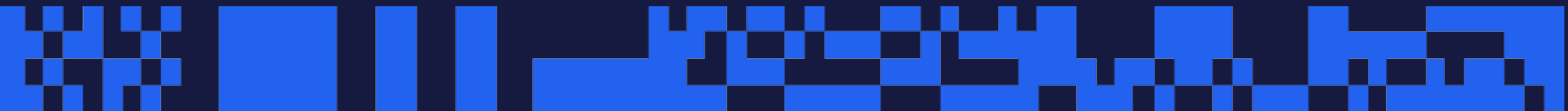


# Developing Innovative Medicines to Treat Obesity and Other Metabolic Diseases



July 2025

Nasdaq: SKYE



# Disclaimer and Important Information for Investors

This presentation ("Presentation") has been prepared solely for general information purposes by or on behalf of Skye Bioscience, Inc. (together with its subsidiaries and affiliates, "Skye"). This Presentation is for informational purposes only and is not intended to form any basis of any investment decision. You should consult your own legal, regulatory, tax, business, financial and accounting advisors concerning the information described herein. Any discussion of the potential use or expected success of our product candidates is subject to our product candidates being approved by regulatory authorities. In addition, any discussion of clinical trial results for nimacimab relate to the results of the Phase 1 clinical trial for nimacimab.

## Cautionary Language Regarding Forward Looking Statements

This Presentation contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements may be identified by the use of words such as "estimate," "plan," "goal," "project," "forecast," "intend," "will," "expect," "anticipate," "believe," "seek," "target," "opportunity" or other similar expressions that predict or indicate future events or trends or that are not statements of historical matters. These forward-looking statements include, but are not limited to: statements concerning Skye's future plans and prospects, any expectations regarding the safety, efficacy, tolerability or combinability of nimacimab, including based on the clinical information from the nimacimab Phase 1 study in NAFLD or from preclinical DIO studies, the timing of the receipt of final data from nimacimab's phase 2 study in obesity, the potential market opportunities, the timing and clinical strategy for nimacimab, the planned timing of Skye's anticipated milestones for nimacimab and the company's cash runway. Forward looking statements are neither historical facts nor assurances of future performance. Although Skye believes the expectations reflected in such forward-looking statements are reasonable, Skye can give no assurance that such expectations will prove to be correct. Readers are cautioned that actual results, levels of activity, safety, efficacy, performance or events and circumstances could differ materially from those expressed or implied in Skye's forward-looking statements due to a variety of risks and uncertainties, which include, without limitation, risks and uncertainties related to the completion of Skye's phase 2 study for nimacimab, Skye's ability to advance, obtain regulatory approval of and ultimately commercialize nimacimab, competitive products or approaches limiting the commercial value of nimacimab, Skye's ability to fund development activities and achieve development goals, the impact of any global pandemics, inflation, supply chain issues, rising interest rates and future bank failures on Skye's business, Skye's ability to protect its intellectual property and other risks and uncertainties described in Skye's most recent Annual Report on Form 10-K and Quarterly Report on Form 10-Q and future reports Skye may file with the Securities and Exchange Commission from time to time. All forward-looking statements contained in this Presentation speak only as of the date on which they were made and are based on management's assumptions and estimates as of such date. Skye undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made, except as required by law.

## Industry and Market Data, and Third-Party Reports

The views and statements provided in this Presentation are based on information derived from Skye's internal estimates and research, studies, publications, surveys and other information provided by third parties and also from publicly available sources. In this Presentation, Skye relies on, and refers to, publicly available information and statistics regarding market participants in the sector in which Skye competes and other industry data. Any comparison of Skye to any other entity assumes the reliability of the information available to Skye. Skye has not independently verified the accuracy or completeness of these sources. Certain information contained in this Presentation relates to or is based on studies, publications, surveys and other data obtained from third-party sources. Skye has not independently verified, and makes no representation as to, the adequacy, fairness, accuracy or completeness of any information obtained from third-party sources. All of the market data included in this Presentation involves a number of assumptions and limitations, and there can be no guarantee as to the accuracy or reliability of such assumptions.

## No Representations and Warranties

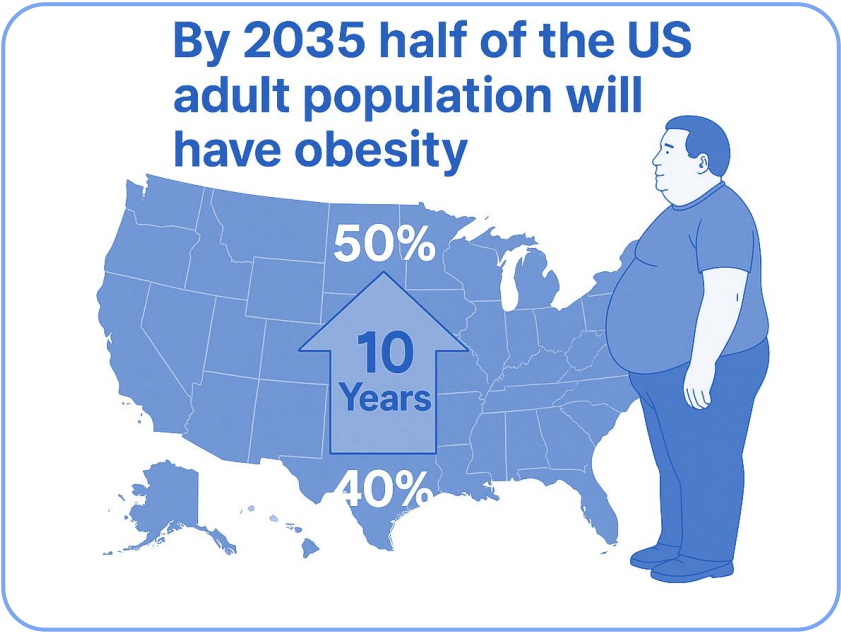
No representation, warranty or undertaking, express or implied, is made or will be given by Skye and its affiliates and representatives as to the fairness, accuracy, completeness or reliability of this Presentation and the information and or statements contained therein.

## Trademarks and Copyrights

This Presentation may contain trademarks, service marks, trade names and copyrights of other companies, which are the property of their respective owners, and Skye's use thereof does not imply an affiliation with, or endorsement by, the owners of such trademarks, service marks, trade names and copyrights. Solely for convenience, some of the trademarks, service marks, trade names and copyrights referred to in this Presentation may be listed without the TM, © or ® symbols, but Skye will assert, to the fullest extent under applicable law, the rights of the applicable owners, if any, to these trademarks, service marks, trade names and copyrights. All images are copyright to their respective owners and are protected under international copyright laws.

# Mission

Pioneer and commercialize the first CB1 antibody to tackle current and future unmet needs of obesity



# OPPORTUNITY

**Nimacimab** has the potential to become the first-to-market CB1 antibody that can address a large patient segment that does not respond to or cannot tolerate GLP-1s, while also providing a combination option for those that need additional weight loss.

# GLP-1s



GLP-1 Drugs in Development

Phase 3	Phase 2	Phase 1	Preclinical
MariTide	AZD5004	AZD9550	NLy12
Orforglipron	AZD6235	GS-4571	DD03
Sema (oral)	Mazdutide	KAI-9531	DD15
Survodutide	GSBR-1290	KAI-4729	DD14
Retatrutide	LY359424	PB-110	PB-2301
Pemvidutide	ARD-101	PB-718	PB-2309
KAI-9531	KAI-7535	CT-388	
	MET-097i	CT-996	
	CT-868	TERN-601	
	VK2735		
	VRB-101		
	Dapiglutide		

The GLP-1 space is incredibly crowded with multiple marketed and soon-to-be-approved drugs - and they all have the same issues with safety and adherence.

Semaglutide (Ozempic/Wegovy) is expected to go off-patent in 2031, enabling a wave of generics.

Wave of incretin-mimetics competition from China.

# Significant Opportunity Remains in Anti-Obesity Drug Market

GLP-1RA have issues with tolerability and lean mass loss

## Gastrointestinal Issues

Wegovy® and Zepbound® cause significant rates of **nausea** (31-53%), **diarrhea** (23-35%) and **vomiting** (12-30%)

## Discontinuation Rates and Rebound Weight Gain

Blue Health Intelligence<sup>2</sup> survey reported **30% of patients dropped out of treatment after 4 weeks**. **58% of patients did not reach the prescribed treatment of a minimum of 12 weeks** and were **unlikely to achieve clinically meaningful weight loss**.

## Response Rates

Wegovy® STEP Trials showed **10.2-16.7% non-responder rate**. Real-world data suggests that patient % achieving >10% weight loss is lower than that reported in Phase 3 trials.<sup>1</sup>

## Lean Mass Loss

Lean mass loss is common with any significant weight reduction: ~25% is typical. Lean mass loss accounted for **~40% of total weight loss with Wegovy®**.

## Opportunity



**Improved tolerability**



**Greater adherence/ compliance over time**



**Optimal weight loss via mono or combo therapy**



**Healthier and more sustained weight loss**

Source:

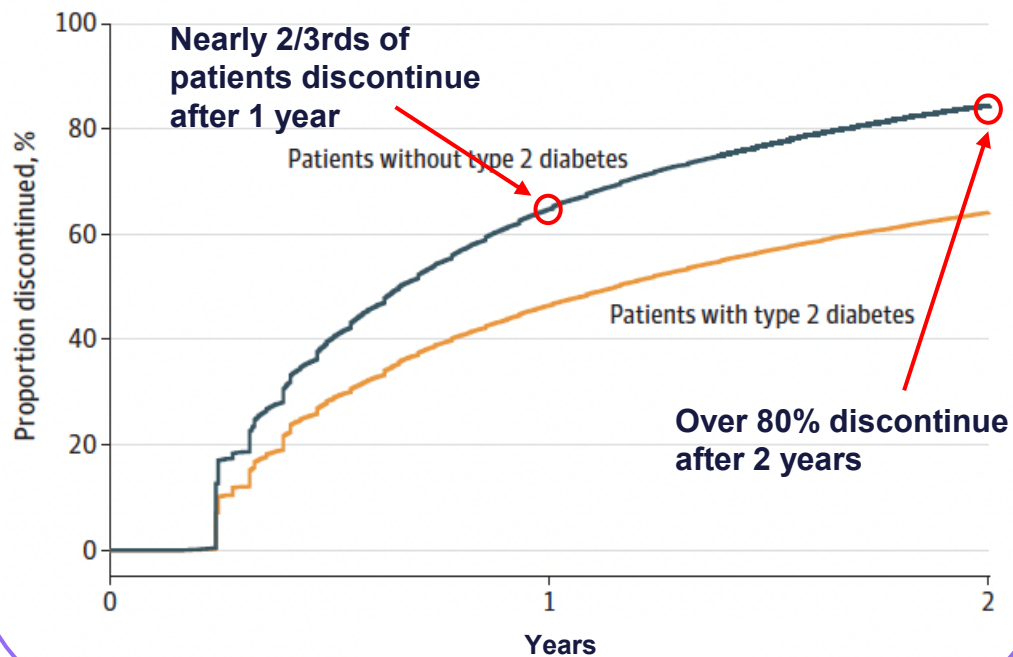
<sup>1</sup> Dandelion Research: Measuring GLP-1 Efficacy in the Real World <https://dandelionhealth.ai/glp1-real-world-efficacy>

<sup>2</sup> Real-World Trends in GLP-1 Treatment Persistence and Prescribing for Weight Management. Issue Brief: May 2024 [https://www.bcbs.com/media/pdf/BHI\\_Issue\\_Brief\\_GLP1\\_Trends.pdf](https://www.bcbs.com/media/pdf/BHI_Issue_Brief_GLP1_Trends.pdf)

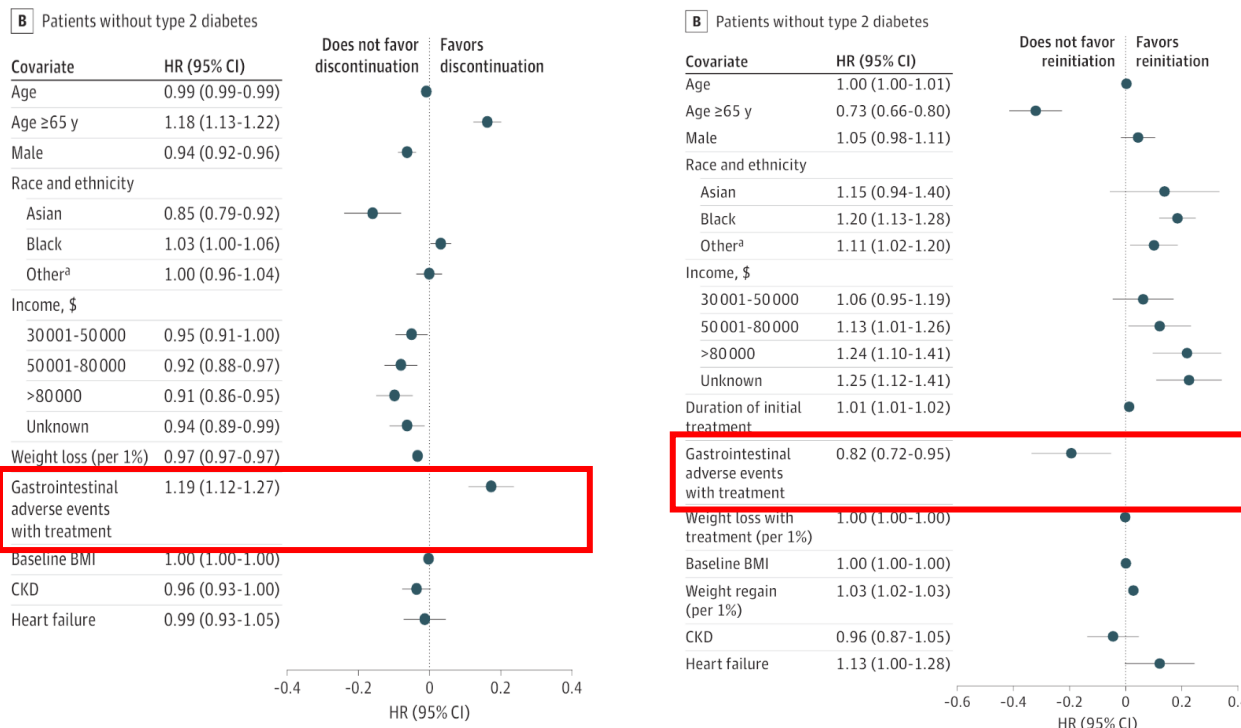
# Pattern of GLP-1 Discontinuation

Most adults with overweight or obesity discontinue GLP-1 RA therapy within one year

Time to Primary Discontinuation of GLP-1 RA Therapy



Discontinuation and Reinitiation Rates Strongly Correlated with GI Intolerability



Source:  
1 Rodriguez et al., Discontinuation and Reinitiation of GLP-1 Receptor Agonists Among US Adults with Overweight and Obesity. JAMA Network Open. 2025;8(1)e2457349  
doi:10.1001/jamanetworkopen.2024.57349

# CB1: Overlooked Non-incretin Target to Tackle Weight Loss

Non-incretins target peripheral receptors and generally do not have central activity

## Incretin-based Approaches, Using Food-intake and Blood-sugar Regulating Hormones:

Weight loss is predominantly driven by caloric restriction, without additional metabolic gains

Current targets:

- GLP-1
- GIP
- Glucagon
- Amylin\*

Adverse events associated with incretins include nausea, vomiting and diarrhea

## Non-incretin-based Approach:

Opportunity for healthier, sustainable weight loss

Current targets:

- **CB1**
- Activin
- Myostatin
- Apelin

## Address fundamental driver of disease:

- Increase energy expenditure
- Target adipose tissue to reduce fat mass + control hyperleptinemia
- Re-establish key metabolic pathways, incl. insulin/leptin sensitivity
- Productive shift in appetite-regulating hormones to curb calorie input safely

**CB1: only non-incretin target clinically validated by multiple agents**

# CB1 Inhibition Can Result in Meaningful Weight Loss, as Demonstrated by Rimonabant and Monlunabant

	16-Week Placebo-Adjusted Weight Loss	GI Tolerability
Monlunabant <sup>1,2</sup>	~6%	~30%
Rimonabant <sup>3</sup>	~3%	~30%
Oral Semaglutide <sup>4</sup> (50 mg)	~5%	~80%

Monlunabant has similar efficacy yet better GI tolerability compared to oral semaglutide

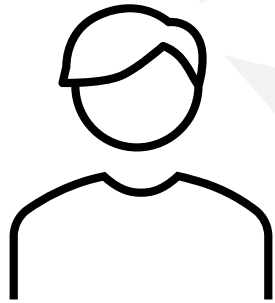
However, monlunabant’s neuropsychiatric adverse events reignited the debate on safety of CB1 inhibition

Source:  
1 Novo Nordisk Press Release Sep 2024. <https://www.novonordisk.com/news-and-media/news-and-ir-materials/news-details.html?id=170501>  
2 Crater et al., Effects of CB1R inverse agonist, INV-202, in patients with features of metabolic syndrome. A randomized, placebo-controlled, double-blind phase 1 study. *Dia. Ob. Metab.* 08 Nov 2023.  
3 Van Gaal et al., SUPPLEMENT 2, FEB 2008  
4 Knop et al., Oral semaglutide 50 mg taken once per day in adults with overweight or obesity (OASIS1): a randomised, double-blind, placebo-controlled, phase 3 trial. *Lancet.* Vol 402.26Aug2023



# Monlunabant – What’s Novo Saying and Doing

Confidence in weight-loss potential of CB1, but knowledge that CNS exposure must be minimized to reduce neuropsychiatric concerns



**Martin Holst Lange,**  
EVP Development at Novo Nordisk

*“The phase 2a results indicate the weight-lowering potential of monlunabant and that further work is needed to determine the optimal dosing to balance safety and efficacy”*

**Novo Nordisk Press Release  
September 2024**

*“When we look at the safety and tolerability profile, it was comparable, albeit at a slightly lower rate than in the dedicated obesity study, basically indicating that we can still have an aspiration of exploring this further in phase 2b with lower doses, looking at weight loss potential, but obviously also—and this has been the intent from the get-go—ruling out a potential safety concern.”*

**Novo Nordisk 2024 Earnings Call  
Response to an analyst's question  
about monlunabant DKD data  
compared to obesity data**

## Ongoing Clinical Research:

**Phase 1 Completed:** A Research Study Investigating Safety and Concentration in the Blood After One Dose Tablet of the New Medicine Monlunabant in Healthy Weight Japanese and Caucasian Men (NCT06542536)

**Phase 2b Planned in 2025/2026**

## Ongoing Preclinical Research:

**INV-347** is a second-generation CB1 small molecule for which Novo has shared multiple updates + planned upcoming obesity conferences.

*INV-347: a next-generation cannabinoid receptor 1 inverse agonist, promotes body weight loss in obese mice*

EASD 2025 – Session 38: New Medications on the Horizon



# Nimacimab Target Product Profile

Opportunity across multiple treatment settings

	Monotherapy	Maintenance	Combination
Addressable Population	Patients who are contraindicated, intolerant, and/or unresponsive to GLP-1 therapy		Patients with high BMI or who require additional weight loss after reaching a plateau on GLP-1 therapy
Opportunities	Novel anti-obesity drug required beyond GLP-1s and other incretin-based approaches	Physicians recognize the need for chronic treatment and would value a more tolerable option than current GLP-1s	Body weight reduction is most important clinical endpoint; a more potent and tolerable regimen will support utilization and product perception


THIS REPRESENTS A MULTI-BILLION DOLLAR OPPORTUNITY

# Why Nimacimab: The Future of Metabolic Tx


Nimacimab clinical and preclinical differentiation

## Established to Date


### Durable weight loss and restoration of metabolic homeostasis

 Nimacimab reduces fat mass but preserves lean mass and modulates key hormones (↑ GLP1, ↓ leptin, ↓ resistin) in DIO mice. Weight loss is durable for at least 27 days post-nimacimab removal.


### Improves glycemic control

 Nimacimab reduces fasting blood glucose and fasting insulin, improves glucose tolerance in DIO mice.


### Modulates lipid metabolism

 Nimacimab significantly reduces steatosis and serum cholesterol in DIO mice.


### Reduces obesity-induced inflammation and fibrosis

 Nimacimab reduces liver fibrosis and macrophage infiltration and lowers multiple serum inflammation markers (IL12p40, TNF-α, leptin, C5, IL23, IL4 and IL33) in DIO mice.

### Additive with incretin therapies

 Greater than 30% weight loss when nimacimab was combined with the dual GLP-1/GIP agonist (tirzepatide) in DIO mice.

### Potency and MOA

 Nimacimab acts as an allosteric inhibitor of CB1 with potency similar to small-molecule inverse agonists.

## Looking Ahead to the Rest of 2025

### Clinical proof-of-concept



Initial data from the CBeyond Phase 2a study is expected late Q3/early Q4 2025.

### Phase 2b study design



Larger Phase 2 study evaluating multiple doses and dose frequency to determine final Phase 3 dose.

### Optimized dose formulation



Improve formulation for final Phase 3 dose.

### New preclinical data



Established hCB1 mouse colonies will provide opportunities for multiple new preclinical readouts for the rest of 2025 and 2026.

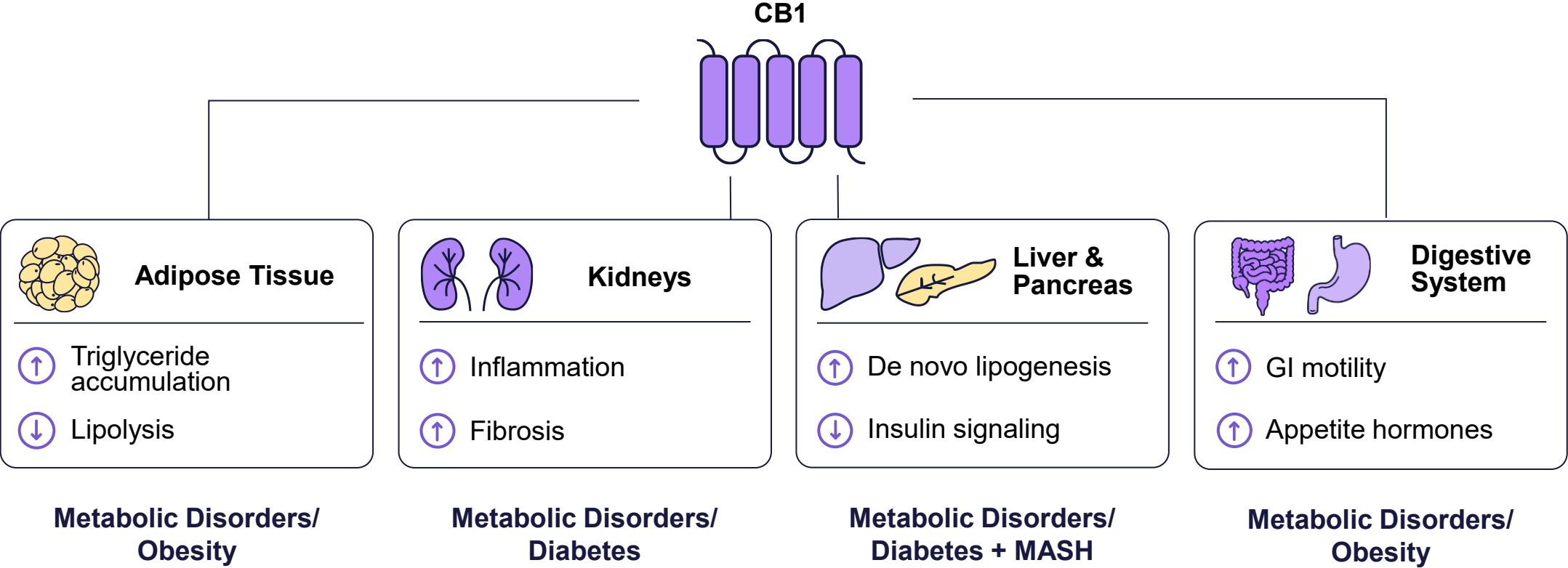
# Nimacimab

Targeting CB1 – Broad Metabolic Potential with  
Clinically Validated Mechanism of Action



# Peripheral CB1 Signaling: Metabolic-focused Targets

Active CB1 engagement promotes inflammation, fibrosis, and metabolic dysfunction; blocking peripheral CB1 can reverse negatively-trending pathologies



# Nimacimab: Peripherally-restricted CB1-inhibiting Antibody

## Long Half-life

- Stable antibody with half-life of 18-21 days (potential bi-weekly or monthly dosing)
- Single mutation in the hinge region that prevents antibody Fab exchange

## Exclusion from Brain

- Multiple NHP studies: background levels in CNS/brain (even at high doses)
- No accumulation of antibody in CNS/brain despite multiple weekly doses
- NOAEL > 75 mg/kg. MTD not reached

## Differentiated Inhibitor

- Functions as both an **antagonist** and an **inverse agonist**
- Binds allosteric site and non-competitively inhibits CB1, independent of agonist

## Safe & Effective Drug

- Achieve ~8x peripheral CB1 inhibition while ~600x below CB1 inhibition in brain
- Allosteric binding maintains peripheral CB1 inhibition with increased endocannabinoids
- Supports a favorable therapeutic index to safely and effectively treat obesity

# Superior Exclusion of CB1 Inhibitor from Brain; No Neuropsychiatric Side Effects

NHP and Ph1 data highlight nimacimab’s lack of CNS accumulation

Cyno	Day 1 (post 1 <sup>st</sup> dose)	Day 8 (post 2 <sup>nd</sup> dose)	Day 15 (post 3 <sup>rd</sup> dose)
CSF/Serum 3 mg/kg IV q1w	BLQ	<0.02%	<0.02%

Phase 1 data showed absence of negative neuropsychiatric effects in humans

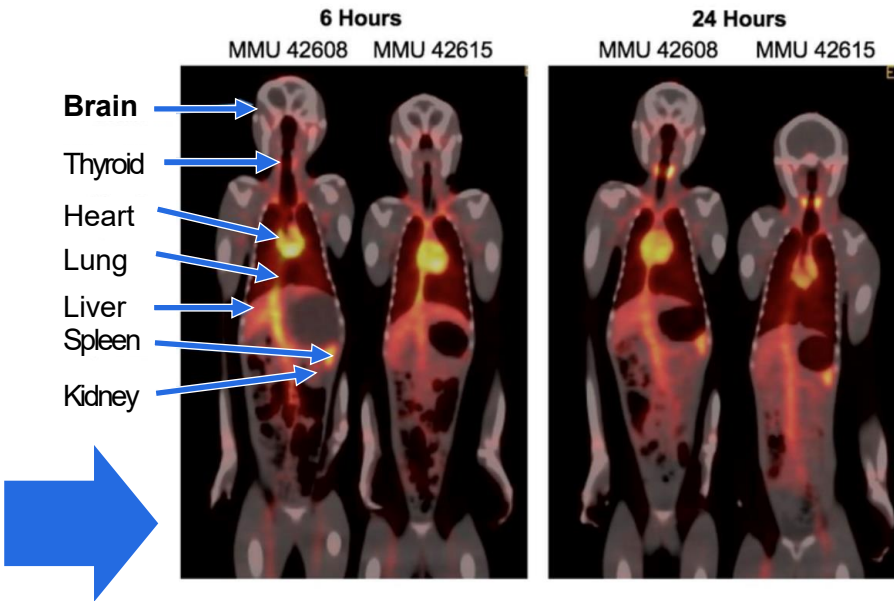
Cyno	9 hours
CSF/Serum 40 mg/kg IV	0.01%

— Level in CSF determined using quantitative ELISA

Rhesus	48 hours
CSF/Plasma	0.05%
Prefrontal Cortex/Plasma	0.83%
Cerebellum/Plasma	0.84%
Liver/Plasma	16.44%

— Uptake of isotope<sup>124</sup>-labeled nimacimab antibody in tissues

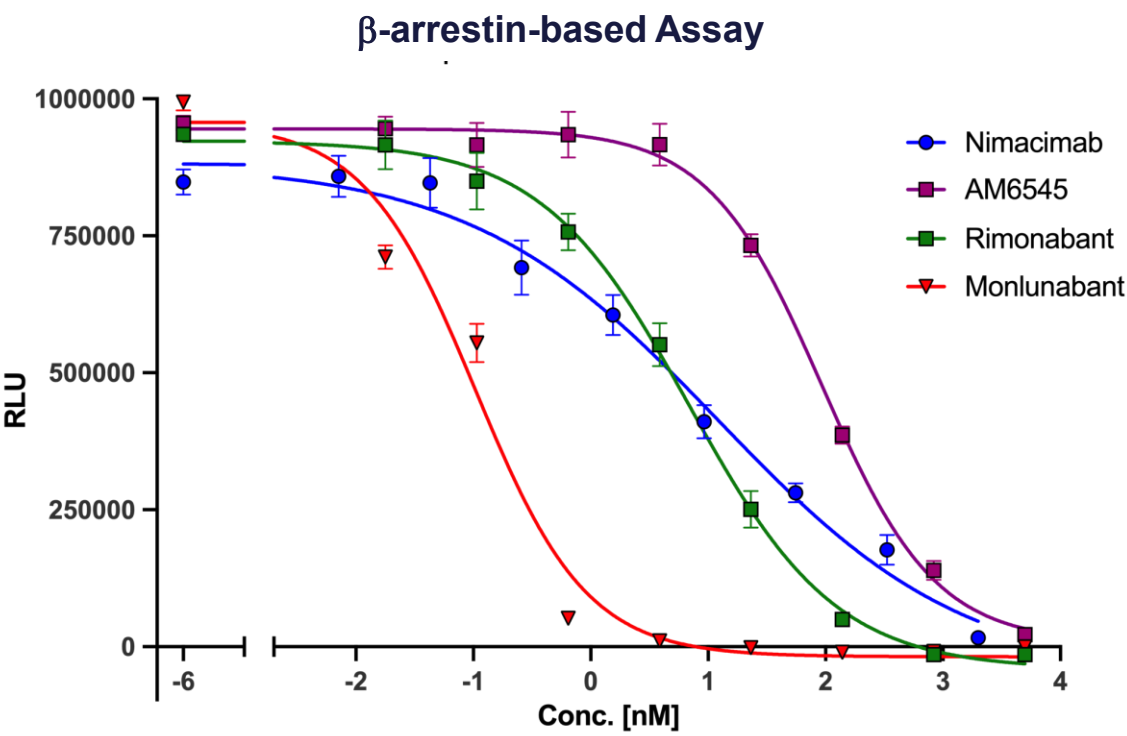
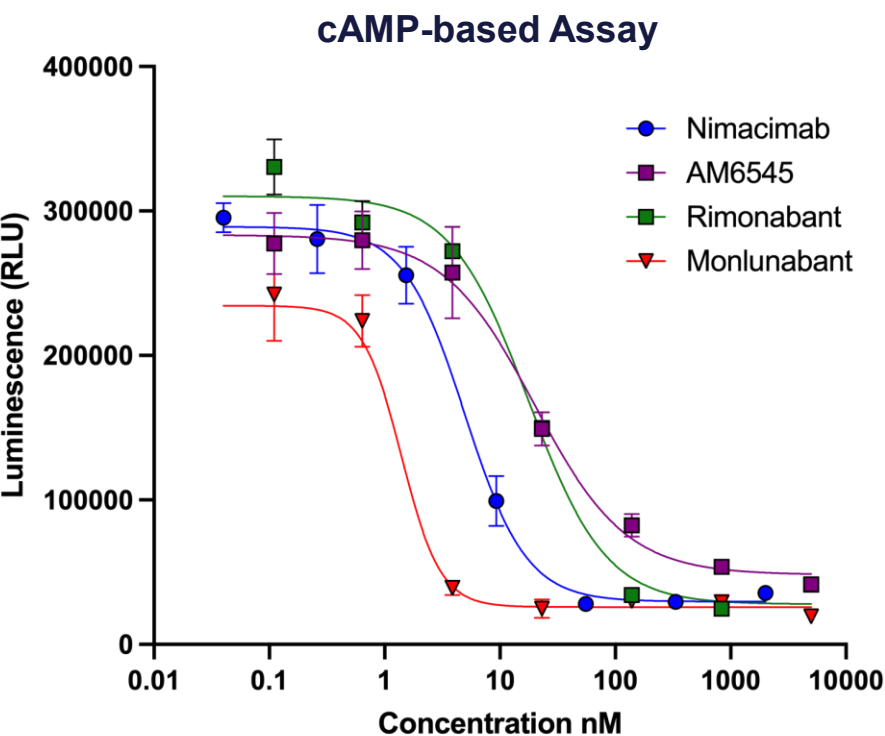
PET imaging also confirmed broad antibody distribution in tissues having upregulated CB1 expression, with no accumulation in the brain



- Tissues harvested without perfusion
- Tissue to plasma assuming 1 mL = 1 g

# Nimacimab Potency Similar to Small Molecule Inhibitors

Based on both cAMP and  $\beta$ -arrestin assays



CB1 Inhibitor	IC <sub>50</sub> (nM)
Nimacimab	4.96
AM6545 (neutral antagonist)	19.95
Rimonabant	17.6
Monlunabant	1.4

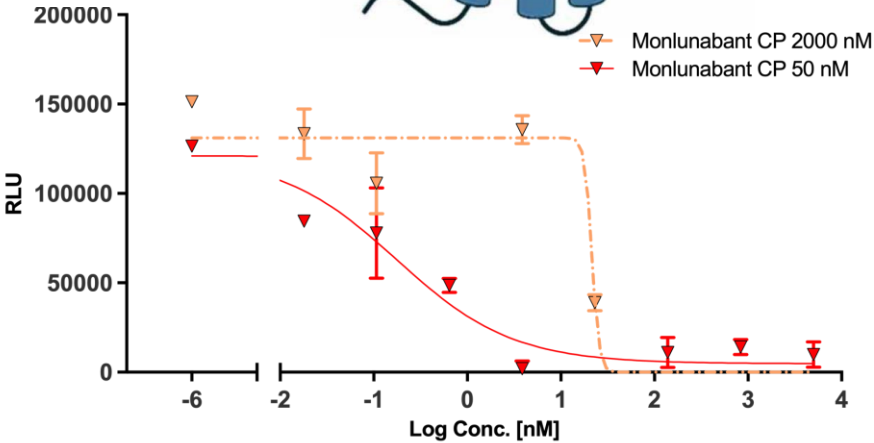
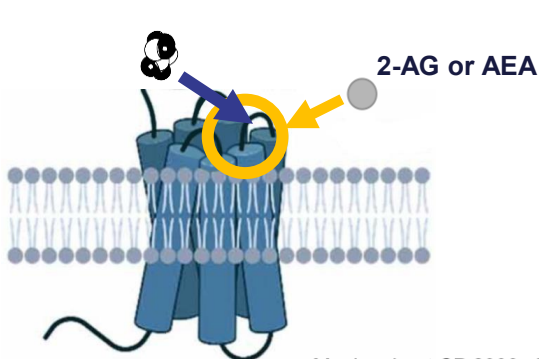
CB1 Inhibitor	IC <sub>50</sub> (nM)
Nimacimab	10.83
AM6545 (neutral antagonist)	47.62
Rimonabant	5.36
Monlunabant	0.07



# Non-competitive CB1 Inhibition: Differentiation of Nimacimab’s Allosteric Modulation

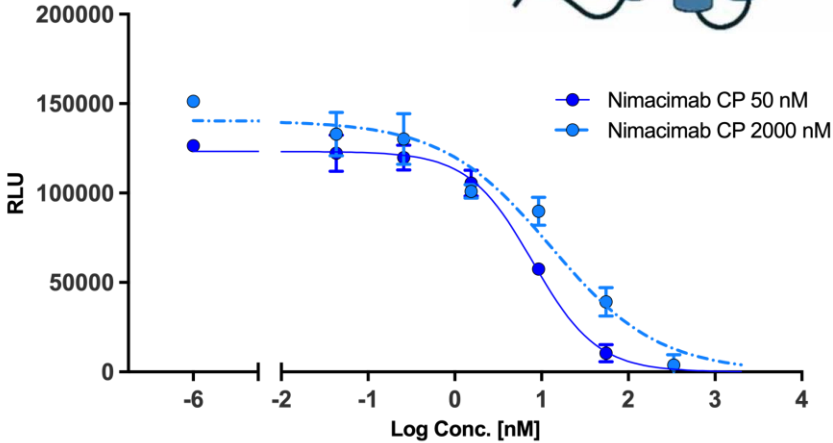
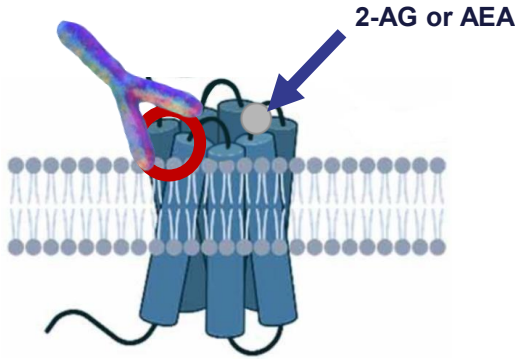
## Monlunabant

Monlunabant competes with AEA/2-AG for binding to the orthosteric site



## Nimacimab

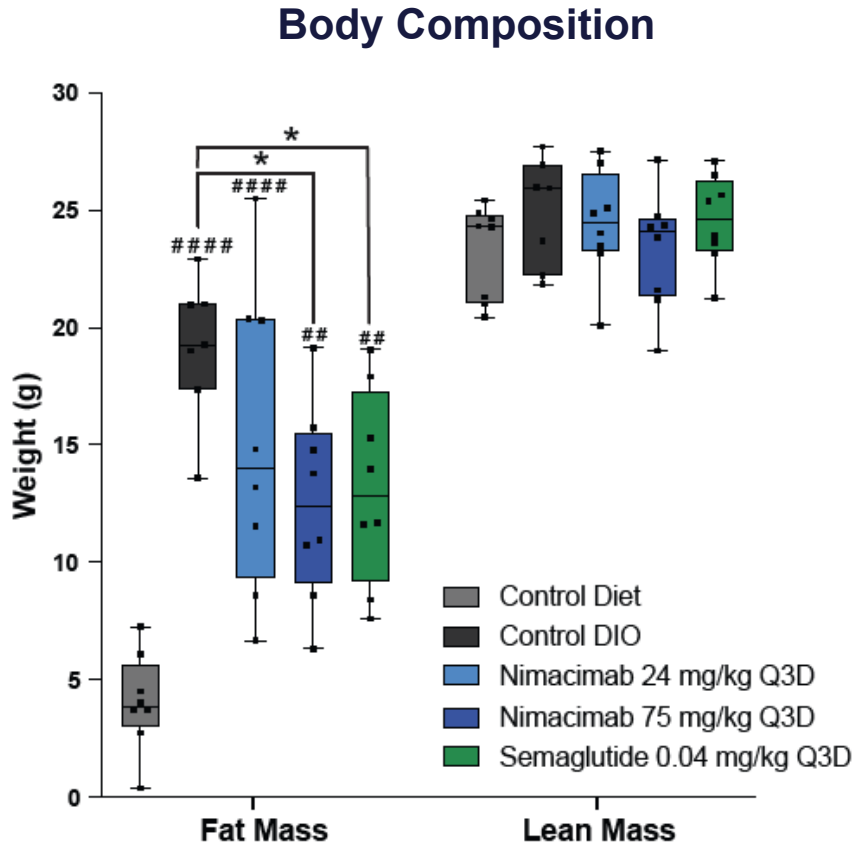
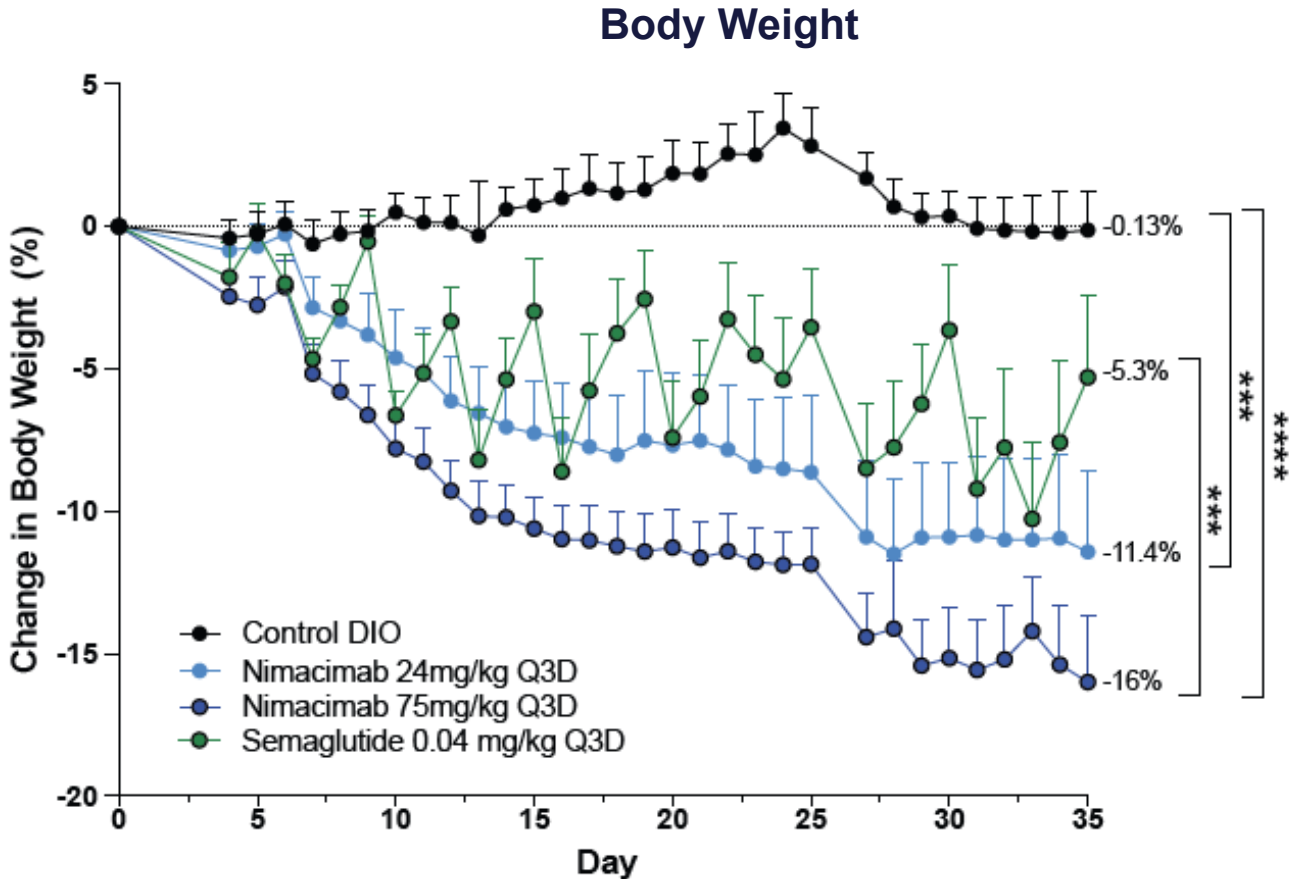
Nimacimab non-competitively binds allosteric site; AEA/2-AG binds the orthosteric site



CB1 Inhibitor	Agonist: CP55940		Reduction in Fold Potency
	EC <sub>80</sub> (50 nM)	40x EC <sub>80</sub> (2000 nM)	
Nimacimab IC <sub>50</sub> (nM)	7.9	12.7	1.6
Monlunabant IC <sub>50</sub> (nM)	0.2	21.44	107

# Favorable Comparison of Nimacimab and Semaglutide in Diet-Induced Obesity Model

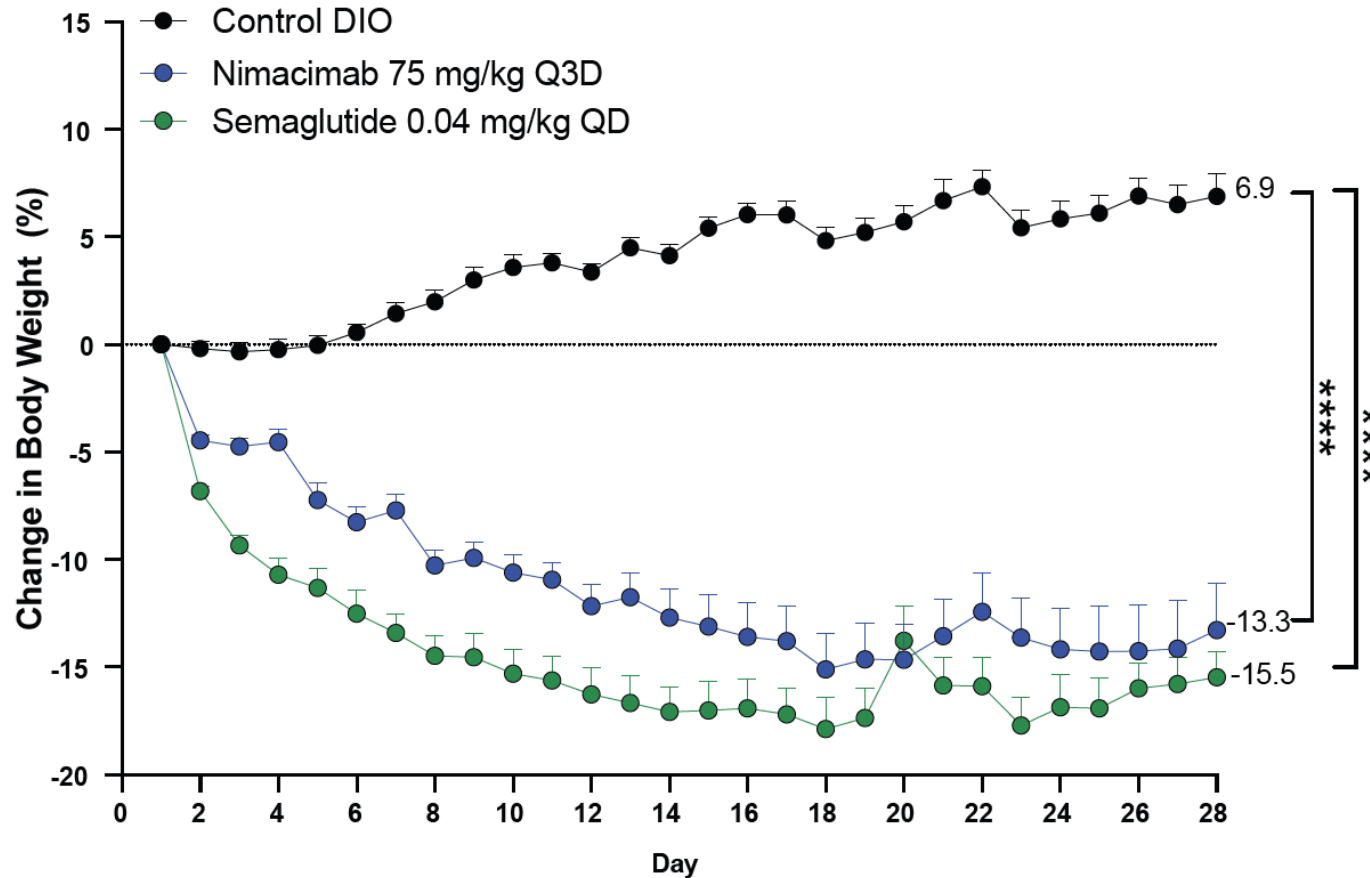
Nimacimab shows dose-dependent weight loss, reduced fat mass, and lean mass preservation



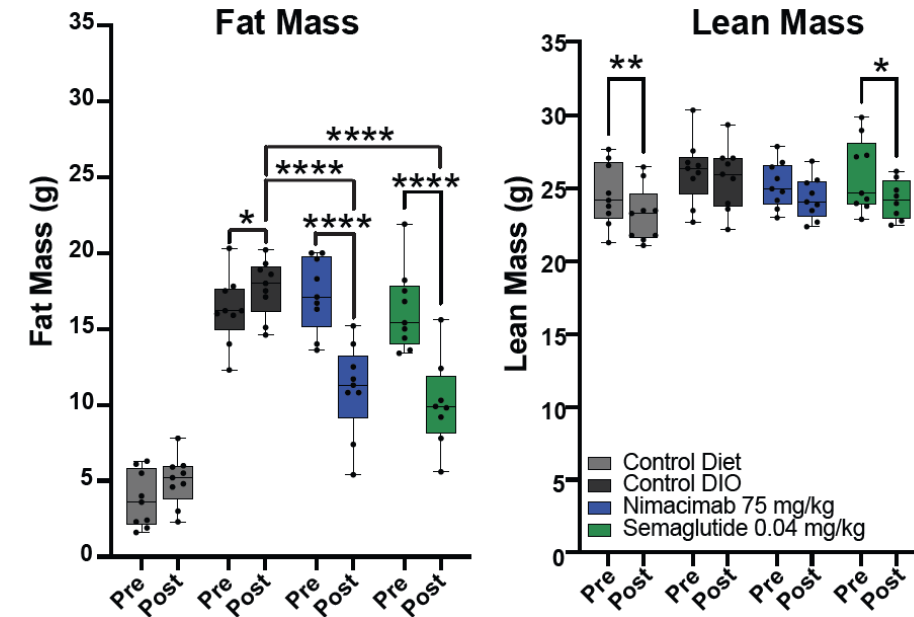
Body weight and composition analyses performed with two-way ANOVA repeated measurements. Tukey multiple comparison test was then performed for all pairwise comparisons. Body weight reporting at day 36 of treatment. Body composition measured with echo MRI on day 35

# Repeat DIO Study with Independent Lab: Similar Weight Loss with Reduced Fat Mass

Body Weight



Body Composition

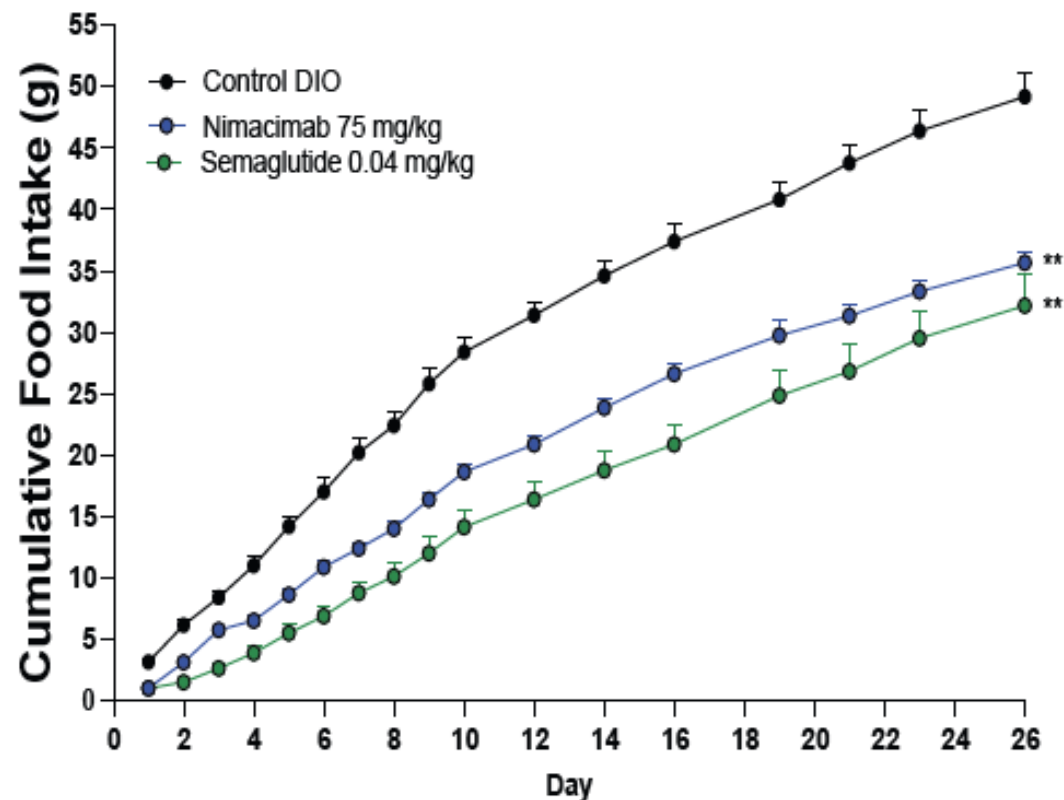


Body weight and composition analyses were performed with two-way ANOVA repeated measurements. Tukey multiple comparison test was then performed for all pairwise comparisons. Body weight reporting through 28 days of treatment. Body composition measured with echo MRI on day 26.

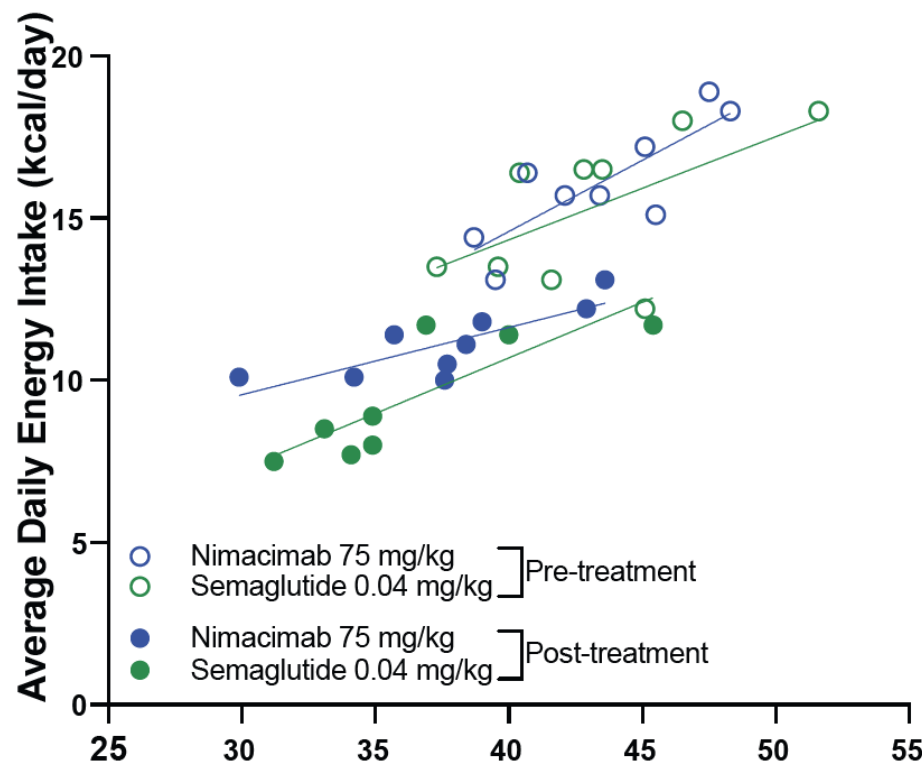
# Nimacimab Led to Reduced Food Intake

Reduced caloric intake with nimacimab comparable to semaglutide – supporting centrally mediated appetite suppression without CNS penetration

Cumulative Food Intake



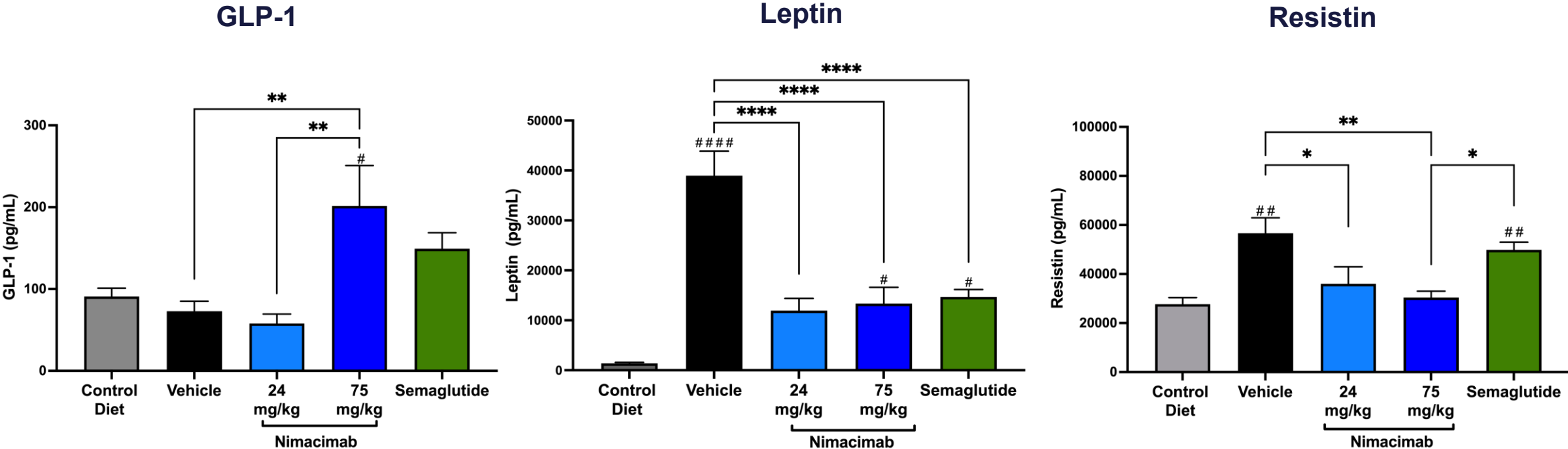
Caloric Intake vs Body Weight



Mixed-effect analysis of cumulative food intake, followed by Tukey's multiple comparisons test. Cumulative food intake reporting at day 28 of treatment. The pre-treatment average daily energy intake was calculated from day -14 to day 0. The pre-treatment weight was measured on day 1 before dosing. The post-treatment average daily energy intake was calculated from day 1 to day 28 and weight was measured on day 28. \*  $p < 0.05$ , \*\*  $p < 0.01$

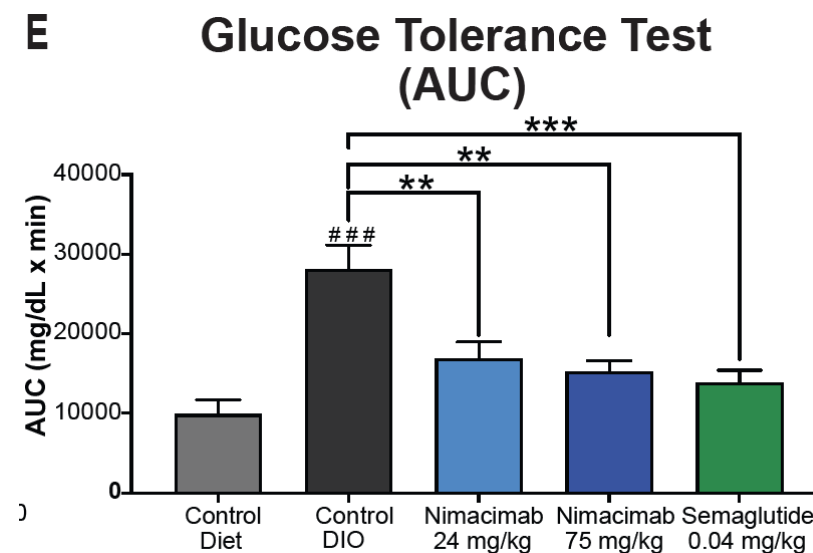
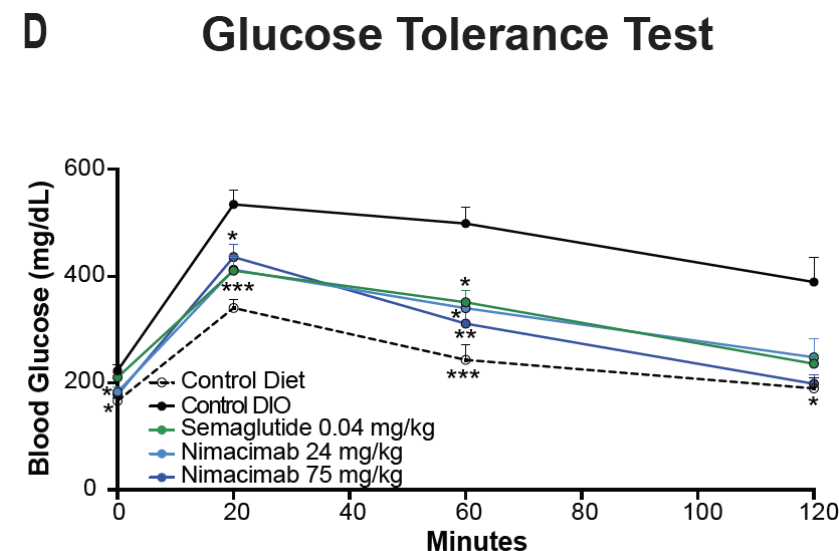
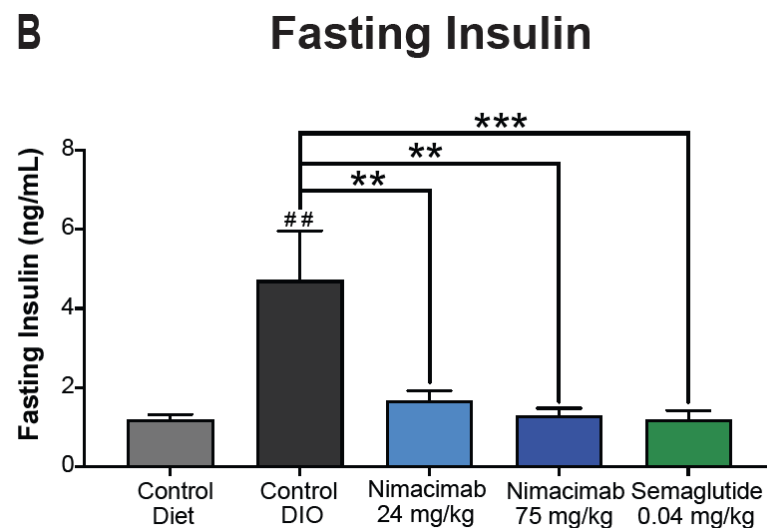
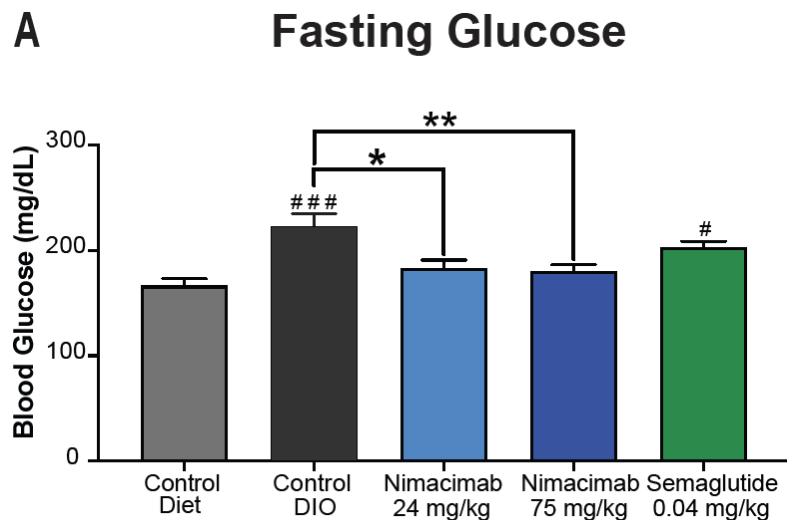
# Productive Modulation of Key Hormones with Nimacimab

Peripheral CB1 Inhibition Modulates Gut and Adipose Tissue Hormones Important For Central Control of Appetite



Serum was collected on day 36 and hormone levels were determined with a Bio Plex Multiplex immunoassay. For all analyses: one-way ANOVA repeated measurements (Tukey multiple comparison test). # denotes significance to the control diet group.

# Nimacimab Improves Glycemic Control



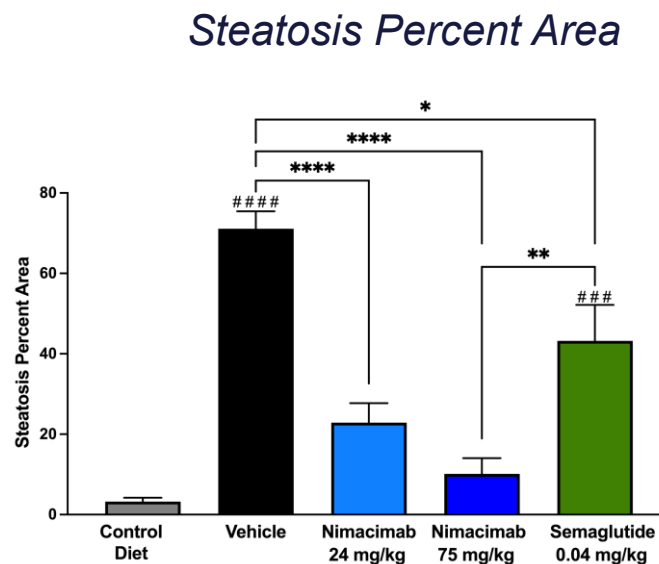
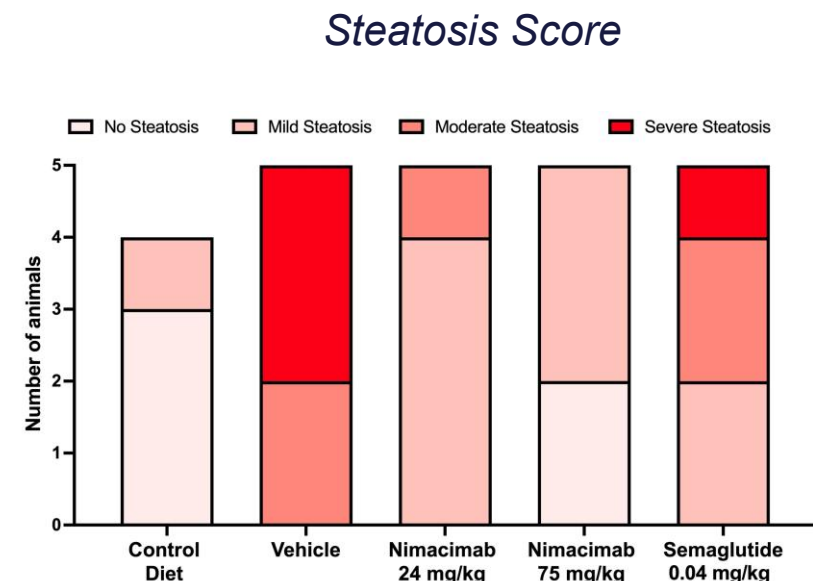
Day 27 mice were fasted for 4h before collecting serum to measure glucose and insulin levels. Day 27 mice were fasted for 4h before ip injection of 2g/kg glucose. GTT analyses: 2-way ANOVA repeated measurements (Tukey multiple comparison test); baseline subtracted AUC analysis was performed with a one-way ANOVA with Tukey multiple comparison test.



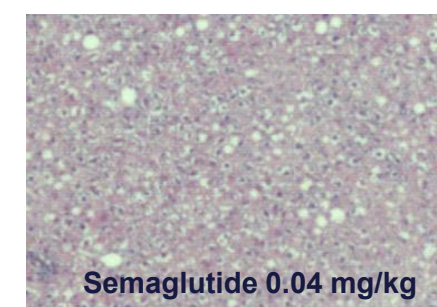
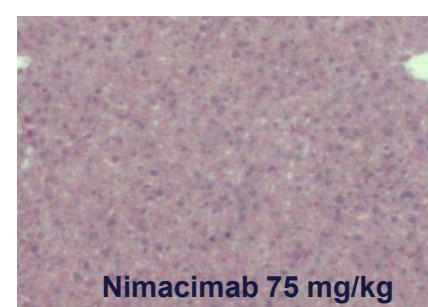
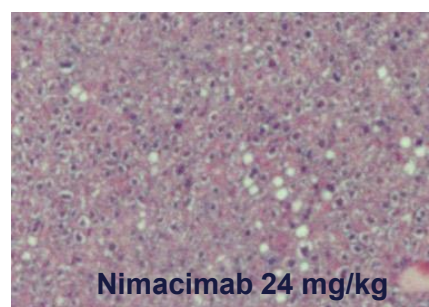
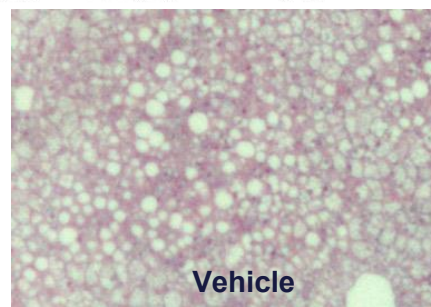
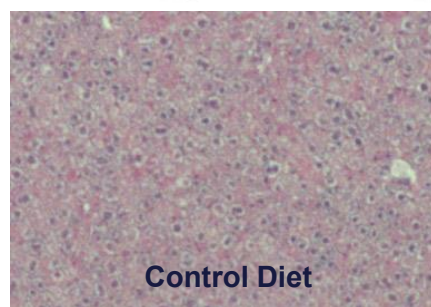
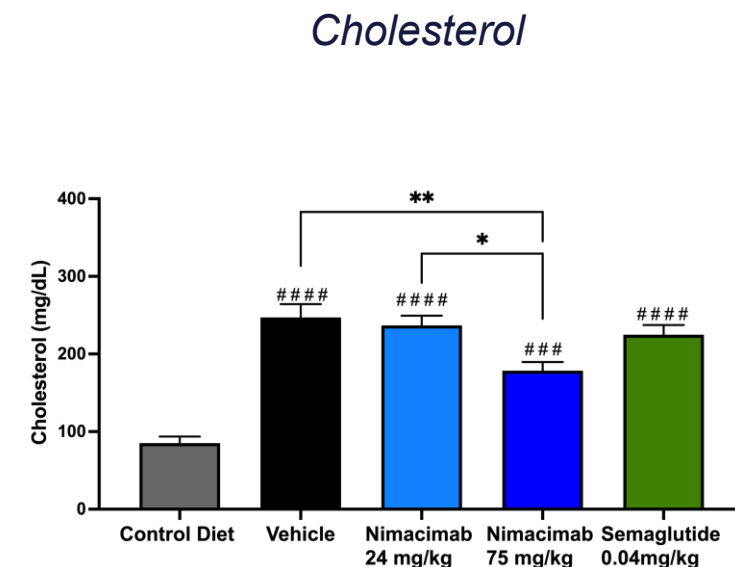
# Nimacimab Treatment Promotes Lipid Metabolism

Dose-dependent reduction in steatosis and serum cholesterol

## Steatosis Analysis (Liver)



## Serum



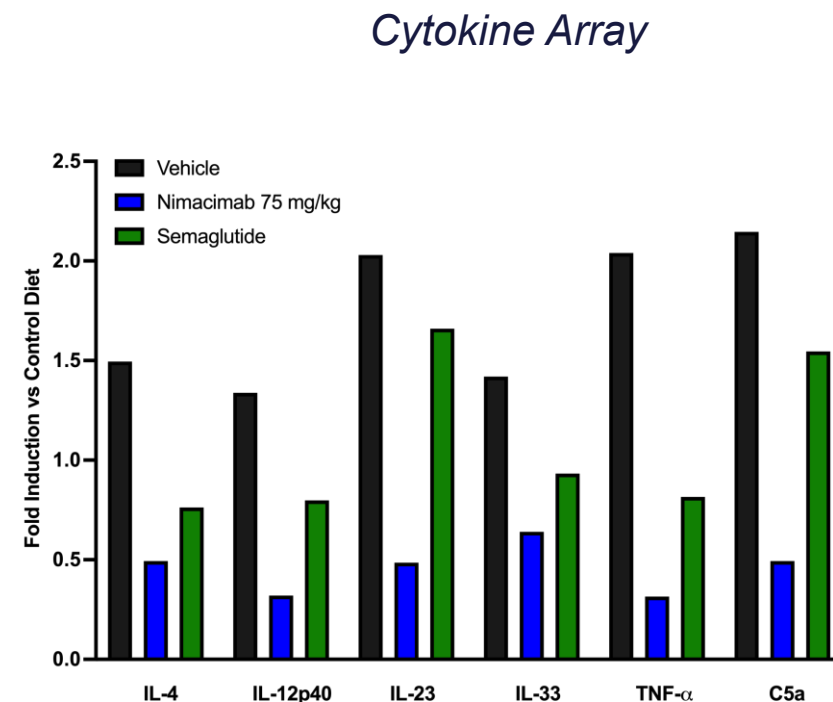
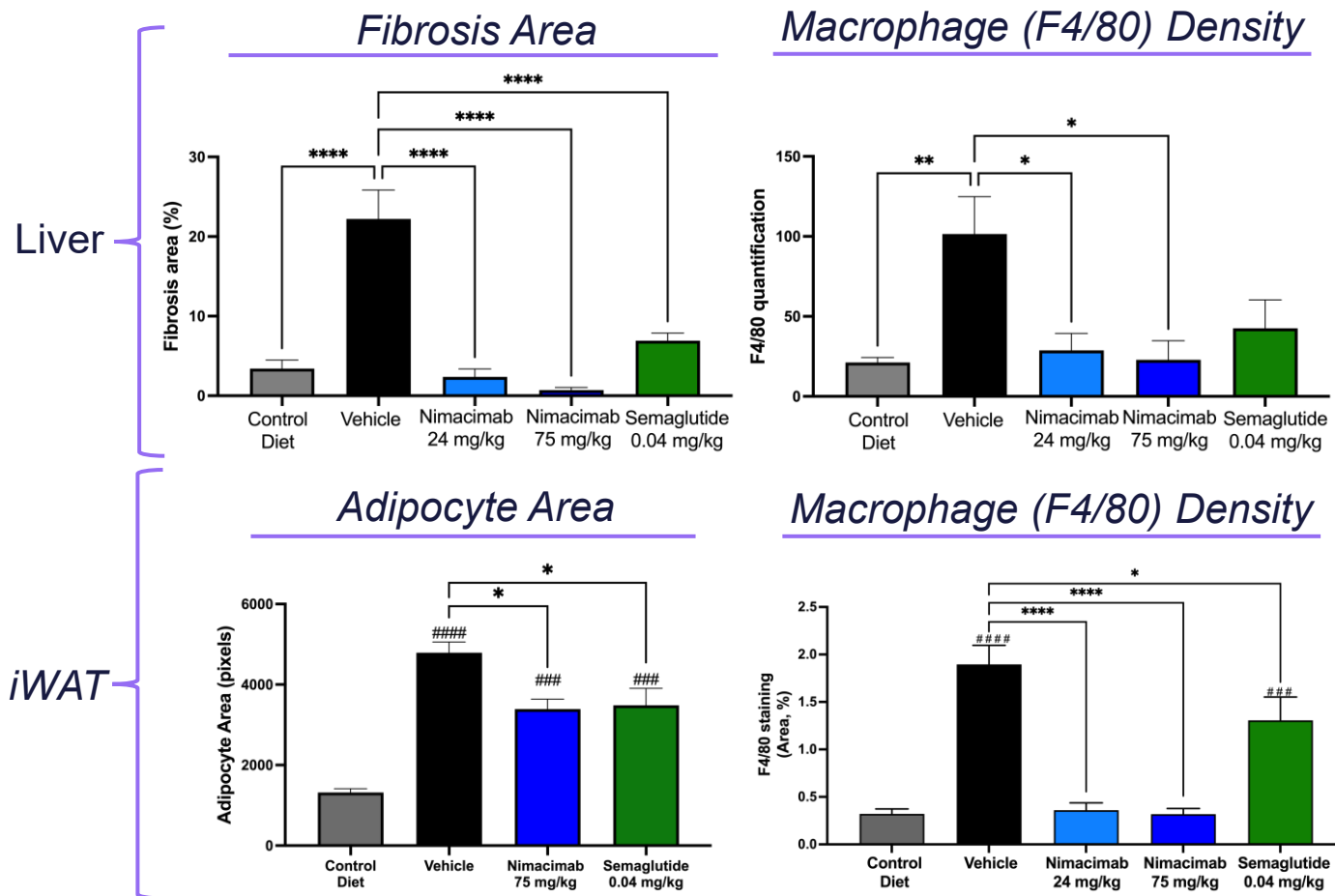
Liver sections scored by a pathologist using computer-aided analysis. A score of 0-3 was assigned based on % of hepatocytes with fat. 0 = no steatosis (<5%), 1=mild (5-33%), 2=moderate (>33-66%), 3=severe steatosis (>66%). (B) steatosis percent area was analyzed using computer-aided analysis with Cellprofiler. (C) Cholesterol levels were measured in serum using a commercial kit. n=4-5 One-way ANOVA followed by Tukey's multiple comparisons test. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ , \*\*\*\* $p < 0.0001$ . #### $p < 0.001$  vs control diet.



# Nimacimab Improves Obesity-related Inflammation

## Reduced Inflammation, Fibrosis, and Adipocyte Area

## Serum Inflammation Markers

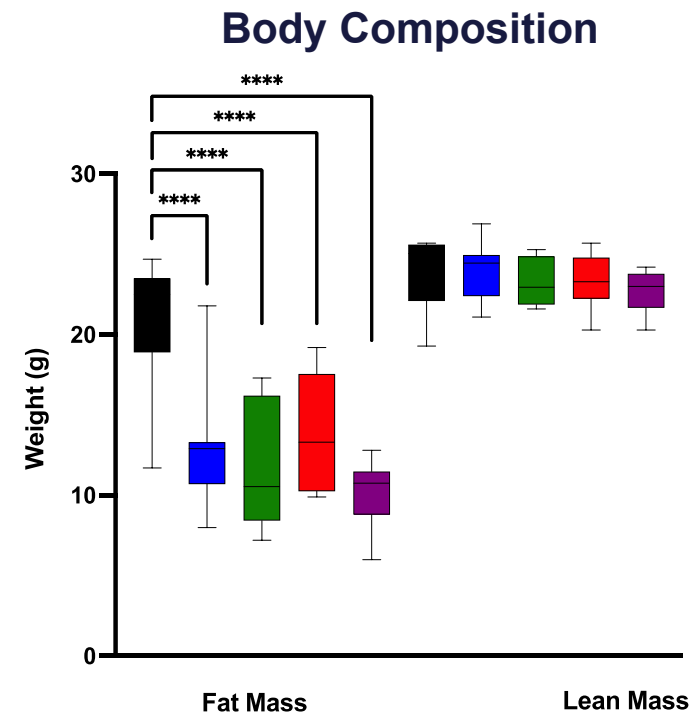
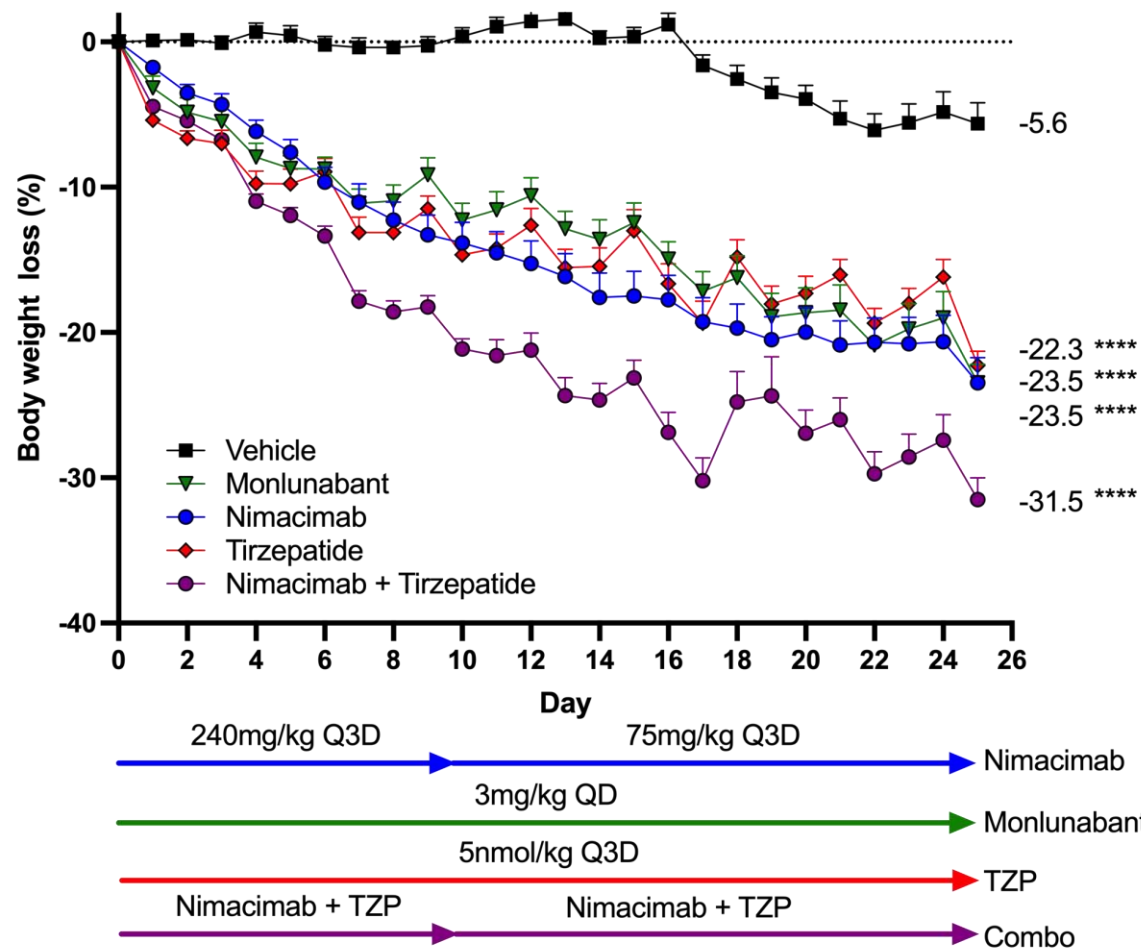


Serum samples were pooled for each group (n=7-8 per group) and assayed for cytokine expression using the Proteome Profiler Mouse XL Cytokine Array.

Four fields per slide were quantified for liver F4/80 staining and five for iWAT F4/80 staining. Two to three fields per slide were quantified for Picrosirius Red staining (fibrosis). Three fields per slide were quantified for adipocyte area in iWAT. Analysis was performed using a one-way ANOVA with a Tukey multiple comparison test. # denotes significance to the control diet group. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ , \*\*\*\* $p < 0.0001$ .

# Potential for Combination with Tirzepatide

Improved weight loss and body composition in diet-induced obesity model using clinically translatable dosing of nimacimab

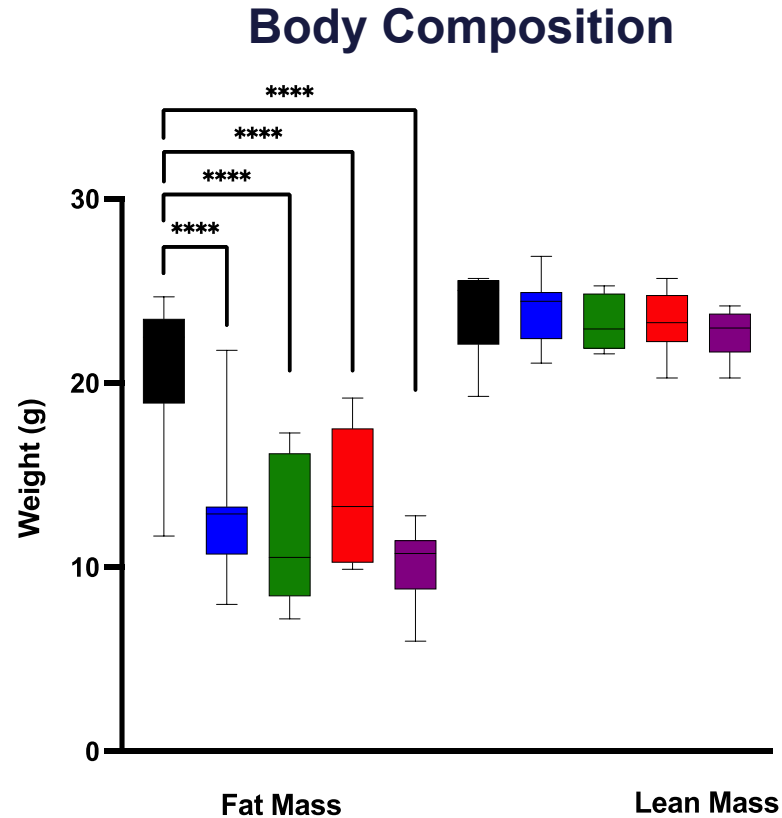


Nimacimab was dosed at 240 mg/kg on days 0, 3, 6, and 9. The nimacimab dose was lowered to 75 mg/kg on days 12, 15, 18, 21, and 24. This dosing provides a similar exposure to translate this DIO model to our Ph2 clinical dose based on PK studies.

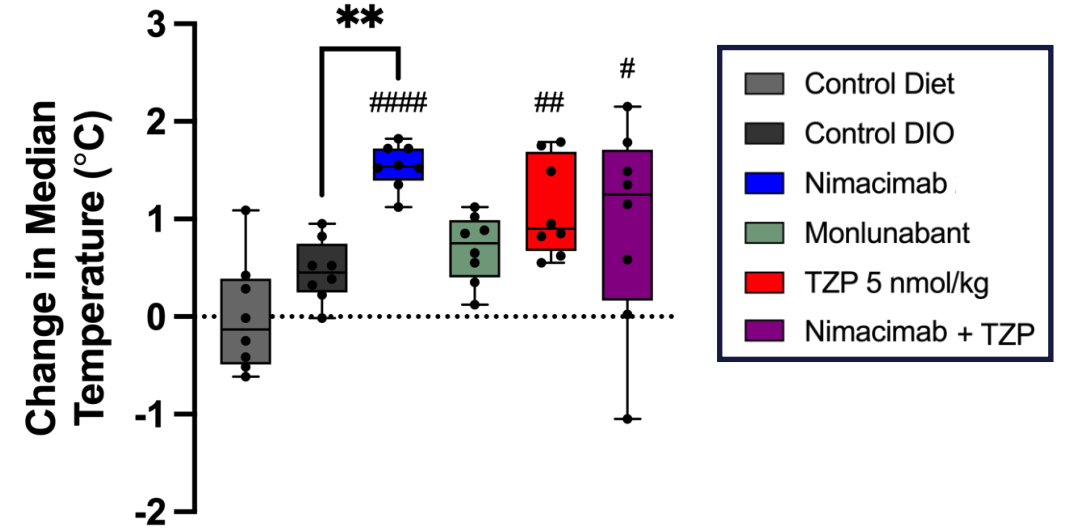
Body weight and composition analyses were performed with two-way ANOVA repeated measurements. Tukey multiple comparison test was then performed for all pairwise comparisons. Body weight reporting at day 25 of treatment. Body composition was measured with EchoMRI on day 25. Only comparisons against vehicle are plotted. \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ , \*\*\*\*  $p < 0.0001$

# Nimacimab Improves Quality of Body Composition

Reduced fat mass while improved thermogenesis in BAT



### Thermogenesis in Brown Adipose Tissue



Body weight and composition analyses were performed with two-way ANOVA repeated measurements. Tukey multiple comparison test was then performed for all pairwise comparisons. Body weight reporting at day 25 of treatment. Body composition was measured with EchoMRI on day 25. Only comparisons against vehicle are plotted. The temperature of brown adipose tissue (BAT) of freely moving mice was measured using an FLIR infrared thermographic camera. For statistical analysis, a mixed effect analysis was followed by Tukey's multiple comparisons test. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ , \*\*\*\* $p < 0.0001$ . # $p < 0.05$ , ## $p < 0.01$ , #### $p < 0.0001$  vs control diet.

# Summary of Initial Nimacimab Studies

- **Nimacimab is a humanized anti-CB1 antibody with key differentiators**
  - Highly restricted to peripheral tissues (orders of magnitude beyond small molecules)
  - Binds to allosteric site on CB1 – a non-competitive antagonist and an inverse agonist
  - Maintains potency in the presence of elevated endocannabinoids (typical with obesity)
- **Efficacy observed in mouse obesity model (DIO)**
  - Significant dose-dependent weight loss (16-23%) with associated fat mass loss
  - Reproducible efficacy and biomarker data with a repeat study at an independent lab
  - Similar efficacy compared to monlunabant and semaglutide
  - Combination with tirzepatide demonstrates the potential for added efficacy
- **Nimacimab-associated biomarker data support coordinated MOAs (DIO)**
  - Reduced caloric intake – in part through peripheral modulation of hormones
  - Improved glycemic control
  - Improved lipid metabolism and energy expenditure
  - Reduced obesity-induced inflammation

# Nimacimab's Differentiation

## Differentiated Receptor Engagement

**Allosteric modulation leads to non-competitive inhibition and superior potency in disease states.**



## Superior Exclusion from the Brain

**As an antibody, nimacimab has little to no penetration into the brain, resulting in improved safety compared to current small molecule CB1 inhibitors.**



## Clinical and Preclinical Validation

**CB1 inhibition for weight loss has been validated in multiple preclinical studies, as well as large Phase 2 and 3 studies.**



# Clinical & Regulatory

CBeyond<sup>1</sup>

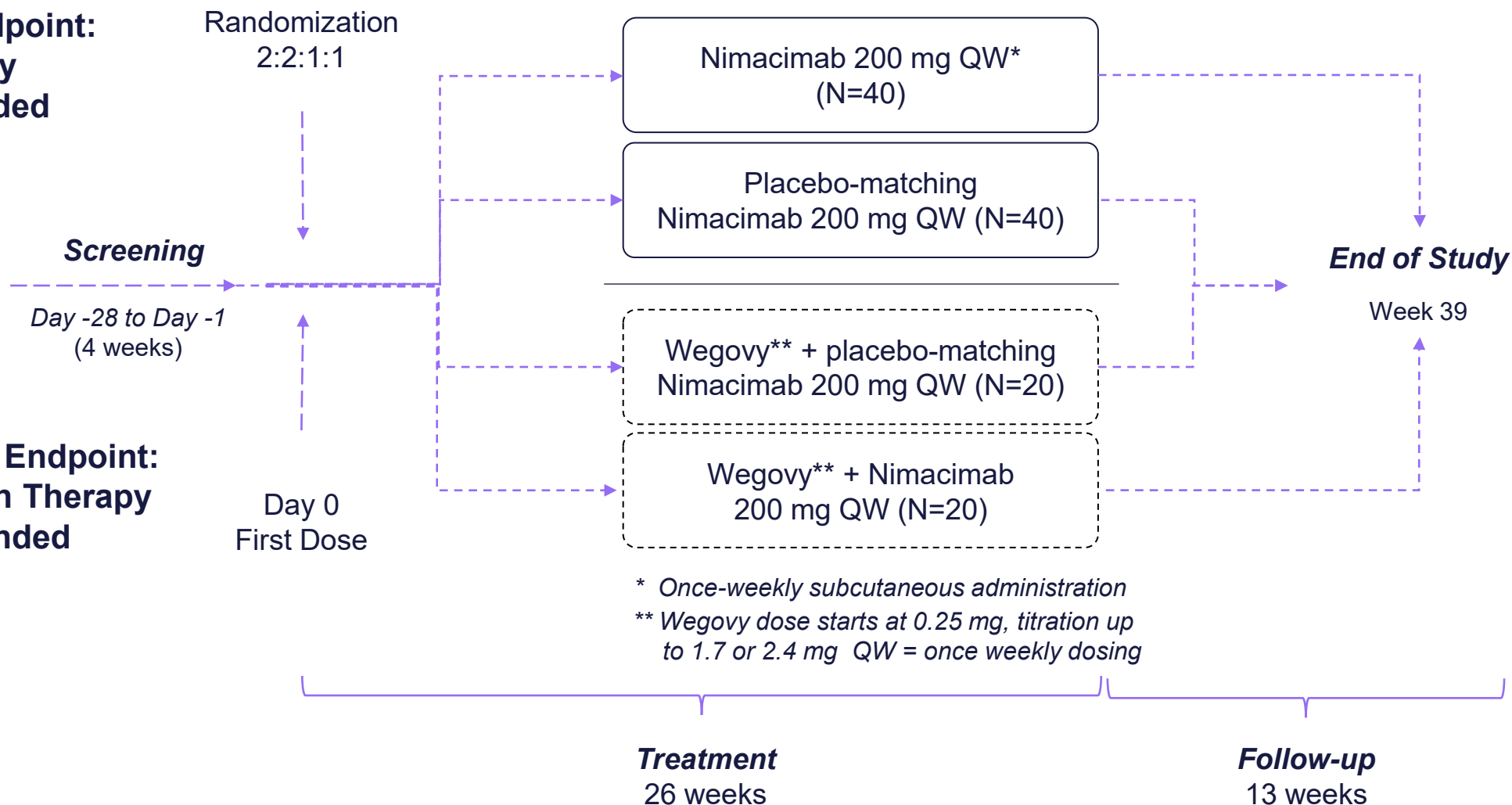


# Phase 2a CBeyond™ Trial: Patients with Overweight or Obesity

Enrollment completed for initial 26-week treatment period

**Primary Endpoint:**  
**Monotherapy**  
**Double-blinded**

**Exploratory Endpoint:**  
**Combination Therapy**  
**Partially Blinded**





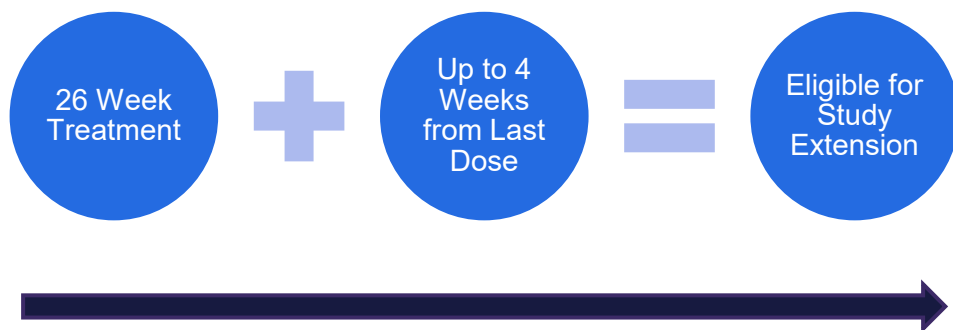
# Nimacimab and Adverse Events of Interest

- AEsIs associated with CB1 inhibitors are concerned with neuropsychiatric and neurological effects
- Skye has included multiple questionnaires and tests to evaluate the frequency of AEsIs, which are provided to and reviewed by the DSMC

Questionnaire/Test	Purpose
<b>Columbia-Suicide Severity Rating Scale (C-SSRS)</b>	Validated questionnaire: identifies if someone is at risk for suicide, assesses severity and immediacy of risk, and gauges level of support the person needs.
<b>Patient Health Questionnaire-9 (PHQ-9)</b>	Validated to measure frequency and severity of depressive symptoms.
<b>SF-36v2® Acute Form</b>	Designed as brief yet comprehensive measure of general health status. Consists of eight scales yielding two summary measures: physical and mental health.
<b>IWQOL-Lite CT</b>	A 20-item measure with two primary domains (physical [7 items] and psychosocial [13 items]). Validated based on FDA guidance on patient-reported outcomes.
<b>Patient Global Impressions of Severity (PGI-S) for Physical Activity</b>	Global index used to rate the severity of a specific condition. This index evaluates limitations in a participant's physical activity.
<b>Cognitive Testing with Digit Symbol Substitution Test (DSST)</b>	Measures attention, processing speed and executive function. These cognitive domains are particularly relevant as they are important for everyday activities such as driving and both occupational and independent living skills.
<b>Scripted Neurological Questionnaire</b>	Battery of questions and evaluations that assess a participant's cognitive, motor and sensory function.

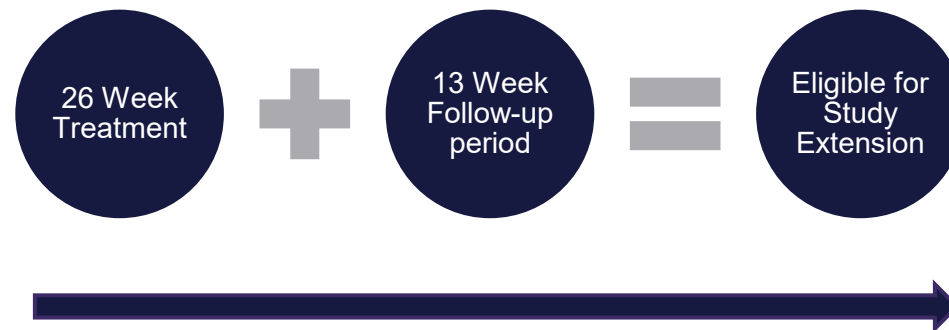
# CBeyond™ Phase 2 Study Extension

## Continuing Combination Arms (52 Weeks)



- ✓ Participants who have completed 26 weeks of treatment, are still enrolled in the study, and are still in the 4-week period post last dose of study drug are eligible to enroll into the study extension (maintaining current assigned therapy and blinding).

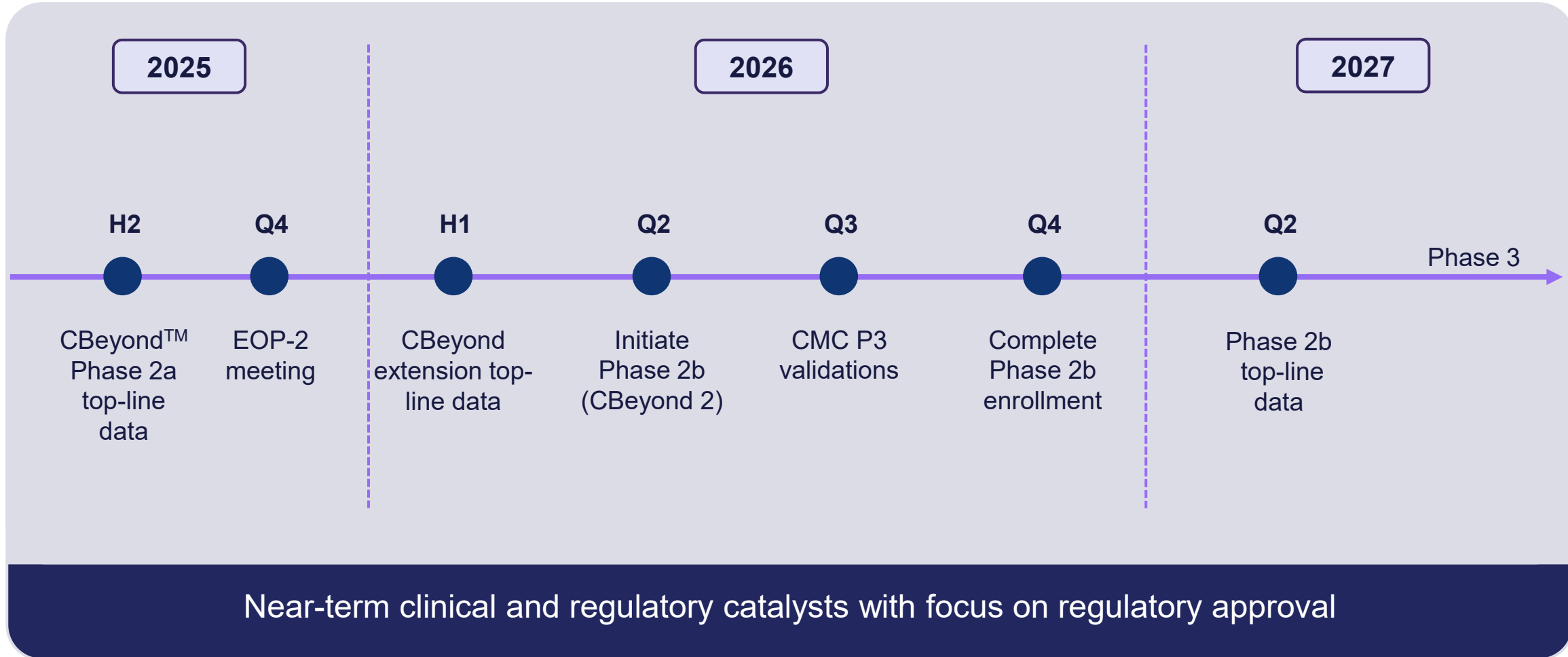
## Monotherapy Arms (~July 2025)



- ✓ Participants who have completed 26 weeks of treatment and are still enrolled in the study (even if in the follow up period and not currently on drug) are eligible to enroll into the open-label study extension at the beginning of August 2025
- ✓ Will provide 52-week data, new 26-week cohort, and also aid retention in current Phase 2 CBeyond study.

\*\*\*Participants who 1) discontinued treatment for any reason during the 26-week treatment period, and 2) continued to attend study visits off drug are not eligible for the study extension.

# Anticipated Clinical and Regulatory Milestones



# What to Expect from CBeyond

Clinical proof-of-concept that peripheral CB1 inhibition is differentiated and complementary to GLP-1s

Endpoint	What It Tells Us	Why It Matters
% Weight Loss (26 wks) Mono	Direct signal of efficacy	5-8% WL at 26 weeks is a strong signal of efficacy with potentially greater WL at 52 weeks
Safety	No signs of neuropsychiatric adverse effects	Validates peripheral restriction of nimaCIMab
GI Tolerability	Superior tolerability seen with antibodies	Supports combination and adherence for long-term use
Combination with GLP-1 (% WL 26 wks)	Potential additive or synergistic effect with GLP-1 to support broader TPP	Dual mechanism designed to complement and target adipose dysfunction; broader commercial opportunity
Body Composition	Fat vs. lean mass effects	Lean mass preservation results in healthier, longer-term WL
Metabolic Biomarkers	Glycemic improvements, hormone, lipid metabolism, other exploratory	Signals broader metabolic benefit

# Nimacimab – Market Opportunity

Review of target product profile and primary research insights





# Nimacimab Target Product Profile

Opportunity across multiple treatment settings

	Monotherapy	Maintenance	Combination
Addressable Population	Patients who are contraindicated, intolerant, and/or unresponsive to GLP-1 therapy		Patients with high BMI or who require additional weight loss after reaching a plateau on GLP-1 therapy
Opportunities	Novel anti-obesity drug required beyond GLP-1s and other incretin-based approaches	Physicians recognize the need for chronic treatment and would value a more tolerable option than current GLP-1s	Body weight reduction is most important clinical endpoint; a more potent and tolerable regimen will support utilization and product perception

THIS REPRESENTS A MULTI-BILLION DOLLAR OPPORTUNITY

AOM: Anti-obesity Medication  
Source: Primary Market Research (N=10 Endocrinologists, N=14 PCPs)

# Significant Opportunity Remains in Anti-Obesity Drug Market

GLP-1RA have issues with tolerability and lean mass loss

## Gastrointestinal Issues

Wegovy® and Zepbound® cause significant rates of **nausea** (31-53%), **diarrhea** (23-35%) and **vomiting** (12-30%)

## Discontinuation Rates and Rebound Weight Gain

Blue Health Intelligence<sup>2</sup> survey reported **30% of patients dropped out of treatment after 4 weeks**. Most did not stay on treatment for the necessary minimum 12 weeks and were **unlikely to achieve clinically meaningful weight loss**.

## Response Rates

Wegovy® STEP Trials showed **10.2-16.7% non-responder rate**. Real-world data suggests that patient % achieving >10% weight loss is lower than that reported in Phase 3 trials.<sup>1</sup>

## Lean Mass Loss

Lean mass loss is common with any significant weight reduction: ~25% is typical. Lean mass loss accounted for **~40% of total weight loss with Wegovy®**.

## Opportunity



**Improved tolerability**



**Greater adherence/ compliance over time**



**Optimal weight loss via mono or combo therapy**



**Healthier and more sustained weight loss**

Source:

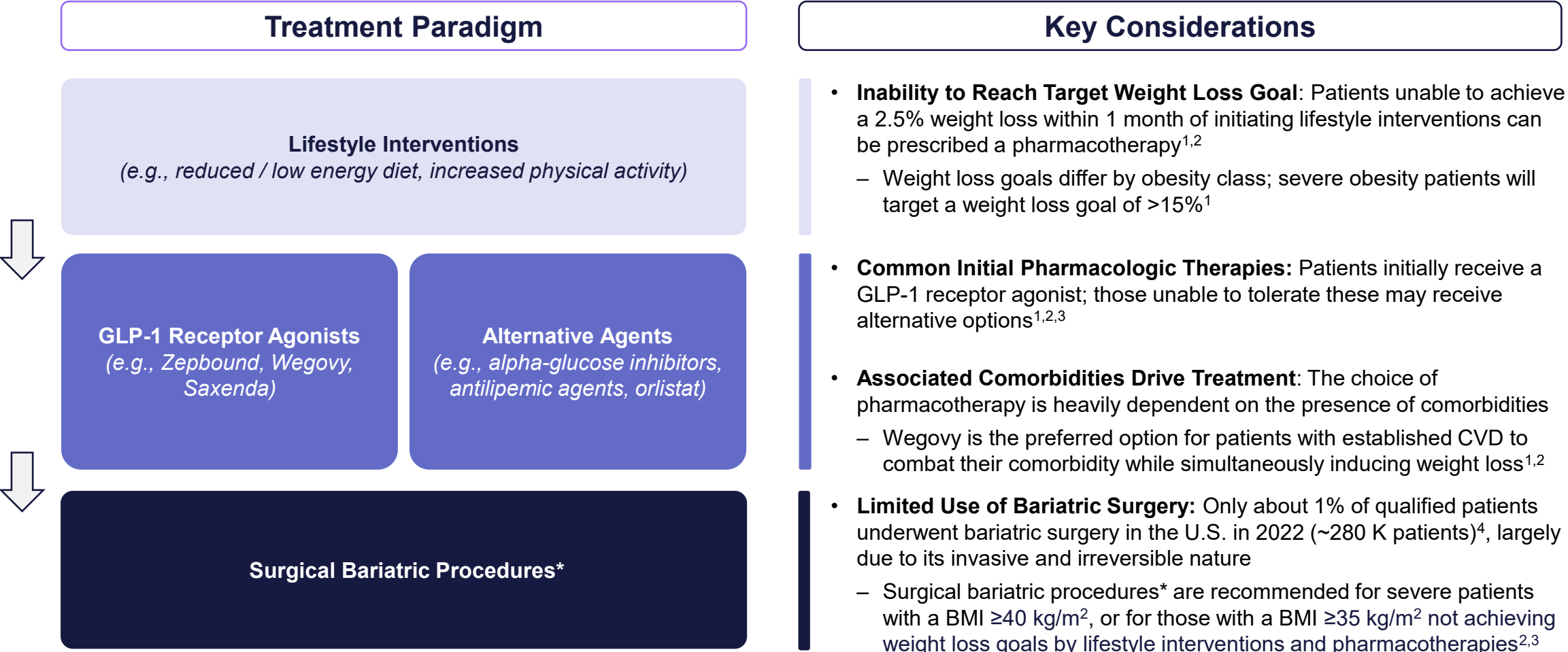
<sup>1</sup> Dandelion Research: Measuring GLP-1 Efficacy in the Real World <https://dandelionhealth.ai/glp1-real-world-efficacy>

<sup>2</sup> Real-World Trends in GLP-1 Treatment Persistence and Prescribing for Weight Management. Issue Brief: May 2024 [https://www.bcbs.com/media/pdf/BHI\\_Issue\\_Brief\\_GLP1\\_Trends.pdf](https://www.bcbs.com/media/pdf/BHI_Issue_Brief_GLP1_Trends.pdf)



# Obesity Treatment Paradigm

Following lifestyle interventions, overweight and obese individuals are eligible for GLP-1 receptor agonists prior to bariatric procedures for patients with morbid obesity



\*Inclusive of laparoscopic adjustable gastric banding, sleeve gastrectomy, Roux-en-Y or one-anastomosis gastric bypass, biliopancreatic diversion with duodenal switch, single anastomosis duodeno-ileal bypass with sleeve gastrectomy, intragastric balloon, transpyloric bulb, aspiration therapy, and vagal nerve blocking therapy. Abbreviations: CVD: Cardiovascular diseases. Sources: 1. UpToDate; 2. Cornier et al., 2022 ([link](#)). 3. Garvey et al., 2016 ([link](#)); 4. Clapp et al, 2024 ([link](#))

# Obesity Unmet Needs

Despite approvals of Zepbound and Wegovy, significant unmet needs remain for alternative treatments that preserve muscle, minimize side effects, offer a more convenient RoA, or provide easier access



## Efficacy Limits and Adverse Events

- **Increased Loss of Lean Mass:** While approved therapies are adequately effective, incretin-induced weight loss may involve a notable contribution from lean mass loss, highlighting the need for a therapy that preserves muscle
- **Association with Serious Side Effects:** Existing pharmacologics have both short- and long-term safety concerns; nausea, diarrhea, constipation, or vomiting can lead to treatment discontinuation



## Inconvenient Administration and Frequency

- **No Oral GLP-1 Receptor Agonists Available:** While multiple pharmacologics are available, all require frequent once-weekly subcutaneous administration with no alternatives for needle-phobic patients<sup>1,2</sup>
- **Hard-To-Titrate Dosing Forms:** Current injections are difficult to titrate (3 - 6-month titration period) and are restricted to available dosage forms



## Accessibility and Coverage Issues

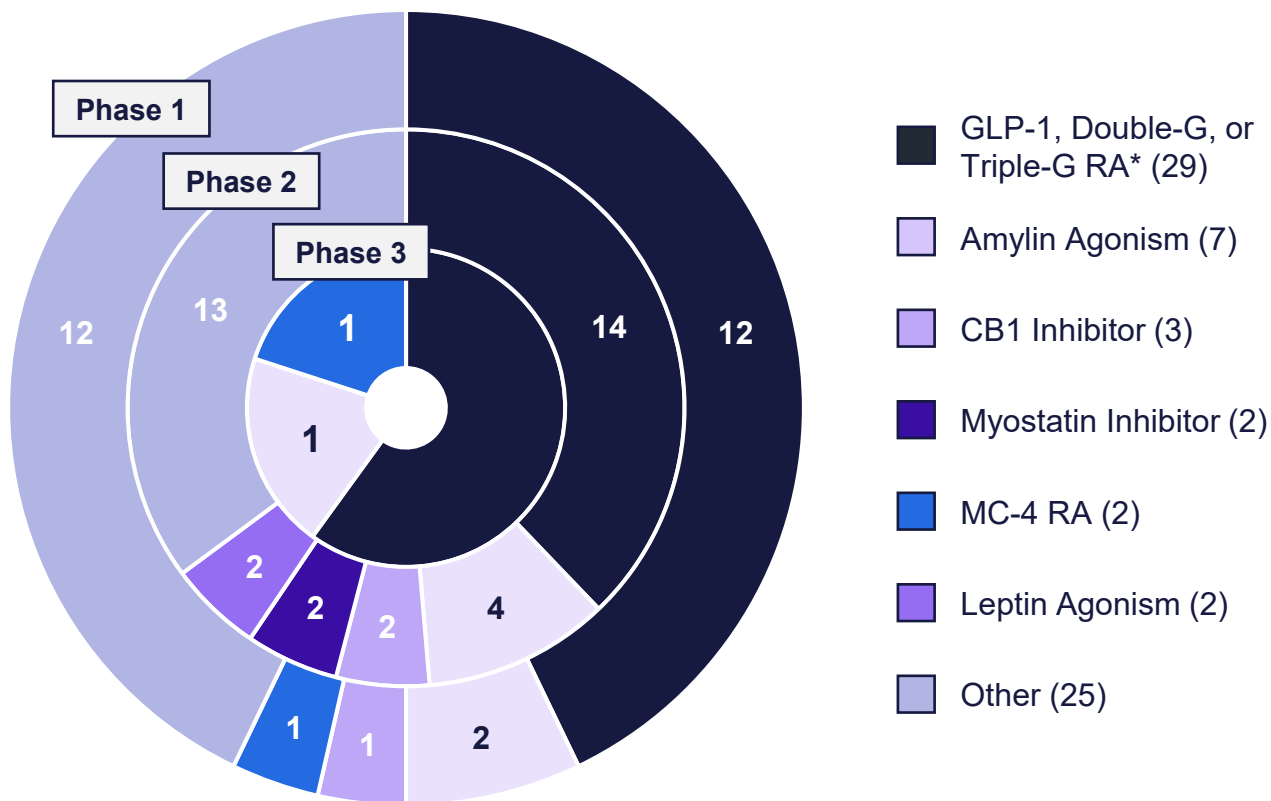
- **Significant Out of Pocket Costs:** Only 10% of qualified patients with obesity can access a prescribed GLP-1 receptor agonist through insurance plans, with strict step edits and restrictions further limiting access<sup>3</sup>
- **GLP-1 Supply Delays Limit Availability:** Marketed GLP-1s have experienced supply delays, driven by limited manufacturing capacity\*, shifting physician prescription behavior and habits

\*The FDA announced the end of the Wegovy and Zepbound shortage, ongoing since 2022, in Q4 2024. Abbreviation: MoA: Route of administration; SubQ: Subcutaneous; OOP: Out-of-pocket; Sources: 1. UpToDate; 2. Tak et al., 2021 ([link](#)); 3. Market Landscape for Obesity Drugs ([link](#))

# U.S. Obesity Clinical-stage Competitive Pipeline

U.S. obesity market faces intense/increasing competition: 5 Phase 3, 36 P2, and 29 P1 programs are primarily focused on GLP-1s; only 3 known CB1 assets in clinical development

## Unique Competitors in the U.S. Obesity Clinical Pipeline



## Key Pipeline Insights

- Prioritization of GLP-1 Receptor Agonists:** GLP-1-targeting assets are spread across stages of development, representing ~42% of all products
  - Key late-stage assets include orforglipron (P3 oral GLP-1 RA), danuglipron (P2 oral GLP-1 RA), cagrisema (P3 amylin/GLP-1 RA) and retatrutide (P3 GLP-1/GIP/GCG RA); all four may launch by 2026 – 2027
- CB1 Clinical Presence:** There is limited CB1 inhibitor competition in the clinical pipeline (N=3)
  - Monlunabant (Novo Nordisk): P2 oral small molecule; currently initiating a P2b trial
  - Nimacimab (Skye Bioscience): P2 mAb
  - INV-347 (Novo Nordisk): P1 oral small molecule; limited data released

\*Double-G is inclusive of GIP / GCG and GLP-1 receptor agonists; triple-G is inclusive of GCG, GIP, and GLP-1 receptor agonists. †Inclusive of amylin monotherapy and combination therapy with other MOAs. Note: Other is inclusive of but not limited to activin receptor 2a antibody, activin receptor A antibody, myostatin (GDF-8) inhibitor, monoacylglycerol acyltransferase 2 inhibitor, microbiome regulator, apelin receptor agonist, alpha-glucosidase inhibitor & lipase inhibitor, atrial natriuretic peptide agonist, and unclassified products in development. Sources: 1. EvaluatePharma; 2. PharmaProjects; 3. Clinicaltrials.gov; 4. Company websites. mAb: Monoclonal Antibody

# Summarized Primary Research Insights

KOLs believe CB1 inhibitors are well-positioned to provide benefit to select patients given the favorable safety profile and acceptable efficacy

## Current Management Paradigm

KOLs indicate that most pharmacologically-treated patients are prescribed a GLP-1 RA; ~15% of patients discontinue treatment due to intolerable side effects while an additional ~10% discontinue due to an inadequate response

## Perspectives on Pipeline

KOLs expect that novel mechanisms will support individualized treatment approaches in the near future (e.g., Class II / III patients requiring more weight loss, those with fatty liver disease, needle averse patients)



## Unmet Needs

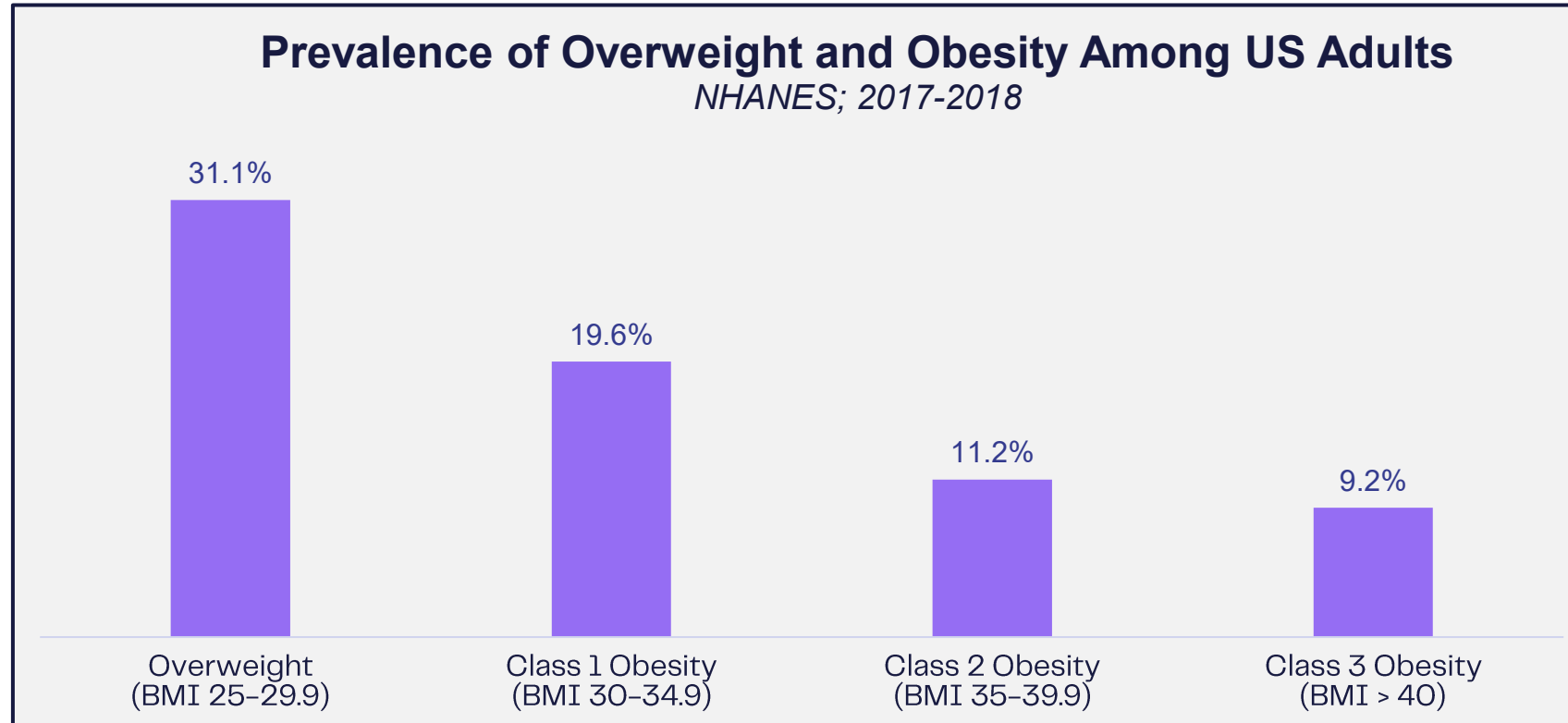
Despite satisfaction with GLP-1 RAs, KOLs identify the need for 1) enhanced access to pharmacological therapies, 2) treatments with improved GI tolerability, and 3) more sustainable and healthier therapeutic options

## Potential Skye Positioning

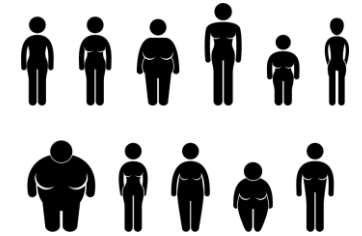
Select KOLs believe CB1 inhibitors can be utilized in patients with sarcopenia, as well as patients with overweight / Class I obesity who are receiving the highest GLP-1 dose in long-term maintenance or have tolerability issues

# Heterogeneous Overweight Population Requires Different Treatment Options

Significant (20%+) weight reduction demonstrated by GLP-1s is not therapeutically appropriate for all obese patients



**Obesity is Highly Heterogeneous; Many Sub-Types**



## Nimacimab Opportunity

~8% reduction + enhanced safety and improved body composition to achieve market establishment

# HCP-reported Nimacimab Addressable Pt Segments (1 of 2)

Physicians identify numerous additional nimacimab use cases across treatment settings; HCPs believe nimacimab will address select unmet needs that current and future agents may not

## Most Relevant Patient Characteristics for Monotherapy



- **GLP non-responders, particularly those unable to lose  $\geq 5\%$  weight loss at 3 – 6 months on a GLP**
- **GLP intolerable who are at risk of CV disease** (prescribers of alt. agents would replace with Nimacimab)
- **Class 1 or 2 obesity with mild-moderate GI side effects on GLP** (may switch to more tolerable agent)
- **Prior history or at risk of pancreatitis and thyroid cancer** (contraindicated for GLP)
- **Elderly (65+ years of age) who have or at risk of sarcopenia**
- **Any patient at risk of sarcopenia** (e.g., women with osteoporosis)
- **Patients with concerns about muscle loss** (e.g., middle-aged men)
- **Patients concerned about or apprehensive towards GLP-1 side effects** (e.g., optical neuropathy)

*“[nimacimab] would be limited to those who couldn’t tolerate or take incretins... I would use combo in patients who need additional weight loss to see if it super charges the patient.”*

*“This is a good option for patients with a lower BMI who didn’t feel great on Zepbound. There are patients with side effects even at low doses. I would offer this to patients who should try a safer option.”*

*“Wegovy and Zepbound work well, but there are limitations. I would use a product with a novel MOA in those who have a history of pancreatitis or thyroid cancer who shouldn’t be on a GLP-1.”*

# HCP-reported Nimacimab Addressable Pt Segments (2 of 2)

In combination with incretin-based therapies, HCPs believe Nimacimab will be most appropriate for patients requiring significant weight loss

## Most Likely Candidate for Nimacimab Combination



- **Class 3 patients who require significant weight loss ( $\geq 20\%$  weight loss)**
- **Initial GLP users who:**
  - **Have Class 3 obesity and require additional weight loss once they reach a weight plateau**
  - **Are unable to achieve weight loss goals due to tolerability issues at the highest dose**
  - **Are unable to achieve their weight loss goals due to a limited response (0 – 10% weight loss) with a GLP alone**
- **Add on agent after exhausting multiple options (e.g., GLPs alone, alternative agents, such as Qsymia)**

*“I would use [nimacimab] in combination with an incretin-based agent in patients who need additional weight loss to see if it super charges the patient.”*

*“I think the combo approach is good for patients who have reached a plateau. I would add another agent like [nimacimab] to see if it can help achieve greater weight loss, especially because Wegovy would be a better option than switching to a future incretin agent.”*

*“Based on the data, [nimacimab’s] combination approach could be used in the people who are not reaching their weight loss goals on a GLP-1. They would be strong candidates as well as others who have no other options to try, where [nimacimab] would be good to use as an add on.”*



# Well-positioned to Become Fully Integrated Metabolic Company

Experienced in therapeutic drug regulatory process through approval and commercialization

- 
**1 Robust IP, Life-Cycle and Development Strategy**

Planned nimacimab EOP2 by 2027 and IP/composition of matter protection through 2035\*
- 
**2 Novel Biologics Pipeline**

Team and collaborators focused on GPCR antibody targets, biomarker and other metabolic pathway R&D
- 
**3 World-Leading Obesity Experts**

Clinical advisory board composed of Key Opinion Leaders from leading academic institutions
- 
**4 Meaningful Near-Term Data Inflection Points**

Strong funding track record with specialist healthcare investor base
- 
**5 Experienced Leadership**

Board and management has been involved in or directly brought 40+ drugs to market
- 
**6 Full CMC Capabilities**

GMP manufacturing supporting future clinical trials underway

*\* May be eligible for up to five years (2040) of extension (Hatch-Waxman)*



# Select Financial Figures & Metrics

- \$107M in equity capital raised since August 2023
- Supported by top-tier specialist life science investors
- Funded at least through Q1 2027
- Ongoing strategic investments in scaling manufacturing, operations, R&D, and advancing the clinical pipeline

Stock Information	
Listed: Nasdaq	SKYE
Stock Price <sup>1</sup>	\$4.22
Shares Outstanding <sup>2</sup>	31.0M
Shares Fully Diluted <sup>2</sup>	47.5M
Cash & Equivalents <sup>3</sup>	\$59.2M
Market Cap <sup>1</sup>	\$134.8M
Avg. 3-Mo. Daily Trading Volume <sup>1</sup>	1.35M

<sup>1</sup> July 9/25   <sup>2</sup> May 6/25   <sup>3</sup> Mar 31/25

# Leadership

Contributed to commercialization of 40+ drugs/diagnostics, led high-value strategic transactions, and co-founded multiple companies

## Executive Management



**Punit Dhillon**  
President & CEO



**Kaitlyn Arsenault, CPA**  
Chief Financial Officer



**Tu Diep, MSc**  
Chief Operating Officer



**Chris Twitty, PhD**  
Chief Scientific Officer



**Puneet Arora, MD**  
Chief Medical Officer



**Brennen Brodersen, JD**  
General Counsel

## Board of Directors



**Paul Grayson**  
Chairman of Skye BOD;  
Pres./CEO, Radionetics



**Annalisa Jenkins,**  
MBBS, FRCP  
Managing Director, Annalisa  
Jenkins LLC



**Deborah Charych, PhD**  
Co-founder and ex-CTO,  
RayzeBio



**Andy Schwab**  
Managing Partner,  
5AM Ventures



**Karen Smith, MD, PhD, MBA, LLM**  
Global pharma/biotech exec  
and C-suite advisor



# THANK YOU!



11250 El Camino Real, Suite 100  
San Diego, CA 92130

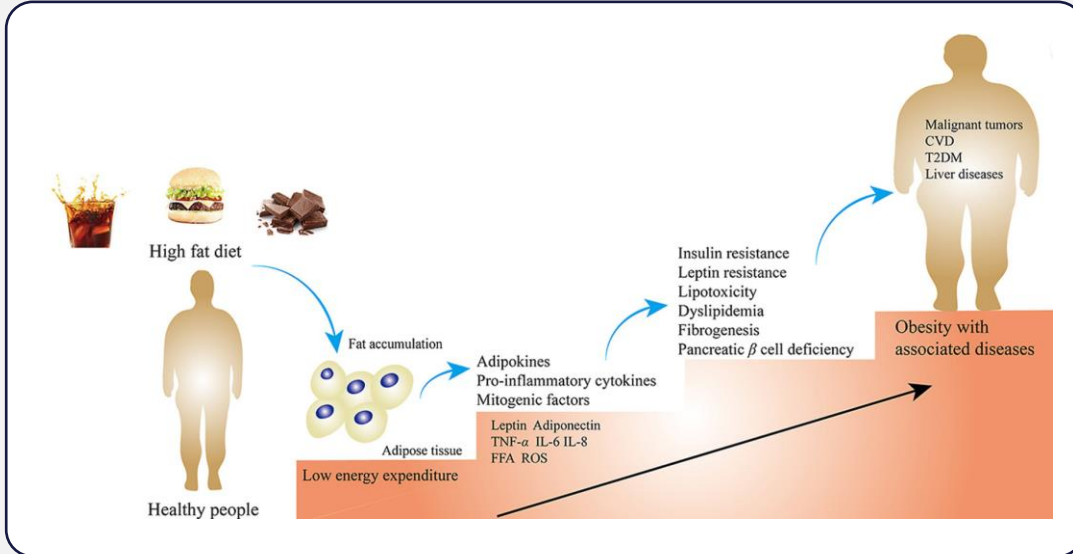
Please learn more or contact us at:

[ir@skyebioscience.com](mailto:ir@skyebioscience.com)

+1 (858) 410-0266

# Obesity Disease Overview

Obesity is a chronic disease characterized by excessive body fat and adipose tissue inflammation, driven by a complex and multifactorial etiology



- Obesity: a medical condition characterized by **excessive body fat**, often linked to mild, chronic **inflammation of adipose tissue**
- Morbidity and mortality associated with obesity are **rising global health concerns** in both adults and children
  - Excess adiposity leads to increased risk of hypertension, T2D, cardiovascular disease, and certain cancers<sup>1,2</sup>



## Pathophysiology

- **Energy Imbalance:** Obesity results from chronic positive energy balance due to energy intake greater than energy expenditure
- **Metabolic inflammation of Adipose Tissue:** Secretion of pro-inflammatory cytokines/hormones alters metabolic pathways<sup>3</sup>



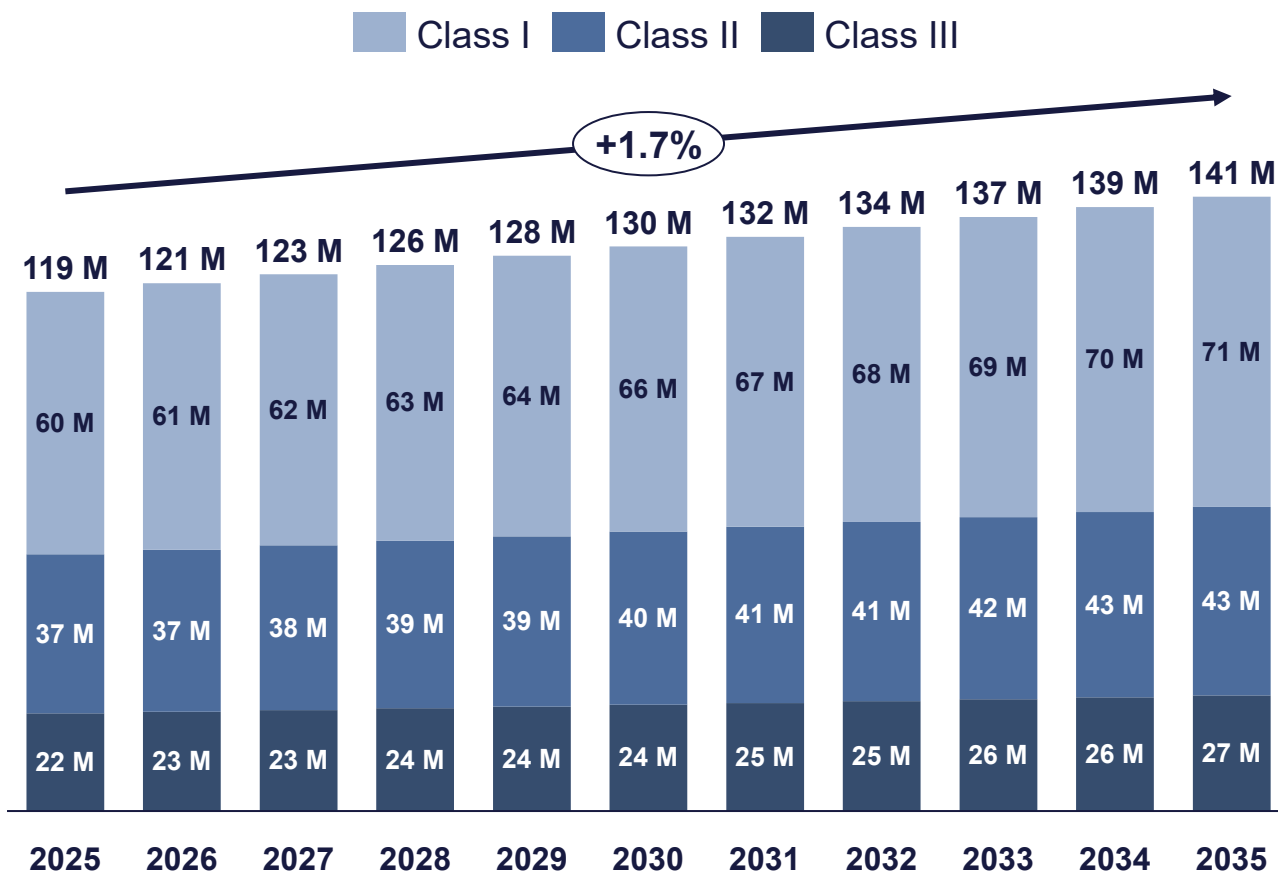
## Genetic Underpinning

- **Genetic Contributions:** Body weight variations among individuals are influenced by genetic and environmental factors; obesity can be categorized as monogenic or polygenic (also known as common obesity) based on genetic characteristics<sup>4</sup>
- **Monogenic Mutations:** Most mutations are caused by genes encoding leptin, melanocortin 4, and leptin receptor<sup>4</sup>
- **Association with Gene Variants:** Polygenic obesity is common and linked to *ADRB3*, *BDNF36*, *CNR1*, *MC4R38*, *PCSK1*, and *PPARG*<sup>4</sup>

# Obesity U.S. Patient Population

Prevalence of obesity among U.S. adults is expected to reach ~141 M by 2035, outpacing general U.S. population growth

## U.S. Adult Prevalence of Obese Individuals



## Obesity Population Dynamics

- **Prevalence:** Obesity prevalent in ~119 M patients in the U.S. (~40% of U.S. population) in 2025
- **Segmentation:** Patients are typically categorized into Class I-III based on BMI<sup>2-5</sup>
  - Class I ( $35 > \text{BMI} \geq 30$ ): ~50%
  - Class II ( $40 > \text{BMI} \geq 35$ ): ~31%
  - Class III ( $\text{BMI} \geq 40$ ): ~19%
- **CAGR:** Projected to be ~1.7% based on NHANES data between 1999 and 2018<sup>8</sup>, which exceeds the growth rate of the overall U.S. population (~0.9%)
  - Continued growth is expected, driven by poor nutritional education, activity levels, and access to healthy food alternatives

# Obesity Comorbidities

Obesity associated with significant comorbidities, ie. diabetes, hypertension, and kidney disease

- Obesity is a whole-body condition that **affects numerous organ systems** including the cardiovascular, respiratory, endocrine, neurologic, and musculoskeletal systems, among others
- Its broad systemic impact means obesity is associated with a **significant degree of comorbidity that drives increased morbidity and mortality** for overweight and obese patients
  - Studies show that **increasing BMI is positively correlated with increased prevalence** of numerous other diseases; common examples include:



**Type 2 diabetes: 16%**



**Osteoarthritis: 22%**



**Chronic kidney disease: 33%**



**Obstructive sleep apnea: 40%**



**Hypertension: 45%**



**Dyslipidemia: 48%**

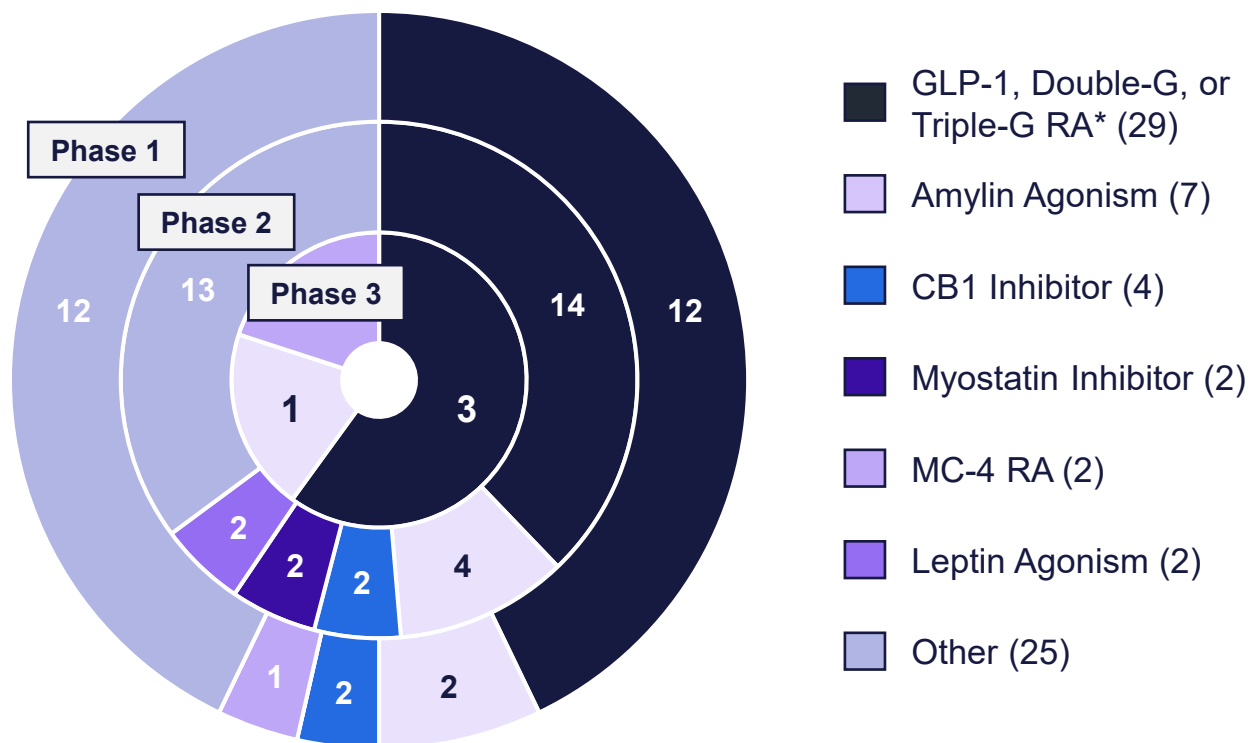


People with obesity have a **54% (Class I) – 124% (Class III) higher likelihood** of having one disease vs. **Concurrent comorbidities** are also strongly associated with obesity, demonstrating a **33% (Class I) – 44% (Class III) prevalence** in obese individuals vs. 23% in normal-weight comparators

# U.S. Obesity Clinical-stage Competitive Pipeline

U.S. obesity market faces intense/increasing competition: 5 Phase 3, 36 Phase 2, and 29 Phase 1 programs are primarily focused on GLP-1s; only 3 CB1 assets in clinical development

## Unique Competitors in the U.S. Obesity Clinical Pipeline



\*Double-G is inclusive of GIP / GCG and GLP-1 receptor agonists; triple-G is inclusive of GCG, GIP, and GLP-1 receptor agonists. ^Inclusive of amylin monotherapy and combination therapy with other MOAs. Note: Other is inclusive of but not limited to activin receptor 2a antibody, activin receptor A antibody, myostatin (GDF-8) inhibitor, monoacylglycerol acyltransferase 2 inhibitor, microbiome regulator, apelin receptor agonist, alpha-glucosidase inhibitor & lipase inhibitor, atrial natriuretic peptide agonist, and unclassified products in development. Sources: 1. EvaluatePharma; 2. PharmaProjects; 3. Clinicaltrials.gov; 4. Company websites. mAb: monoclonal antibody

## Key Pipeline Insights

- Prioritization of GLP-1 Receptor Agonists:** GLP-1-targeting assets are spread across stages of development, representing ~42% of all products
  - Key late-stage assets include orforglipron (P3 oral GLP-1 RA), danuglipron (P2 oral GLP-1 RA), cagrisema (P3 amylin/GLP-1 RA) and retatrutide (P3 GLP-1/GIP/GCG RA); all four may launch by 2026 – 2027
- CB1 Clinical Presence:** There is limited CB1 inhibitor competition in the clinical pipeline (N=3)
  - Monlunabant (Novo Nordisk): P2 oral small molecule; currently initiating a P2b trial
  - Nimacimab (Skye Bioscience): P2 mAb
  - INV-347 (Novo Nordisk): P1 oral small molecule; limited data released
  - CRB-913 (Corbus): P1 oral small molecule