KEZAR LIFE SCIENCES

41st ANNUAL J.P. MORGAN HEALTHCARE CONFERENCE

January 2023

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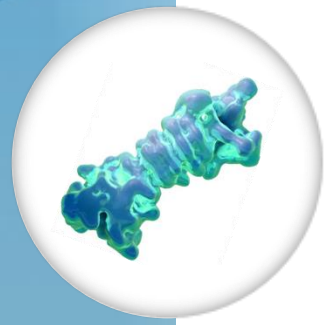
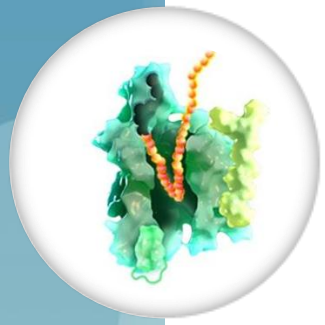
Pursuing Paradigm Shifts in Immunology and Oncology



Zetomipzomib (KZR-616): First-in-Class Immunoproteasome Inhibitor

- Harmonizing the immune system via immunomodulation
- Potential pipeline in a drug
- Successfully completed MISSION Phase 2 study in lupus nephritis



KZR-261: First Candidate from Our Protein Secretion Platform

- First-in-class inhibitor of Sec61 translocon
- Impacts tumor proliferation, metastasis and immune invasion
- Currently in a Phase 1 study in solid tumors

Strong Financial Position

- $276.6M cash, cash equivalents and marketable securities as of Dec. 31, 2022; 68.5M common shares outstanding

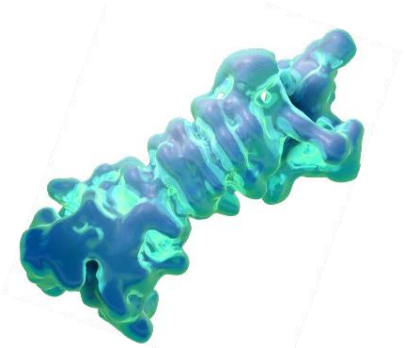
Targeting Master Regulators of Cellular Function to Treat a Range of Chronic Conditions

Kezar's Two Unique, Protein-Targeting Approaches

1

Selective Immunoproteasome Inhibition

Immunoproteasome



Targeting a range of autoimmune diseases through immune modulation versus direct immunosuppression

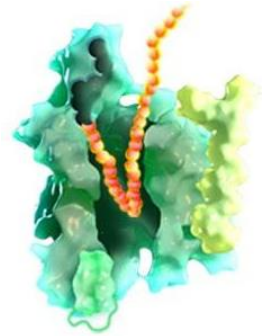
Clinical Programs

- Lupus Nephritis
- Autoimmune Hepatitis

2

Protein Secretion Inhibition

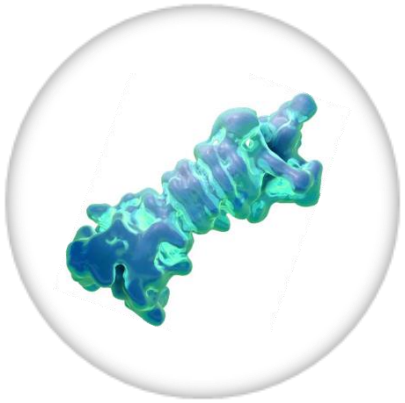
The Sec61 Translocon



Halting the secretion of target proteins necessary for the proliferation of diseases spanning oncology and autoimmunity

Clinical Program

- Solid Tumors

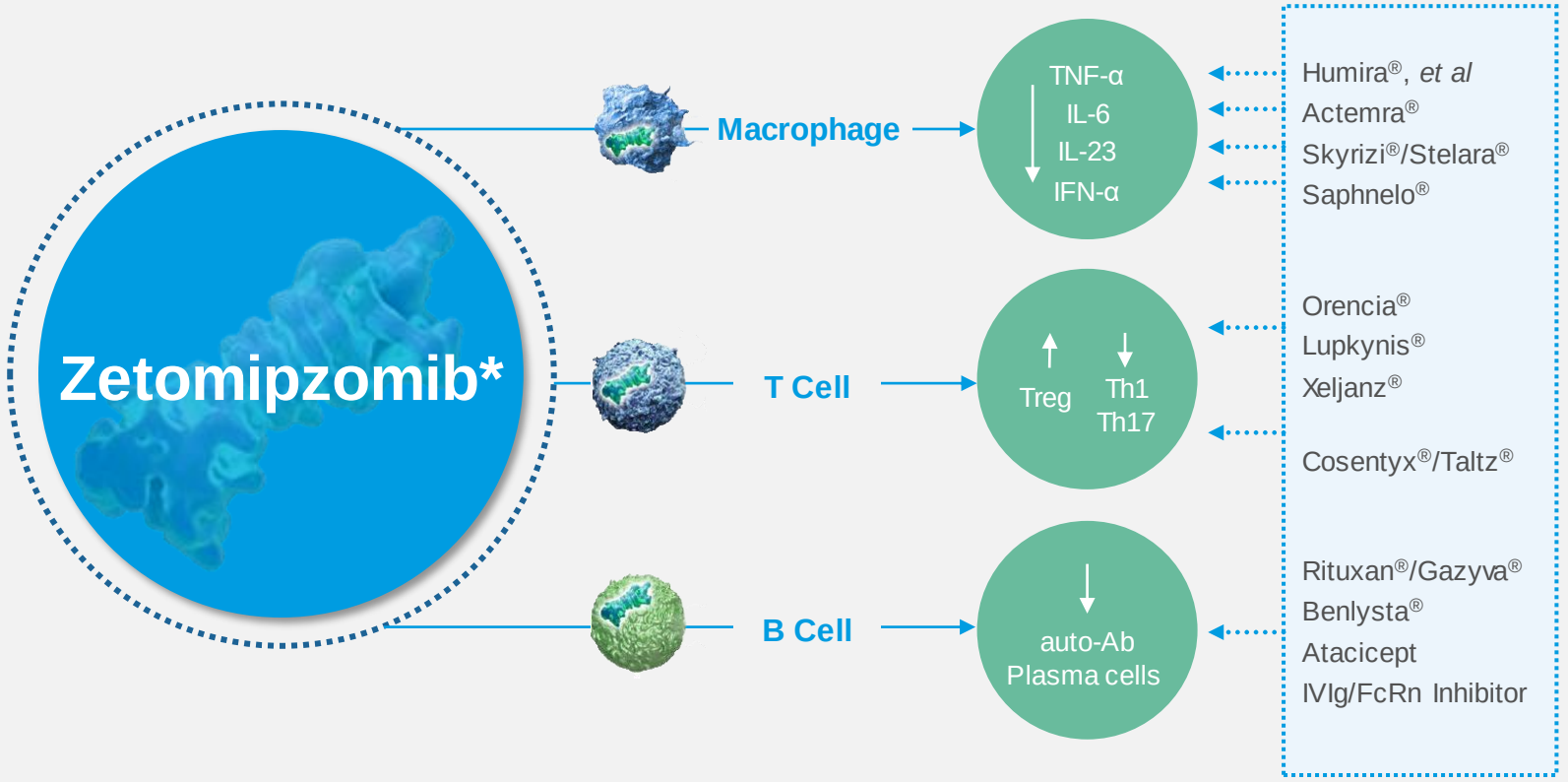


SELECTIVE IMMUNOPROTEASOME INHIBITION:

Zetomipzomib

Targeting a range of autoimmune diseases through immune modulation versus direct immunosuppression

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



Zetomipzomib Advantage

- Targeted inhibition of immunoproteasome in immune cells and site of inflammation
- Inhibits multiple drivers of inflammation
- Normal immune response mechanisms remain intact

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

Zetomipzomib Has Potential to Shift Treatment Paradigms Beyond Immunosuppression

Most Commonly Prescribed Autoimmune Treatments are Limited by Safety Concerns

1 Steroids

Shortcomings include but are not limited to:

- Thinning Bones (osteoporosis)
- Fatigue
- High Blood Pressure
- Weight Gain

2 Standard Immunosuppressives (e.g. MMF)

Shortcomings include but are not limited to:

- Malignancies (e.g. lymphoma, skin cancer)
- Viral Infections
- Teratogenicity
- Neutropenia

3 Anti-TNFs, B-cell Therapies

Shortcomings include but are not limited to:

- Malignancies (e.g. lymphomas)
- Serious Infections (e.g. tuberculosis)
- Congestive Heart Failure

Severely Immunosuppressive

Zetomipzomib

Modulates innate and acquired immune responses without signs of immunosuppression to date

- ☑ **No Opportunistic or ≥Grade 3 Infections**
- ☑ **No Immune Cell Depletion**
- ☑ **No Predicted DDIs**
- ☑ **No Off-target Effects**
- ☑ **No Teratogenicity**
- ☑ **No Serum Monitoring**

Abbreviation: CHF, congestive heart failure; DDI, drug-drug interactions; MMF, mycophenolate mofetil.

MISSION: Results Suggest Zetomipzomib's Potential to Revolutionize Treatment for Lupus Nephritis as a Novel Anti-inflammatory Agent

MISSION

Phase 2 Trial in Adults with Lupus Nephritis

(N=21)

Successfully Completed

- Patients did not receive standard induction therapy or protocol-mandated steroid taper
- Lack of induction therapy is a significant difference compared to recently published LN trials

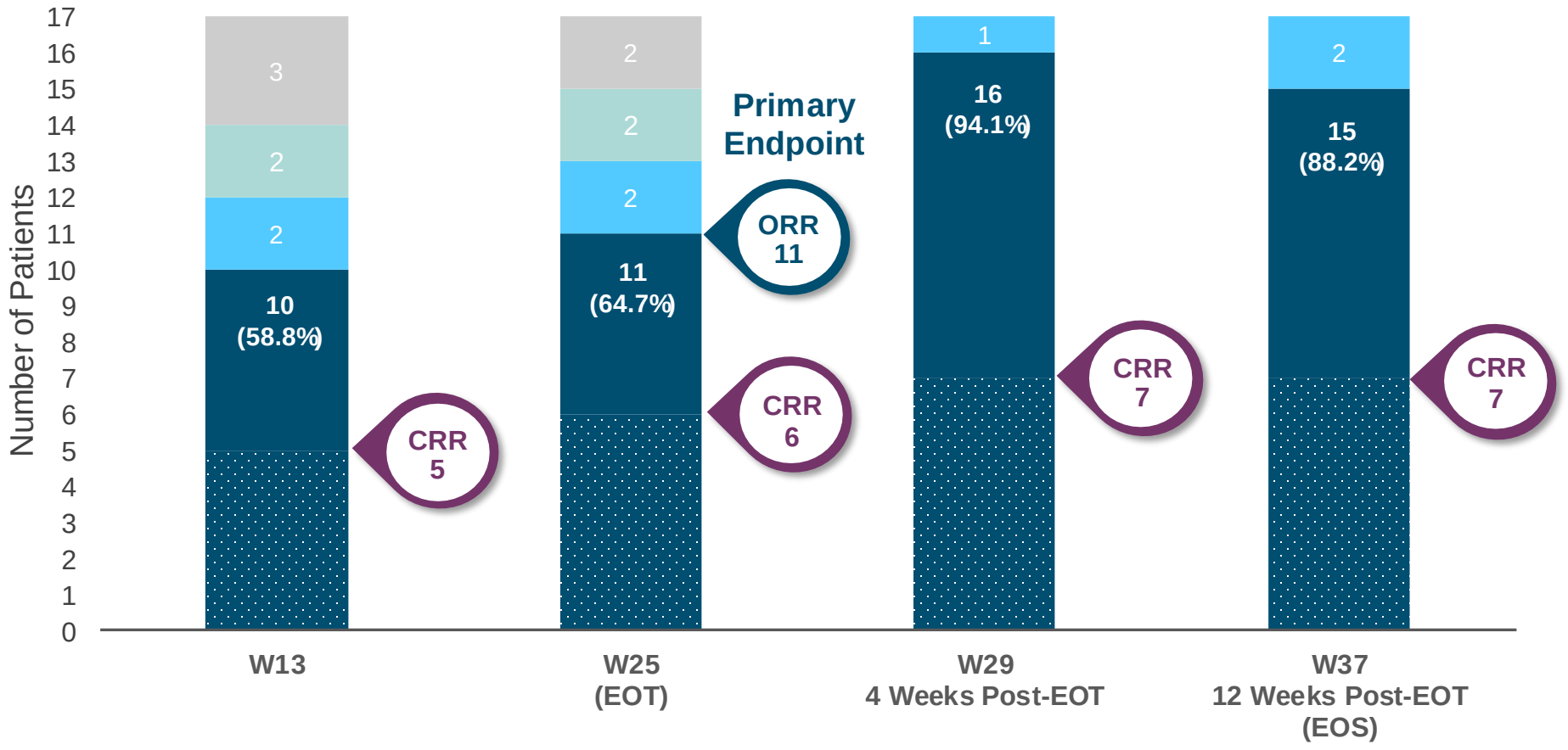
Next Steps

Initiation of Phase 2b Portion of the LN Development Program

1H 2023

https://clinicaltrials.gov/ct2/show/NCT03393013.
Abbreviation: LN, lupus nephritis.

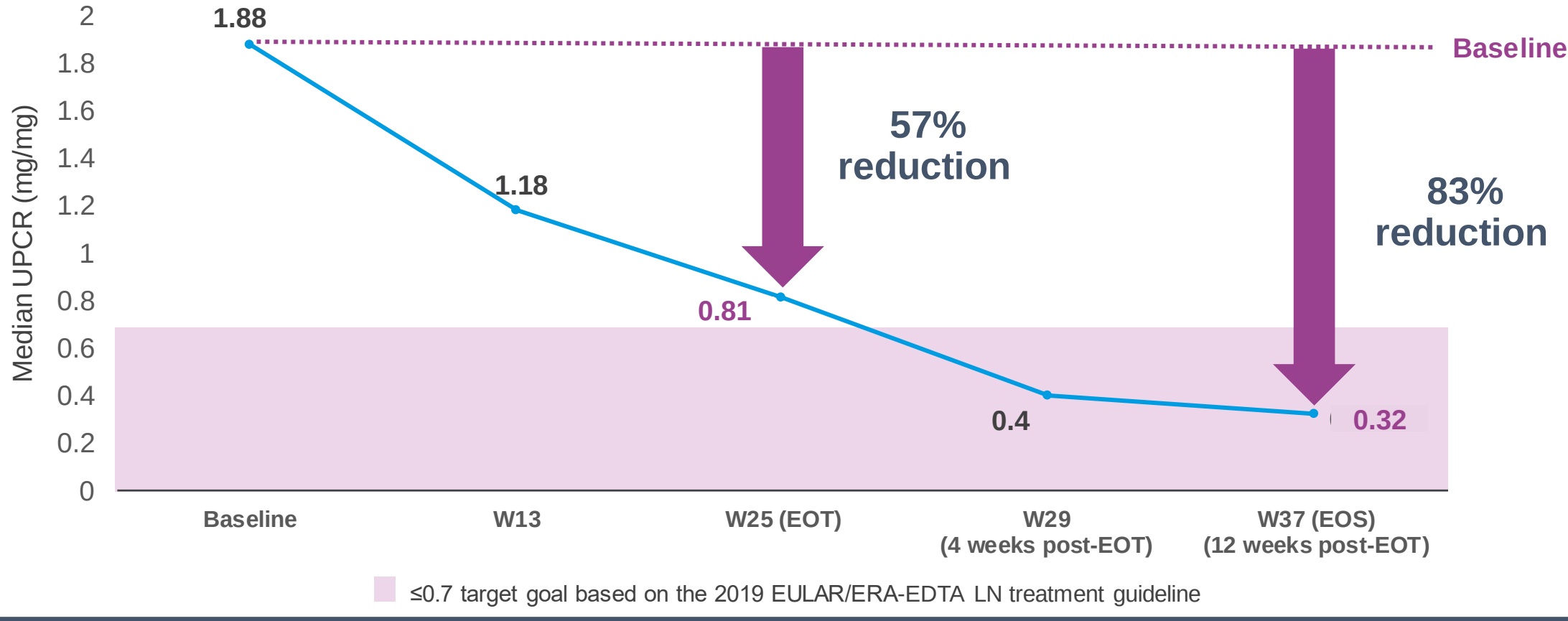
MISSION: Zetomipzomib Demonstrated Clinically Meaningful Renal Responses



ORR: ≥50% reduction in UPCR compared to baseline; CRR: UPCR ≤0.5, eGFR ≥60 mL/min/1.73m2 or no worsening of eGFR from baseline of ≥25%, prednisone (or equivalent) ≤10 mg and no use of prohibited medication; Evaluable population (n=17) are patients that did not withdraw before Week 25; Patients received 24 weeks of zetomipzomib; End-of-treatment assessments performed at Week 25.

Abbreviations: CRR, complete renal response; eGFR, estimated Glomerular Filtration Rate; EOS, end of study, EOT, end of treatment; ORR, overall renal response; UPCR, urine protein to creatinine ratio.

MISSION: Continued Improvement in Median UPCR Observed with Zetomipzomib Treatment



Evaluable population (n=17) are patients that did not withdraw before Week 25; Patients received 24 weeks of zetomipzomib; End-of-treatment assessments performed at Week 25.
Abbreviations: EOS, end of study; EOT, end of treatment; UPCR, urine protein to creatinine ratio.

MISSION: Zetomipzomib Has Potential to Transform the Treatment Landscape in Lupus Nephritis and Beyond

Steroid Sparing Potential

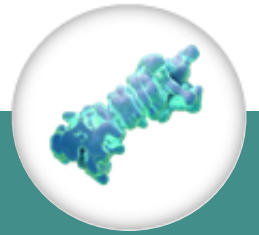
- 53% mean reduction in steroid dose, **despite no mandated taper**
- 82% of patients reduced to a steroid dose of ≤10 mg by W13

Favorable Safety and Tolerability Profile

- Adverse events were generally mild to moderate (most common AE: injection site reaction)
- **No opportunistic infections** reported and **without evidence** of **immunosuppression**

Biomarker Correlation

- Improvements in anti-dsDNA (10/12), C3 (4/5), C4 (3/4) at W25
- Decrease in urinary CD163, an inflammatory marker of nephritis, correlated with UPCR



Opportunities Beyond LN

- Improvements observed in key SLE disease activity scores (mean score change from baseline to week 25)

SLEDAI: 11.3 → 6.5

PhGA: 52.7 → 23.9

CLASI†: 5.7 → 2.6

†11 patients had active cutaneous SLE at baseline (CLASI-A >0).

Abbreviations: AE, adverse event; C3, complement 3, C4, complement 4; CLASI, Cutaneous Lupus Erythematosus Severity Index-Activity; dsDNA, double-stranded deoxyribonucleic acid; LN, lupus nephritis; PhGA, Physician Global Assessment; SLE, systemic lupus erythematosus; SLEDAI-2K, Systemic Lupus Erythematosus Disease Activity Index 2000; UPCR, urine protein to creatinine ratio; W, week.

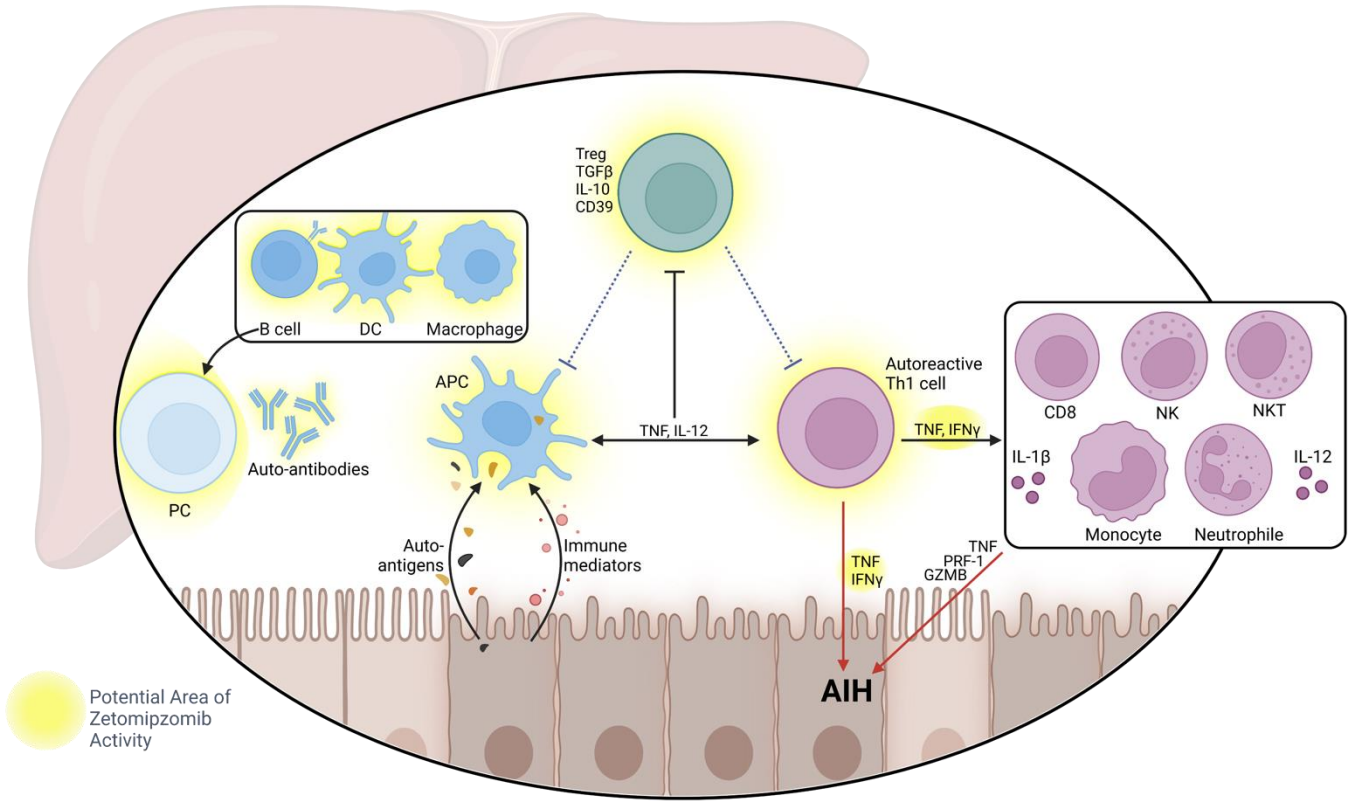
Newest Clinical Program for Zetomipzomib: Autoimmune Hepatitis (AIH) Significant Need For Treatments that Reduce Use of Chronic Immunosuppression

AIH: Complex Autoimmune Liver Disease with Increasing Prevalence

Significant Unmet Need Remains:

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

Zetomipzomib Targets Multiple Immune Effector Cells Involved in AIH



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

[1]Mack et al. *Hepatology*. 2020;72(2):671-722. [2]Volk and Reau. *Clinical Liver Disease*. 2021;17(2):85-89.
Abbreviations: AIH, autoimmune hepatitis; SOC, standard of care.

Autoimmune Hepatitis (AIH): A Strong Overlap of Disease Biology and MOA of Zetomipzomib

Autoimmune Hepatitis

- ✓ Current treatment reliant on high-dose chronic steroids
- ✓ Rare disease
- ✓ Ability to do-it-alone
- ✓ Quantitative endpoints; earlier inflection points
- ✓ Strong patient advocacy community (AIHA)

FDA Clearance of IND

Next Steps

PORTOLA

Phase 2a Placebo-Controlled Trial in Adults with AIH

(N=24)

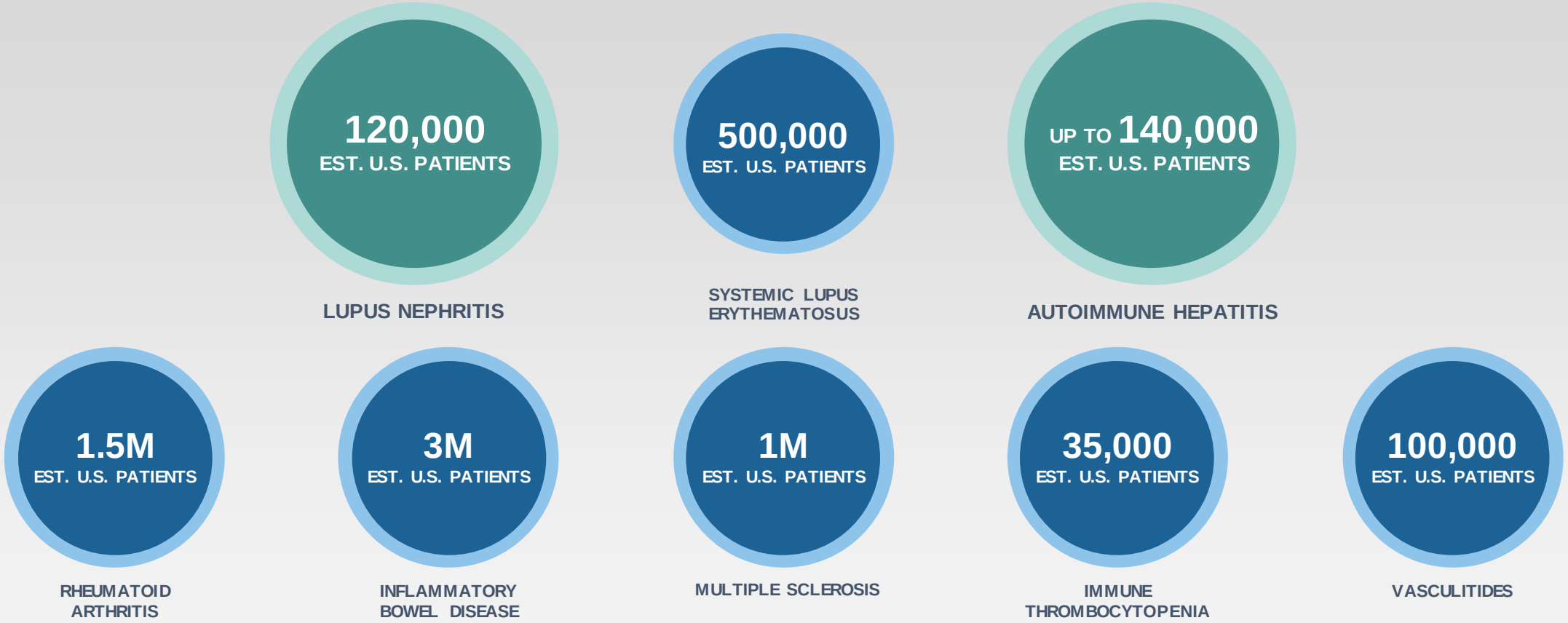
Starting in 1Q 2023

https://clinicaltrials.gov/ct2/show/NCT05569759

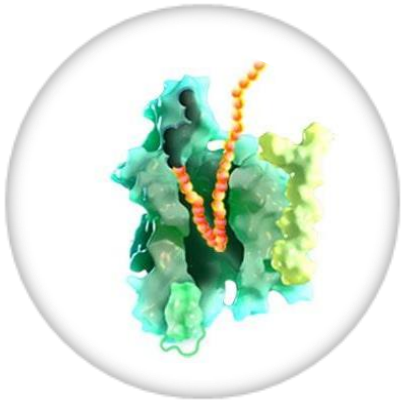
Abbreviations: AIH, autoimmune hepatitis; IND, Investigational New Drug.

Pipeline in a Drug Approach: Zetomipzomib Has Blockbuster Potential Across Multiple Chronic Diseases

ZETOMIPZOMIB



- Indications currently under investigation with zetomipzomib
- Indications with preclinical/clinical data with immunoproteasome and/or dual proteasome inhibition



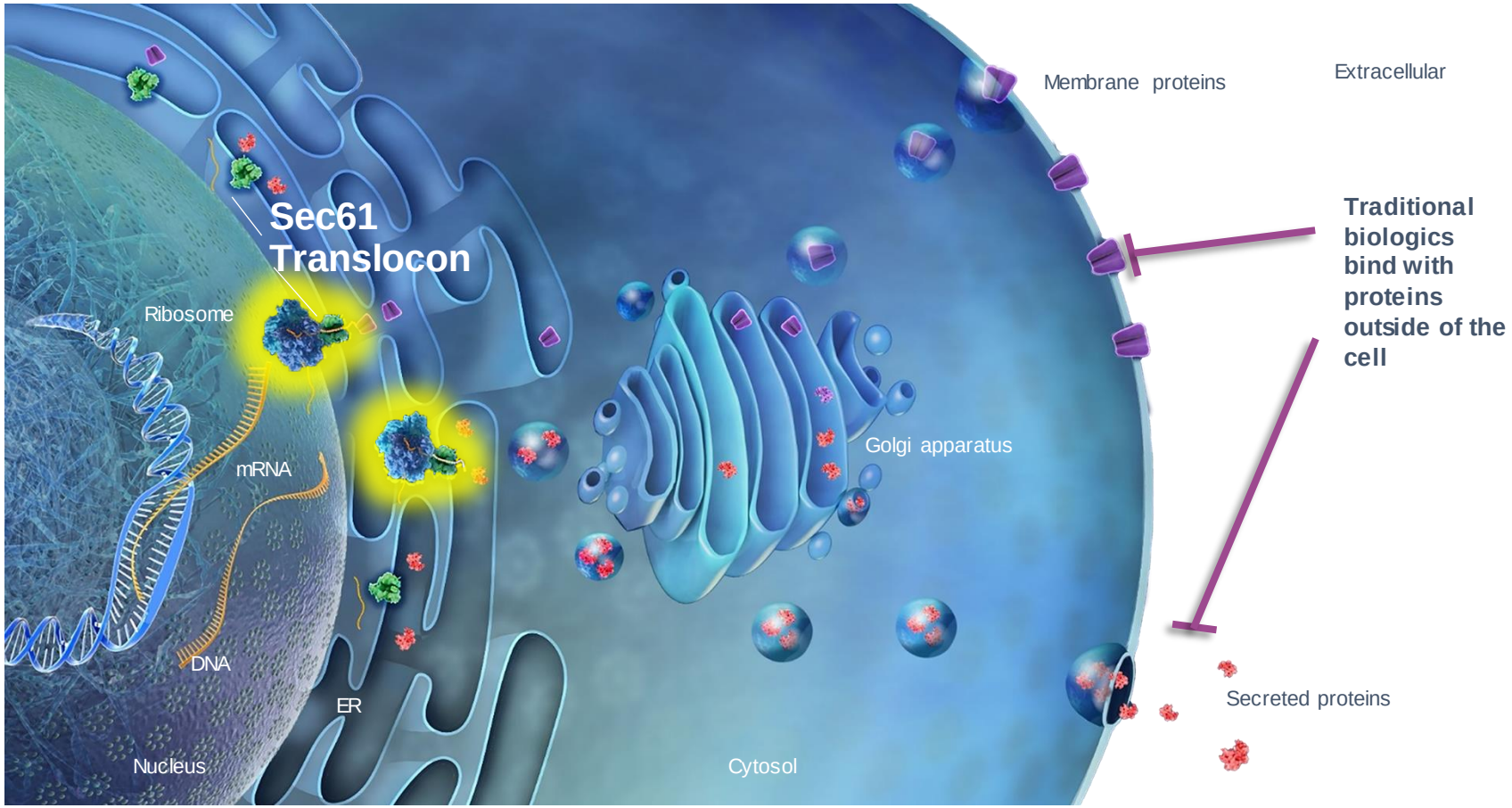
PROTEIN SECRETION INHIBITION:

KZR-261

KZR-261: A first-in-class anti-cancer agent targeting the Sec61 translocon

KZR-261: Novel Small Molecule Targeting the Sec61 Translocon

Tumor cells utilize the Sec61 translocon for proliferation, metastasis and immune evasion



Membrane Proteins
(partial list)

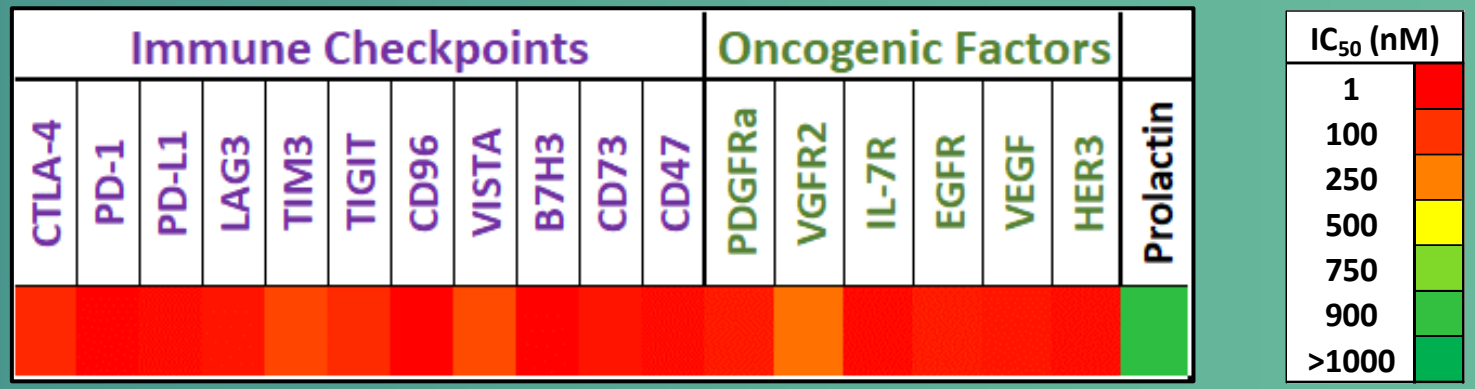
EGFR (ERBITUX®)
IL-6R (ACTEMRA®)
PD-1 (OPDIVO®)
PDL1 (TECENTRIQ®)
CTLA4 (YERVOY®)

Secreted Proteins
(partial list)

TNF-α (HUMIRA®)
IL-17 (COSENTYX®)
PCSK9 (REPATHA®)
IL-6 (SYLVANT®)
BAFF (BENLYSTA®)

KZR-261: Blockade of Multiple Cancer-Related Proteins Resulting in Broad Action

***In vitro* Protein Secretion Assays**



Direct Effects on Tumor Cells

- Tumor cell death via proteotoxic stress
- Reduced growth factor & oncogenic RTK expression

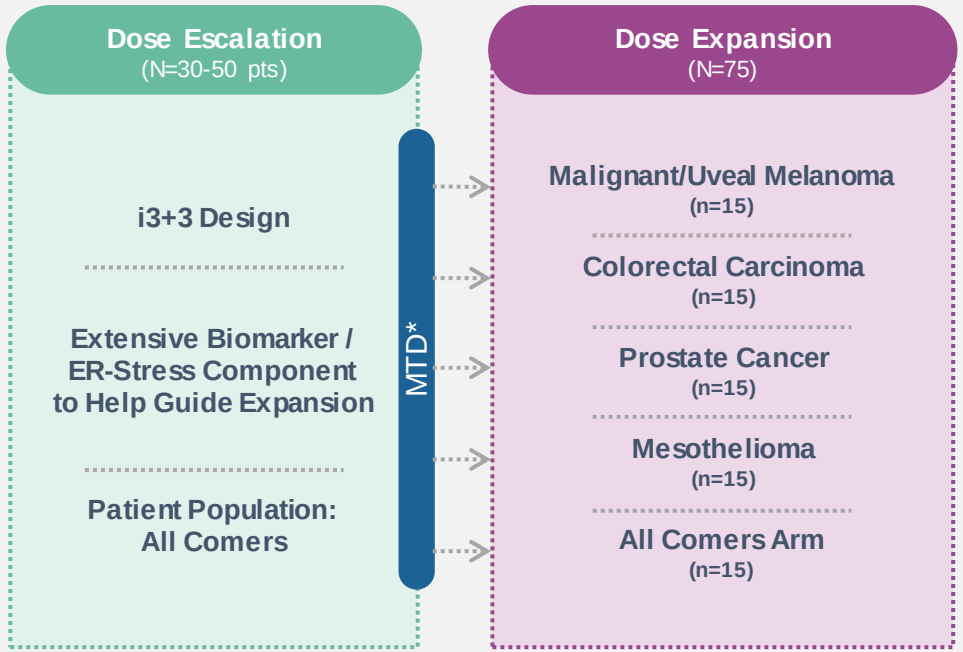
Tumor Microenvironment Modulation

- Reduced angiogenic factor expression (e.g., VEGF)
- Reduced immune checkpoint expression

Phase 1 Trial Ongoing

First-in-Human Study of KZR-261 Ongoing

KZR-261-101 Phase 1 Trial Design



NCT05047536
*Maximum Tolerated Dose

Measures & Goals

Key Outcome Measures

- Recommended Phase 2 dose (RP2D)
- Anti-tumor efficacy
- Biomarker validation

Goals for KZR-261-101

- Establish single agent activity
- Maximize opportunities for success for KZR-261
- Identify/confirm potential, predictive biomarkers

Next Steps

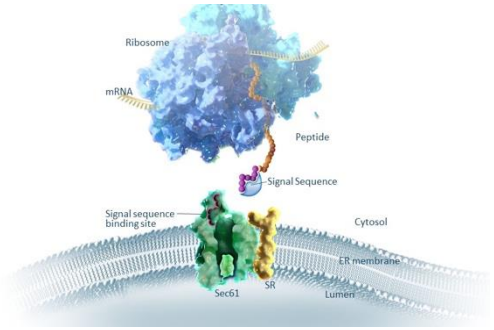
Report Safety and Dose Escalation Data

☐ Expected 2H 2023

Initiate Dose Expansion

☐ Expected 2023

Kezar's Novel Platform for Drug Discovery Targets the Sec61 Translocon and the Protein Secretion Pathway



- Unique drug discovery engine with applications in multiple diseases
- Opportunity for orally bioavailable inhibitors of 1 or more high value targets with a single compound

Multi-Target ⟷ **Target Selective**

Multi-Protein Secretion Inhibitors

- Inhibition of **multiple** secreted/membrane proteins
- Combination therapy in a single molecule
- **Multiple potential oncology indications (tumor agnostic)**

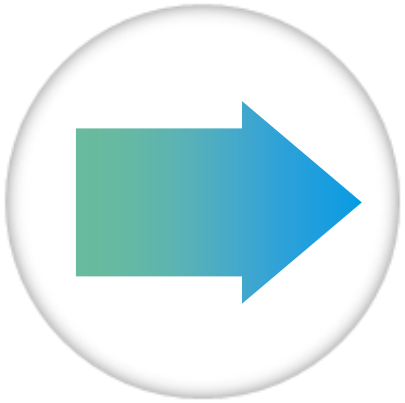
KZR-261: 1st clinical candidate

Subset Protein Secretion Inhibitors

- Inhibition of relevant **subset** secreted/membrane proteins
- Non-cytotoxic agents
- **Indications: oncology, immuno-oncology, immunology**

Single Protein Secretion Inhibitors

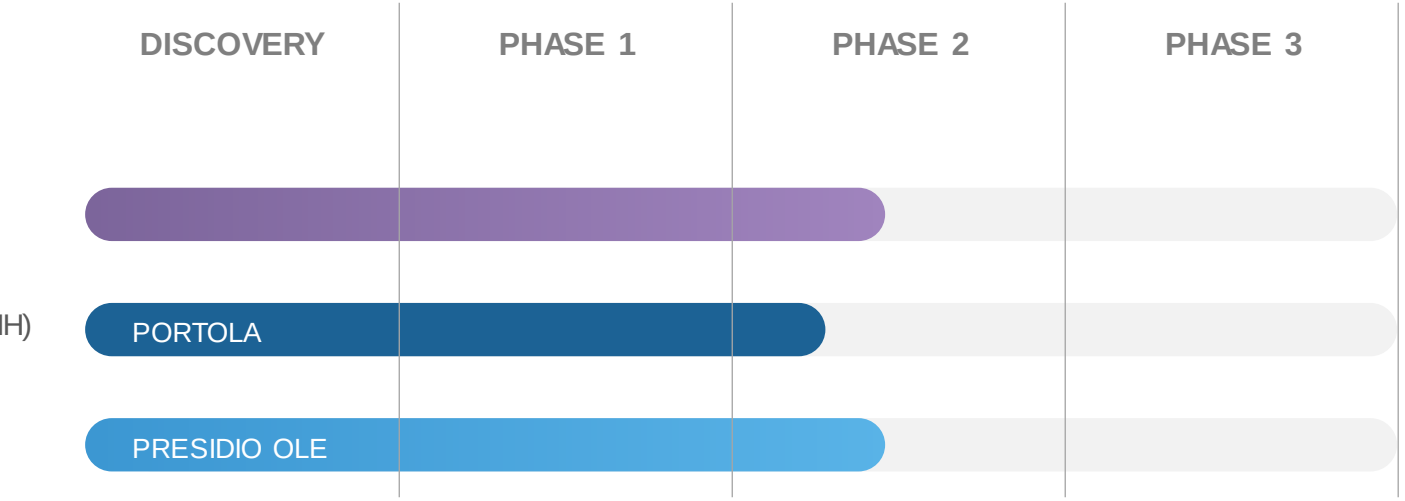
- Inhibition of a **single** secreted/membrane protein
- **Preclinical oral PD1 inhibitor: KZR-540**
  - Data presented at SITC 2022
- Non-cytotoxic agents
- **Indications: Many…**



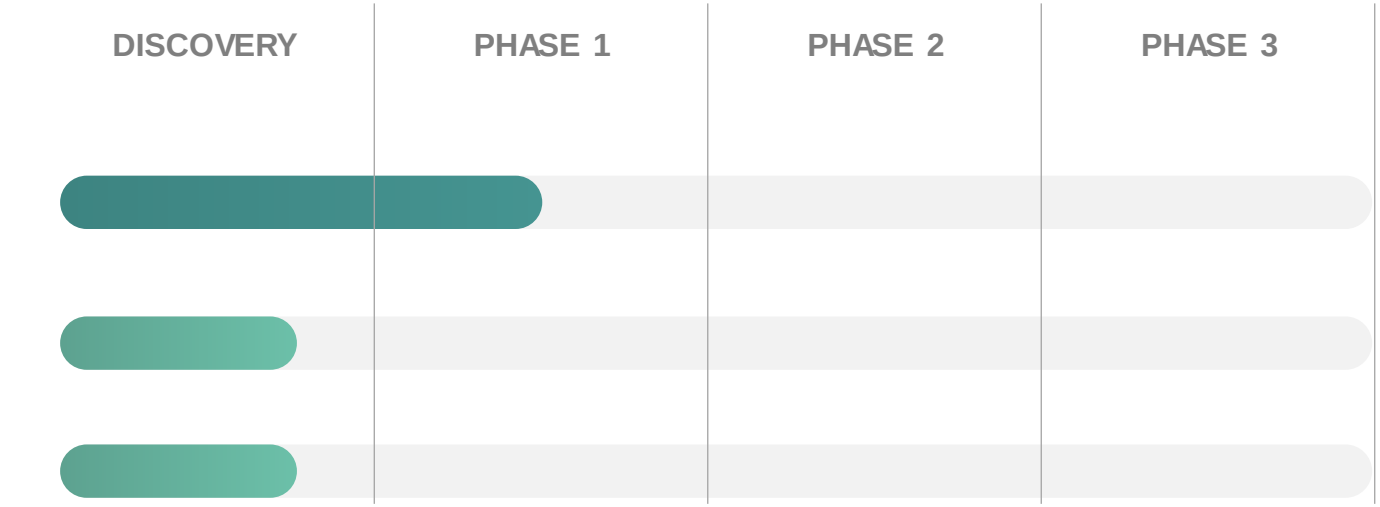
Next Steps

Building a First-In-Class Therapeutic Portfolio: “Pipeline in a Drug” Candidate and Novel Discovery Platform

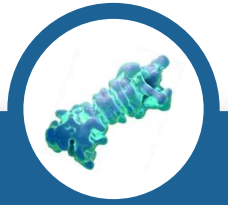
Selective Immunoproteasome Inhibition



Protein Secretion Inhibition



Looking Ahead: Key Upcoming Milestones for 2023



Selective Immunoproteasome Inhibition

- Start of PORTOLA study in adults with AIH in 1Q 2023
- Initiate Phase 2b portion of the LN development program in 1H 2023

Protein Secretion Inhibition

- Report safety and dose escalation data from KZR-261 Phase 1 trial in solid tumors in 2H 2023
- Initiate dose expansion in KZR-261 Phase 1 trial in solid tumors in 2023

Strong cash position to fund future catalysts

Abbreviations: AIH, autoimmune hepatitis; LN, lupus nephritis.

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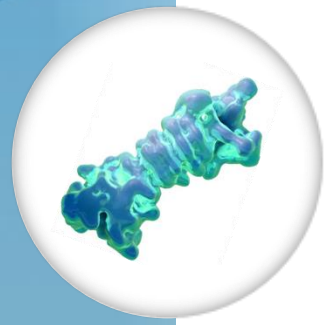

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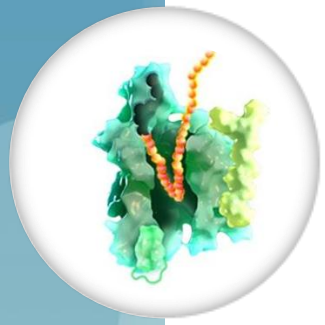

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