Corporate Presentation

Restoring Health, Transforming Lives Through Innovation

January 2025 l Nasdaq:ZVSA

Cautionary Statement Regarding Forward-Looking Statements

Certain statements contained in this press release regarding matters that are not historical facts, are forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933, as amended. These include statements regarding management's intentions, plans, beliefs, expectations, or forecasts for the future, and, therefore, you are cautioned not to place undue reliance on them. No forward-looking statement can be guaranteed, and actual results may differ materially from those projected. ZyVersa Therapeutics, Inc. ("ZyVersa") uses words such as "anticipates," "believes," "plans," "expects," "projects," "future," "intends," "may," "will," "should," "could," "estimates," "predicts," "potential," "continue," "guidance," and similar expressions to identify these forward-looking statements that are intended to be covered by the safe-harbor provisions. Such forward-looking statements are based on ZyVersa's expectations and involve risks and uncertainties; consequently, actual results may differ materially from those expressed or implied in the statements due to a number of factors, including ZyVersa's plans to develop and commercialize its product candidates, the timing of initiation of ZyVersa's planned preclinical and clinical trials; the timing of the availability of data from ZyVersa's preclinical and clinical trials; the timing of any planned investigational new drug application or new drug application; ZyVersa's plans to research, develop, and commercialize its current and future product candidates; the clinical utility, potential benefits and market acceptance of ZyVersa's product candidates; ZyVersa's commercialization, marketing and manufacturing capabilities and strategy; ZyVersa's ability to protect its intellectual property position; and ZyVersa's estimates regarding future revenue, expenses, capital requirements and need for additional financing. Other factors that may cause the Company's actual results to differ from current expectations are discussed in the Company's filings with the Securities and Exchange Commission, including the section titled "Risk Factors" contained therein.

New factors emerge from time-to-time, and it is not possible for ZyVersa to predict all such factors, nor can ZyVersa assess the impact of each such factor on the business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. Forward-looking statements included in this press release are based on information available to ZyVersa as of the date of this presentation. ZyVersa disclaims any obligation to update such forward-looking statements to reflect events or circumstances after the date of this presentation, except as required by applicable law.

ZyVersa Executive Summary

Developing novel therapeutics targeting anti-inflammatory and renal indications with unmet needs, including orphan indications

$100B+

Global Market Potential[1,2]

- Inflammatory Diseases (IC 100)
- Renal Diseases (VAR 200)

Strong Patent Portfolios

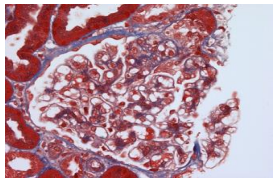
- Composition of Matter
- Drug/Device Combinations
- Potential Orphan Exclusivity

NIH/Foundation Grants

- IC 100 SBIR (UM) & MJF

ZyVersa Capital Raised

- >$50M (Private & Public)



VAR 200 Is Disease Modifying

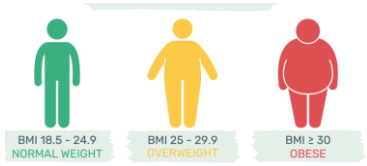
- Diabetic Kidney Disease; Orphan Renal Diseases
- Opportunity for Priority Review Voucher

VAR 200 Open IND

- Diabetic Kidney Disease
- Orphan Focal Segmental Glomerulosclerosis

IC 100 Inflammasome Inhibitor

- Treatment of Obesity with Comorbidities (e.g., Cardiovascular Diseases)



Obesity Market

- Obese Population Expected to Increase to 50% by 2035[3]
- Global Market for obesity drugs projected to reach $105 - $144B in 2030[4]

Near Term Milestones

- VAR 200: Completion of P2 Trial in DKD
- IC 100: IND Filing; Completion of P1 Trial in Obesity

1. Anti-inflammatory Drugs Market Size to Hit USD 272.35 Bn by 2033BioSpace, June 18, 2024; 2. Global Chronic Kidney Disease Drugs Market. Transparency Market Research, April, 2024; 3. The World Obesity Atlas 2023; 4. Scaling Up the Impact of Obesity Drugs, Morgan Stanley. May 7, 2024

COMPANY HIGHLIGHTS

Novel Approach for Life-threatening Diseases

Multiple drug candidates with preclinical validation for numerous diseases

- ✓ **Experienced Management Team:** 115+ combined years in biopharma from drug development to commercialization
- ✓ **VAR 200 IND Cleared for P2a Trial**: Diabetic kidney disease (DKD) – Renal therapeutic area has no approved drugs for renal lipotoxicity
- ✓ **Attractive Regulatory Pathway for Renal Program:** Potential Orphan Drug Designation, rare pediatric indications, and Fast Track Designations available in US; opportunity for Priority Review Voucher
- ✓ **Novel Biologic Drug (IC 100):** For treatment of obesity with related comorbidities
- ✓ **Robust Preclinical Data Package for IC 100:** Six different indications
- ✓ **Strong IP:** Includes Composition of Matter protection for IC 100
- ✓ **Multiple Value Inflection Points:** Potential inflection points over next 6 – 12 months, with additional critical inflection points to follow

Two Proprietary Product Platforms

Product Candidate	Development	Pre-Clinical	Phase 1	Phase 2	Phase 3	2025 Milestones
Inflammasome ACS Inhibitor						
IC-100-01 Acute Respiratory Distress Syndrome						
IC-100-02 Multiple Sclerosis						
IC-100-03 Parkinson's Disease						H2 Initiation Animal Model POC
IC-100-07 Early Alzheimer's Disease						
IC-100-08 Obesity/Metabolic Syndrome (Lead)						Q1 Initiation DIO Model Studies
Renal/Cholesterol Efflux Mediator™						
VAR 200-01 FSGS* (Lead)						
VAR 200-02: Alport Syndrome*						
VAR 200-03: Diabetic Kidney Disease						Q1 Initiation P2a Trial

*Orphan Disease

Experienced Leadership Team

Stephen C. Glover, Co-Founder, CEO, President & Director
40+ Years

Pablo A. Guzman, MD, FACC, Chief Medical Officer
30+ Years

Karen A. Cashmere, Chief Commercial Officer
25+ Years

Peter Wolfe, Chief Financial Officer
20+ Years

Strong Board of Directors

Robert Finizio, Executive Director, PleoPharma
20+ years in healthcare. Prior executive roles at TherapeuticsMD, CareFusion, Omnicell, Endoscopy Specialist

Min Chul Park, PHD, CEO and Director, Curebio Therapeutics
10+ years in pharmaceuticals. Previous CEO and Director at Neomics

Gregory G. Freitag, JD, CPA, Founder and Principal, FreiMc
30+ years in life sciences, medical devices, and healthcare
Prior executive roles at Axogen, LecTec , Pfizer Health Solutions, Guidant , HTS Biosystems, Quantech

James Sapirstein, Chairman, CEO & President, Entero Therapeutics
38+ years in pharmaceuticals. Prior senior executive roles at Contravir Pharmaceuticals; Alliqua, Tobira Therapeutics, Serono Laboratories, and Gilead Sciences

ZyVersa THERAPEUTICS℠

Cholesterol Efflux Mediator™ VAR 200

Promising Treatment Option for Renal Diseases

Cholesterol Efflux Mediator™ VAR 200, Phase 2a-Ready

2-Hydroxypropyl-Beta-Cyclodextrin

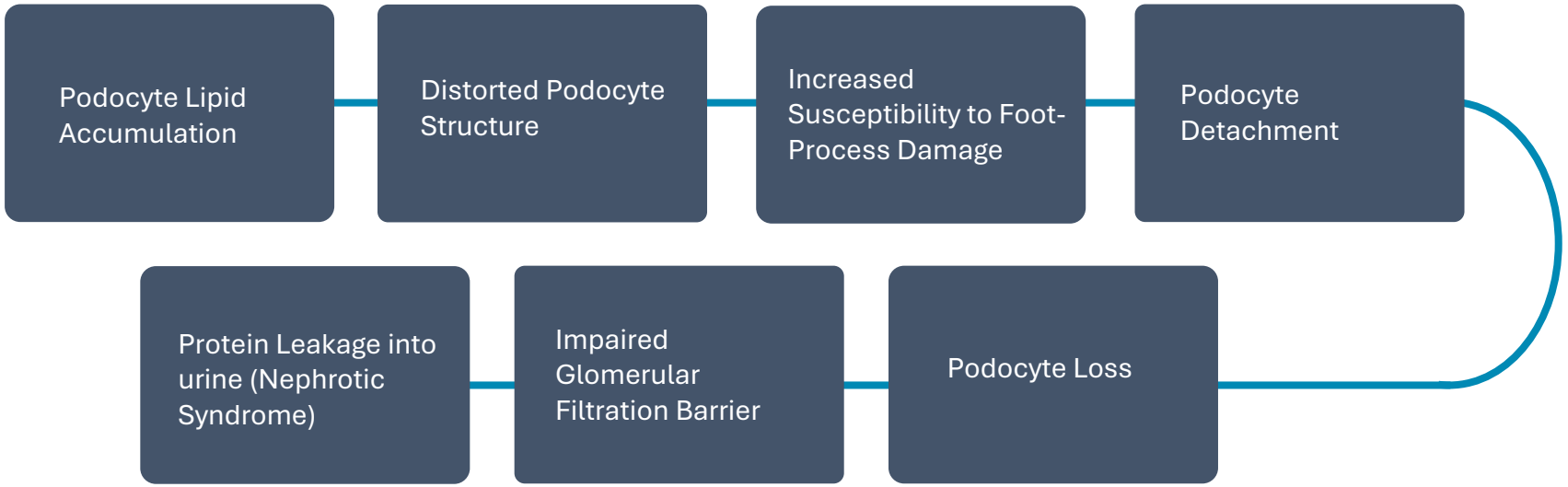
- **FDA clearance for Phase 2a**: Study may proceed following letter received related to FSGS; IND amendment filed and cleared for diabetic kidney disease
- **Potential for Rare Pediatric Disease Voucher:** FDA authorized enrollment of pediatric patients in P2a FSGS study
- **Differentiated MOA**: Passively and actively mediates removal of excess intracellular lipids that contribute to kidney damage and dysfunction; competitive pipeline targets renal hypertension, inflammation, and fibrosis
- **Significant Proof of Concept:** Similar preclinical response across 3 different animal models of kidney disease (FSGS, Alport syndrome, diabetic kidney disease); robust safety profile
- **Strong IP Protection**: Potential for 7 years of orphan drug exclusivity in the US, 10 years in the EU, with an exclusive worldwide license for IP related to 2HPβCD for treatment of kidney diseases
- **Opportunity for Indication Expansion:** As a cholesterol efflux mediator, offers potential indication expansion across multiple kidney diseases, including FSGS, Alport syndrome, diabetic kidney disease, and other chronic glomerular diseases
- **Total Accessible Market:** $14.8B in 2023, which is projected to grow to $23.8B in 2032[1]
- **Multiple Life Cycle Opportunities Via Drug Delivery Mechanisms**

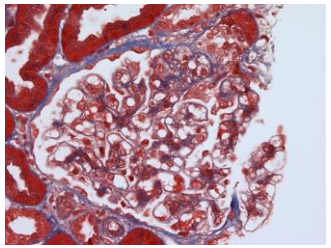
1. Global Chronic Kidney Disease Drugs Market. Transparency Market Research, April, 2024

Why Target Renal Lipids?

FSGS and Other Glomerular Diseases Develop "Foamy Podocytes" Due to Lipid Accumulation

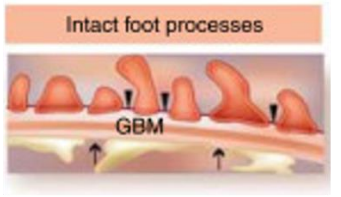
Accumulation of Podocyte Lipids Contributes to Structural Damage, Proteinuria, and Progression of Kidney Disease[1,2]





FSGS Patient's Podocyte Histology (Neptune)

Normal: *Intact podocyte foot process*



Filtration Slit Diaphram

Fenestration

Abnormal: *Flattened podocytes*

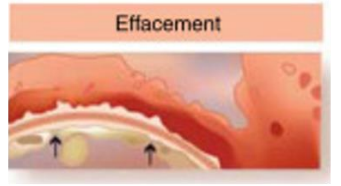
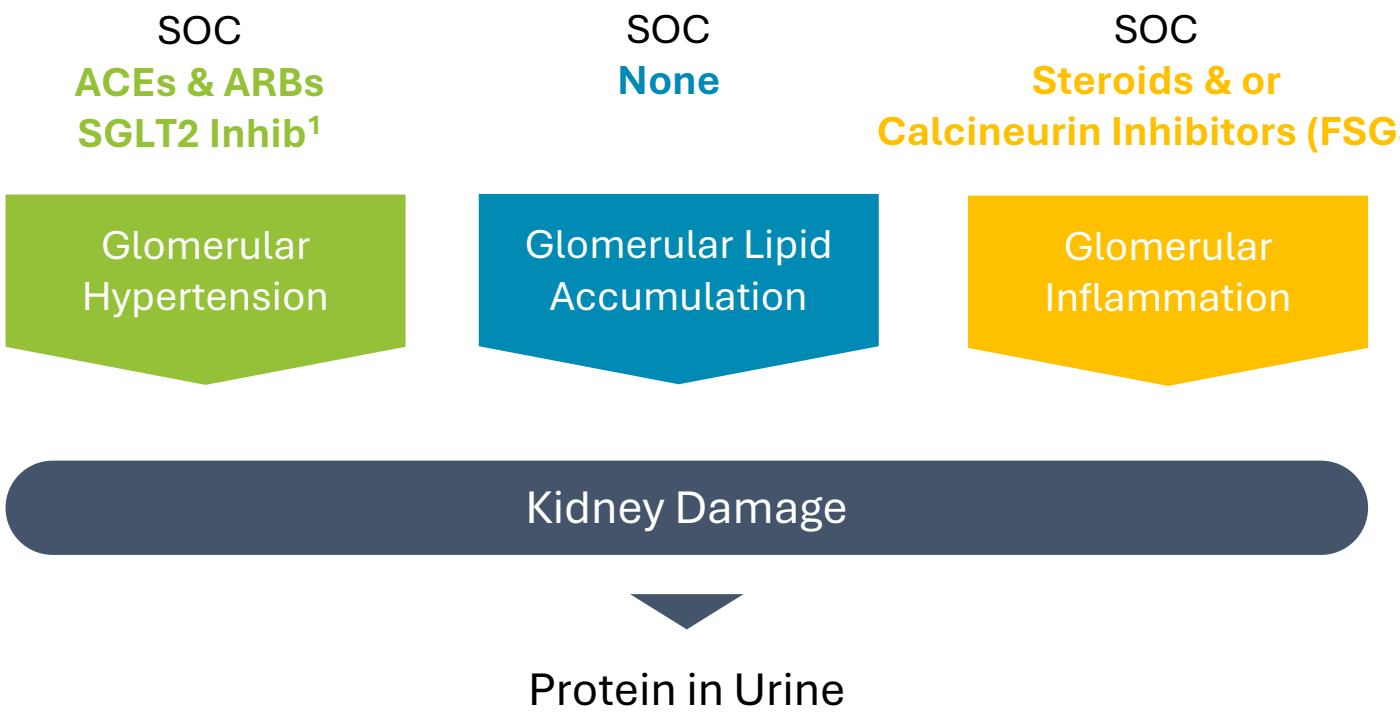


Image Adapted From D'Agati VD: Kidney Int. 2008 Feb;73(4):399-406

1. Mitrofanova, Molina J, Varona Santos J, et al, Hydroxypropyl-β-cyclodextrin protects from kidney disease in experimental Alport syndrome and focal segmental glomerulosclerosis. Kidney Int. 2018 Dec;94(6):1151-1159; 2.Ducasa GM, Mitrofanova A, Mallela SK, et al. ATP-binding cassette A1 deficiency causes cardiolipin-driven mitochondrial dysfunction in podocytes. J Clin Invest. 2019;129(8):3387–3400

Kidney Disease Pathologies Are Multifactorial

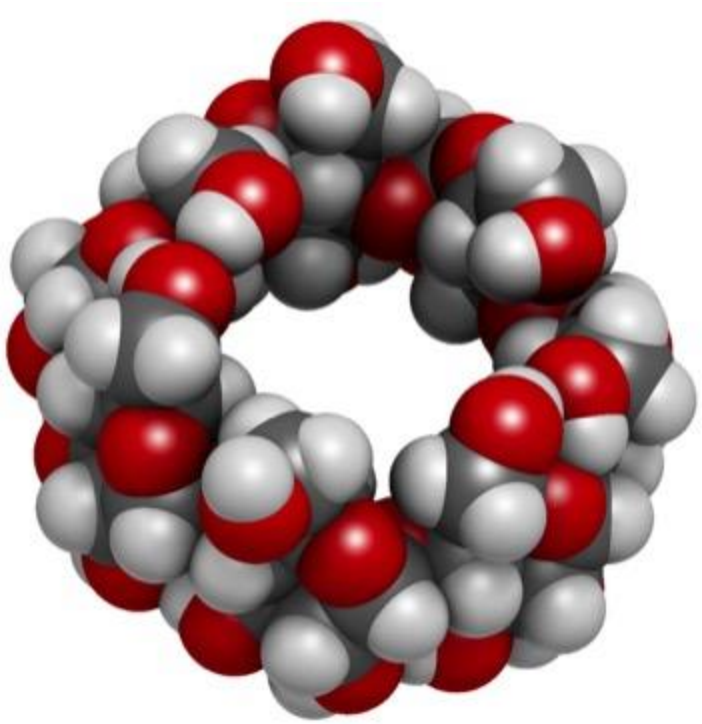
Current Standard-of-Care (SOC) Addresses Glomerular Hypertension and Inflammation



VAR 200 Addition to SOC Expected To Provide Incremental Benefits

1. Yau K, Dharia A, Alrowiyti I, Cherney DZI. Prescribing SGLT2 Inhibitors in Patients With CKD: Expanding Indications and Practical Considerations. Kidney Int Rep. 2022 Aug 28;7(11):2546-2547.

VAR 200, Cholesterol Efflux Mediator™ 2-Hydroxypropyl-Beta-Cyclodextrin (2HPβCD) Reduces Podocyte Cholesterol and Lipids



Space filling model
of
β-Cyclodextrin

Comprised of 7 Sugar Molecules Bound Together in a 3-D Ring

- 2HPβCD has a hydrophobic core that forms an inclusion complex with intracellular cholesterol and removes it from the kidney
- 2HPβCD is believed to mediate active cholesterol removal through upregulation of cholesterol efflux transporters ABCA1 and ABCG1
- Cholesterol removal restores renal structure and function

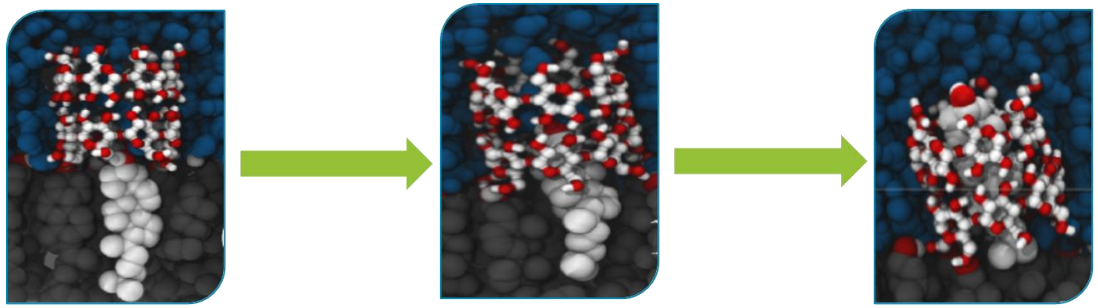
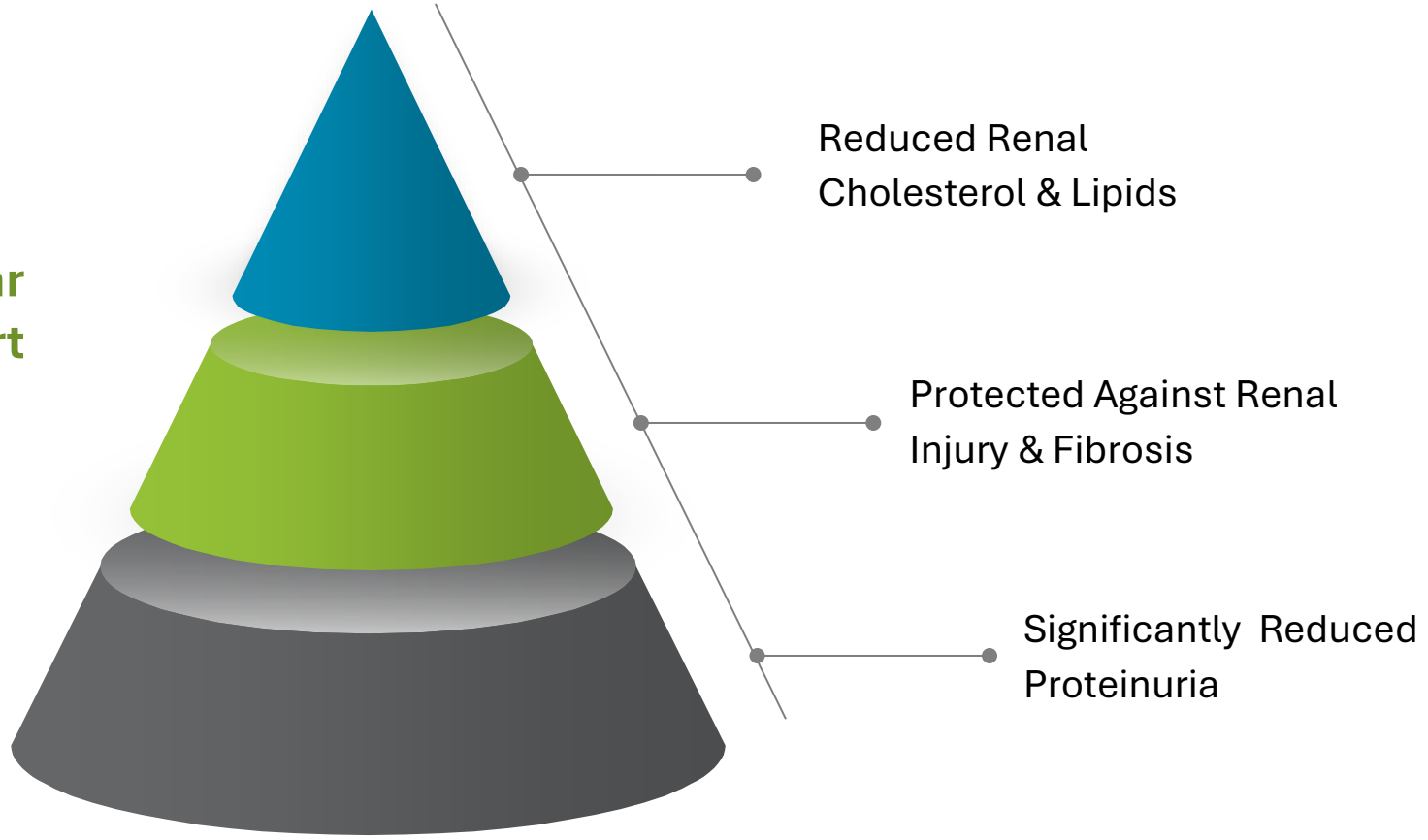


Image of βCD Adapted From Lopez et al: LoS Comput Biol 7(3): e1002020. doi:10.1371/journal.pcbi.1002020

Strong Preclinical Support for VAR 200, With POC in 3 Different Animal Models of Kidney Disease, Both Genetic and Drug-induced

VAR 200 Demonstrated Similar Response Across FSGS, Alport Syndrome, and Diabetic Kidney Disease Models



VAR 200 Phase 2a Clinical Trial in Patients With Diabetic Kidney Disease

Objectives

- Evaluate the efficacy and safety of Cholesterol Efflux Mediator™ VAR 200 in eight patients with type 2 diabetes who have diabetic kidney disease

Study Overview

- Open label
- VAR 200 will be administered intravenously twice weekly at 6g/dose for a period of 12 weeks
- 4-week post-treatment follow-up period

Primary Efficacy Endpoint

- Percent change from baseline to week 12 in urinary albumin to creatinine ratio (UACR)

Key Secondary Efficacy Endpoints

- Change from baseline to week 12 in urinary protein to creatinine ratio (UPCR) and UACR
- Change from baseline to week 12 in serum creatinine

Key Exploratory Endpoint

- Change from baseline to week 12 in eGFR

Milestones

- Q1-2025: Study initiation
- 2H-2025: Initial DKD data

ZyVersa THERAPEUTICS℠

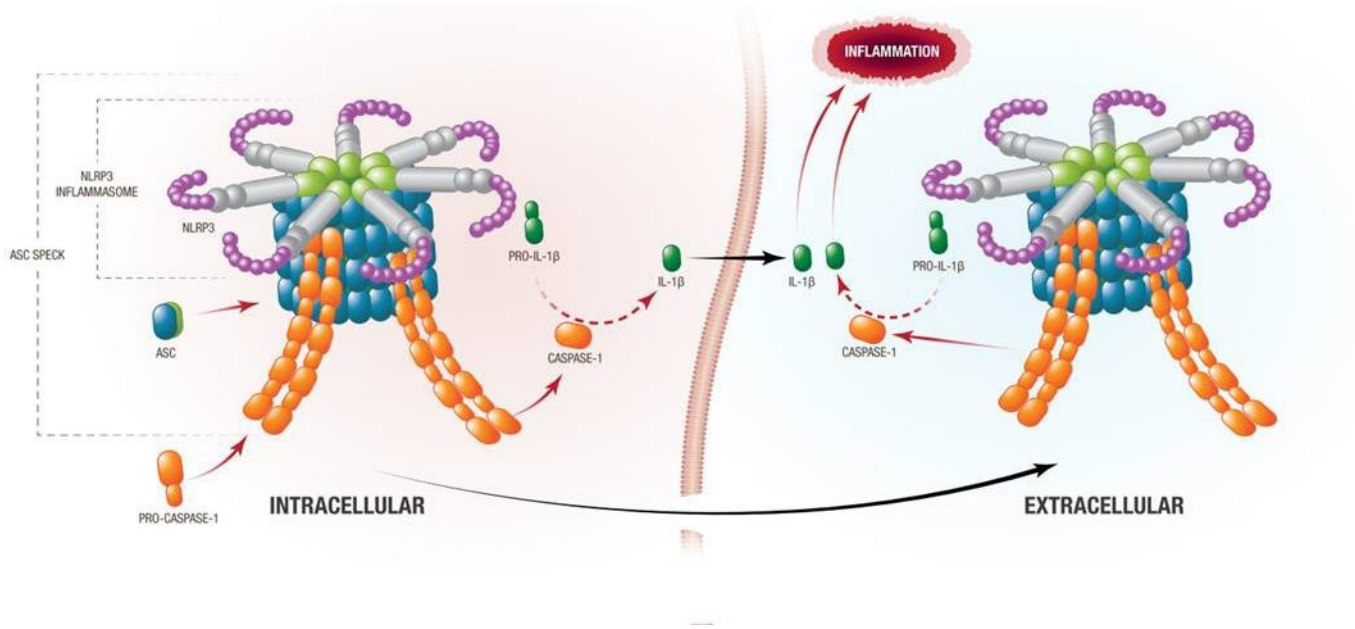
Inflammasomes and Obesity Driven Metabolic Diseases

What Are Inflammasomes?

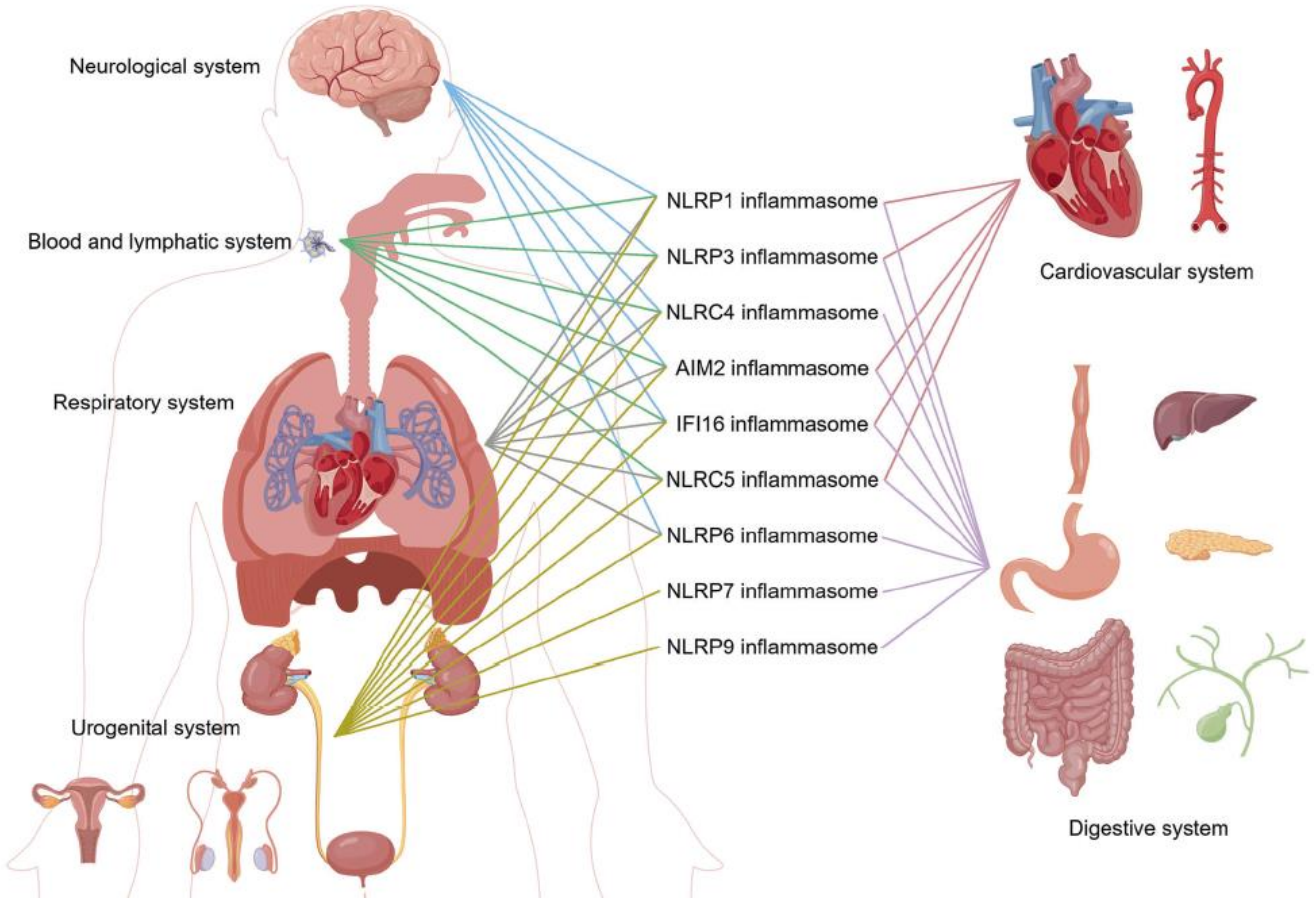
Inflammasomes

- Initiate inflammation as the first line of defense against bacteria, viruses, and other threats.
- Multiple types, each responding to a different threat.
- Inflammasomes stimulate the production of cytokines IL-1β and IL-18.
- When dysregulated, they perpetuate and spread inflammation, damaging cells, tissues, and organs leading to inflammatory diseases.

Inflammasomes oligomerize into macromolecular ASC specks that initiate and perpetuate the innate inflammatory response.



Multiple Inflammasome Pathways Play a Role in Initiation and Progression of Diseases Affecting All Body Systems



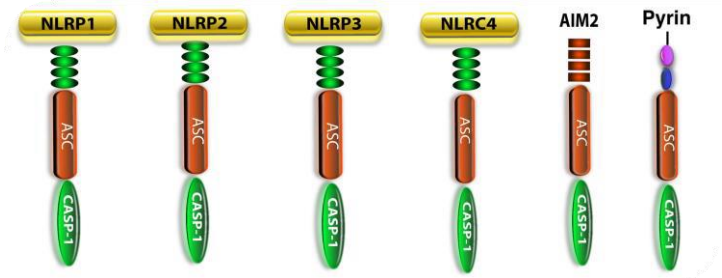
Neurological System	NLRP1, NLRP3, NLRC4, AIM2, IFI16, NRLP6
Blood and lymphatic system	NLRP1, NLRP3, NLRC4, AIM2, IFI16, NRLC5
Respiratory System	NLRP1, NLRP3, NLRC4, AIM2, IFI16, NRLC5
Urogenital System	NLRP1, NLRP3, NLRC4, AIM2, IFI16, NRLC5, NLRP6. NLRP7, NLRP9
Cardiovascular System	NLRP1, NLRP3, AIM2, IFI16, NRLC5
Digestive System	NLRP1, NLRP3, NLRC4, AIM2, IFI16, NRLC5, NLRP6. NLRP7, NLRP9

Yao J, Sterling K, Wang Z, Zhang Y, Song W. The role of inflammasomes in human diseases and their potential as therapeutic targets. Signal Transduct Target Ther. 2024 Jan 5;9(1):10.

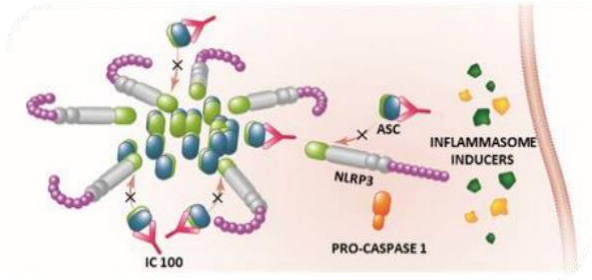
Why Target Inflammasome ASC Rather Than NLRP3?

ASC Inhibition Expected to Better Control Inflammation

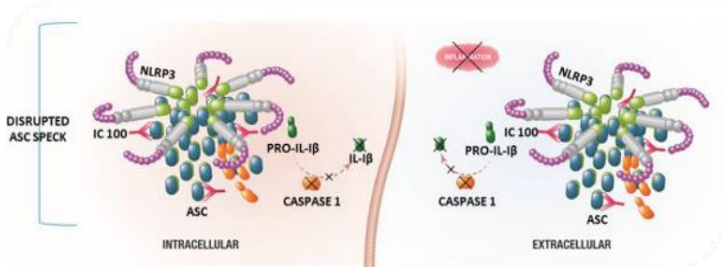
Potentially Inhibits 12 or More Types of Inflammasomes to Control Inflammation Regardless of Its Triggers



Inhibits Intracellular ASC to Block Inflammasome Formation & Initiation of the Inflammatory Cascade



Inhibits Intra- and Extracellular ASC Specks, Disrupting Their Structure & Function to Block Perpetuation of Damaging Inflammation



Multiple Inflammasomes Trigger Many Diseases/Conditions

Disease/Condition	Obesity	Insulin Resistance	Parkinson's Disease	Diabetic Nephropathy	Alzheimer's Disease	Multiple Sclerosis
Inflammasomes Implicated	AIM2, NLRP3	AIM2, NLRP1, NLRP3, NLRC4, NLRP6	NLRP1, NLRP3, AIM2	AIM2, NLRP3	AIM2, NLRP1, NLRP3	AIM2, NLRP1, NLRP2, NLRP3, NLRC4

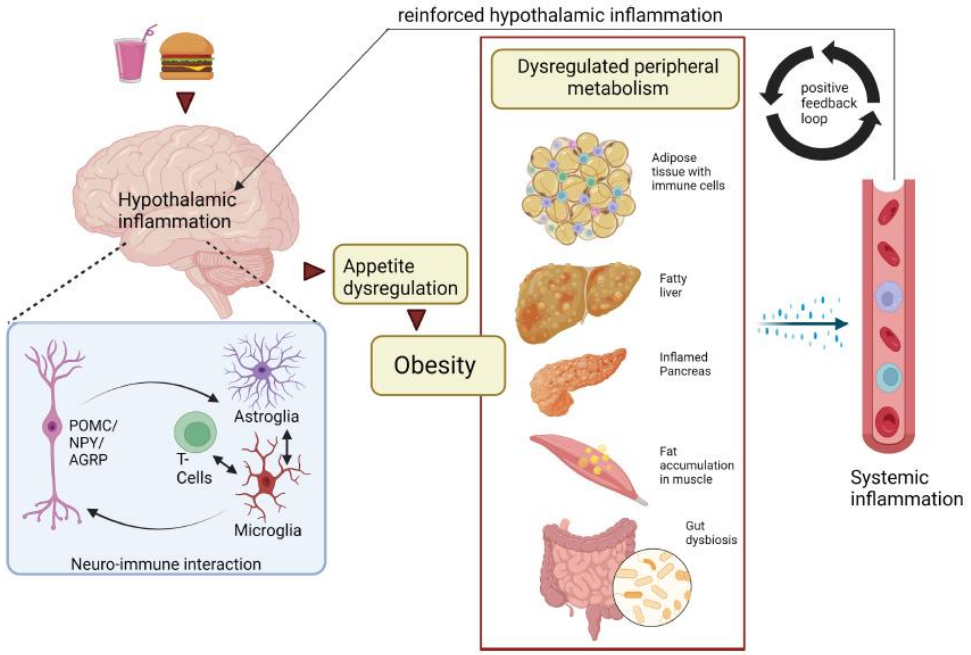
NLRP3 Inhibitors Block Only One Type Inflammasome
Don't Address ASC Specks To Block Chronic Perpetuation of Inflammation

By Inhibiting ASC/ASC Specks, IC 100 Has Potential to Alleviate Hypothalamic and Systemic Inflammation To Attenuate Obesity & Its Complications

IC 100

Penetrates Brain, Alleviating Hypothalamic Inflammation

Disrupts Function of ASC Specks, Alleviating Systemic Inflammation



Nutrient Overload

↓

Hypothalamic Inflammasome-mediated Inflammation

↓

Increased Appetite & Food Intake

↓

Increased Number & Size of Fat Cells

↓

Fat Cell Hypoxia, Cell Death, Macrophage Recruitment

↓

Inflammasome Activation & Cell Death

↓

Systemic Release of Cytokines & ASC Specks

↓

Inflammation Spread to Peripheral Tissues & CNS

↓

Sustained CNS Inflammation, Obesity, Metabolic Syndrome

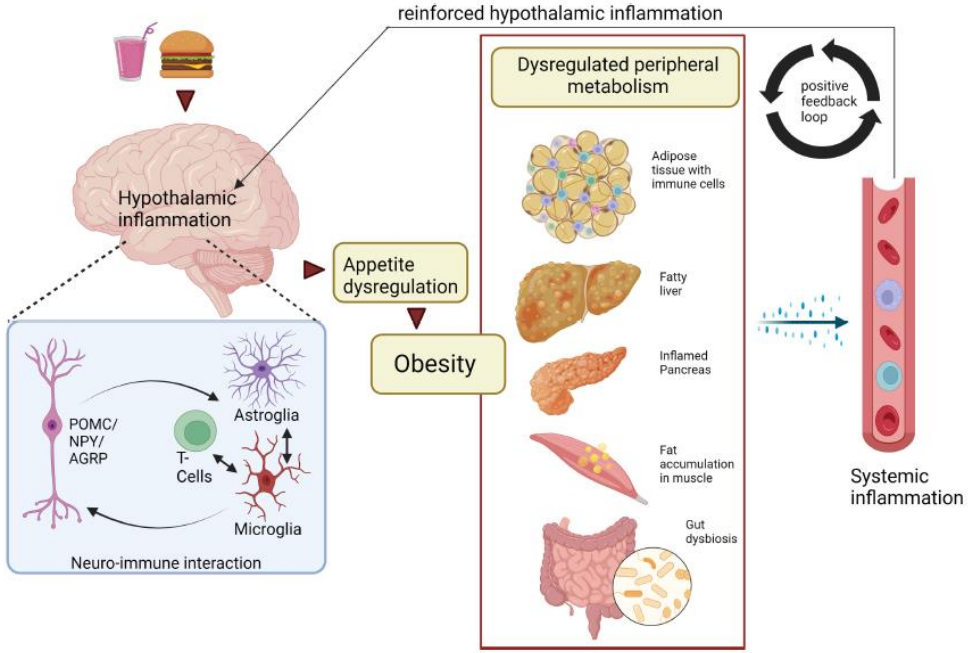
Mukherjee S, Skrede S, Haugstøyl M, López M, Fernø J. Peripheral and central macrophages in obesity. Front Endocrinol (Lausanne). 2023 Aug 31;14:1232171

Inflammasome ASC Inhibitor IC 100 Plus Incretin Therapy Expected to Control Chronic Systemic Inflammation, Improve Long-term Outcomes, & Augment Weight Loss

IC 100

Penetrates Brain, Alleviating Hypothalamic Inflammation

Disrupts Function of ASC Specks, Alleviating Systemic Inflammation



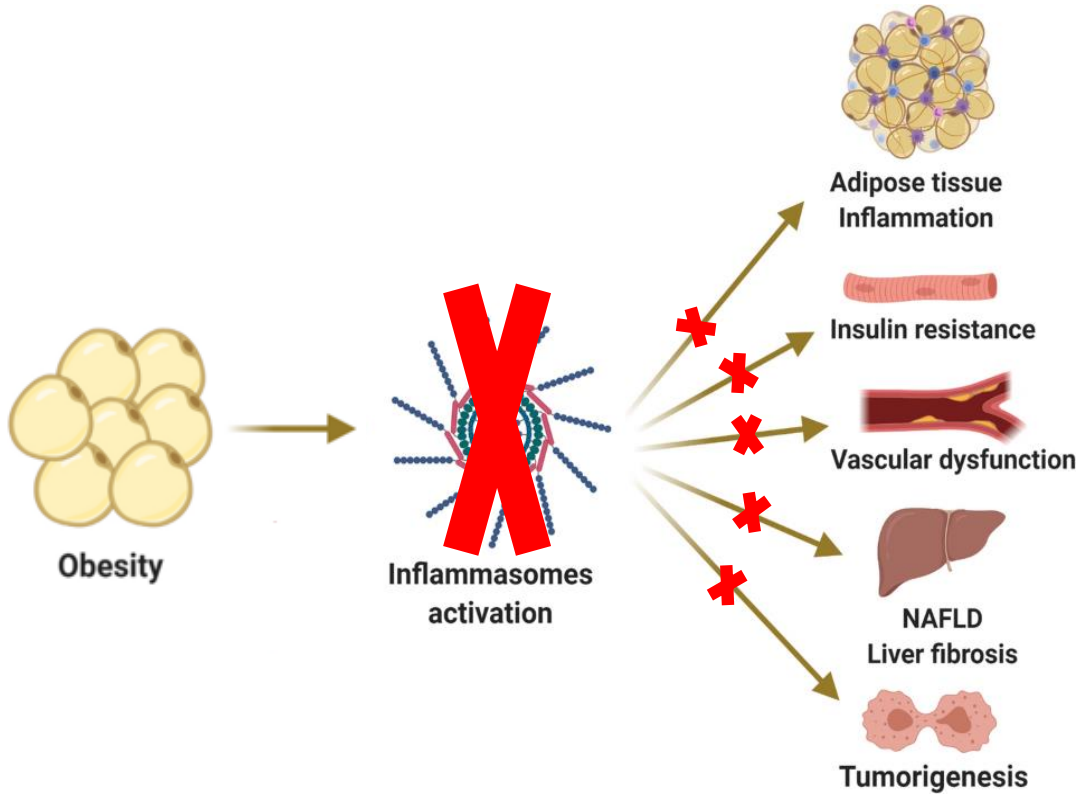


Image adapted from Pham, DV et al. Arch. Pharm. Res. 43, 997–1016 (2020)

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Inflammasome ASC Inhibitor IC 100

Promising Therapeutic Option for Obesity and Associated Complications

IC 100 Attributes Versus Key Inflammasome Competitors

Attribute	IC 100 (mAb)	VTX 3232 (SM)	VTX 2735 (SM)	NT-0796 (SM)	NT-0249 (SM)	Anti-NLRP3-ASC (mAb)	Anti-NLRP3-ASC (SM)
Company	ZyVersa	Ventyx		NodThera		AC Immune	
Molecular Target	ASC/ASC Specks	NLRP3	NLRP3	NLRP3	NLRP3	NLRP3-ASC/ ASC Specks	NLRP3-ASC/ ASC Specks
# Inflammasomes Targeted	Up to 12	1	1	1	1	1	1
Body System Target	CNS & Peripheral	CNS	Peripheral	CNS	CNS	CNS	Peripheral
Target Specificity	Yes	No	No	No	No	Yes	No
Latest Development Stage	Preclinical	P1	P2	P1b/2a	P1	Discovery	Discovery
Timing Next Stage	P1: Q4-2025	P2a: H2-2024	TBD	TBD	TBD	TBD	TBD
Indications	Obesity/Metabolic, Parkinson's	Obesity/CV, Parkinson's	CAPS, CV	Parkinson's Obesity/CV	TBD	TBD	TBD
Expected Dose Frequency	Quarterly to Twice Annually	Once Daily	Once Daily	Once Daily	Once Daily	TBD	TBD

Source: ZyVersa Therapeutics, Ventyx Biosciences, NodThera, AC Immune SA

IC 100, a Promising Treatment Option for Inflammatory Diseases

IC 100: Novel ASC inhibitor for treatment of inflammatory diseases

- Humanized monoclonal IgG4 antibody that binds to a specific region of adaptor ASC, an integral component of multiple types of inflammasomes
- By targeting ASC, potentially inhibits 12 or more types of inflammasomes, thus IC 100's MOA is independent of triggers and sensors leading to inflammasome activation
- Inhibits inflammasome formation intracellularly, blocking initiation of the inflammatory response
- Inhibits ASC specks, intra-and extracellularly, disrupting speck structure and function preventing perpetuation of the inflammatory response

IC 100 Half-Life: Approximately 24 days

IC 100 POC: Strong pharmacologic signals in animal models of six inflammatory conditions

- Stroke-related cardiovascular injury, retinopathy of prematurity, multiple sclerosis, acute respiratory distress syndrome, spinal cord injury, and traumatic brain injury
- Preclinical studies ongoing in obesity, and Parkinson's disease

IC 100 Safety:

- Attenuates the immune system, without broad immune suppression
- Lower immunogenicity (9%) than many biologics - less potential for acquired drug resistance and drug discontinuation due to side effects
- No drug-related AEs or histopathology changes at weekly doses up to 300 mg/kg for 21 days in non-GLP tox studies (mice & NHP)

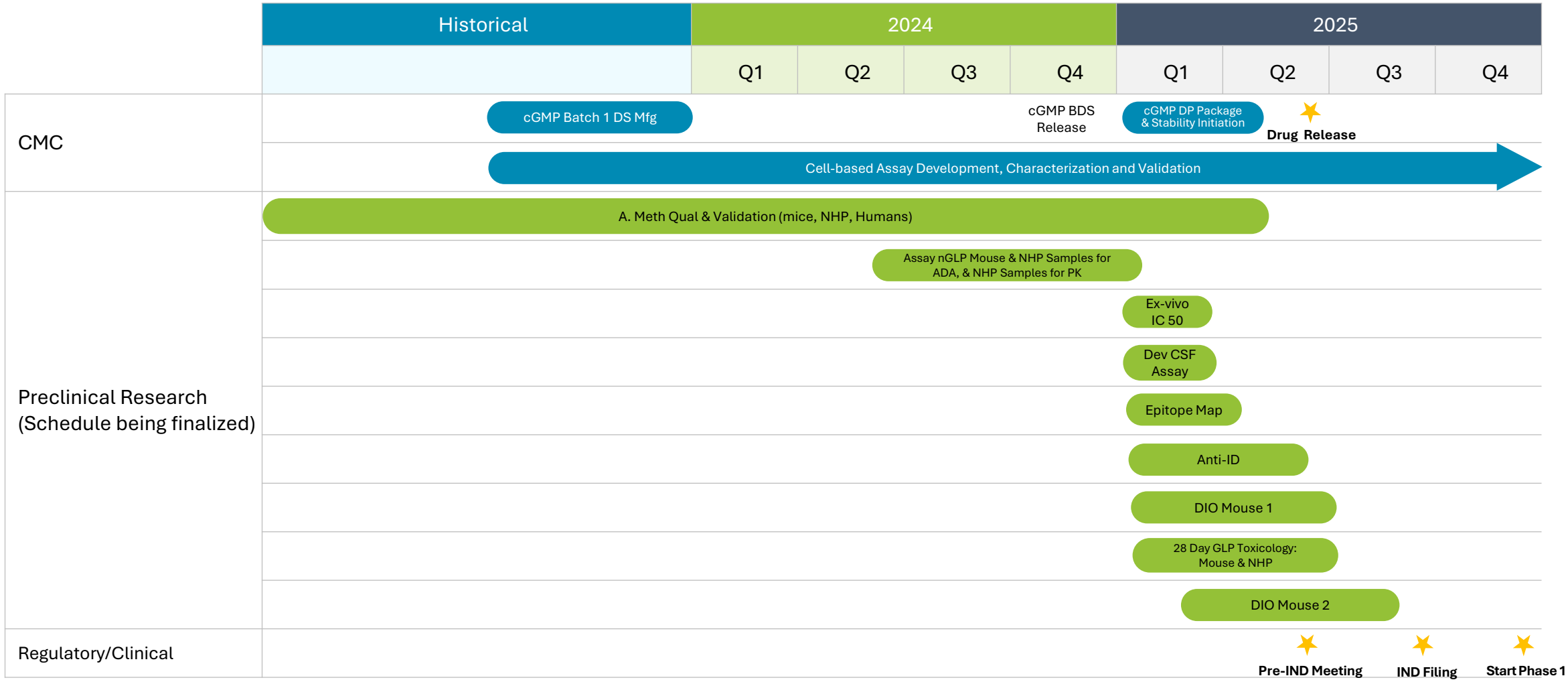
CMC

- Stable, viable cell line established; 2000L cGMP run completed

IC 100 Preclinical Data Substantiates Its MOA in Both CNS and Non-CNS Diseases

Multiple Sclerosis (MS)	• MS is characterized by an inflammatory response sustained by innate and adaptive immune mechanisms dependent on lymphocyte and myeloid cell activation • IC 100 at 30 mg/kg resulted in a lower number of activated myeloid cells in the spinal cord and spleen, a lower number of microglial cells in the spinal cord, and improved clinical outcomes consistent with these changes
Spinal Cord Injury (SCI)	• Following SCI, expression of NLRP1 inflammasome signaling molecules, including ASC, are increased and NLRP1 inflammasome is activated in spinal cord neurons, triggering an inflammatory response • ASC inhibition decreased inflammasome activation, reduced spinal lesions, and improved behavioral outcomes
Age-related Inflammation	• Inflammasome signaling proteins, NLRP1, ASC, caspase-1, caspase-8, and IL-1β, are significantly increased in the cortex of aged mice • IC 100 inhibits both canonical and non-canonical NLRP1 inflammasome activation that occurs in aged mice • IC 100 significantly reduced ASC Specks, IL-1β, and inflammasome protein expression (NLRP1, ASC, caspase-1, and caspase-8)
Penetrating Ballistic-Like Brain Injury Model (PBBI)	• Following PBBI, expression of inflammasome signaling molecules, including ASC, are increased and inflammasomes are activated in microglia triggering an inflammatory response and pyroptosis • IC 100 decreased inflammasome activation and pyroptosis when compared with vehicle control
Fluid Percussion Brain Injury Model (FPI)	• Following FPI, expression of inflammasome signaling molecules, including ASC, are increased and inflammasomes are activated in cerebral cortex neurons triggering an inflammatory response • ASC neutralization reduced inflammasome activation and decreased brain contusion volume associated with inflammation when compared with IgG control
Acute Respiratory Distress Syndrome (ARDS)	• Inflammasome activation and inflammation play a central role in the pathomechanism of lung injury in ARDS • IC 100 inhibited inflammasome activation and improved histopathological outcomes in lung tissue
Retinopathy of Prematurity	• Inflammasome activation is associated with the pathogenesis of ocular diseases (e.g., diabetic retinopathy, age related macular degeneration) • IC 100 Attenuated Retinal Inflammation in OIR Mice and Restored Retinal Structure and Function
Diabetic Nephropathy	• A link between NLRP3 inflammasome activity and glomerular injury in the kidneys of people with diabetic nephropathy is now well established • IC 100 (5 mg/kg) significantly reduced fasting blood glucose, ACR, and BUN in Mouse Model of Type 2 Diabetic Nephropathy (BTBR ob/ob Mice)
Stroke-related Cardiovascular Injury	• Catecholamine surge after stroke activates AIM2 inflammasomes in the heart, triggering inflammation resulting in damage and dysfunction • IC 100 administered post-stoke reduced cardiac inflammation and attenuated cardiac dysfunction (shortened action potential duration)

Key Milestones: IC 100 Path to IND and Phase 1 (Anticipated H2-2025)



Clinical development, clinical trial preparation, other activities to be added; not rate limiting
Note: Detail included related to the timing of potential milestones are estimates, and are subject to change

Key Activities, Inflection Points and Regulatory Milestones

IC 100: Next 4 quarters

- Initiate GLP toxicology studies
- Manufacture clinical supplies
- Initiate and complete obesity animal model studies
- File IND and begin phase I trials

Program	Development Stage	Key Activities	IND Status and Target Date	Key Milestones
IC 100	Preclinical	GMP manufacturing GLP toxicology Obesity DIO mouse study	IND filing (Q3-2025)	Phase I safety read-out (Q1-2026)

Note: Detail included related to the timing of potential milestones are estimates, and are subject to change

Potential Benefits of IC 100 Over NLRP3 Inhibitors

- Penetrates CNS & Peripheral Tissues to Address Inflammatory Signaling Throughout the Body (vs Separate Compounds for Each)
- Uniquely Targets ASC Specks to Attenuate Inflammation Perpetuation and Spread
- Targets Multiple Types of Inflammasomes Vs Just NLRP3 To Better Control Inflammation
- Target Engagement Specificity for Fewer Side Effects (e.g., Liver Damage) & Drug/Drug Interactions
- Less Frequent Dosing – Quarterly Vs Daily for Small Molecules for Improved Dosing Compliance/Persistence