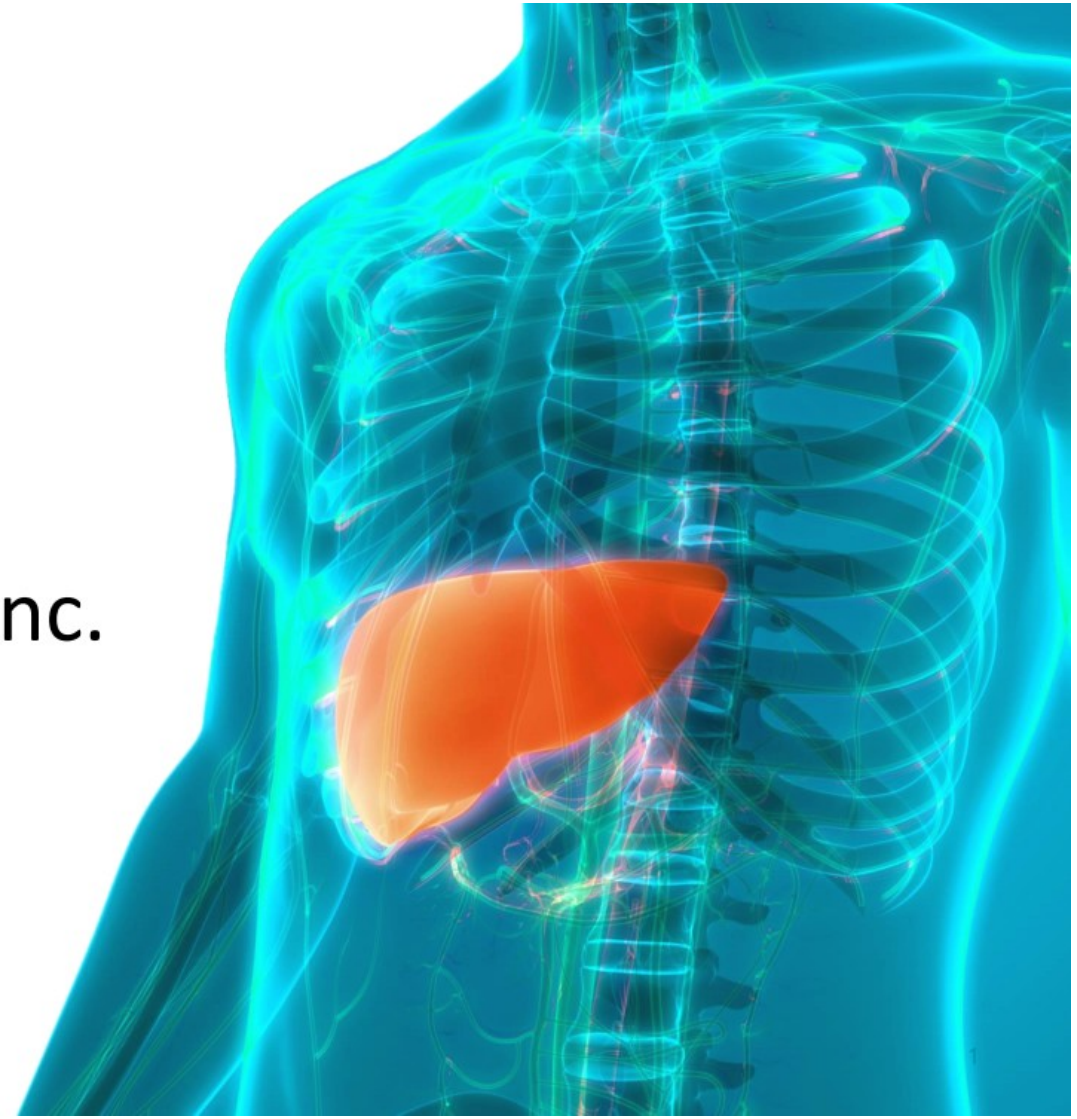
NeuroBo
PHARMACEUTICALS

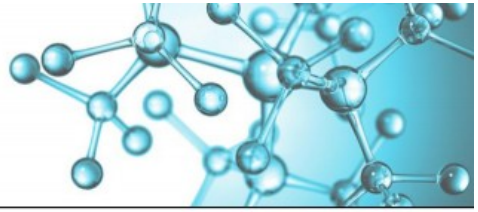
NeuroBo Pharmaceuticals, Inc.



April 2024

NASDAQ: NRBO

Forward-Looking Statements



This presentation may contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include all statements that do not relate solely to historical or current facts and can be identified by the use of words such as "believes", "expects", "anticipates", "may", "will", "should", "seeks", "approximately", "intends", "projects," "plans", "estimates" or the negative of these words or other comparable terminology (as well as other words or expressions referencing future events, conditions or circumstances). Forward-looking statements are predictions, projections and other statements about future events that are based on current expectations and assumptions and, as a result, are subject to risks and uncertainties. These forward-looking statements include statements regarding the market size and potential growth opportunities of our current and future product candidates, capital requirements and use of proceeds, clinical development activities, the timeline for, and results of, clinical trials, regulatory submissions, and potential regulatory approval and commercialization of its current and future product candidates. Many factors could cause actual future events to differ materially from the forward-looking statements in this release, including, without limitation, those risks associated with our ability to execute on its commercial strategy; the timeline for regulatory submissions; ability to obtain regulatory approval through the development steps of our current and future product candidates, the ability to realize the benefits of the license agreement with Dong-A ST Co. Ltd., including the impact on future financial and operating results of NeuroBo; the cooperation of our contract manufacturers, clinical study partners and others involved in the development of our current and future product candidates; potential negative interactions between our product candidates and any other products with which they are combined for treatment; our ability to initiate and complete clinical trials on a timely basis; our ability to recruit subjects for our clinical trials; whether we receive results from our clinical trials that are consistent with the results of pre-clinical and previous clinical trials; impact of costs related to the license agreement, known and unknown, including costs of any litigation or regulatory actions relating to the license agreement; effects of changes in applicable laws or regulations; whether we are able to maintain compliance with Nasdaq listing requirements; and effects of changes to our stock price on the terms of the license agreement and any future fundraising. These forward-looking statements are based on information currently available to us and our current plans or expectations and are subject to a number of known and unknown uncertainties, risks and other important factors that may cause our actual results, performance or achievements expressed or implied by the forward-looking statements. These and other important factors are described in detail in the "Risk Factors" section of our Annual Report on Form 10-K for the year ended December 31, 2023 and our other filings with the Securities and Exchange Commission.

While we may elect to update such forward-looking statements at some point in the future, except as required by law, we disclaim any obligation to do so, even if subsequent events cause our views to change. Although we believe the expectations reflected in such forward-looking statements are reasonable, we can give no assurance that such expectations will prove to be correct. These forward-looking statements should not be relied upon as representing our views as of any date subsequent to this presentation.

This presentation also may contain estimates and other statistical data made by independent parties and by us relating to market size and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

Strong Leadership Team

Management Team

Hyung Heon Kim, Chief Executive Officer

- 20+ years of experience in M&A, financing and corporate governance
- 10+ years of licensing, M&A and compliance with Dong-A Group
- Former General Counsel/SVP at Dong-A ST and Dong-A Socio Group
- BA Soonghsil University, JD Washington University School of Law

Mi-Kyung Kim, Ph.D., RPh, Chief Scientific Officer

- 25+ years in drug discovery research at Dong-A ST
- Specialized in diabetes, obesity, MASH, immune-mediated diseases
- Ph.D., RPh, College of Pharmacy, Ewha Womans University

Marshall H. Woodworth, Chief Financial Officer

- 35+ years of financial experience
- 20+ years working with life science investors and analysts
- CFO of Nevakar Inc., Braeburn Pharmaceuticals Inc., Aerocrine AB and Furiex Pharmaceuticals Inc.
- BS University of Maryland, MBA Indiana University

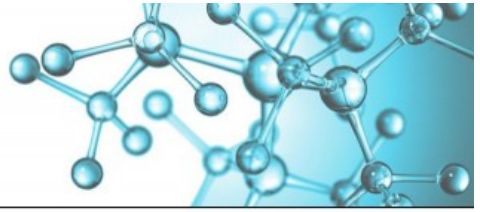
Robert Homolka, SVP Clinical Operations

- 35+ years in pharmaceutical and biotech development
- Sr. director of clinical operations in Adiso Therapeutics
- Director of clinical operations at Shire/Takeda pharmaceuticals
- Director of experimental trial management at AstraZeneca

Stephen Harrison, M.D., Consulting Chief Medical Officer

- MASH/NAFLD clinical trials expert, ~300 peer reviewed publications
- Visiting Professor, Hepatology, Oxford University
- M.D. University of Mississippi
- Col (ret.) USA, MC

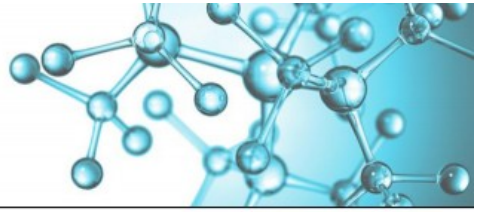
Compelling Investment Opportunity



Targeting **Obesity and MASH** with a Pipeline of **Next Generation Therapeutics**

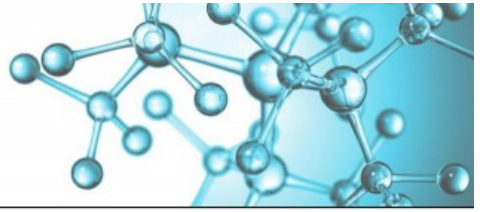
- Aiming to Increase Shareholder Value through ***Multiple, Near-Term, Value Creating Milestones***
  - **DA-1726**
    - ✓Open IND for Treatment of Obesity
    - ✓First patient dosed and actively recruiting into a Phase 1 for obesity
  - **DA-1241**
    - ✓ Open IND for Treatment of MASH and Type 2 Diabetes
    - ✓ Actively recruiting into a Phase 2a for DA-1241 in subjects with presumed MASH
    - ✓ Completed SAD and MAD studies (in healthy volunteers and subjects with T2D)
- Backed by Strategic Partner and Major Shareholder, Dong-A ST
- Well Capitalized With ***$22.4 million*** in Cash at the end of Q4 2023. Cash runway into Q4 2024
- Exploring ***Strategic Opportunities*** to out-license legacy assets

Pipeline



Asset	Indication	Preclinical	Phase 1	Phase 2	
				2a	2b
DA-1241 (GPR119 Agonist)	**MASH**				
DA-1726 (GLP1R/GCGR Dual Agonist)	**Obesity**				

Multiple Near-Term Milestones: Targeting to Increase Shareholder Value



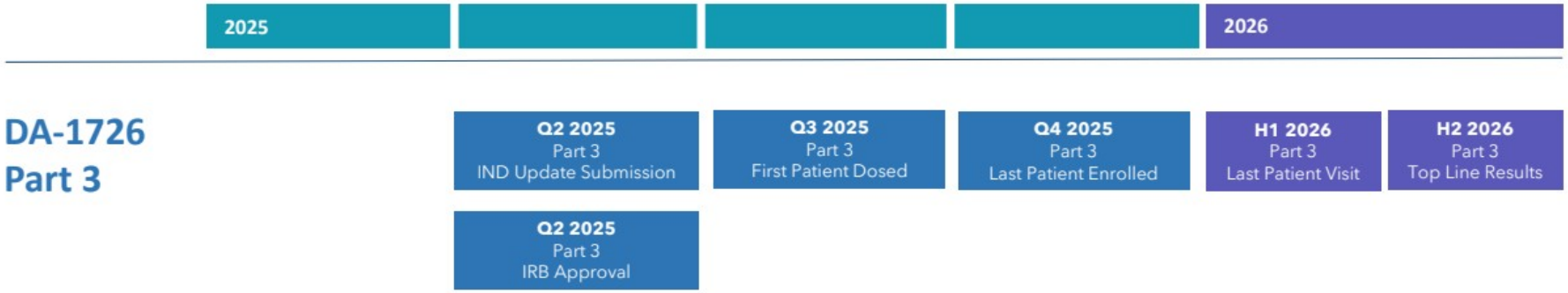
Investments in the **current DA-1241 Phase 2a** and **DA-1726 Phase 1** have the potential for significant returns in the event of clinical and regulatory success

	2024				2025
DA-1241			**Q3 2024** Phase 2a Last Patient Last Visit	**Q4 2024** Phase 2a Top Line Results	**Q1/Q2 2025** Meeting with FDA
DA-1726	**√ Q1 2024** Phase 1 IND No Objections	**√ Q2 2024** Phase 1 (Part 1) First Patient In	**Q3 2024** Phase 1 (Part 1) Last Patient Visit		
			Q3 2024 Phase 1 (Part 1)Top Line Results	**Q4 2024** Phase 1 (Part 2) Last Patient Visit	**Q1 2025** Phase 1 (Part 2) Top Line Results
			Q3 2024 Phase 1 (Part 2) First Patient In		**Q2 2025** Phase 1 (Part 3) IND Update Submission

* These milestones assume regulatory and clinical success, which is not guaranteed

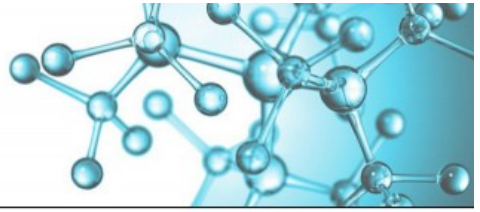
DA-1726: Upcoming Phase 1 Part 3 Trial in Obesity Timeline

Phase 1 Part 3 will assess total weight loss at 24 weeks, exploring maximum titratable dose and dietary changes.



* These milestones assume regulatory and clinical success, which is not guaranteed

DA-1726: Upcoming Phase 1 Part 3 to Evaluate Maximum Titratable Dose



Study Objectives

- ***Gain an understanding of drug titration and dosing***
- ***Time to maximum-tolerated dose***
- ***Titration up to the maximum-tolerated individualized dose***

Exploratory Efficacy Endpoints

- ***Evaluate total weight loss at 24 weeks*** – change in baseline at maximum-tolerated individualized dose to the end of treatment period
- ***Explore dietary changes*** including caloric intake and composition
- ***Explore type of weight loss*** - lean muscle mass versus fat loss
- ***Evaluate sustained weight loss*** after discontinuation

Study Design	
Study Overview	▪ A multicenter, randomized, double-blind, placebo-controlled, Phase 1 clinical trial to evaluate the efficacy and safety of DA-1726 in obese, otherwise healthy subjects
Additional Endpoints	▪ Biomarker changes (PK, PD) ▪ Longer term safety (i.e., AEs, Lab, ECG)
Study Design	▪ 3 Period design • Titration Period – up to 12 weeks • Treatment Period – at least 12 weeks at individualized maximum titratable dose • Off-Drug Period – up to 8 weeks
No. of Subjects and Location	▪ Approximately 50 subjects randomized in a 4:1 ratio of DA-1726 or Placebo at multiple centers in the United States
Enrollment (estimated)	▪ FPFV Q3 2025 ▪ LPLV 1H 2026

Notes: FPFV (First Patient First Visit); LPLV (Last Patient Last Visit); PK (Pharmacokinetic); PD (Pharmacodynamic)

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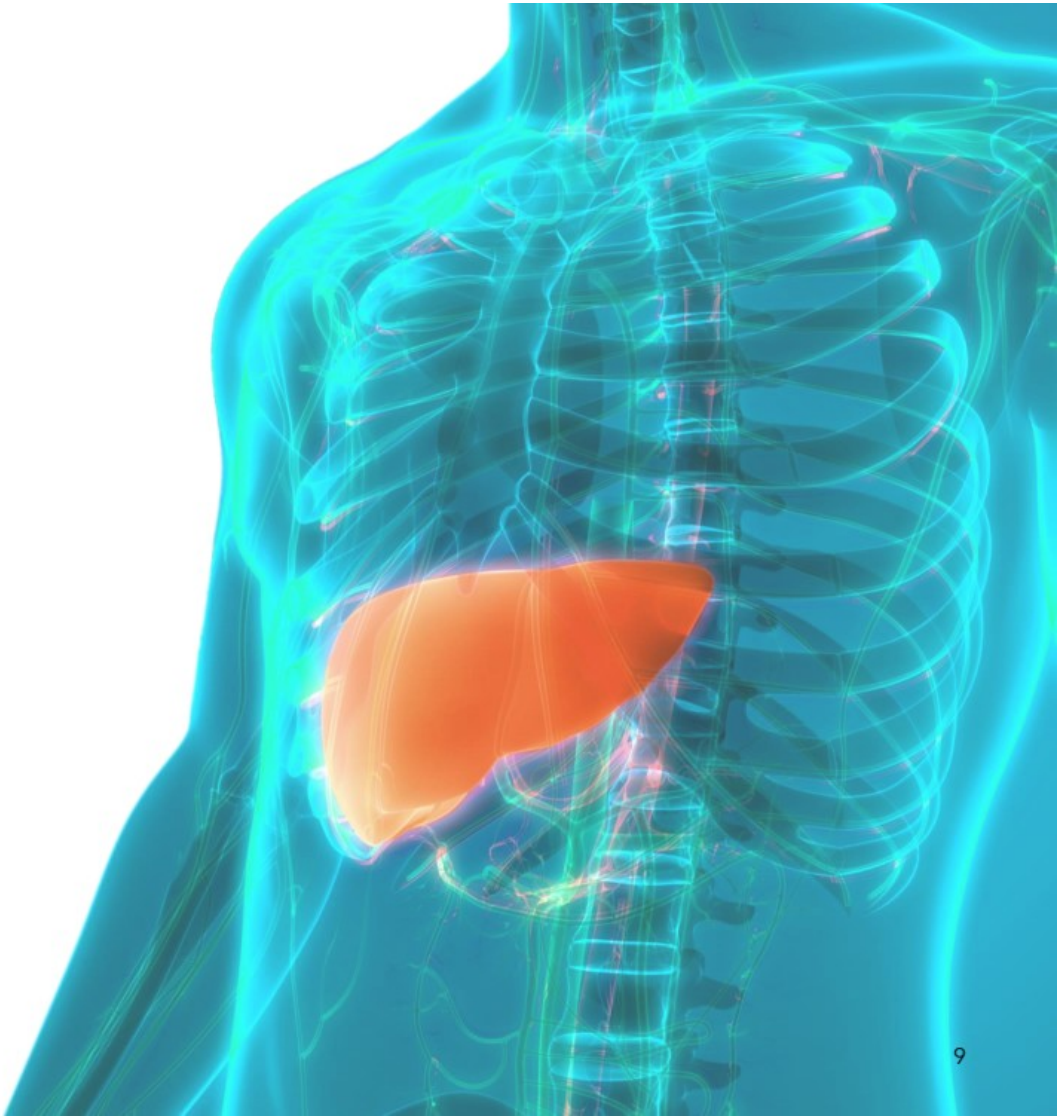
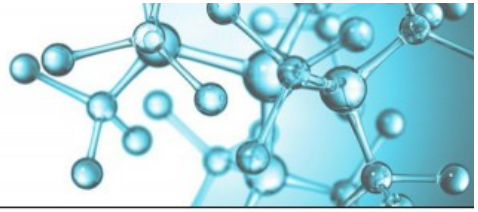
DA-1726

A Novel **GLP1R/GCGR**
Dual Agonist for the
Treatment of **Obesity**



DA-1726: Competitive Differentiation

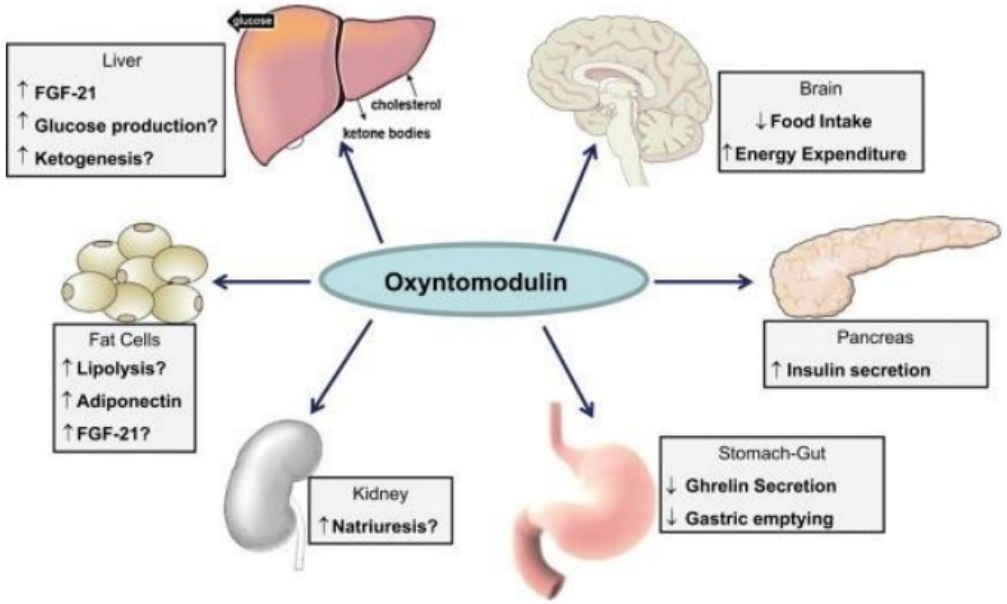


	Survodutide	Mazdutide	DA-1726	Semaglutide	Tirzepatide
Developer	Boehringer Ingelheim	Innovent Biologics Lilly	**NeuroBo**	Novo Nordisk	Lilly
Indication	Obesity	Obesity	**Obesity**	Obesity	Obesity
Status	Phase 2 completed	Phase 3 (China) Phase 1 (USA)	**Phase 1**	Marketed (Obesity/Wegovy®) Marketed (T2D/Ozempic®)	Marketed (Obesity/Zepbound®) Marketed (T2D/Mounjaro®)
Action	GLP-1R/GCGR dual agonist	GLP-1R/GCGR dual agonist	**GLP-1R/GCGR (Glucagon receptor) dual agonist**	GLP-1R agonist	GLP-1R/GIPR dual agonist
Dosage	once weekly, injection	once weekly, injection	**Exploratory dosing in Phase 1**	once weekly, injection	once weekly, injection
Efficacy in Human	Body weight loss, 16.7% @ 46-week	Body weight loss, 15.4% @ 24-week (interim analysis)	**Exploratory efficacy in Phase 1**	Body weight loss, 12.4% @ 68-week	Body weight loss, 20.1% @ 72-week
Safety in Human	Nausea, vomiting, diarrhea, constipation, Treatment discontinuations due to AEs: 28.6%	Nausea, diarrhea, vomiting, abdominal distension	**Exploratory safety in Phase 1**	Nausea, diarrhea, vomiting, constipation, abdominal pain	Nausea, diarrhea, decreased appetite, vomiting, constipation
Differentiation	First-in-class for obesity, Not reached plateau at week 46	No discontinued treatment due to adverse events in interim analysis	• **Weight loss similar or better as compared to semaglutide** • **Better tolerability due to balance approach as compared to semaglutide**	In recruiting participants for MASH P3	Higher efficacy

DA-1726: Mechanism of Action

DA-1726 is a **novel oxyntomodulin analogue** functioning as a GLP1R/GCGR dual agonist for **the treatment of obesity**

- ***Oxyntomodulin***
  - a gut hormone released from intestinal L-cells after meal ingestion resulting in dual agonism of the GLP-1 receptor and glucagon receptor
- ***Reduces food intake (GLP-1 R)*** and ***increases energy expenditure (GCGR)*** in humans, potentially resulting in superior body weight loss

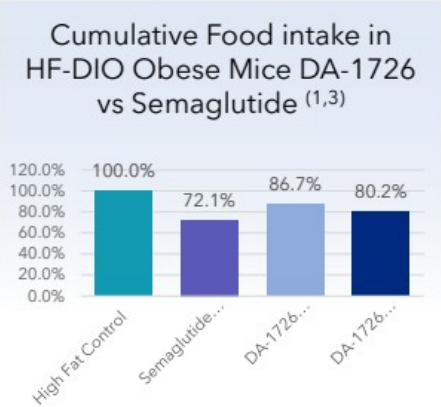


Physiological effects of oxyntomodulin[1]

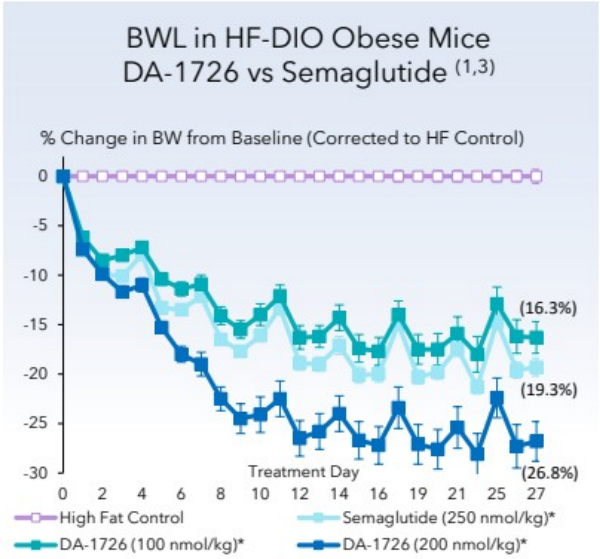
Notes: GLP1R/GCGR (Glucagon-Like Peptide 1 Receptor/Glucagon Receptor);
GLP-1 (Glucagon-Like Peptide 1)
1. Pocai A. Mol Metab.2014;3:241-51

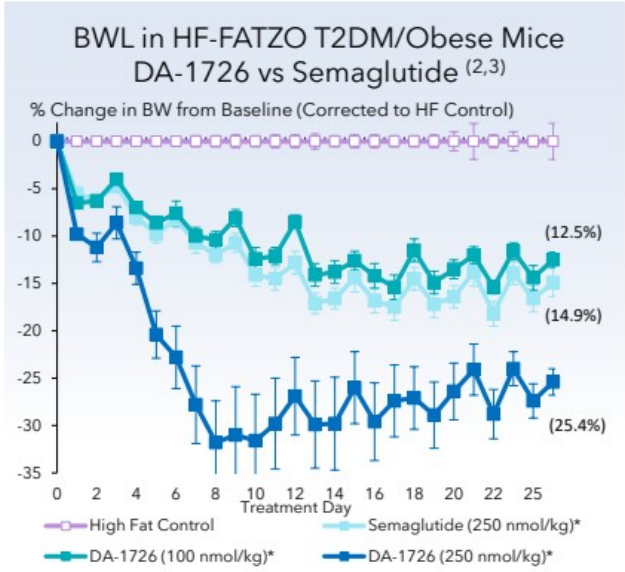
DA-1726: Therapeutic Potential in Obesity[1-3] — Semaglutide Comparison

DA-1726 outperformed Semaglutide (WEGOVY™), a GLP-1 agonist, in mouse models of obesity*



Weight loss observed from DA-1726 is attributed to reduced food intake via GLP1R and increased energy expenditure via the GCGR





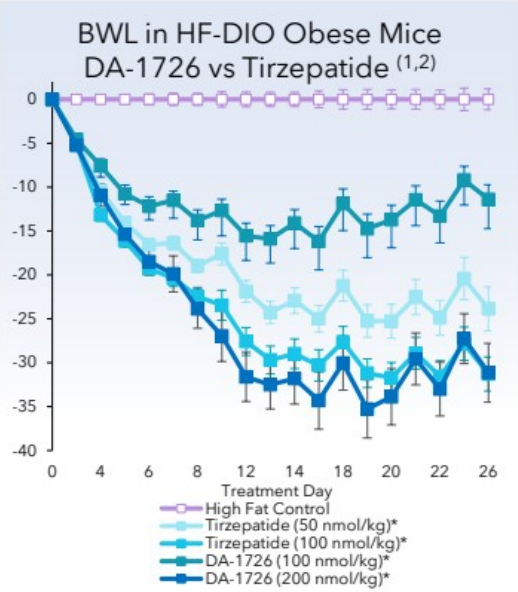
*Statistically significant compared to control

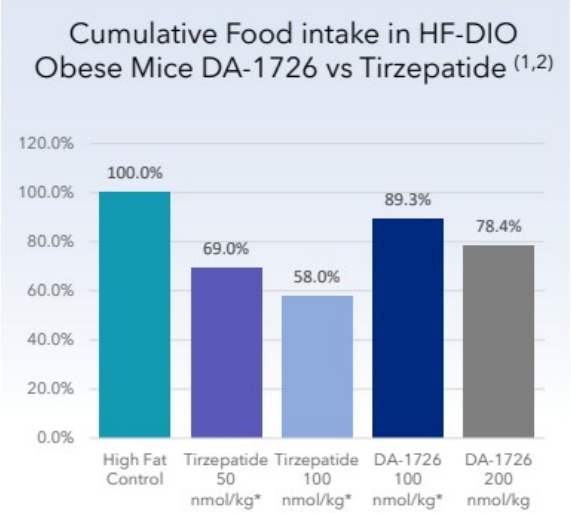
Notes: GLP1R/GCGR (Glucagon-Like Peptide 1 Receptor/ Glucagon Receptor); HF-DIO (High Fat-Diet Induced Obesity); GLP-1 (Glucagon-Like Peptide 1).

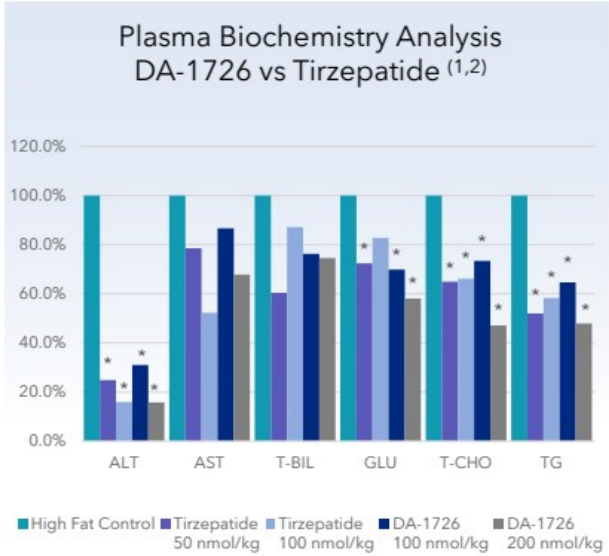
1. Dong-A Study Report 104561. All treatments given as twice weekly injections.
2. Dong-A Study Report 104455. All treatments given every 3 days as injections.
3. Kim TH et al. 82nd Meeting of the American Diabetes Association. 2022; Abstract 1403-P.

DA-1726: Therapeutic Potential in Obesity [1,2] — Tirzepatide Comparison

DA-1726 shows similar weight loss while consuming more food compared to Tirzepatide (Mounjaro™)





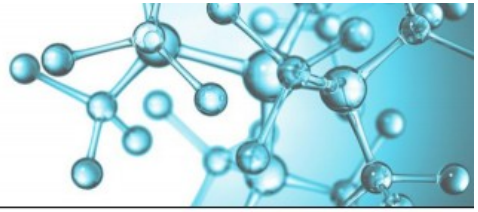


Weight loss is attributed to reduced food intake and increased energy expenditure

Notes: HF-DIO (High Fat-Diet Induced Obesity); BWL (Body Weight Loss)

1. Dong-A Study Report 105497. All treatments given as twice weekly injections.
2. Jung I-H et al. 83rd Meeting of the American Diabetes Association. 2023; Abstract 1668-P.

DA-1726: Phase 1 Part 1 & 2 to Evaluate Safety and Tolerability



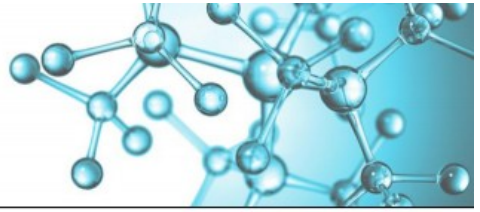
Rationale for study

- ***Gain a robust understanding of safety, tolerability of various dose levels in humans.***
- ***Superior weight loss*** compared with the pair-fed group, indicating much of the weight loss was attributed to reduced food intake via activation of GLP-1
- ***Superior to both the pair-fed and control groups*** in energy expenditure (secondary to glucagon activation)
- ***Potentially superior weight loss compared to approved obesity products***

Phase I	
Study overview	▪ 2-part study • Part 1—Single ascending dose study • Part 2—Multiple ascending dose study
Population	▪ Obese otherwise healthy
No. of Subjects	▪ Approximately 100 subjects for both studies
Location	▪ United States

Notes: MAD (Multiple Ascending Dose); SAD (Single Ascending Dose); PK (Pharmacokinetic); PD (Pharmacodynamic); FPFV (First Patient First Visit); LPLV (Last Patient Last Visit).

DA-1726: Upcoming Phase 1 Part 3 to Evaluate Maximum Titratable Dose



Study Objectives

- ***Gain an understanding of drug titration and dosing***
- ***Time to maximum-tolerated dose***
- ***Titration up to the maximum-tolerated individualized dose***

Exploratory Efficacy Endpoints

- ***Evaluate total weight loss at 24 weeks*** – change in baseline at maximum-tolerated individualized dose to the end of treatment period
- ***Explore dietary changes*** including caloric intake and composition
- ***Explore type of weight loss*** - lean muscle mass versus fat loss
- ***Evaluate sustained weight loss*** after discontinuation

Study Design	
Study Overview	▪ A multicenter, randomized, double-blind, placebo-controlled, Phase 1 clinical trial to evaluate the efficacy and safety of DA-1726 in obese, otherwise healthy subjects
Additional Endpoints	▪ Biomarker changes (PK, PD) ▪ Longer term safety (i.e., AEs, Lab, ECG)
Study Design	▪ 3 Period design • Titration Period – up to 12 weeks • Treatment Period – at least 12 weeks at individualized maximum titratable dose • Off-Drug Period – up to 8 weeks
No. of Subjects and Location	▪ Approximately 50 subjects randomized in a 4:1 ratio of DA-1726 or Placebo at multiple centers in the United States
Enrollment (estimated)	▪ FPFV Q3 2025 ▪ LPLV 1H 2026

Notes: FPFV (First Patient First Visit); LPLV (Last Patient Last Visit); PK (Pharmacokinetic); PD (Pharmacodynamic)

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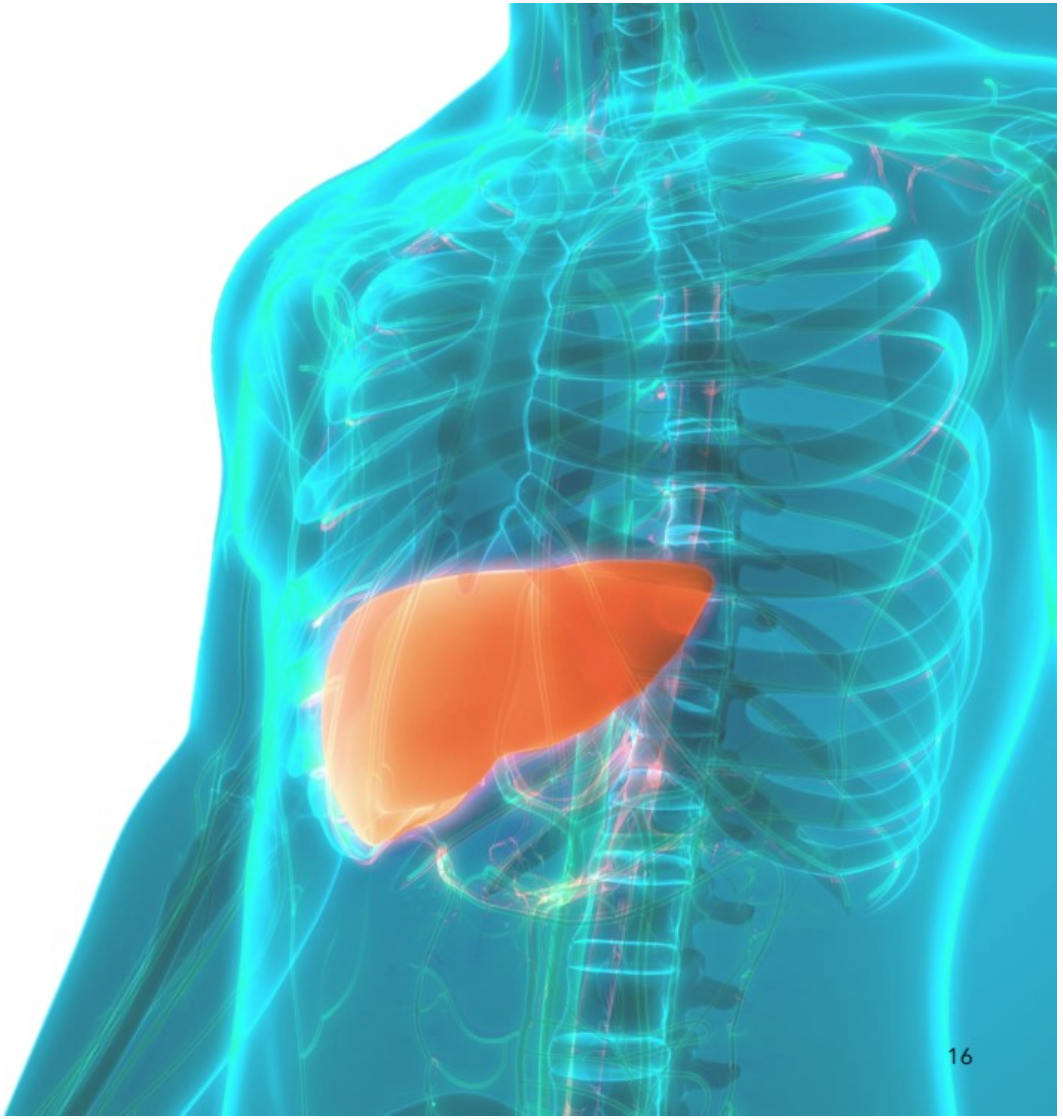
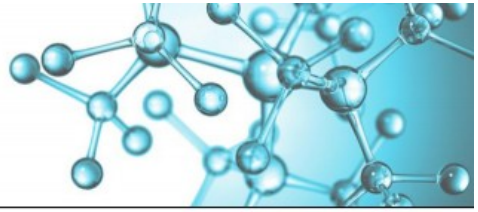
DA-1241

Orally Available, Potential First-in-Class GPR119 Agonist for the Treatment of **MASH**



DA-1241: Competitive Differentiation



	Resmetirom	DA-1241
Developer	Madrigal	NeuroBo
Indication	MASH	MASH
Status	Phase 3 completed NDA Submitted	Phase 2
Action	THR (Thyroid hormone receptor) β agonist	GPR119 agonist
Dosage	Once daily, oral	Once daily, oral
Efficacy in Human	MASH resolution with more than a 2-point reduction in MASH Activity Score (100mg: 30%, 80mg: 26%, Placebo: 10%)[1]	Effective in treating or modifying the progression of MASH, NAFLD Activity Score and Biomarkers
Safety in Human	Mild/transient diarrhea, mild nausea[1]	Headache, somnolence, fatigue, hypoglycemia, and cold sweat (reported in Phase I studies)
Differentiation	If approved by the NDA, the first treatment for MASH	1. Unique mechanism of action. Works on inflammation associated with MASH 2. Can be used as a monotherapy or in combination with other therapies 3. Synergistic effect(s) when co-administered with a DPP4 or GLP1R agonist

1. https://ir.madrigalpharma.com/news-releases/news-release-details/madrigal-announces-positive-topline-results-pivotal-phase-3

DA-1241 Effect on Pathogenesis in **MASH** as a Monotherapy

GPR119 activation:

Monocytes and macrophages

- Macrophage activation
- Monocyte recruitment
- Macrophage differentiation

→ ***Reduction in hepatic and systemic inflammation***

Hepatic stellate cells

Stellate cell activation

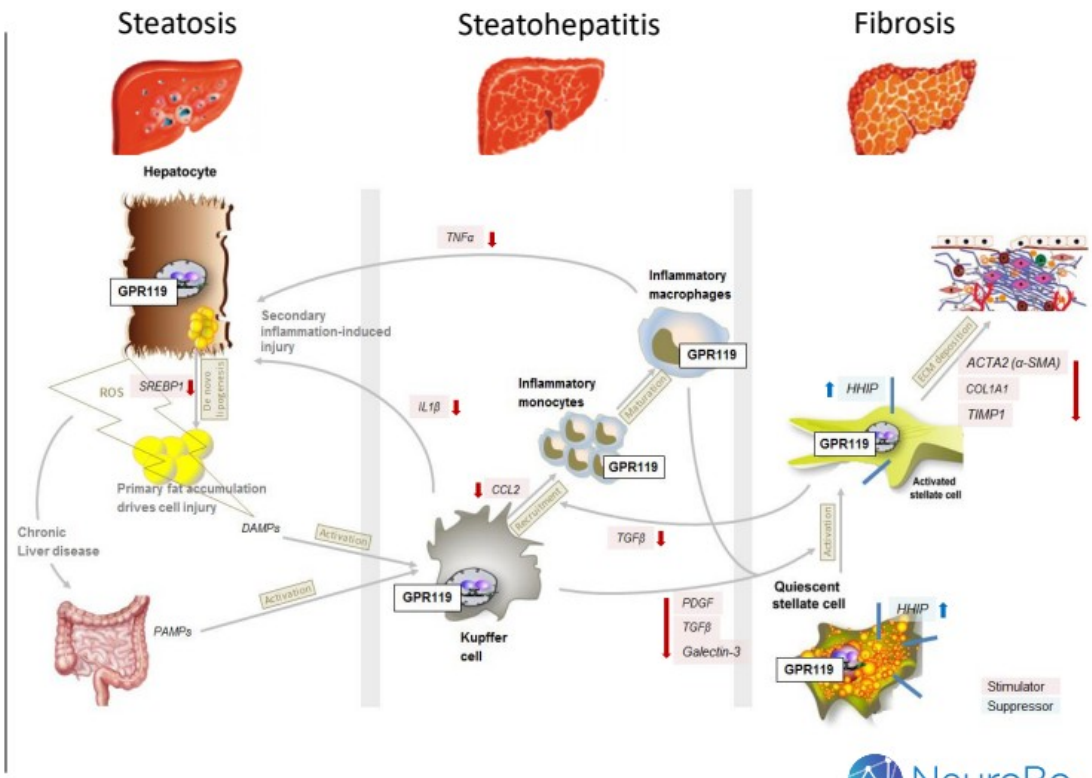
→ ***Reduce hepatic fibrogenesis***

Hepatocytes and intestinal L-cells

De novo lipogenesis
Dietary fat absorption

→ ***Reduce hepatic steatosis***

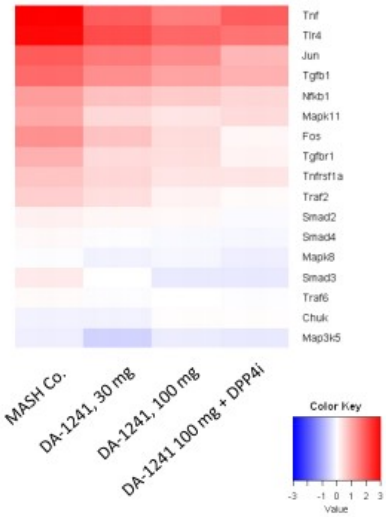
DAMPs: danger-associated molecular patterns
PAMPs: pathogen-associated molecular patterns
ECM: extracellular matrix



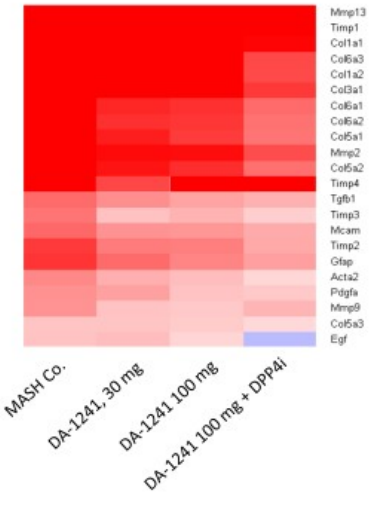
GPR119 in Glucose Control when Co-Administered with Other Therapies

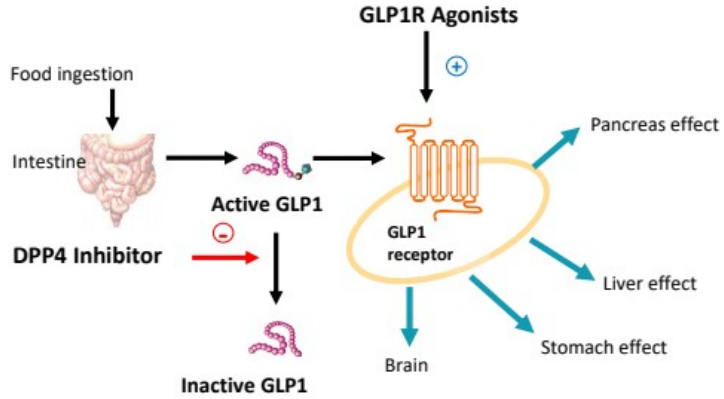
- ***Effectively decreased hepatic inflammation***
- ***Reduced systemic inflammation*** and fibrosis biomarkers
- ***Reduced hepatic lipid and collagen deposition*** in the liver of MASH mice

Changes of 17 ***inflammation signaling-related*** genes



Changes of 22 ***stellate cell activation-related*** genes

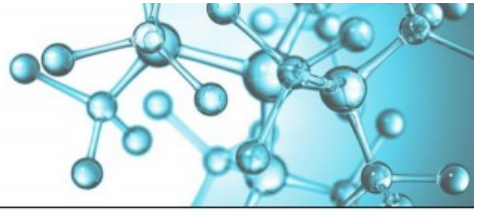




Activation of GLP1 Receptor Effects

- Pancreas
  - Increase proliferation of beta cells
  - Prevent the apoptosis of beta cells
  - Increase insulin biosynthesis
  - Increase insulin secretion
  - Increase insulin biosynthesis
- Liver
  - Decrease glucose production
- Stomach
  - Decrease gastric emptying
- Brain
  - Decrease appetite

DA-1241: Ongoing Phase 2a in **MASH**



Support use as a monotherapy

- DA-1241 modified the ***progression of MASH*** in Ob-MASH mice
- Exploring improved ***biomarkers (CCL2, TNFa, and TIMP1), liver fat content, and stiffness*** as measured by Fibroscan and MRI

Exploring Co-Administration with a DPP4 inhibitor

- ***Identify ability to effectively decreased hepatic inflammation***
- ***Explore ability to reduce systemic inflammation*** and fibrosis biomarkers
- ***Reduced hepatic lipid and collagen deposition*** in Ob-MASH mice

Study Design	
Study Overview	▪ A multicenter, randomized, double-blind, placebo-controlled, parallel, Phase 2a clinical trial to evaluate the efficacy and safety of DA-1241 in subjects with presumed non-alcoholic steatohepatitis
Primary Endpoint	▪ ALT change from baseline in alanine transaminase
Study Design	▪ 2 Part study • Part 1: DA-1241 50mg, DA-1241 100mg, Placebo • Part 2: DA-1241 100mg + Sitagliptin 100mg, Placebo
No. of Subjects	▪ Approximately 90 subjects with presumed MASH
Location	▪ Approximately 25 centers in the United States
Enrollment (planned)	▪ FPI September 2023 ▪ LPLV August 2024

Notes: FPFV (First Patient First Visit); LPO (Last Patient Last Visit)

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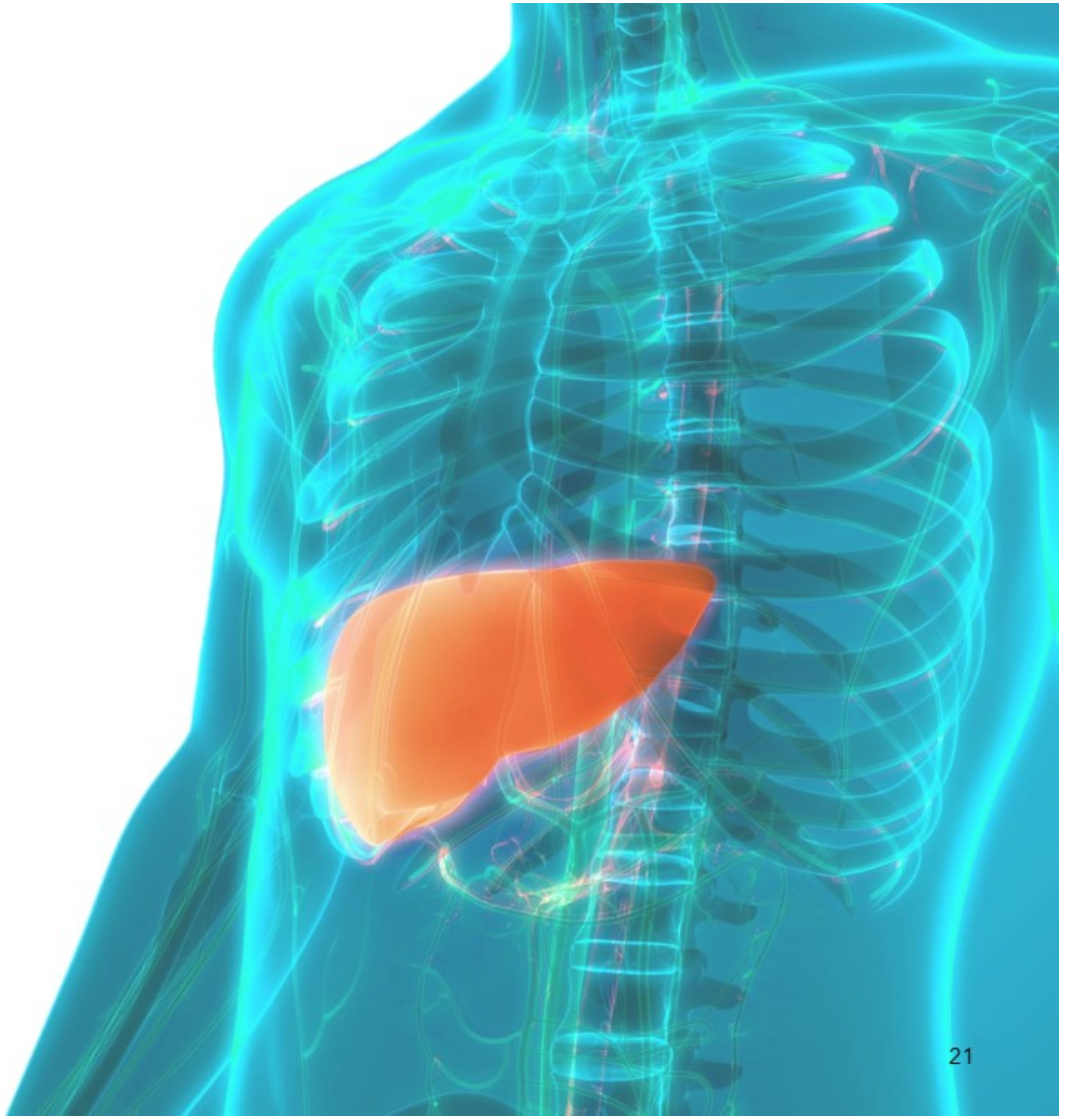
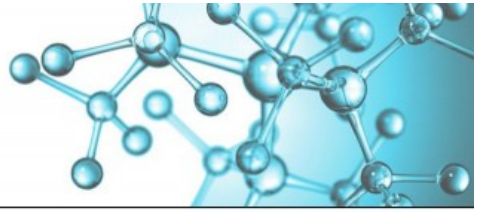
Financials and Capitalization



Cash Balance and Capitalization Table

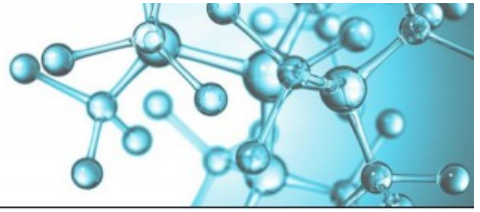


Cash Balance	As of December 31, 2023
Cash	**$22.4 million**
Debt	**none**

Capitalization Table as of December 31, 2023	Common Stock Equivalents
Common Stock (as of March 31, 2024)	4,906,032
Warrants (WAEP $145.54)[1]	203,914
Options (WAEP $398.30)	4,700
Common Stock Shares Available for Issuance under Equity Incentive Plans	469,820
Fully Diluted	**5,584,466**

1. No ratchets, price resets or anti-dilution provisions. Presumes $0.00 exercise price for each Series B warrant exchangeable for one share of common stock.

Multiple Near-Term Milestones: Targeting to Increase Shareholder Value



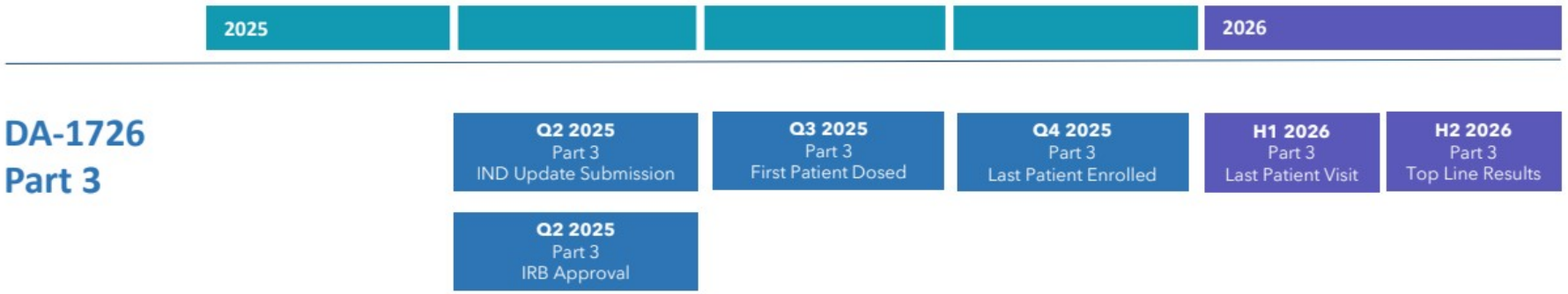
Investments in the **current DA-1241 Phase 2a** and **DA-1726 Phase 1** have the potential for significant returns in the event of clinical and regulatory success

	2024				2025
DA-1241			**Q3 2024** Phase 2a Last Patient Last Visit	**Q4 2024** Phase 2a Top Line Results	**Q1/Q2 2025** Meeting with FDA
DA-1726	**√ Q1 2024** Phase 1 IND No Objections	**√ Q2 2024** Phase 1 (Part 1) First Patient In	**Q3 2024** Phase 1 (Part 1) Last Patient Visit		
			Q3 2024 Phase 1 (Part 1)Top Line Results	**Q4 2024** Phase 1 (Part 2) Last Patient Visit	**Q1 2025** Phase 1 (Part 2) Top Line Results
			Q3 2024 Phase 1 (Part 2) First Patient In		**Q2 2025** Phase 1 (Part 3) IND Update Submission

* These milestones assume regulatory and clinical success, which is not guaranteed

DA-1726: Upcoming Phase 1 Part 3 Trial in Obesity Timeline

Phase 1 Part 3 will assess total weight loss at 24 weeks, exploring maximum titratable dose and dietary changes.



* These milestones assume regulatory and clinical success, which is not guaranteed

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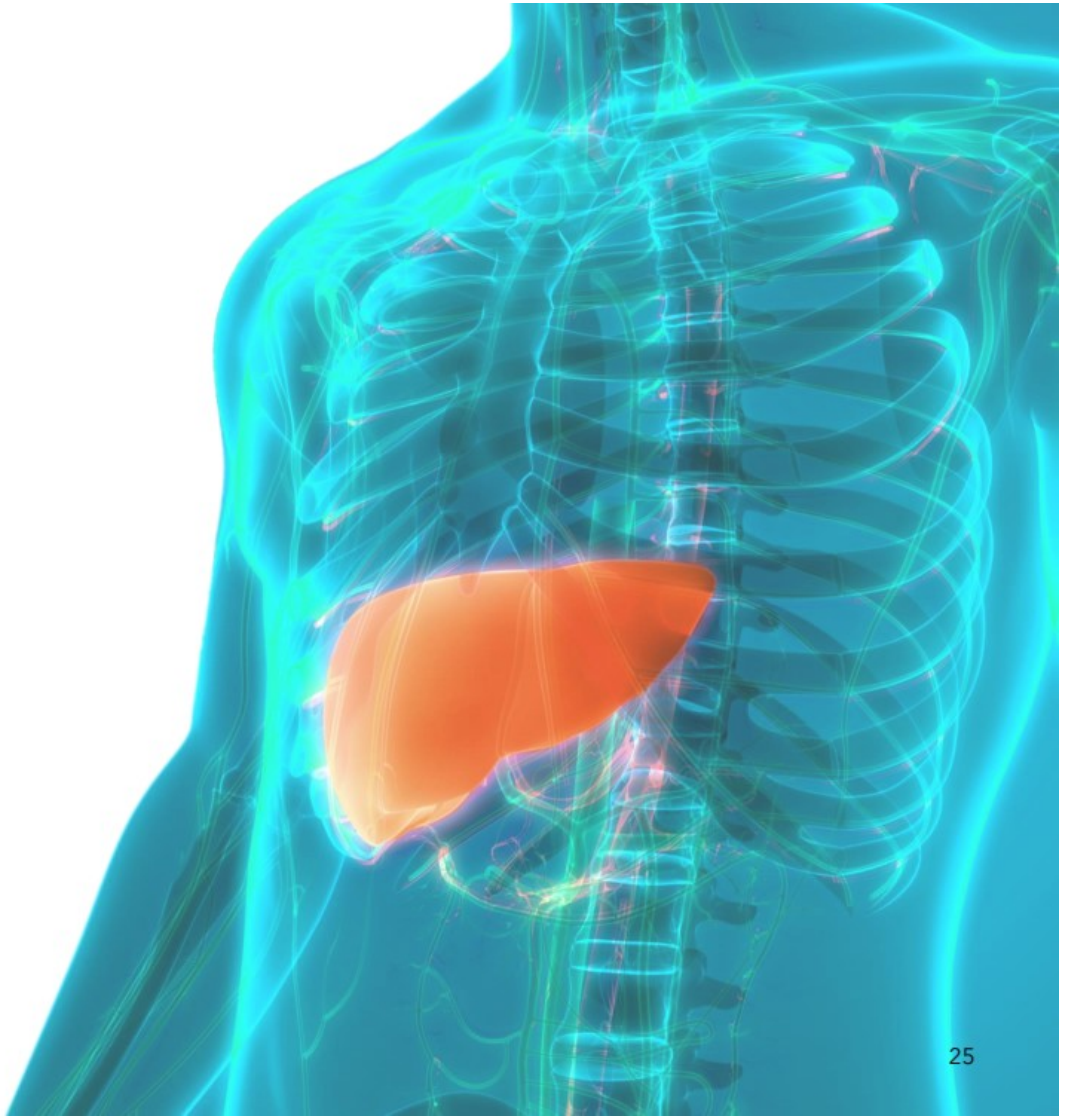
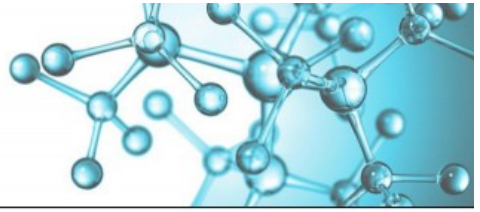
Investment Thesis



Compelling Investment Opportunity



Targeting **Obesity and MASH** with a Pipeline of **Next Generation Therapeutics**

- Aiming to Increase Shareholder Value through ***Multiple, Near-Term, Value Creating Milestones***
  - **DA-1726**
    - ✓Open IND for Treatment of Obesity
    - ✓First patient dosed and actively recruiting into a Phase 1 for obesity
  - **DA-1241**
    - ✓ Open IND for Treatment of MASH and Type 2 Diabetes
    - ✓ Actively recruiting into a Phase 2a for DA-1241 in subjects with presumed MASH
    - ✓ Completed SAD and MAD studies (in healthy volunteers and subjects with T2D)
- Backed by Strategic Partner and Major Shareholder, Dong-A ST
- Well Capitalized With ***$22.4 million*** in Cash at the end of Q4 2023. Cash runway into Q4 2024
- Exploring ***Strategic Opportunities*** to out-license legacy assets

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Thank You!

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