIB: MISSION

Phase 1b/2a Study Evaluating  
Zetomipzomib in SLE and Lupus Nephritis



# MISSION Phase 1b: Zetomipzomib Reduced UPCR and uCD163 in 2 of 2 LN Patients without Induction Therapy



uCD163 - novel noninvasive biomarker that correlates with active LN inflammation and shows moderate concordance with UPCR; normalized to urine creatinine.

- Baseline stable treatment regimen of leflunomide, hydroxychloroquine, and prednisone (10 mg/d); failed prior tacrolimus
- >50% reduction in UPCR at week 17
- Reduced anti-dsDNA at week 13

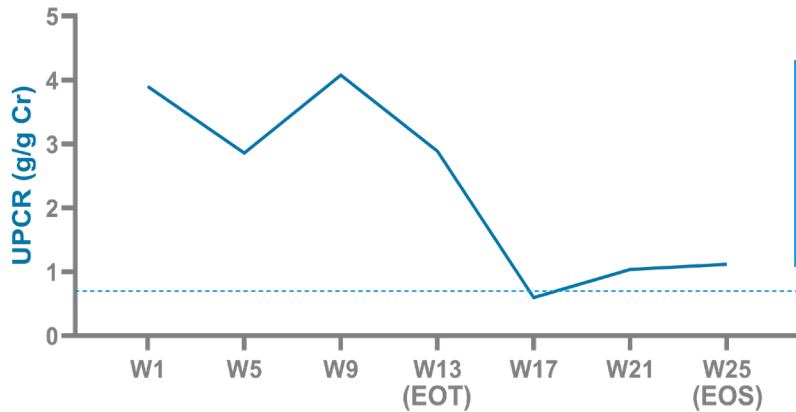
- Baseline stable treatment regimen of MMF (2 g), hydroxychloroquine, and prednisone (10 mg/d)
- >50% reduction in UPCR at week 5
- Improved symptom scores at week 5
- Reduced anti-dsDNA at week 5

Source: EULAR 2021

Abbreviations: anti-dsDNA, anti-double-stranded DNA antibody; LN, lupus nephritis; MMF, mycophenolate mofetil; UPCR, urine protein to creatine ratio; uCD163, urinary CD163.

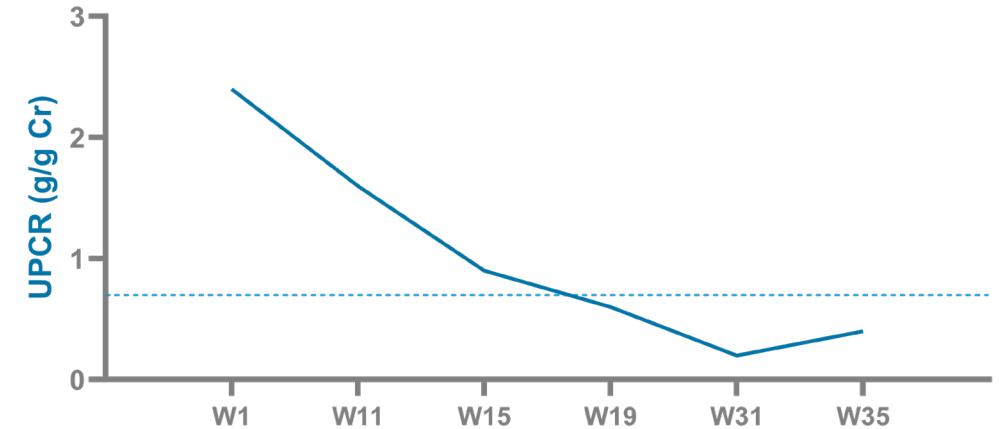
# Successful Retreatment with Zetomipzomib Following 9 Months of Stable Response

## MISSION Ph 1b Patient 1



- 9 months post-MISSION: renal flare occurred and was not fully responsive to SOC
- Patient retreated with zetomipzomib following single patient IND

## 2<sup>nd</sup> Treatment with zetomipzomib



### Disease activity assessment:

Instrument	Baseline	Week 13 (EOT)	Week 25 (EOS)
SLEDAI-2K	17	12	8
PGA (mm)	67	59	35

### Serologic biomarkers:

- Anti-dsDNA antibody: Improvement
- C3: Improvement
- C4 values normalized after zetomipzomib treatment

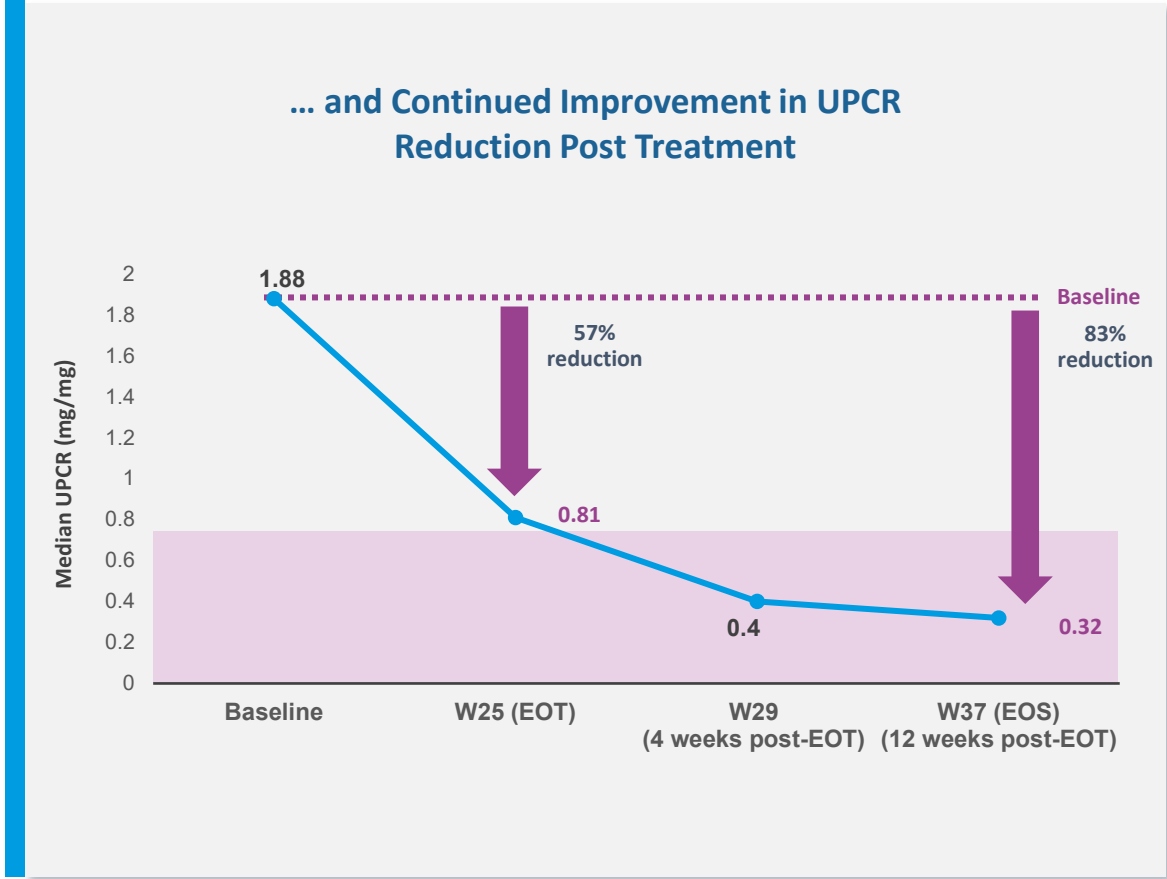
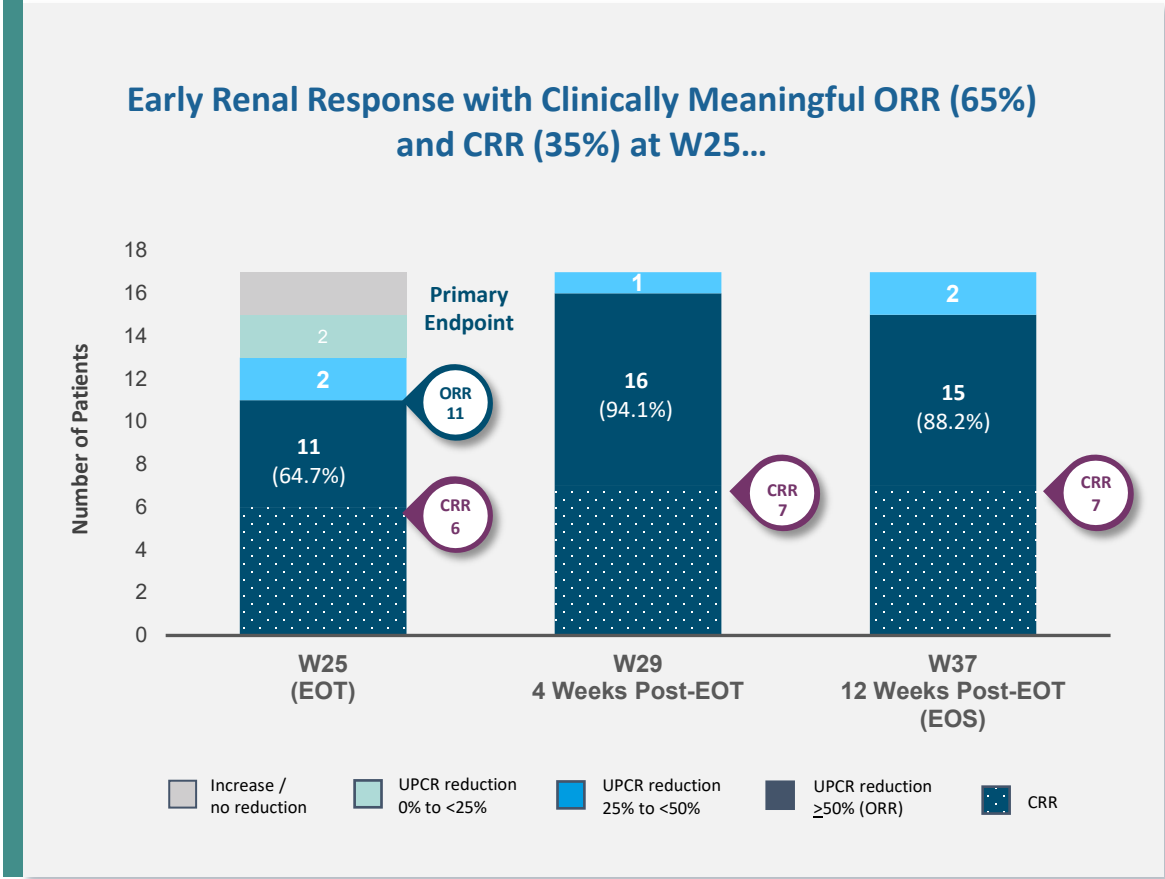
### Disease activity assessment:

Instrument	Baseline	Week 11	Week 15	Week 27	Week 33
SLEDAI-2K	10	4	6	0	n/a
PGA (mm)	63	44	51.5	37	n/a

### Serologic biomarkers:

- Anti-dsDNA antibody: Improvement
- C3/C4 values normalized after zetomipzomib treatment

# MISSION Phase 2a Overview: Zetomipzomib Achieves Clinically Meaningful Overall Renal Response in Refractory or Hard-to-Treat LN Patients without Standard Induction Therapy<sup>1</sup>

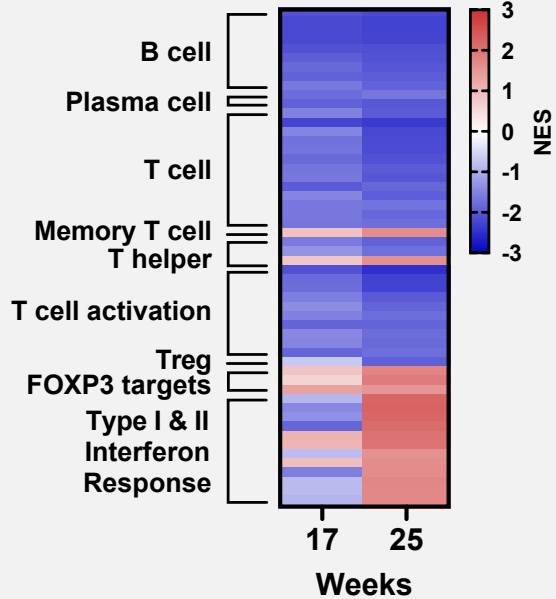


Mean daily prednisone background dosage was reduced from 19.2 mg at baseline to 9.1 mg at EOT and was further reduced at Week 29.

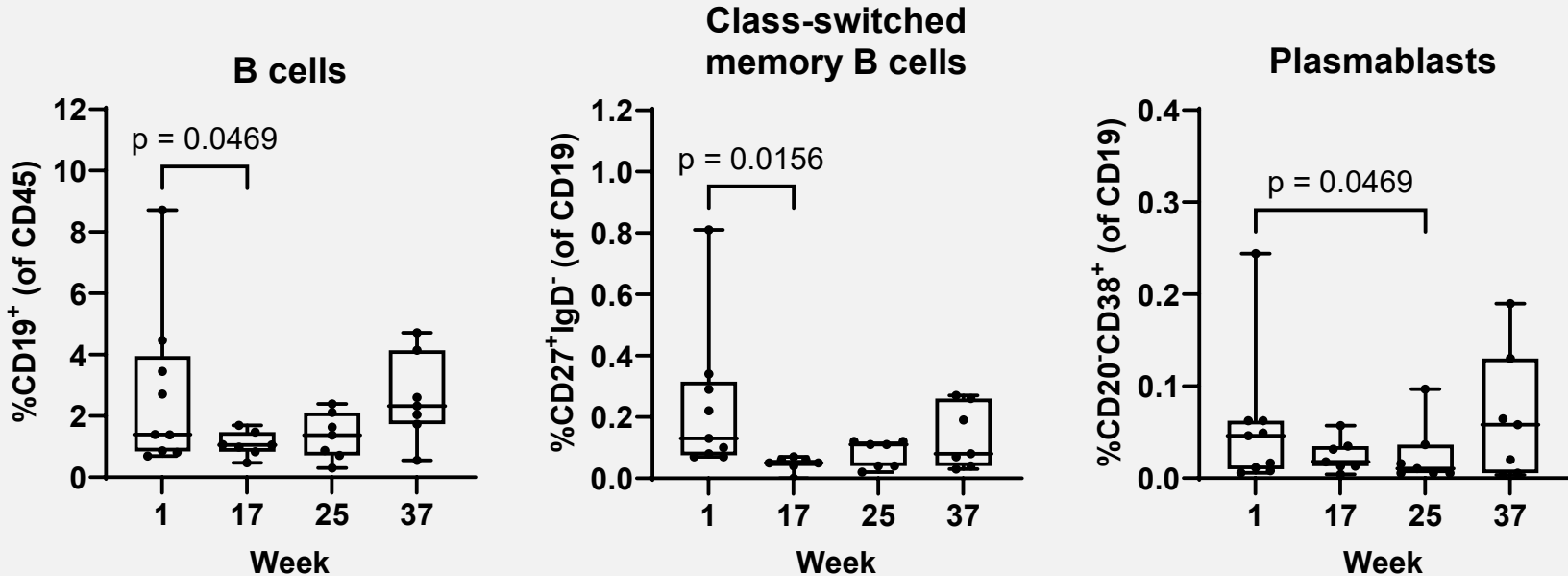
Source: ACR 2022, ASN 2022. Abbreviation: EOT, End of Treatment; EOS, End of Study.  
 1. Reporting Evaluable population (n=17) - patients that did not withdraw before Week 25.

# MISSION Phase 2a: Zetomipzomib Treatment Decreased Numerous Blood Immune Cell Gene Modules and B Cell Populations

## Gene Module Changes<sup>a</sup>



## B Cell Populations<sup>b</sup>



<sup>a</sup>Whole blood transcriptomics at week 17 and week 25 compared to week 1 baseline (n=14). B and T cells, FoxP3-targeted gene, and Type I and Type II interferon response gene modules are shown.

<sup>b</sup>Peripheral blood B cell populations at week 1 (baseline), 17, 25, and 37.. Median changes from 9 patient samples are plotted.

Abbreviations: NES, normalized enrichment score

# MISSION Phase 1b/2a: Zetomipzomib Treatment Improved Key SLE Disease Activity Scores in as Quickly as 13 Weeks

Tool	MISSION 1b (n=35)		MISSION 2a (n=17)	
	Baseline	EOT (Week 13)	Baseline	EOT (Week 25)
<b>SLEDAI-2K</b>	9.1	6.6	11.3	6.5
<b>CLASI-A</b>	4.3	2.3	3.7	1.9
<b>Physician Global Assessment Score</b>	57.0	39.7	57.2	23.9
<b>Patient Global Assessment Score</b>	58.3	38.2	23.6	10.7
<b>HAQ-pain</b>	58.5	43.1	21.3	12.2

\*Evaluable population are the ITT participants that did not withdraw before Week 13/25.

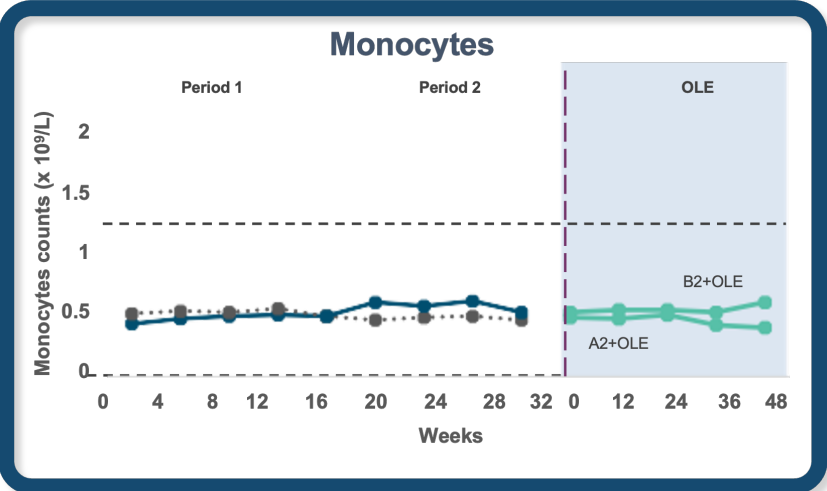
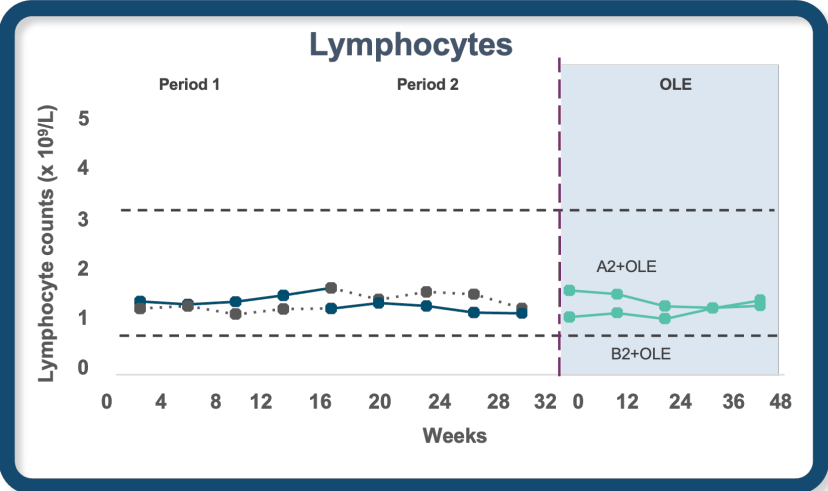
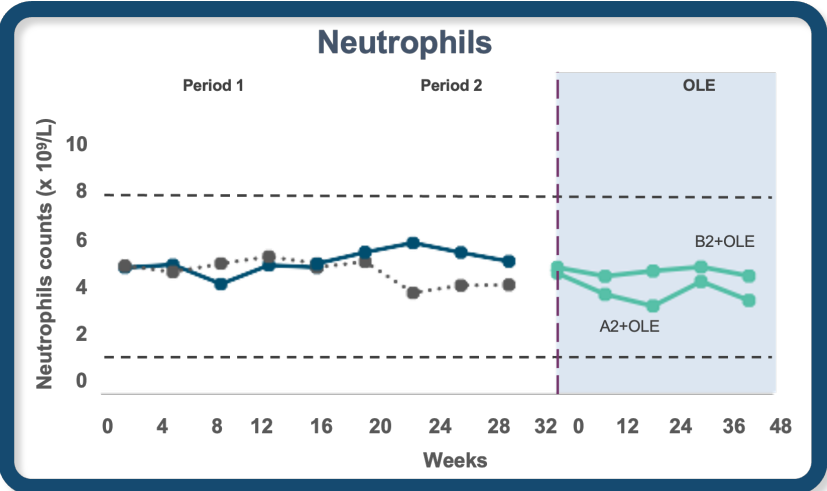
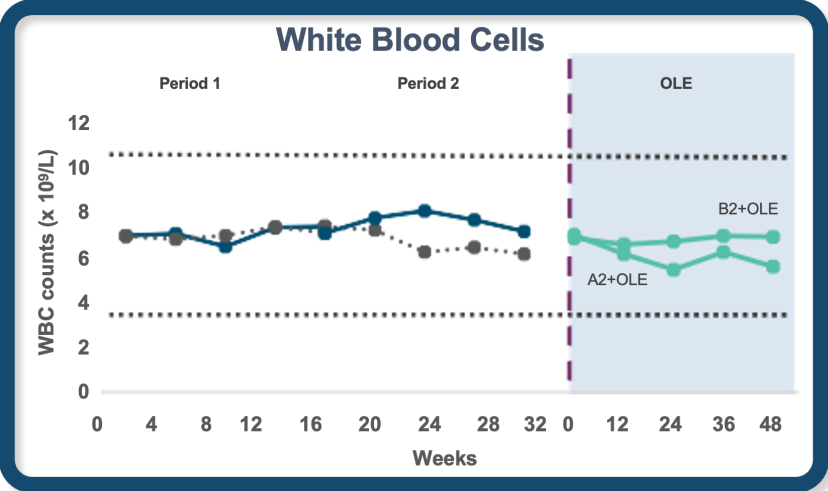
**Abbreviations:** CLASI-A, Cutaneous Lupus Erythematosus Severity Index-Activity; EOT, end of treatment; EOS, end of study; HAQ, Health Assessment Questionnaire; SLEDAI-2K, Systemic Lupus Erythematosus Disease Activity Index 2000; TJC, tender joint count.

# Favorable Safety and Tolerability Profile of Zetomipzomib with Low Risk of Immunosuppression Observed: Results from Completed Studies

Adverse Events	MISSION Ph1b N=47 (%)	MISSION Ph2a N=21 (%)	PRESIDIO Zetomipzomib N=25 (%)	PRESIDIO OLE Zetomipzomib N=18 (%)	PRESIDIO Placebo N=22 (%)
Treatment Period (Weeks)	13	24	16	Up to 64	16
Most Common TEAE: Injection-site Reaction	20 (42.6)	15 (71.4)	18 (72.0)	14 (77.8)	3 (13.6)
TEAE Leading to Study Drug Discontinuation	10 (21.3)	4 (19.0)	1 (4.0)	3 (16.7)	0 (0)
Serious TEAE	4 (8.5)	2 (9.5)	2 (8.0)	1 (5.6)	1 (4.5)
Infectious TEAE	11 (23.4)	9 (42.9)	7 (28.0)	8 (44.4)	6 (27.3)
Grade ≥3 Infectious TEAE	1 (0.02)	0 (0)	0 (0)	0 (0)	1 (4.5)
Opportunistic Infections	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Abbreviation: TEAE, treatment emergent adverse event; additional TEAEs include nausea, vomiting, and headache  
Source: EULAR 2021, ACR 2022, ASN 2022, ACR 2023

# PRESIDIO: Long-Term Safety Data Demonstrates No Evidence of Immunosuppression; Preserved Immune Cell Counts Observed with Zetomipzomib Treatment



**Period 1**

- A1 (Zeto)
- B1 (PBO)

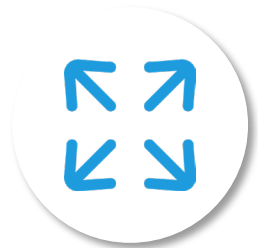
**Period 2**

- A2 (PBO)
- B2 (Zeto)

**OLE**

- OLE (Zeto)

# Zetomipzomib's Mechanism of Action is Differentiated from Other Agents in this Therapeutic Area



Broad mechanism of action targets multiple immune cell subtypes including macrophages, T-cells, and B-cells



Rapid reduction of UPCR with multiple CRR (5 of 17 patients) seen as soon as Week 13 without induction therapy



No evidence of immunosuppression, with no clinically significant serious or opportunistic infections observed to date





ZETOMIPZOMIB:  
**PORTOLA**

Phase 2a Placebo-Controlled Study  
Evaluating Zetomipzomib in AIH



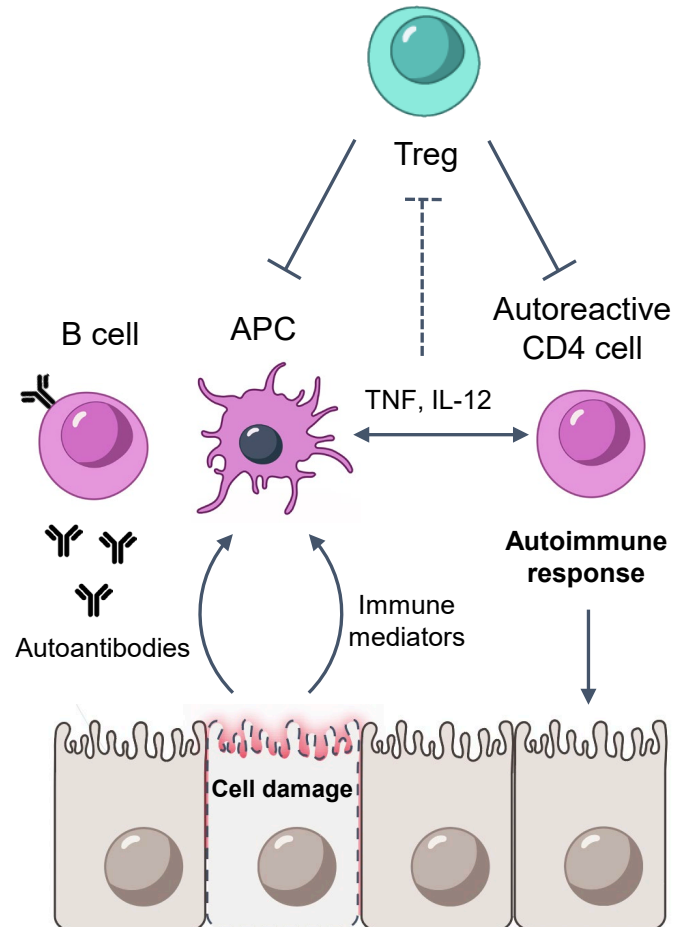
# Zetomipzomib: Autoimmune Hepatitis (AIH); Significant Need for Treatments that Reduce Use of Chronic Immunosuppression

## AIH: Complex Autoimmune Liver Disease with Increasing Prevalence

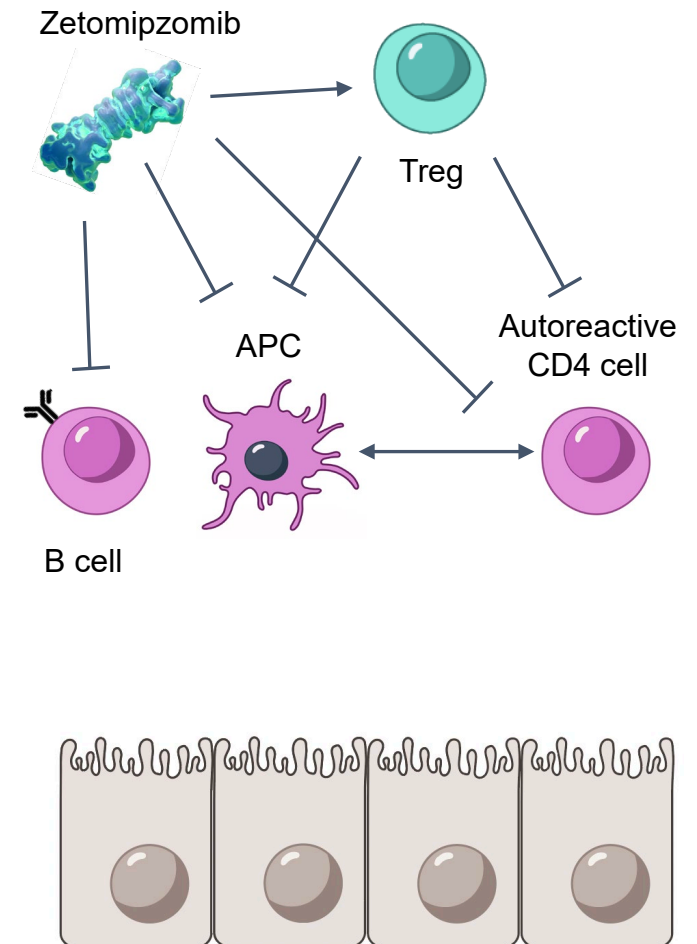
### Significant Unmet Need Remains:

- Chronic, immunosuppressive steroids are the mainstay treatment<sup>1</sup>
- 35% of patients on SOC do not go into remission<sup>2</sup>
- **Significant need for treatments that reduce the use of corticosteroids**

Cellular Dysfunction Observed in AIH



Zetomipzomib Targets Multiple Immune Effector Cells Involved in AIH



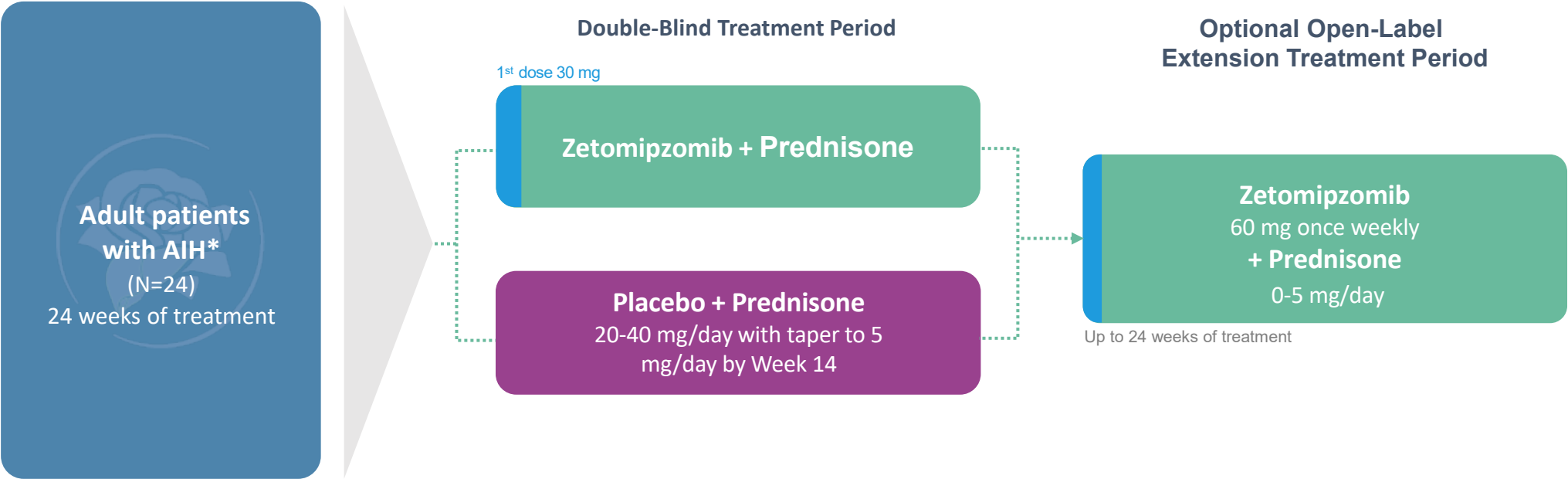
<sup>1</sup>Mack et al., *Hepatology*. 2020;72(2):671-722. <sup>2</sup>Volk and Reau. *Clinical Liver Disease*. 2021;17(2):85-89.

Abbreviations: AIH, autoimmune hepatitis; SOC, standard of care.

Adapted from Herkel et al., *Journal of Hepatology*. 2020;73(2):446-448.

# PORTOLA: Phase 2a Placebo-Controlled Trial Evaluating the Safety and Efficacy of Zetomipzomib in Autoimmune Hepatitis

Key Eligibility: \*Clinical diagnosis of AIH + active disease despite SOC therapy for  $\geq 3$  months



## Phase 2a topline results 1H 2025

NCT05569759

Abbreviations: AIH, autoimmune hepatitis; ALT, alanine transaminase; AST, aspartate transaminase; SOC, standard of care.

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**First-In-Class Small Molecule Therapeutic with Differentiated Approach to Treating Immune-Mediated Diseases**



**Sole agent in development in Autoimmune Hepatitis (AIH) with initial data from PORTOLA study expected in 1H 2025**



**Strong, Experienced Team of Research Scientists and Drug Developers**



## CONTACT US

4000 Shoreline Court  
Suite 300  
South San Francisco, CA 94080