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Registration Statement  
October 24, 2022

# NeuroBo Pharmaceuticals, Inc.

NASDAQ:NRBO

October 2022

# Forward Looking Statements



NeuroBo Pharmaceuticals, Inc. ("NeuroBo") is offering shares of common stock, shares of convertible preferred stock and warrants to purchase shares of common stock (the "Securities") in a public offering (the "Offering"). The proceeds of the Offering are intended primarily to be used for development of new assets which NeuroBo is seeking to in-license from Dong-A ST Co. Ltd. (the "Proposed Transaction") with the consummation of the Proposed Transaction being conditioned upon the completion of the Offering.

Information included herein has been prepared by NeuroBo or obtained from sources believed to be reliable, but the accuracy or completeness of such information is not guaranteed by, and should not be construed as a representation by, Ladenburg Thalmann & Co. Inc., NeuroBo or Dong-A St Co. Ltd. or any other person. Any representations and warranties will be contained only in an underwriting agreement signed by NeuroBo. NeuroBo is subject to the informational filing requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and files periodic reports and other information with the Commission. These documents are available at no charge by visiting EDGAR on the Commission website at <http://www.sec.gov>.

This presentation includes forward-looking statements within the meaning of Section 27A of the Act and Section 21E of the Exchange Act. Except for statements of historical fact, any information in this presentation may be a forward-looking statement that reflects NeuroBo's current views about future events and are subject to risks, uncertainties, assumptions and changes in circumstances. Forward-looking statements such as "may", "will", "could", "would", "should", "plan", "predict", "potential", "project", "expect", "estimate", "anticipate", "intend", "goal", "strategy", "believe," and similar expressions and verbs. Forward-looking statements may include statements regarding the Proposed Transaction and the Offering, NeuroBo's integration of the assets to be licensed in the Proposed Transaction, the Proposed Transaction and the Offering on NeuroBo's business strategy, the market size and potential growth opportunities of NeuroBo's current and future product candidates, capital requirements, 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. Although NeuroBo believes that the expectations reflected in such forward-looking statements are reasonable, such statements are based upon numerous estimates and assumptions with respect to industry performance and competition, general business, economic, market and financial conditions and matters specific to the business of NeuroBo, all of which are difficult to predict and many of which are beyond the control of NeuroBo. NeuroBo cannot guarantee future events, results, actions, levels of activity, performance or achievements. These forward-looking statements are based on a number of risks, uncertainties and assumptions, including those described under the heading "Risk Factors" in NeuroBo's filings with the SEC as well as risks, uncertainties and assumptions arising from: (1) the inability to enter into a definitive agreement for the Proposed Transaction or the Offering; (2) the structure, timing and ability to satisfy the conditions to closing the Proposed Transaction and the Offering; (3) NeuroBo's ability to be continued to be listed on the NASDAQ Capital Market; (4) the ability to realize the benefits of the Proposed Transaction and the Offering, including the impact on future financial and operating results of NeuroBo; (5) the ability to integrate the new product candidates to be licensed as part of the Proposed Transaction into NeuroBo's business in a timely and cost-efficient manner; (6) the cooperation of our contract manufacturers, clinical study partners and others involved in the development of our current and future product candidates; (7) costs and expenses related to the Proposed Transaction and the Offering, known and unknown, including costs of any litigation or regulatory actions relating to the Proposed Transaction or the Offering; (8) changes in applicable regulations; (9) effects of changes to NeuroBo's stock price on the terms of the Proposed Transaction and the Offering; and (10) the ability of NeuroBo to obtain the requisite approval of its securities to permit the conversion of the Securities to common stock under applicable NASDAQ rules. Actual results and the timing of events could differ from those anticipated in such forward-looking statements as a result of these risks.

These forward-looking statements speak only as of the date of this presentation and NeuroBo undertakes no obligation to revise or update any forward-looking statements to reflect events or circumstances after the date hereof.

This presentation also contains estimates and other statistical data made by independent parties and by NeuroBo relating to market shares and other data about the biopharmaceutical industry. Such data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates.

The trademarks included herein are the property of the owners thereof and are used for reference purposes only. Such use should not be construed as an endorsement of such products.

# Free Writing Prospectus



This presentation highlights basic information about us and the Offering. Because it is a summary, it does not contain all of the information you should consider before investing. We have filed a registration statement on Form S-1 (File No. 333-267482) with the SEC, including a preliminary prospectus dated October 24, 2022 (the "Preliminary Prospectus"), with respect to the offering of our securities to which this presentation refers. If you invest, you should read the Preliminary Prospectus (including the risk factors described therein) and, when available, the final prospectus for the Offering and other documents we have filed with the SEC and incorporated by reference into the Preliminary Prospectus for more complete information about us and the Offering. You may access these documents for free by visiting EDGAR on the SEC website at <http://www.sec.gov>. Alternatively, we or any underwriter participating in the offering will arrange to send you the prospectus if you contact Ladenburg Thalmann & Co. Inc. by written request addressed to Syndicate Department, 4th Floor New York, NY 10019, telephone: 1-800-573-2541 or e-mail: [prospectus@ladenburg.com](mailto:prospectus@ladenburg.com).

This presentation shall not constitute an offer to sell, or the solicitation of an offer to buy, nor will there be any sale of these securities in any jurisdiction in which such offer, solicitation or sale would be unlawful.

Neither the United States Securities and Exchange Commission nor any other regulatory body has approved or disapproved of our securities or upon the accuracy or adequacy of this presentation. Any representation to the contrary is a criminal offense.

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**NeuroBo has entered into an agreement to in-license from Dong-A ST Co., Ltd (KOSDAQ: 035500) two cardiometabolic assets for the treatment of nonalcoholic steatohepatitis (NASH) and type 2 diabetes (T2DM).**



**\$15M equity capital commitment<sup>(1)</sup>**



**NRBO's 2<sup>nd</sup> Largest Shareholder**  
(10.8% common stock ownership)

- **Ticker:** KOSE:A170900
- **LTM Sales<sup>(2)</sup>:** \$440M

### Licensing Agreement with DONG-A ST CO., LTD

(Sept 14, 2022)

#### Assets, Clinical Indication and Clinical Stage

<b>DA-1241</b>	<ul style="list-style-type: none"> <li>▪ NASH/T2DM</li> <li>▪ Phase II ready in NASH</li> </ul>
<b>DA-1726</b>	<ul style="list-style-type: none"> <li>▪ Obesity/NASH</li> <li>▪ Pre-IND</li> </ul>
<b>IP</b>	<ul style="list-style-type: none"> <li>▪ 4 US Patents (2 granted, 2 pending)</li> <li>▪ 1 PCT Application</li> <li>▪ 44 Ex-US Patents (22 granted, 22 pending)</li> <li>▪ Expire 2035 - 2040</li> </ul>

1. Dong-A will purchase, in a private offering, \$15 million of Series A Convertible Preferred Stock at a conversion price equivalent to the public offering together with warrants equivalent to the warrants in the public offering. Shareholder approval will be obtained for the issuance of the common stock underlying the Preferred and the warrants. This is contingent upon NRBO raising at least \$15 million in the public offering.

2. As of June 30, 2022

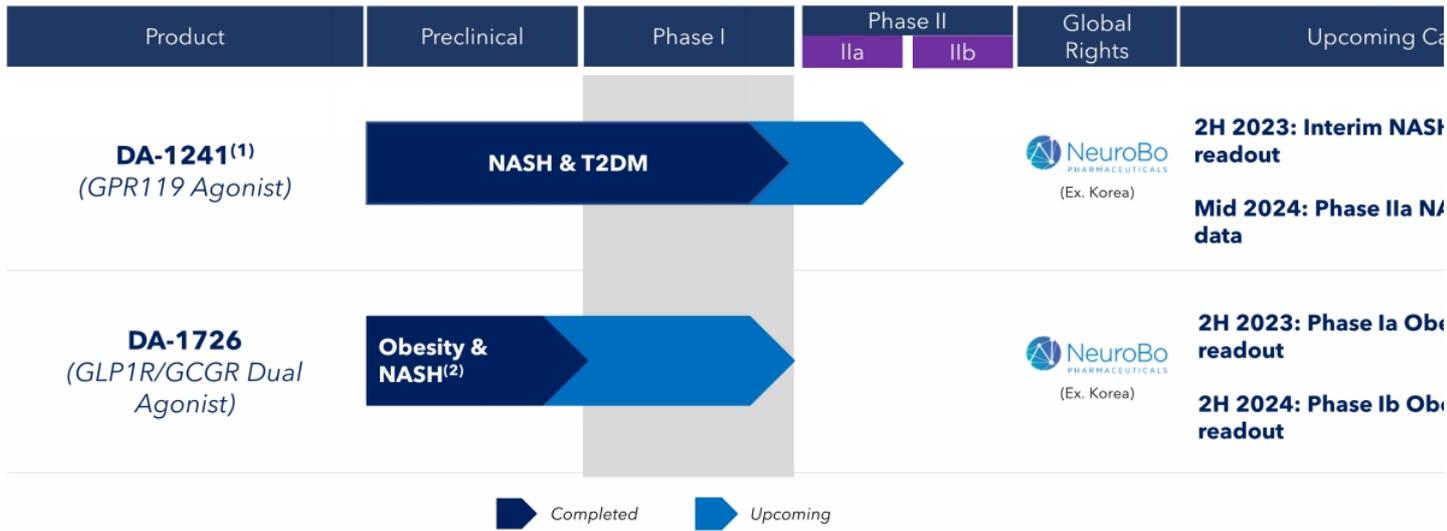
## Terms of the licensing agreement with Dong-A include:

Dong-A and NRBO Equity		Milestone Payments and Royalties
Upfront Payment for Licensing Agreement	\$22M	<ul style="list-style-type: none"> <li>Regulatory milestone payments and DA-1241.</li> <li>Single digit royalties on net sales</li> </ul>
Private Placement	\$15M	<ul style="list-style-type: none"> <li>Commercial based milestones</li> </ul>
<ul style="list-style-type: none"> <li>Series A Convertible Preferred Stock.</li> <li>Conversion price = public offering price units.</li> <li>Conversion subject to shareholder vote.</li> </ul>		
<ul style="list-style-type: none"> <li>Series A Convertible Preferred Stock.</li> <li>Conversion price and warrants = public offering price and warrant coverage as units.</li> <li>Conversion subject to shareholder vote.</li> </ul>		
 <b>DONG-A ST</b> <b>\$37M of new equity in NRBO</b>		

***Dong-A will continue to fund pre-clinical work in DA-1726 until submission of the IND.***

1. Payable in cash or common stock

# Pipeline and Near-Term Catalysts



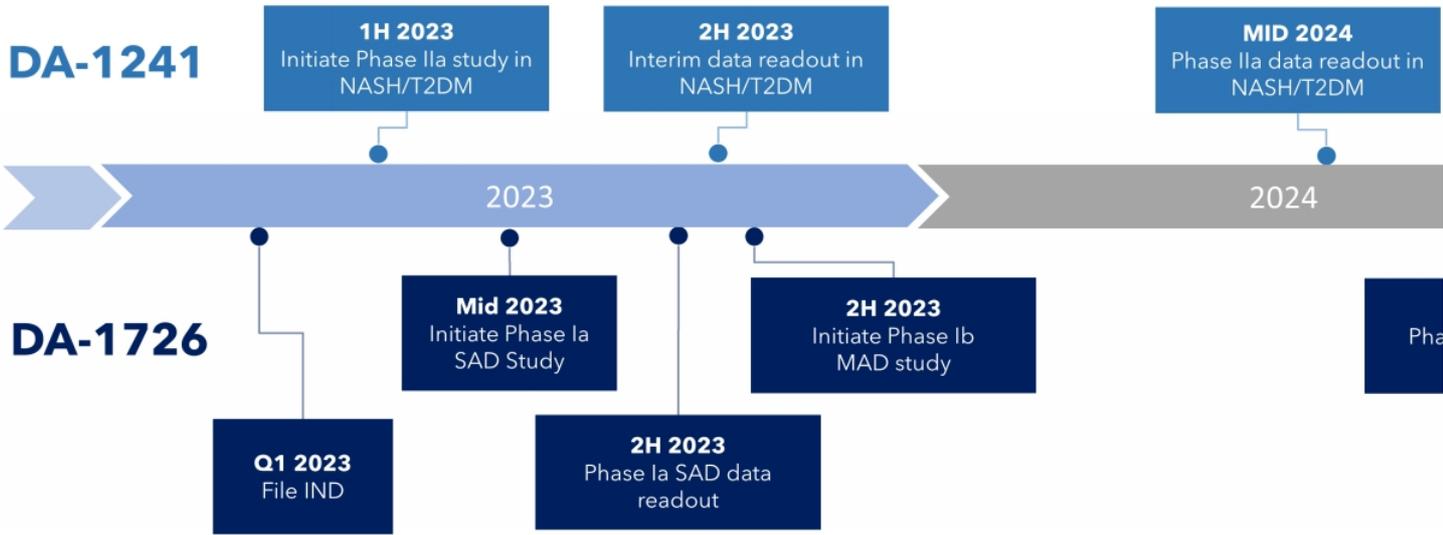
Sources: Dong-A, Management projections.

Notes: GPR119 (G Protein-Coupled Receptor 119); T2DM (Type 2 Diabetes Mellitus); NASH (Non-Alcoholic Steatohepatitis); GLP1R/GCGR (Glucagon-Like Peptide 1 Receptor/ Glucagon Receptor).

1. Assumes standalone development path in NASH; NeuroBo has option to pursue T2DM as an additional indication for DA-1241.

2. Remaining preclinical work will be carried out prior to the initiation of the Phase Ia trial.

# Anticipated Catalysts



Notes: NASH (Non-Alcoholic Steatohepatitis); IND (Investigational New Drug); MAD (Multiple Ascending Dose); SAD (Single Ascending Dose).

# DA-1241

A novel G-Protein-Coupled Receptor 119 (GPR119) ago with potential for Non-Alcoholic Steatohepatitis (NASH)

Synthetic, small molecule, selective and suitable for oral administration

1. DA-1241 also has potential in T2DM.

## DA-1241 has a multimodal mechanism that induces strong anti-NASH effects, by potential best-in-class efficacy demonstrated during preclinical studies <sup>(1-5)</sup>

- Agonism of GPR119 in the gut promotes the release of key gut peptides GLP-1, GIP, and PYY, these peptides play a role in glucose metabolism, lipid metabolism and weight loss
- Reduced lipid and collagen deposition via inhibition of triglyceride biosynthesis and stellate cell activation; produces beneficial effects on blood glucose levels <sup>(1,2)</sup>
- Reduced both pro-inflammatory cytokines and chemokines <sup>(2-5)</sup>

### DA-1241 demonstrated anti-NASH effects in animal models:

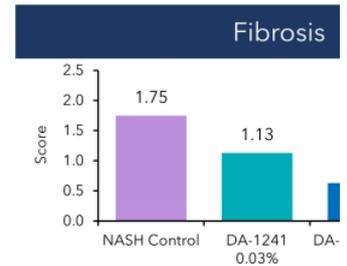
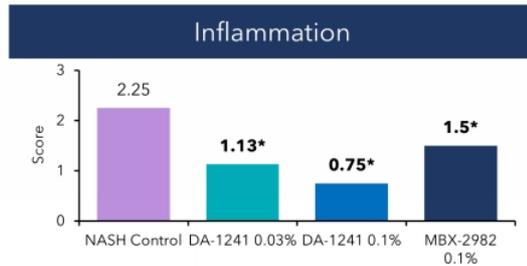
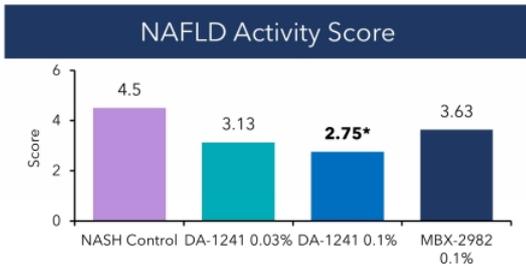
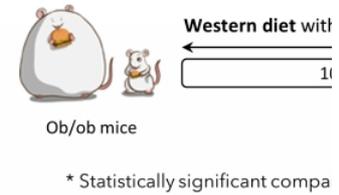
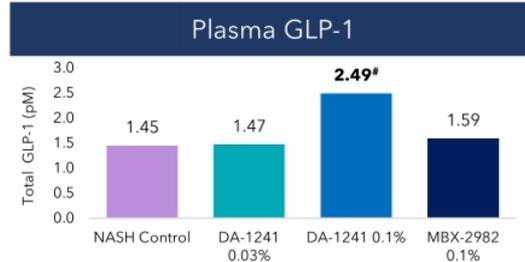
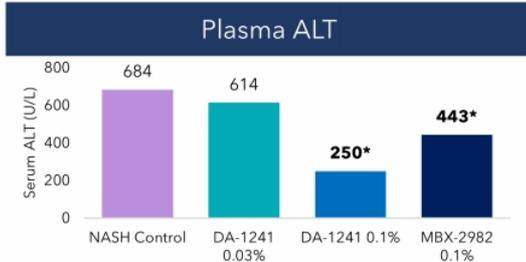
- ✓ Significantly reduced hepatic steatosis, inflammation, and fibrosis
- ✓ Attenuated NASH progression
- ✓ Reduced lipid and collagen deposition in the liver
- ✓ Decreased hepatic inflammation assessed by macrophage marker
- ✓ Reduced systemic inflammation and fibrosis biomarkers
- ✓ Reversion of hepatic transcriptome - most variable genes were improved towards the normal control

Notes: GPR119 (G Protein-Coupled Receptor 119); NASH (Non-Alcoholic Steatohepatitis); T2DM (Type 2 Diabetes Mellitus); GLP-1 (Glucagon-Like Peptide 1); GIP (Glucose-Dependent Insulinotropic Peptide); PYY (Polypeptide YY).

1. Dong-A ST DA-1241 Investigator's Brochure.
2. Dong-A Study Report 104458.
3. Park H et al. 80th Meeting of the American Diabetes Association. 2020; Abstract 216-LB.
4. Park H et al. 80th Meeting of the American Diabetes Association. 2020; Abstract 217-LB.
5. Park H et al. AASLD The Liver Meeting. 2020; Abstract 1666.

# DA-1241 Attenuates NASH Progression in Obese NASH Mice <sup>(1,2)</sup>

- Chronic treatment with DA-1241 **increased plasma total GLP-1**, but NOT another GPR119 agonist
- DA-1241 **alleviated the progression of NASH** in Ob-NASH mice on a high fat/fructose/CHO diet
- Biomarkers including **CCL2 and TIMP-1** in both plasma and liver were improved accordingly



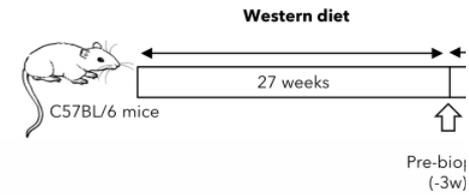
Notes: NASH (Non-Alcoholic Steatohepatitis); GPR119 (G Protein-Coupled Receptor 119); GLP-1 (Glucagon-Like Peptide 1); Ob (Obese); CHO (Carbohydrate); CCL2 (C-C Motif Chemokine Ligand 2); TIMP-1 (TIMP Metalloproteinase Inhibitor 1); NASH (Non-Alcoholic Steatohepatitis); Fatty Liver Disease.

1. Dong-A Study Report 103143.

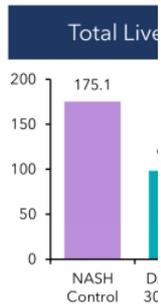
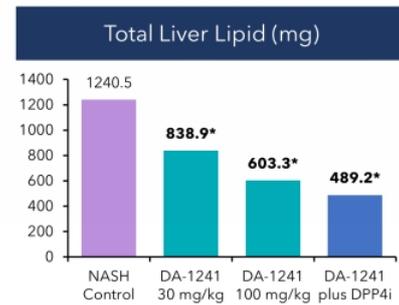
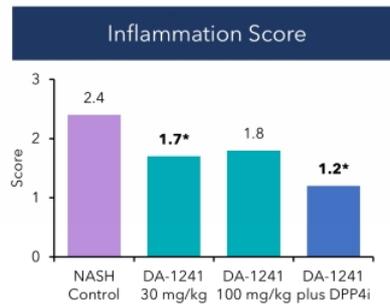
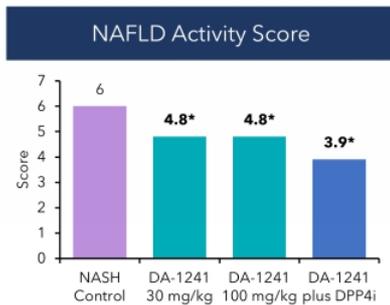
2. Park H et al. 80th Meeting of the American Diabetes Association, 2020; Abstract 217-LB.

# Therapeutic Potential of DA-1241 in Diet Induced Obesity -NASH Mice <sup>(1-3)</sup>

- The beneficial effects of DA-1241 alone and in combination with a DPP4 inhibitor were carried over to NASH models in mice
- DA-1241 alone and in combination with a DPP4 inhibitor **reduced hepatic lipid and collagen deposition** in the liver of biopsy-proven NASH mice
- DA-1241 alone and in combination with a DPP4 inhibitor **effectively decreased hepatic inflammation** assessed by a macrophage marker, galectin-3
- DA-1241 alone and in combination with a DPP4 inhibitor **reduced systemic inflammation** and fibrosis biomarkers



- Statistically significant compared to NASH control  
Combination therapy: DA-1241 100 mg/kg/day plus DPP4i



Notes:  
 1. NASH (Non-Alcoholic Steatohepatitis); NAFLD (Non-Alcoholic Fatty Liver Disease); DIO (Diet Induced Obese); DPP4i (Dipeptidyl Peptidase 4).  
 2. Dong-A Study Report 103420.  
 3. Park H et al. AASLD The Liver Meeting, 2020; Abstract 1666.  
 Park H et al. 80th Meeting of the American Diabetes Association, 2020; Abstract 216-LB.

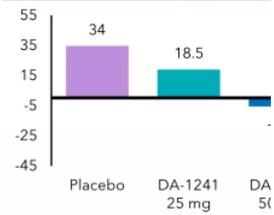
# DA-1241 Clinical Trials to Date – Phase Ia and Ib (1-4)



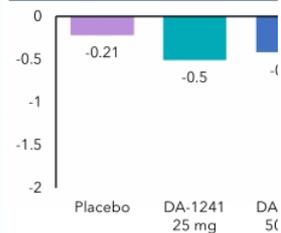
## Clinical Outcomes

Study	<ul style="list-style-type: none"> <li>Phase Ia, First-In-Human, Double-Blind, Placebo-Controlled, Randomized, Single Ascending Dose and Interactions with Metformin Study (n=60)</li> <li>Phase Ib, Double-Blind, Placebo-Controlled, Randomized, Multiple Ascending Dose Study (n=108)                             <ul style="list-style-type: none"> <li>Study treated 24 healthy volunteers for 28 days and 84 subjects with T2DM for 56 days</li> </ul> </li> </ul>
Safety	<ul style="list-style-type: none"> <li><b>Phase Ia, DA-1241 was well tolerated at doses up to 400 mg in healthy volunteers</b> <ul style="list-style-type: none"> <li>3 mild AEs in 3 subjects receiving DA-1241</li> <li>1 possibly related AE of “headache”</li> <li>Statistical analyses of the interaction effect of metformin on DA-1241 PK parameters showed no effect of concomitant administration</li> </ul> </li> <li><b>Phase Ib, DA-1241 was well tolerated at doses up to 200 mg/d for 28 days in healthy males and 100 mg/d for 56 days in T2DM subjects</b> <ul style="list-style-type: none"> <li>Most AEs were mild, no obvious relationship between the frequency of AEs and dose of DA-1241</li> <li>The most frequent treatment emergent AEs were mild gastrointestinal side effects (nausea, diarrhea, abdominal pain), all resolved spontaneously</li> </ul> </li> <li><b>No clinically significant labs, vitals, 12-lead ECG, or physical findings in any subjects receiving DA-1241 (Phase Ia or Ib)</b></li> </ul>
PD Results	<ul style="list-style-type: none"> <li>DA-1241 in T2DM showed decreases from baseline in 2-hour post-prandial glucose, FPG, HbA1c, and in most parameters for continuous glucose monitoring systems</li> <li>T2DM subjects administered DA-1241 at 100 mg/d showed some weight loss</li> <li><b>Secretion of GIP, GLP-1 and PYY were increased at Day 56 in all DA-1241 treatment groups, consistent with the mechanism of action of DA-1241</b></li> </ul>

## Change in Glucose Subjects at



## Weight Loss Subjects at



Notes: T2DM (Type 2 Diabetes Mellitus); PK (Pharmacokinetic); PD (Pharmacodynamic); AE (Adverse Event); SAE (Serious Adverse Event); ECG (Electrocardiogram); iAUE (Incremental Area Under the Measurement Versus Time Curve); FPG (Fasting Plasma Glucose); HbA1c (Hemoglobin A1c); GLP-1 (Glucagon-Like Peptide 1); GIP (Glucose-Dependent Insulinotropic Peptide); PYY (Polypeptide YY).

- Dong-A Study Report DA1241\_DM\_Ia.
- Dong-A Study Report DA1241\_DM\_Ib.
- Kim MK et al. 81st Meeting of the American Diabetes Association. 2021; Abstract 765-P.
- Kim MK et al. 81st Meeting of the American Diabetes Association. 2021; Abstract 766-P.

# DA-1241 NASH Upcoming Study Overview Phase II to Establish Signal Efficacy in NASH



## Phase II (NASH) Study Design

Population:	▪ Presumed NASH with or with out T2DM defined by imaging/non-invasive criteria
N:	▪ ~100; multiple arms, various doses of DA-1241 and matching placebo
Design:	▪ Multiple doses vs. placebo ▪ Outcome at 6 months
Summary:	▪ Non-invasive measures (imaging biomarkers and serum-based biomarkers) <ul style="list-style-type: none"><li>• Primary pharmacodynamic endpoint, change in hepatic fat at 24 weeks as assessed by MRI-PDFF</li></ul> ▪ Secondary endpoints to evaluate markers for T2DM control ▪ Further determine safety of DA-1241
Location:	▪ Multi-center United States
Duration of Study:	▪ FPFV to LPLV and top-line results ~18 months ▪ Interim readout in ~12-14 months

Notes: NASH (Non-Alcoholic Steatohepatitis); NAFLD (Non-Alcoholic Fatty Liver Disease); T2DM (Type 2 Diabetes Mellitus); FPFV (First Patient First Visit); LPLV (Last Patient Last Visit).

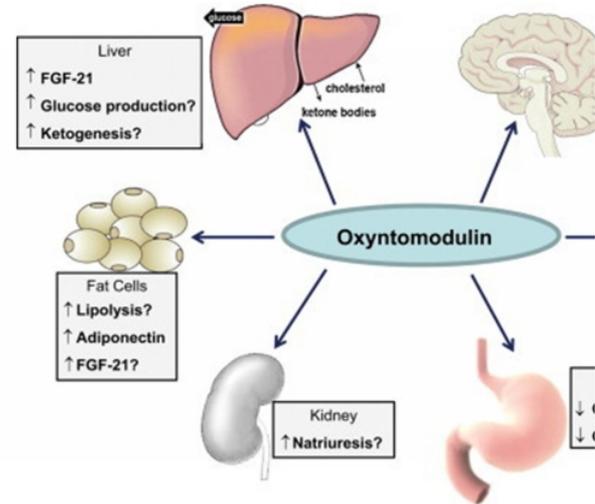
# DA-1726

A novel oxyntomodulin analogue functioning as a GLP1 dual agonist for the treatment of NASH and obesity

Once-weekly administration

## DA-1726 is a novel oxyntomodulin analogue functioning as a GLP1R/GCGR dual agonist for the treatment of obesity, NASH and possibly T2DM

- OXM is a peptide hormone released from the gut after a meal activating both the GLP-1 and glucagon receptors
- In turn, reducing food intake and increasing energy expenditure in humans, potentially resulting in superior body weight lowering to selective GLP-1 receptor agonists
- OXM improves glucose metabolism in part by promoting glucose dependent insulin secretion
  - While activation of the GCGR increases glucose production posing a hyperglycemic risk, the simultaneous activation of the GLP-1 receptor counteracts this effect
  - Overall, there is a low risk for hypoglycemia
- Agonism of GCGR enhances hepatic lipid oxidation and thus may prevent fat accumulation and fatty liver disease
  - In addition, GLP-1 receptor activation is known to decrease hepatic lipogenesis



Physiological effects of oxyntomodulin (1)

Notes: GLP1R/GCGR (Glucagon-Like Peptide 1 Receptor/ Glucagon Receptor); NASH (Non-Alcoholic Steatohepatitis); T2DM (Type 2 Diabetes Mellitus); OXM (Oxyntomodulin); GLP-1 (Glucagon-Like Peptide 1).

1. Pocai A. Mol Metab.2014;3:241-51.

# Mechanism of Action of Body Weight Loss <sup>(1,2)</sup>

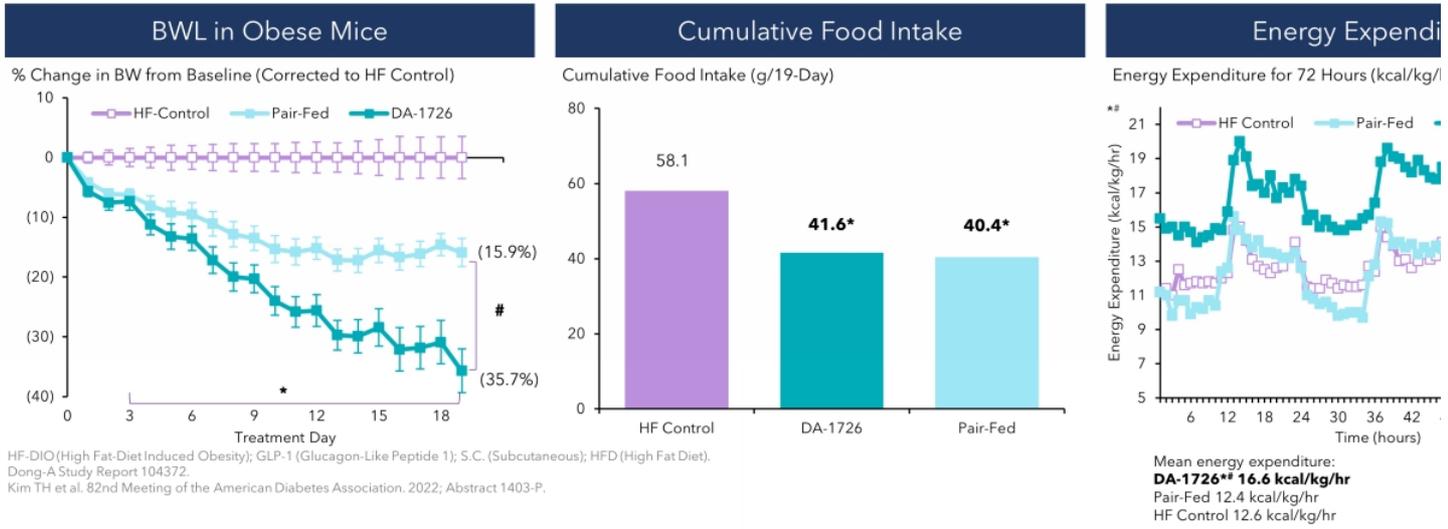


- DA-1726 was superior to the pair-fed group in the body weight loss, indicating that nearly half of the weight loss caused by DA-1726 was attributed to reduced food intake via activating GLP-1 receptor
- DA-1726 was superior to both the pair-fed and control groups regarding energy expenditure, which is secondary to glucagon activation

- Animals: male HF-I
- Regimen: Every th
- DA-1726 Dose: 12

14-week C57BL/6-DIO mouse  
 HFD feeding  
 4-week

\* Statistically significant compared to control # Statistically significant compared to either treatment



Notes: HF-DIO (High Fat-Diet Induced Obesity); GLP-1 (Glucagon-Like Peptide 1); S.C. (Subcutaneous); HFD (High Fat Diet).  
 1. Dong-A Study Report 104372.  
 2. Kim TH et al. 82nd Meeting of the American Diabetes Association. 2022; Abstract 1403-P.

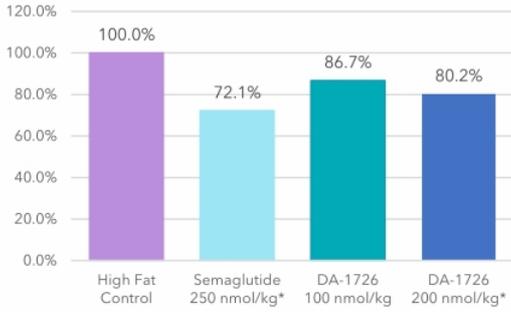
# DA-1726 Therapeutic Potential Obesity <sup>(1-3)</sup>



## DA-1726 out-performed semaglutide (WEGOVY™), a GLP-1 agonist, models of obesity and T2DM

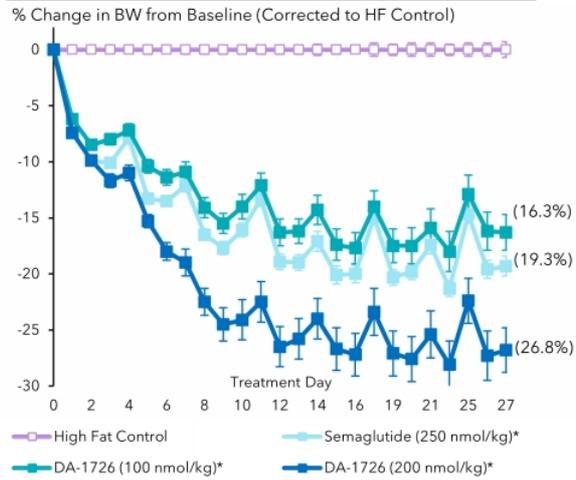
\*Statistically significant compared to control

Cumulative Food intake in HF-DIO Obese Mice DA-1726 vs Semaglutide <sup>(1,3)</sup>

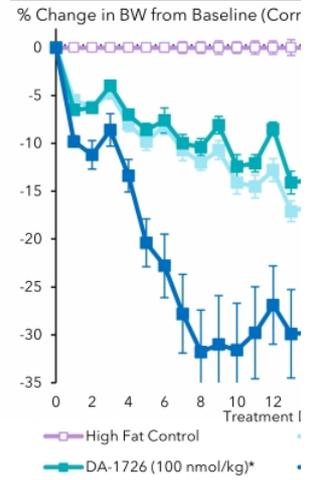


Weight loss observed from DA-1726 is not solely attributed to reduced food intake via GLP1R but increased energy expenditure via the GCGR

BWL in HF-DIO Obese Mice DA-1726 vs Semaglutide <sup>(1,3)</sup>



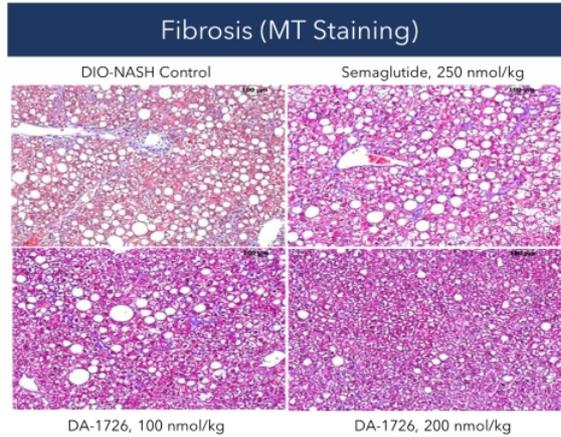
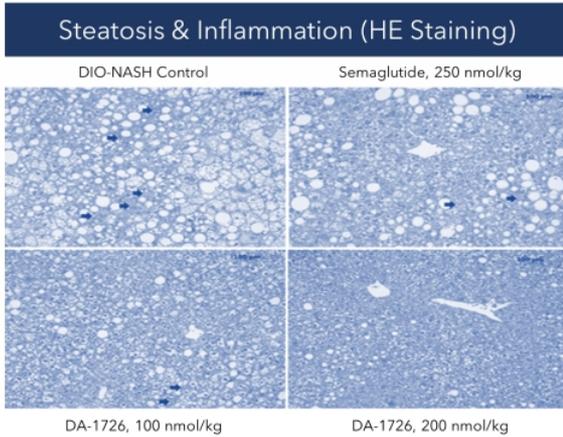
BWL in HF-FATZO T2M DA-1726 vs Semaglutide <sup>(1,3)</sup>



Notes: GLP1R/GCGR (Glucagon-Like Peptide 1 Receptor/ Glucagon Receptor); HF-DIO (High Fat-Diet Induced Obesity); GLP-1 (Glucagon-Like Peptide 1); T2DM (Type 2 Diabetes Mellitus).  
 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.

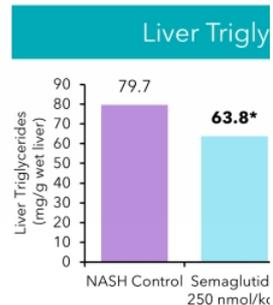
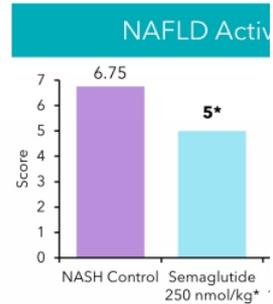
## DA-1726 further improved hepatic steatosis, inflammation, and fibrosis compared to semaglutide

- Animals: male DIO-NASH mice
- Regimen: Every three days S.C. injection
- Dose: 100 & 200 nmol/kg DA-1726 vs. 250 nmol/kg semaglutide



Arrow: Inflammation

Blue Color: Fibrosis



\*Statistically significant

Notes: NASH (Non-Alcoholic Steatohepatitis); DIO (Diet Induced Obesity); S.C. (Subcutaneous); NAFLD (Non-Alcoholic Fatty Liver Disease); HE (Hematoxylin and Eosin); MT (Masson's Trichrome).

- Dong-A Study Report 104854.
- Jung IH et al. 82nd Meeting of the American Diabetes Association. 2022; Abstract 1333-P.

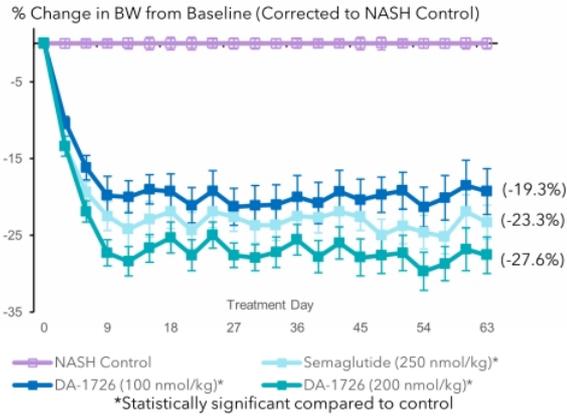
# DA-1726 Therapeutic Potential for NASH (Cont'd)<sup>(1,2)</sup>



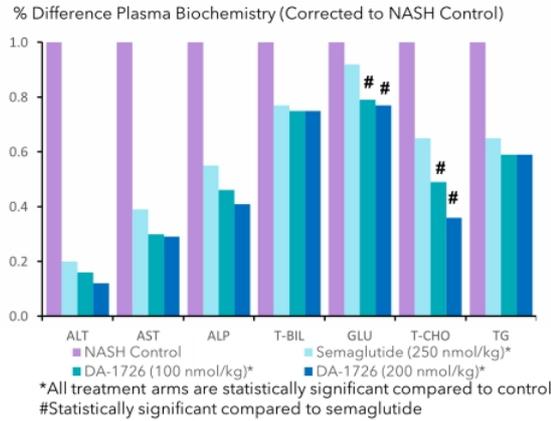
DA-1726 reduced body weight and decreased plasma clinical chemistry parameter decreased gene expression related to inflammation and liver fibrosis, with the low-dose showing higher anti-NASH effects despite lower body weight loss compared to semaglutide

- Animals: male DIO-NASH mice
- Regimen: Every three days S.C. injection
- Dose: 100 & 200 nmol/kg DA-1726 vs. 250 nmol/kg semaglutide

## BWL in DIO-NASH Mouse

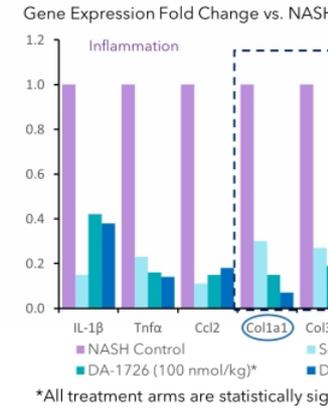


## Plasma Biochemistry Analysis



5-week C57BL/6 Mouse → GAND Feeding → 30-week

## Hepatic Gene Expression



Notes: NASH (Non-Alcoholic Steatohepatitis); DIO (Diet Induced Obesity); S.C. (Subcutaneous).  
 1. Dong-A Study 104854  
 2. Jung IH et al. 82nd Meeting of the American Diabetes Association. 2022; Abstract 1333-P.

# DA-1726 Obesity & NASH Upcoming Study Overviews



## Phase I

<b>Population:</b>	▪ Healthy volunteers Phase Ia, Phase Ib mix of healthy volunteers and otherwise healthy obesity
<b>N:</b>	▪ ~100 (two studies Phase Ia and Phase Ib)
<b>Design:</b>	▪ SAD and MAD
<b>Summary:</b>	▪ PK, PD (12 weeks) safety and tolerability. Extended dosing (12 weeks) in Phase study with obese patients could provide an added clinical signal in obesity
<b>Location:</b>	▪ United States (consideration may be given to Canada or Australia)
<b>Duration of Study:</b>	▪ FPFV to LPLV and topline results 10-16 months each study (SAD & MAD)

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

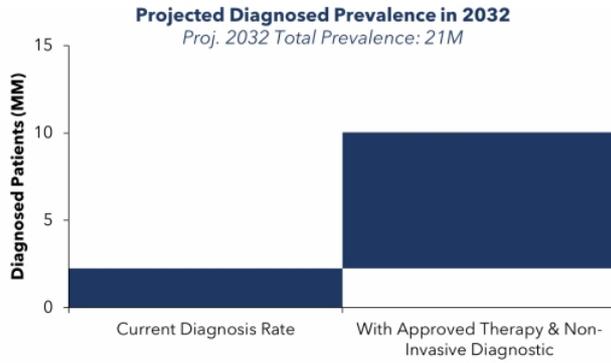
# Market Opportunity & Financial Overview

# Developing Assets Targeting Significant Opportunities of Unmet Need...



## NASH

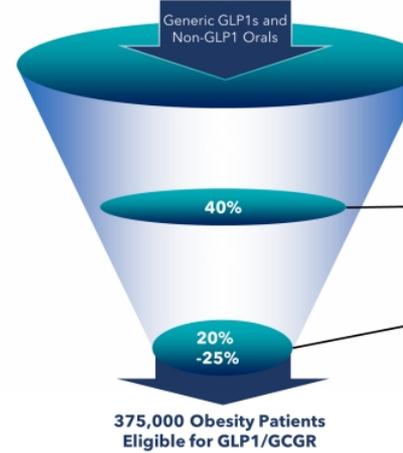
NASH diagnosis rates will increase upon the approval of new pipeline therapies in the coming years, reaching a peak of 50% by 2032



## Obesity

It is estimated ~40% of patients on pharmacotherapy with a GLP-1 based therapy like semaglutide or tirzepatide, 20% to 25% will progress to GLP1/GCGR dual agonists due to lack of response or issues with tolerance.

### 4.7M Treated Obesity Patients, 2029



Source: Health Advances Quantitative Research

Notes: GLP1R/GCGR (Glucagon-Like Peptide 1 Receptor/ Glucagon Receptor); NASH (Non-Alcoholic Steatohepatitis);

## DA-1241

- Oral agent with once-a-day dosing
- Novel mechanism of action which promotes the release of key gut peptides GLP-1, GIP, and PYY
- Only GPR119 in development for NASH
  - Demonstrated effect on hepatic steatosis, fibrogenesis, and inflammation in animal models
- Potential to address multiple comorbidities NASH, T2DM, and dyslipidemia
- Low likelihood of inducing hypoglycemia
- Likely to promote weight loss adding to the benefit in NASH and T2DM
- Candidate for FDA Fast Track Designation

## DA-1726

- Unlike semaglutide, the dual GLP1R/GCGR activity of the added benefit of increased energy expenditure at the liver and steatosis
  - Demonstrated increased benefit compared to semaglutide on steatosis, fibrogenesis, and inflammation in animal models
- Superior effect in animal models compared to cotadunipitant on glucose control
- Potential to address multiple comorbidities NASH, obesity, and T2DM
- Low risk for hypoglycemia
- Candidate for FDA Fast Track Designation

## Overall Program

- Multiple assets in the same clinical space synergies in the drug development process
- For NASH, it may be possible to combine the agents using DA-1726 as induction therapy and then converting the patient to DA-1241 for maintenance therapy
- Both assets allow for multiple shots on multiple various therapeutic targets

# WEGOVY™ (Semaglutide) and Obesity

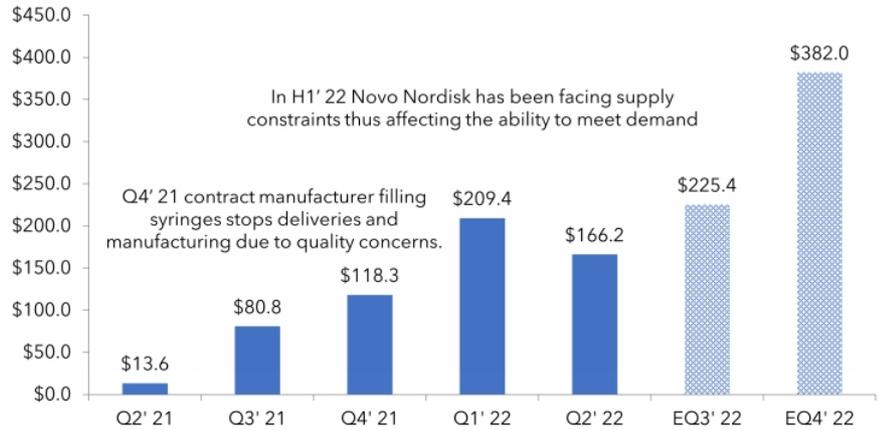


In June 2021 the FDA approved WEGOVY™ (semaglutide) injection for chronic weight management in adults with obesity or overweight with at least one weight-related condition (e.g. high blood pressure, T2DM, or high cholesterol).



As many prescriptions were written for WEGOVY™ as in the four years following launch of its predecessor SAXENDA®(1)

WEGOVY™ Sales (\$M)<sup>(2)(3)</sup>

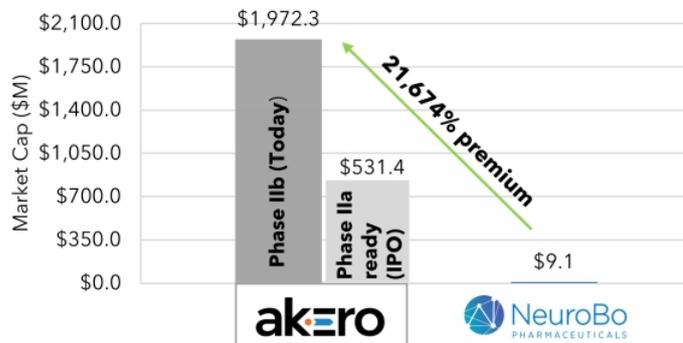


1. Novo Nordisk A/S Form 20 filed on February 2, 2022  
2. Novo Nordisk A/S Q2 2022 Financial Results; Financial workbook (xlsx). Financials presented in Danish Krone and converted into USD at the exchange rate on the last day of each respective quarter.  
3. Estimated Q3' 22 and Q4' 22 sales based on the average analyst consensus per Bloomberg

# Tangible Universe of Successful, Early-Stage Cardio-Metabolic Comparables

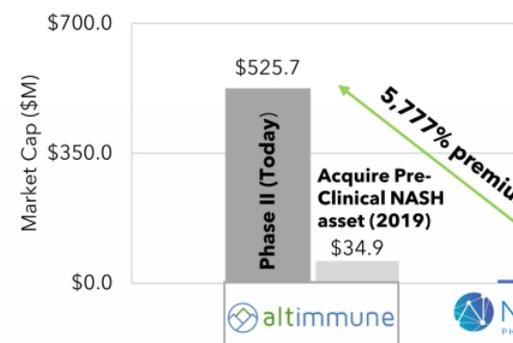


## NASH



Lead Product	Efruxifermin	DA-1241
Indication	NASH	NASH/T2DM
Stage	Phase IIb	Phase II Ready - NASH
PoC Data	✓	✗ TBD

## NASH / Obesity



Lead Product	Pemvidutide	
Indication	Obesity/NASH	OB
Stage	Phase II	
PoC Data	✓	

Sources: Company Website, Press Releases, Corporate Presentation, Capital IQ as of 10/21/22

Notes: Includes cardio-met focused companies in Ph II development or earlier, excludes gene therapy and RNA platforms.

1. Program defined as separate indications; i.e. same asset being developed for different indications counted as two programs.

# Financials and Capitalization Table



## Financial Overview As of September 30, 2022

Cash	\$6.4M
Debt	-

## Capitalization as of September 30, 2022

	Common Stock Equivalents
Common Stock	888,693
Warrants (WAEP \$140.07) <sup>(1)</sup>	228,235
Options (WAEP \$99.62)	36,493
Fully Diluted	1,153,415

## Other Potential Dilutive Securities

Series A Convertible Preferred Issuance to Dong-A per License Agreement (convertible at public offering price and subject to shareholder vote)	\$22,000,000
Series A Convertible Preferred Private Placement Purchase by Dong-A <sup>(2)</sup>	\$15,000,000

1. No ratchets, price resets or anti-dilution provisions
2. Dong-A will purchase, in a private offering, \$15 million of Series A Convertible Preferred Stock at a conversion price equivalent to the public offering together with warrants equivalent to the warrants in the public offering. Shareholder approval be obtained for the issuance of the common stock underlying the Preferred and the warrants. This is contingent upon NRBO raising at least \$15 million in the public offering.

## NeuroBo Leadership



### Gil Price, MD\*

- President & Chief Executive Officer
- Former CEO and CMO of Drug Safety Solutions, Inc.
- Former CMO of the ProPharma Group
- 35 years in the pharmaceutical industry spread across medical affairs, clinical development, and pharmacovigilance



### Matthew Bardin, PharmD, BCPS\*

- Sr. Vice-President, Operations
- 17 years in the pharmaceutical industry spread across medical affairs, clinical development, and pharmacovigilance
- Doctor of Pharmacy from the Samford University McWhorter School of Pharmacy and is a Board-Certified Pharmacotherapy Specialist



### Adam Perlish

- Comptroller
- Over 15 years of finance and accounting experience, including 10 years in pharmaceutical industry
- Bachelor's degree in accounting from the George Washington University and is a licensed CPA



### Stephen Harrison, M.D, FACP, FAASLD

- Consulting Medical Director
- Visiting Prof. of Hepatology, Radcliffe Department of Medicine, University of Oxford, UK
- Expert in clinical studies for NAFLD/NASH with nearly 300 peer reviewed publications
- Col (ret.) USA, MC



### Frank Kondrad

- Vice President, Corporate & Business Development
- Previously, with AstraZeneca as Executive Director, Business Development and Licensing, for Cardiovascular, Metabolic Disease and Renal business
- Over 45 years in the pharmaceutical industry in business development, managed markets, and strategic planning



### Eric Ruby

- Regulatory
- 35 years of experience in regulatory strategy, data review, and regulatory filings, including work at the FDA
- Bachelor's degree in chemistry from Harvard University and master's degree in organic chemistry from Berkeley

## Scientific Advisors



### Roy Freeman,

- Prof. of Neuro School
- Director, Cent Peripheral Ne
- Boston, MA



### Leigh Perreau

- Associate Prof Endocrinolog
- Colorado Univ
- Boulder, CO



### Caroline Apov DABOM

- Associate Prof Medical Scho
- Co-Director C Management Women's Hos
- Boston, MA



### Danamarie Be

- Medical Direc
- Clinical Resea Human Clinica
- New York, NY

\*Full-time NeuroBo employee

- IP rights currently owned by Dong-A and to be licensed to NeuroBo.

	DA-1241	DA-1726
<b>US</b>	<ul style="list-style-type: none"> <li>▪ One patent: both <b>composition of matter</b> and <b>process of making the composition</b>.                             <ul style="list-style-type: none"> <li>- Expected to expire in <b>2035*</b></li> </ul> </li> <li>▪ One non-provisional patent application: both <b>composition of matter and use of the composition</b>.</li> </ul>	<ul style="list-style-type: none"> <li>▪ One U.S. patent: both <b>composition of matter</b> and <b>composition</b>.                             <ul style="list-style-type: none"> <li>- Expected to expire in <b>2038*</b></li> </ul> </li> <li>▪ One U.S. non-provisional patent application: both <b>of matter and use of the composition</b>.</li> <li>▪ PCT application enters national phases in October</li> </ul>
<b>Non-US</b>	<ul style="list-style-type: none"> <li>▪ 17 patents:                             <ul style="list-style-type: none"> <li>- Expected to expire between <b>2035 and 2039*</b></li> </ul> </li> <li>▪ 14 patent applications: <b>composition of matter and/or use of the composition</b>.</li> </ul>	<ul style="list-style-type: none"> <li>▪ 5 patents: <b>composition of matter</b>.                             <ul style="list-style-type: none"> <li>- Expected to expire between <b>2038 and 2040*</b></li> </ul> </li> <li>▪ 8 patent applications: <b>composition of matter and/or use of the composition</b>.</li> </ul>

**\*All expected patent expiration dates are subject to adjustment or extension.**

Source: Form S-1/A (File No.: 333-267482), available by visiting Edgar on the Commission website at <https://www.sec.gov>.

## ANA001

- A proprietary oral niclosamide formulation being developed as a treatment for patients with moderate COVID-19.
- Enrollment in the Phase 2 clinical trial for moderate COVID-19 in hospitalized patients closed in July 2022 and the trial moved to the data analysis phase.
- Following an analysis of the clinical trial data, expected in Q4-2022, the Company will begin discussions with the FDA on the next steps.
- Potential future opportunity to out-license asset.

## NB-01

- Potential to treat painful diabetic neuropathy (PDN) as a first-line pain management therapy for PDN.
- Potential future opportunity to out-license asset.

## NB-02

- Potential to treat the symptoms of cognitive impairment and modify the progression of neurodegenerative disease.
- Potential future opportunity to out-license asset.

## Gemcabene

- Being assessed for various indications including COVID-19 in combination with ANA001.
- Potential future opportunity to out-license asset.

1. The Company does not intend to use the proceeds from the public offering or the private offering for further development of these product candidates.

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# NeuroBo Pharmaceuticals, Inc.

## NASDAQ:NRBO

Contact:

Frank Kondrad  
Vice President, Corporate and Business Development  
(610) 316-1735  
[Frank.Kondrad@NeuroBoPharma.com](mailto:Frank.Kondrad@NeuroBoPharma.com)