

Innovation and therapeutic focus



Research & Early development

CMD22
CAPITAL MARKETS DAY

3 MARCH



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Forward-looking statements

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- Statements of targets, plans, objectives or goals for future operations, including those related to Novo Nordisk's products, product research, product development, product introductions and product approvals as well as cooperation in relation thereto,
- Statements containing projections of or targets for revenues, costs, income (or loss), earnings per share, capital expenditures, dividends, capital structure, net financials and other financial measures,
- Statements regarding future economic performance, future actions and outcome of contingencies such as legal proceedings, and
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Factors that may affect future results include, but are not limited to, global as well as local political and economic conditions, including interest rate and currency exchange rate fluctuations, delay or failure of projects related to research and/or development, unplanned loss of patents, interruptions of supplies and production, including as a result of interruptions or delays affecting supply chains on which Novo Nordisk relies, product recalls, unexpected contract breaches or terminations, government- mandated or market-driven price decreases for Novo Nordisk's products, introduction of competing products, reliance on information technology including the risk of cybersecurity breaches, Novo Nordisk's ability to successfully market current and new products, exposure to product liability and legal proceedings and investigations, changes in governmental laws and related interpretation thereof, including on reimbursement, intellectual property protection and regulatory controls on testing, approval, manufacturing and marketing, perceived or actual failure to adhere to ethical marketing practices, investments in and divestitures of domestic and foreign companies, unexpected growth in costs and expenses, failure to recruit and retain the right employees, failure to maintain a culture of compliance, epidemics, pandemics or other public health crises, and factors related to the foregoing matters and other factors not specifically identified herein.

For an overview of some, but not all, of the risks that could adversely affect Novo Nordisk's results or the accuracy of forward-looking statements in this Annual Report 2021, reference is made to the overview of risk factors in 'Risk management' of this Annual Report 2021.

Unless required by law, Novo Nordisk is under no duty and undertakes no obligation to update or revise any forward-looking statement after the distribution of this Annual Report 2021, whether as a result of new information, future events, or otherwise.

Important drug information

Victoza® and Ozempic® are approved for the management of type 2 diabetes only
Saxenda® and Wegovy® are approved in the USA and the EU for the treatment of obesity only

Strategic aspirations 2025



Purpose and sustainability (ESG)

- Progress towards zero environmental impact
- Being respected for adding value to society
- Ensure distinct core capabilities and evolve culture



Commercial execution

- Strengthen Diabetes leadership - aim at global value market share of more than 1/3
- Strengthen Obesity leadership and double current sales¹
- Secure a sustained growth outlook for Rare disease



Innovation and therapeutic focus

- **Further raise the innovation-bar for diabetes treatment**
- **Develop a leading portfolio of superior treatment solutions for obesity**
- **Strengthen and progress the Rare disease pipeline**
- **Establish presence in Other serious chronic diseases focusing on CVD, NASH and CKD**

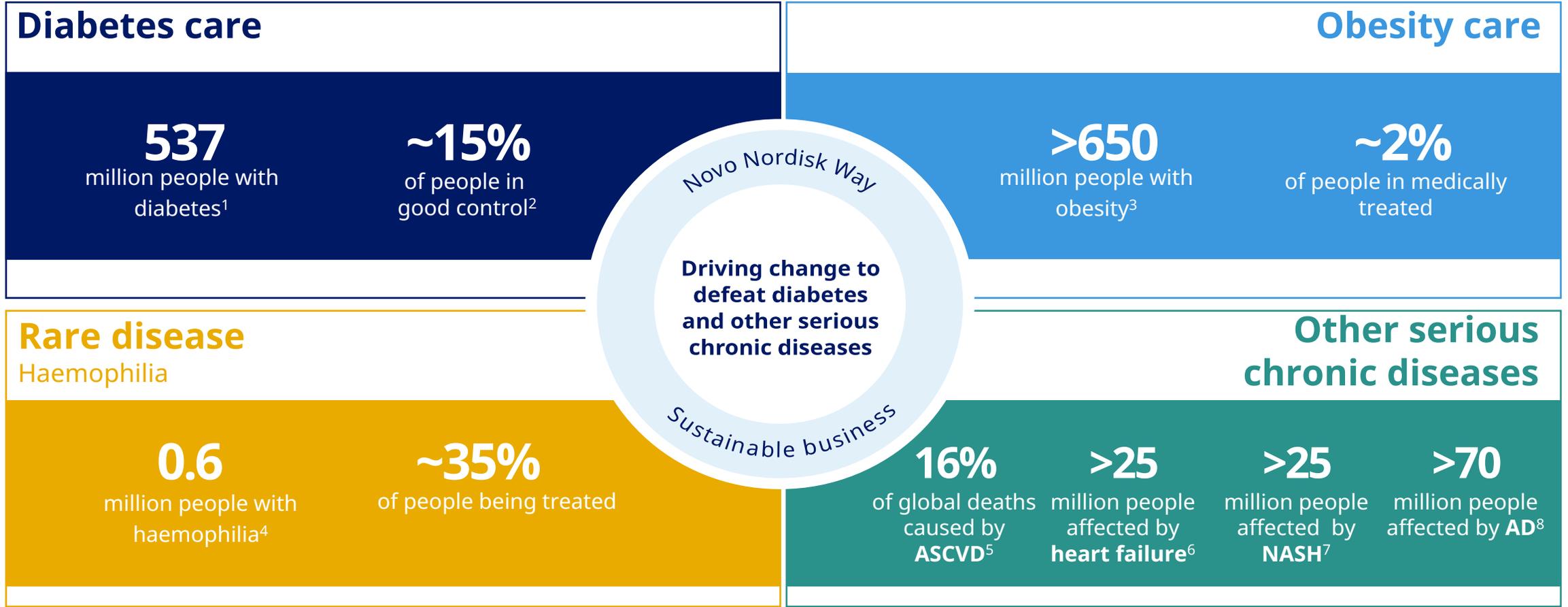


Financials

- Deliver solid sales and operating profit growth
 - Deliver 6-10% sales growth in IO
 - Transform 70% of sales in the US²
- Drive operational efficiencies across the value chain to enable investments in future growth assets
- Deliver free cash flow to enable attractive capital allocation to shareholders

¹ Based on reported sales in 2019, ² From 2015 to 2022, 70% of sales to come from products launched from 2015. IO: International Operations; CVD: Cardiovascular disease; NASH: Non-alcoholic steatohepatitis; CKD: Chronic kidney disease. Note: The strategic aspirations are not a projection of Novo Nordisk's financial outlook or expected growth.

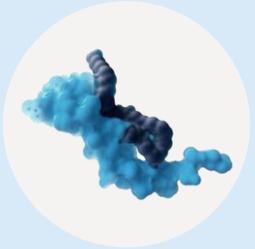
Innovation starts with addressing unmet needs, improving outcomes and reaching more patients



¹International Diabetes Federation: Diabetes Atlas 10th edition, 2021; ²Real-world studies indicate between 30-55% of patients reach HbA_{1c} target <7% .e.g. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4388968/>, taking 42.5% in good control of treated people; ³World Health Organisation; ⁴ WFH annual survey 2020 (120 of 147 countries responded): Prevalence by calculating expected number of patients using 20.9 per 100.000 in haemophilia. Identified patients as proxy for receiving some sort of treatment; ⁵ "The top 10 causes of death", WHO, 9 December 2020 (ASCVD denoted as ischaemic heart disease); ⁶Global Public Health Burden of Heart Failure, Apr. 2017: <https://pubmed.ncbi.nlm.nih.gov/28785469/>; ⁷Estes C, Modeling the epidemic of non-alcoholic fatty liver disease demonstrates an exponential increase in burden of disease, Hepatology, 2018; ⁸The World Alzheimer Report 2015, The Global Impact of Dementia, Alzheimer's Disease International (ADI), London.

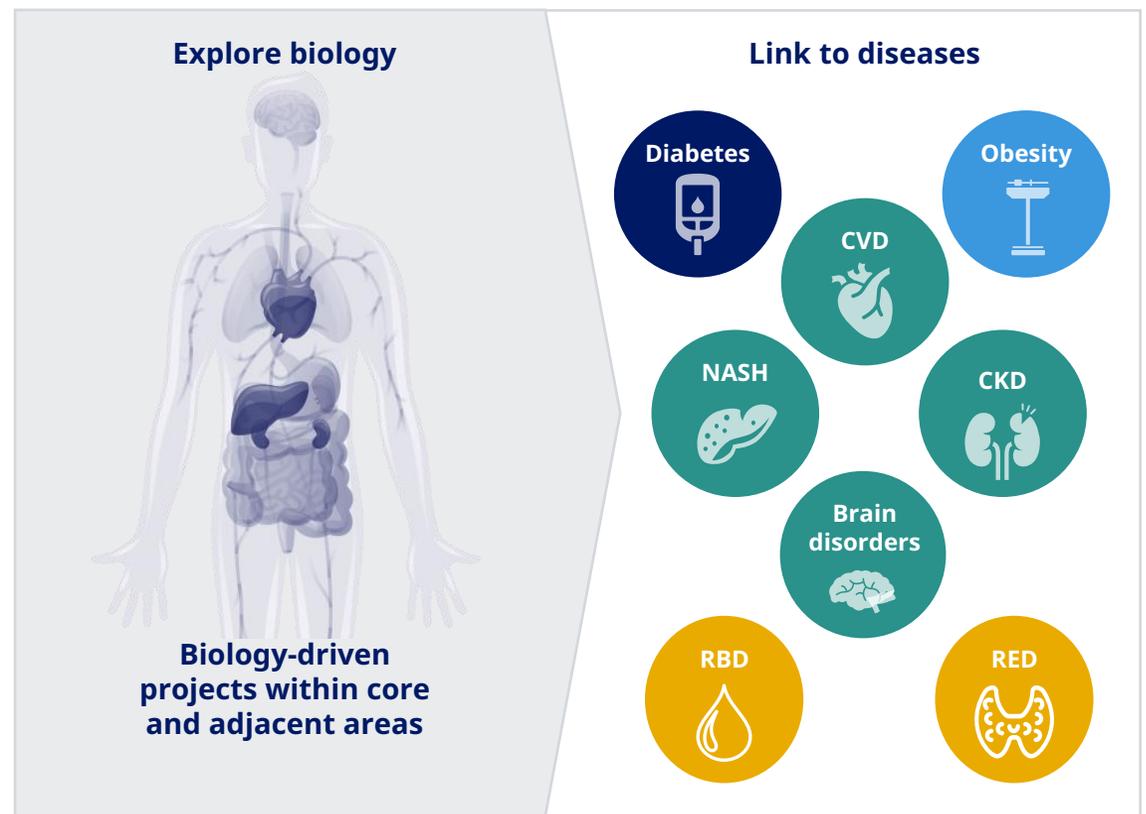
Biology-driven and disease agnostic approach to drug discovery

Exploring and understanding GLP-1 biology opened up our ability to address more diseases



<p>Pancreas</p> <ul style="list-style-type: none"> ↑ Glucose-dependent glucagon secretion ↓ Glucose-dependent insulin secretion ↑ Beta-cell function ↑ Beta-cell apoptosis ↓ Insulin biosynthesis 	<p>Brain</p> <ul style="list-style-type: none"> ↓ Body weight ↓ Food intake ↓ Satiety
<p>Heart</p> <ul style="list-style-type: none"> ↓ CV risk ↓ Fatty acid metabolism ↑ Cardiac function ↓ SBP ↓ Inflammation 	<p>Stomach</p> <ul style="list-style-type: none"> ↓ Gastric emptying
<p>Liver</p> <ul style="list-style-type: none"> ↓ Endogenous glucose production ↑ Hepatic insulin sensitivity ↓ De novo lipogenesis ↓ Lipotoxicity ↓ Steatosis 	

Driving disease agnostic drug discovery within core and adjacent areas



A human-centric approach improves understanding of people with serious chronic disease and is key to identify new targets



From:

- Guided by literature or partners towards target discovery in a given disease
- In vitro and in vivo experiments towards validation



To:

- Analyses of human cohort data, linking genetics to disease incidence
- Beyond traditional approach to clinical data by including life-style insights, anthropometric measurements, biomarkers, etc.

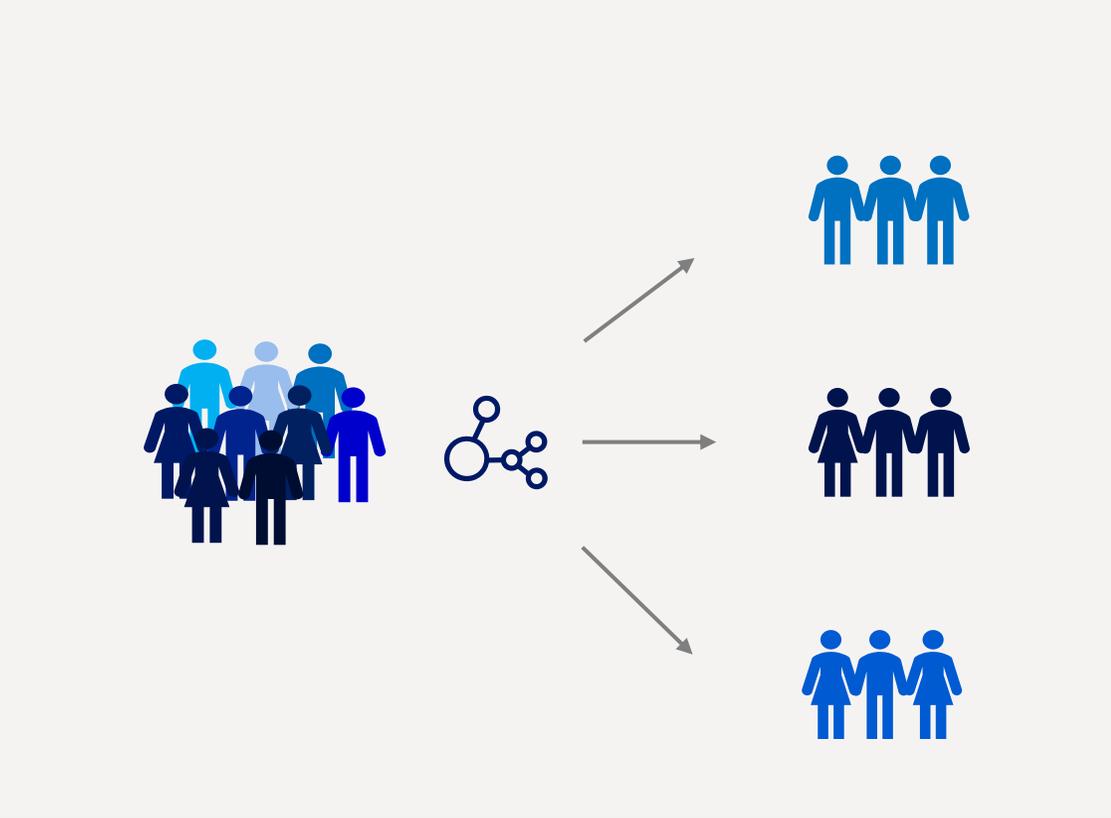


A biological root cause

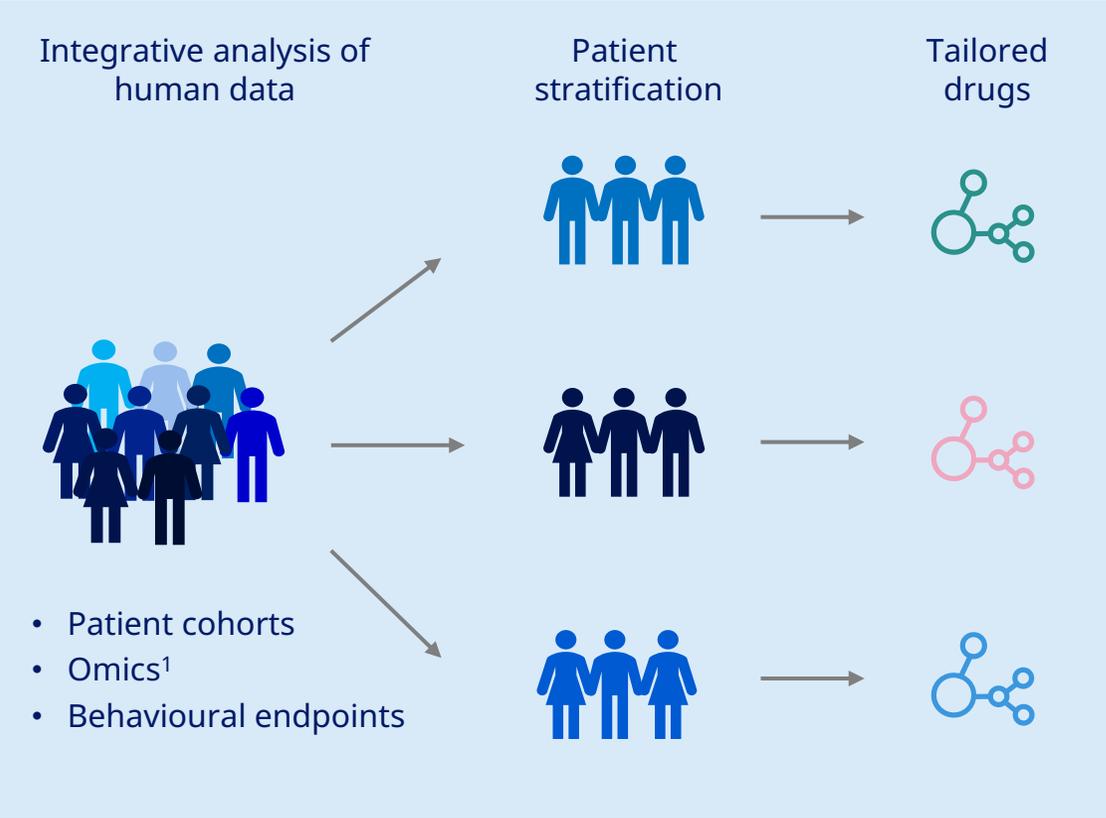
A biological target to address

Precision medicine drives better outcomes for a specific patient population

From one size fits all medicine

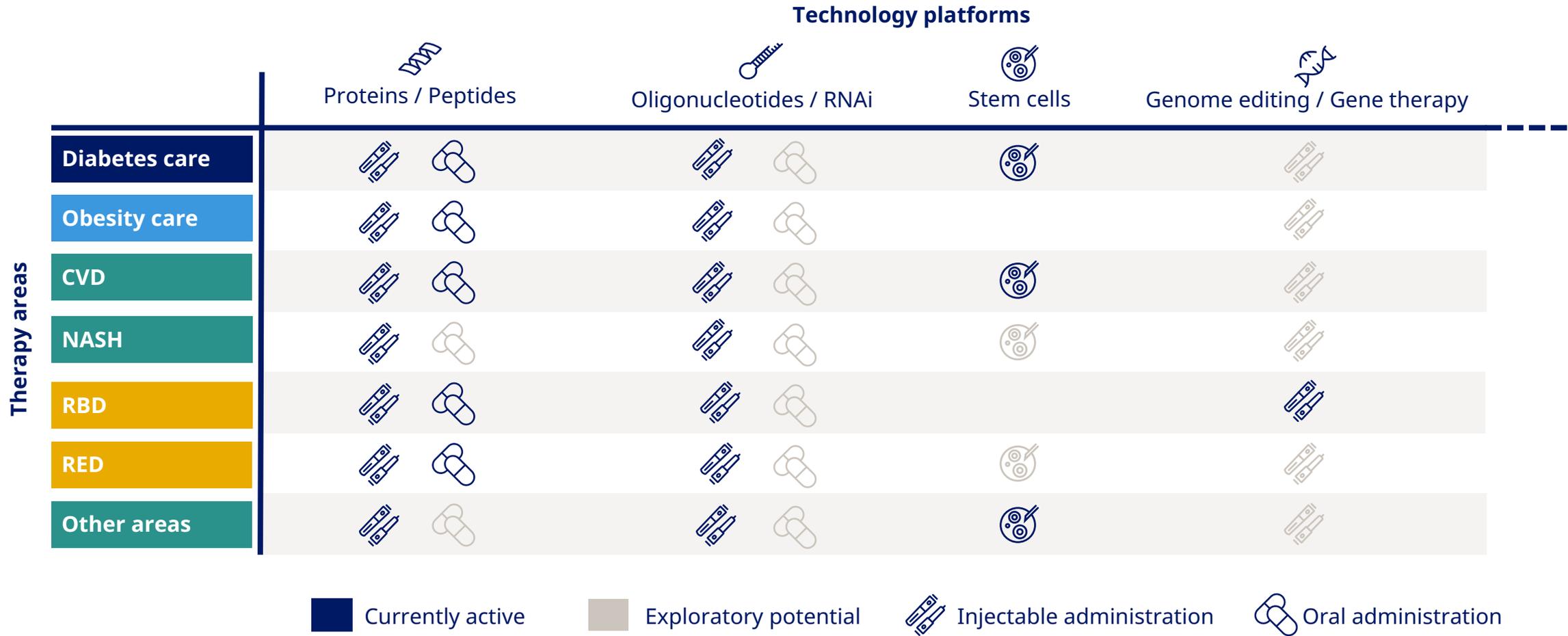


To precision medicine powered by digitalisation



¹Omics relates to various disciplines in biology with names ending on -omics, such as genomics, proteomics, metabolomics, etc.

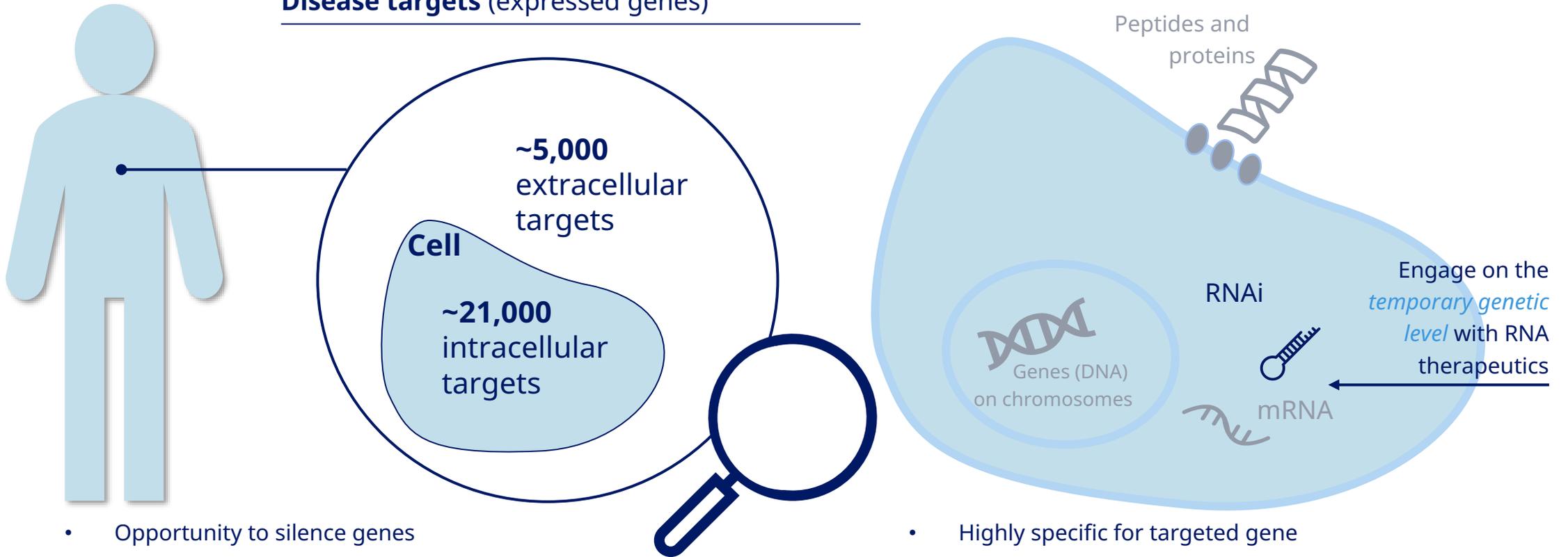
Core capabilities and additional technology platforms open up new opportunities across therapy areas



Note: Currently active means Novo Nordisk is currently pursuing research projects, while exploratory potential indicates that the platform is potentially applicable for the given disease
 RBD: Rare blood disorders; RED: Rare endocrine disorders; CVD: Cardiovascular disease; NASH: Non-alcoholic steatohepatitis; RNA: Ribonucleic acid

With the RNAi technology intracellular targets become accessible for Novo Nordisk

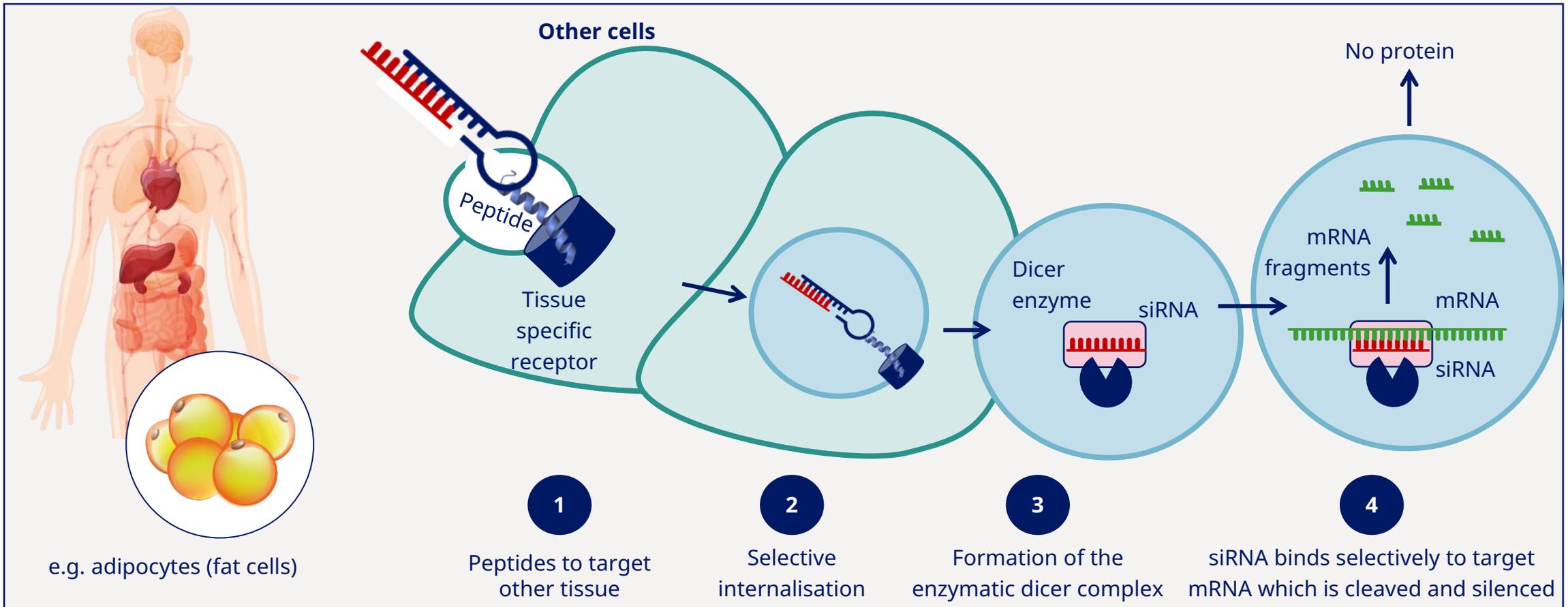
Disease targets (expressed genes)



- Opportunity to silence genes
- Drugability of intracellular targets

- Highly specific for targeted gene
- Reversible yet long-acting therapies

Historically, Dicerna's RNAi technology was used for hepatocytes – now the technology is explored beyond liver targets



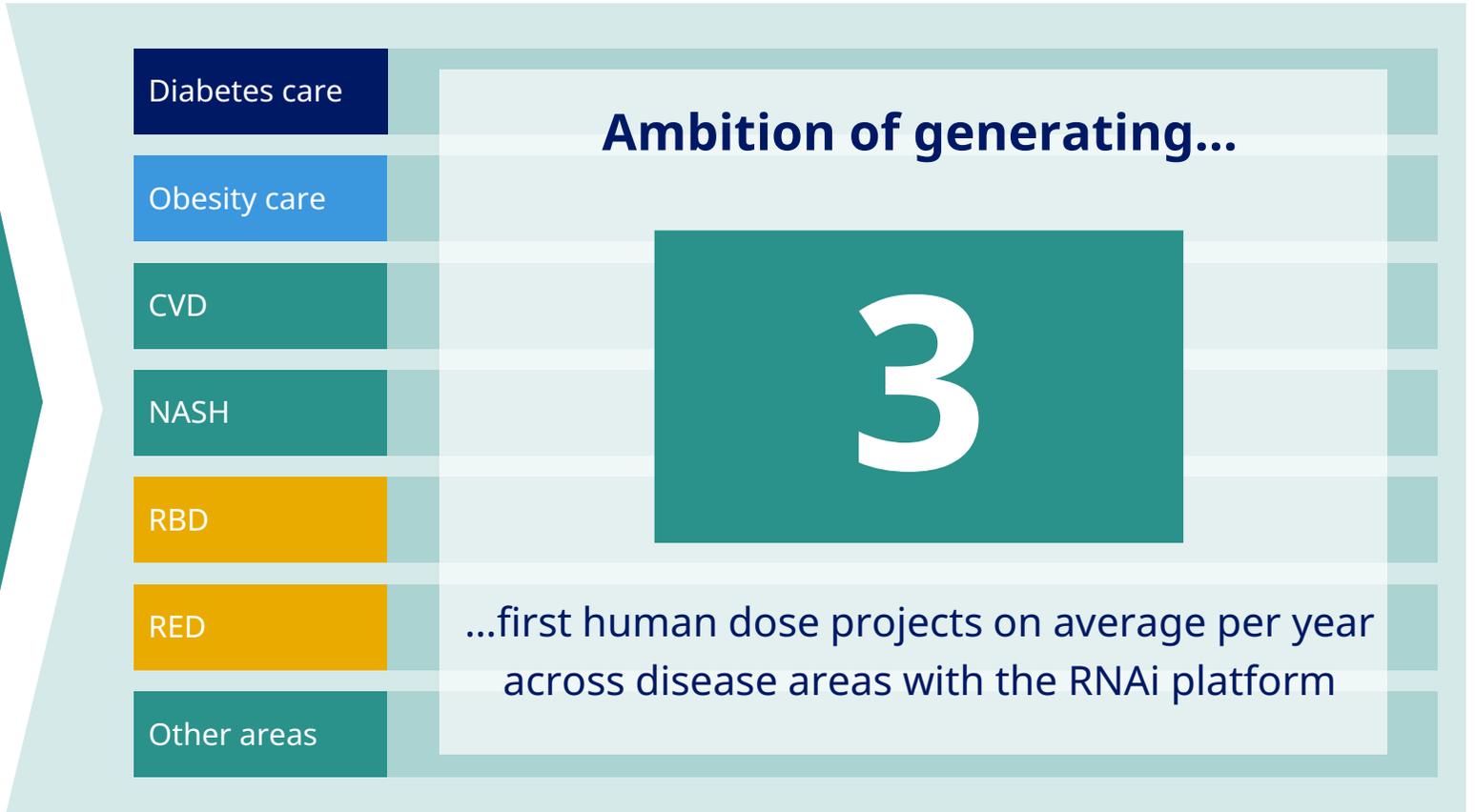
RNA: Ribonucleic acid; siRNA: small interfering RNA; mRNA: messenger RNA
Note: The dicer enzyme is cleaving double stranded RNA to small fragments. It activates the RNA induced silencing complex (RISC)

The addition of RNAi technology is expected to improve productivity and accelerates number of first human doses

Novo Nordisk and Dicerna

- Productive partnership since 2019
- Planning first human dose project in 2022
- Dicerna is an addition to Novo Nordisk's already existing Transformational research units (TRU)
- Dicerna will operate as a TRU
- Working as a TRU enables:
 - the agility and speed of a smaller biotech company
 - at the scale and quality of a pharmaceutical company

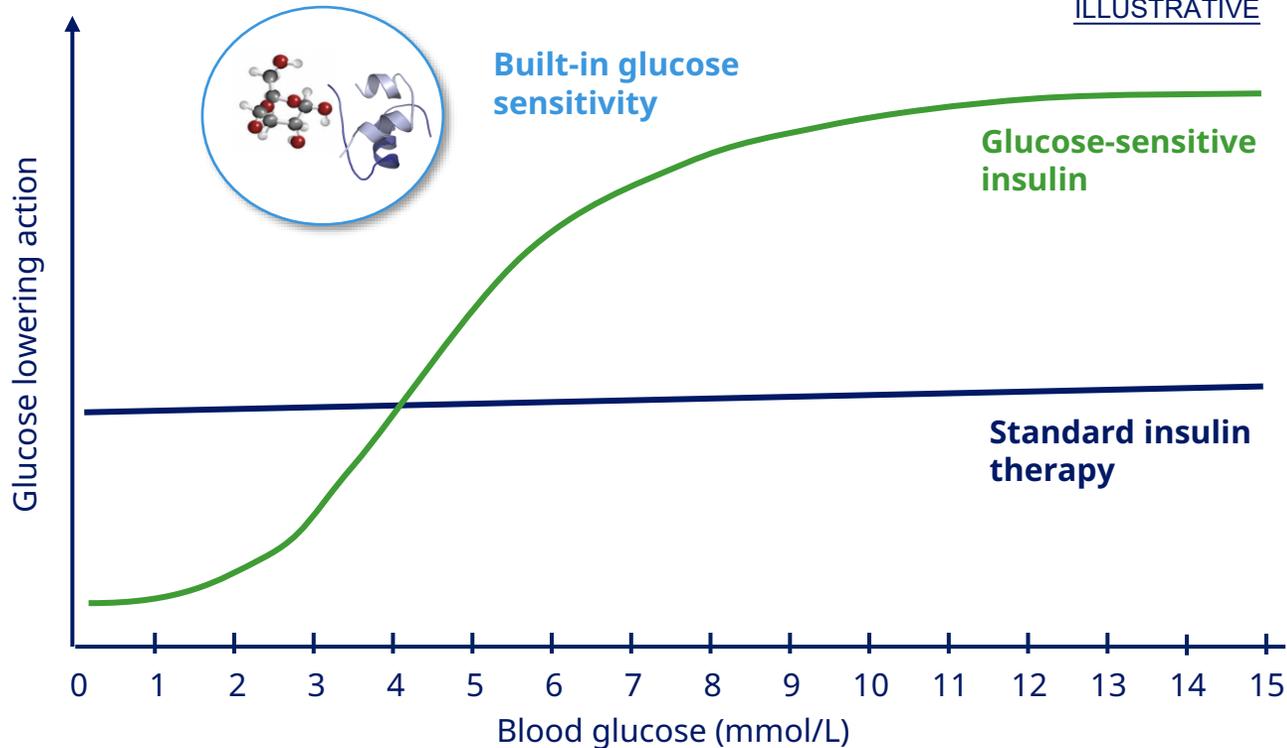
A platform with broad application across therapy areas



Protein and peptide innovation is the starting point, and the ambition is to develop a glucose-sensitive insulin

Designing a smart, glucose-responsive insulin to normalise glucose and reduce or eliminate hypoglycaemia

ILLUSTRATIVE



Proof of principle for first Glucose-sensitive insulin achieved with insulin 845

Phase 1 trial completed with glucose-sensitive insulin 845

- Demonstrated proof-of-principle of glucose-sensitive properties
- Appeared to have a safe and well-tolerated profile
- Exploratory proof-of-concept ongoing with expected completion in second half of 2022

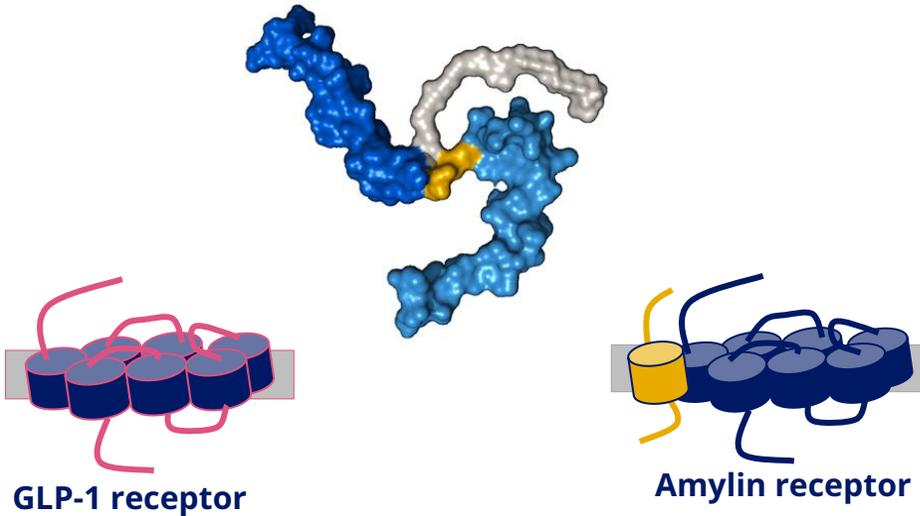
Further research and development of glucose-sensitive insulin to optimise properties is being evaluated

Note: Proof-of-principle is defined as demonstrating feasibility of a new mechanism in a clinical setting; Proof-of-concept is defined as verifying a new concept having practical potential in a clinical setting

Protein and peptide expertise combined with oral technology enables oral amycretin entering phase 1

Amycretin is a GLP-1 and amylin receptor co-agonist intended for oral delivery

Phase 1 single dose and multiple dose trial for oral amycretin in obesity to be initiated in 2022



People living with overweight or obesity, and otherwise healthy



Trial objectives

- Assess the safety and tolerability of oral amycretin
- Assess PK profile and explore PD effects

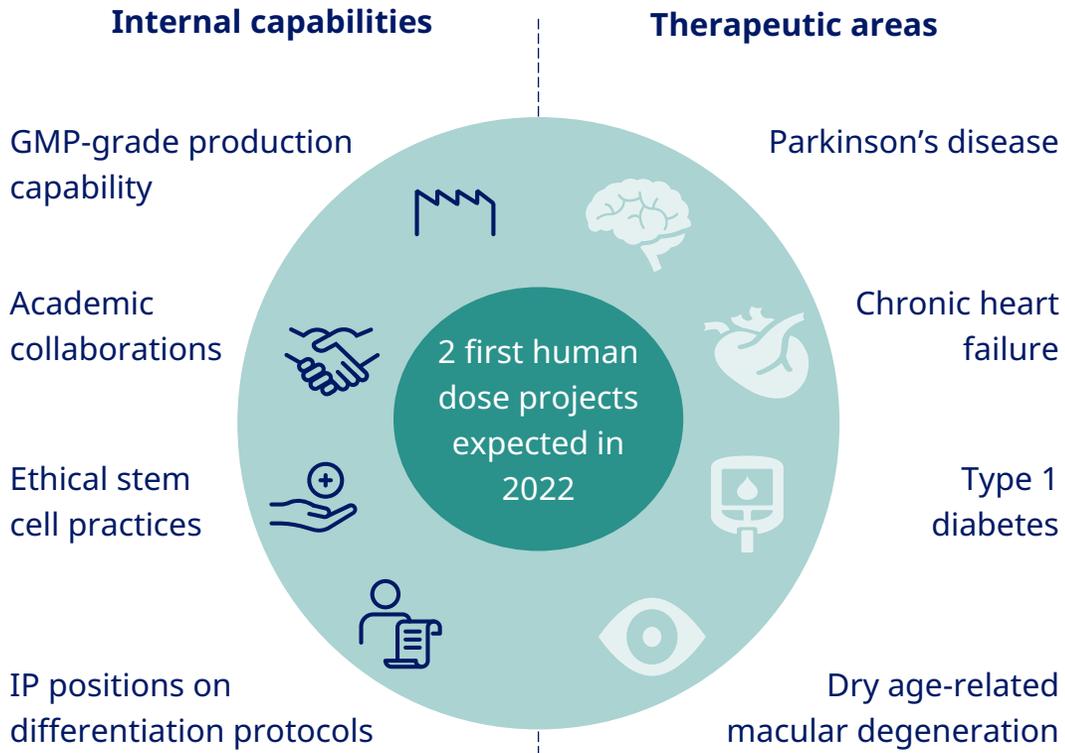
Next steps

- Phase 1 initiation expected during 2022

Utilising the SNAC technology

Potential first human dose with cell therapy in collaboration with Heartseed and others

Utilise internal capabilities and disease understanding for stem cell development



Accelerate innovation through partnerships



- iPSC derived cardiomyocyte spheroids for direct injection into heart
- First human dose expected first half of 2022



- hESC derived dopaminergic progenitor neurons for placing into the brain
- Parkinson's disease
- First human dose expected first half of 2022

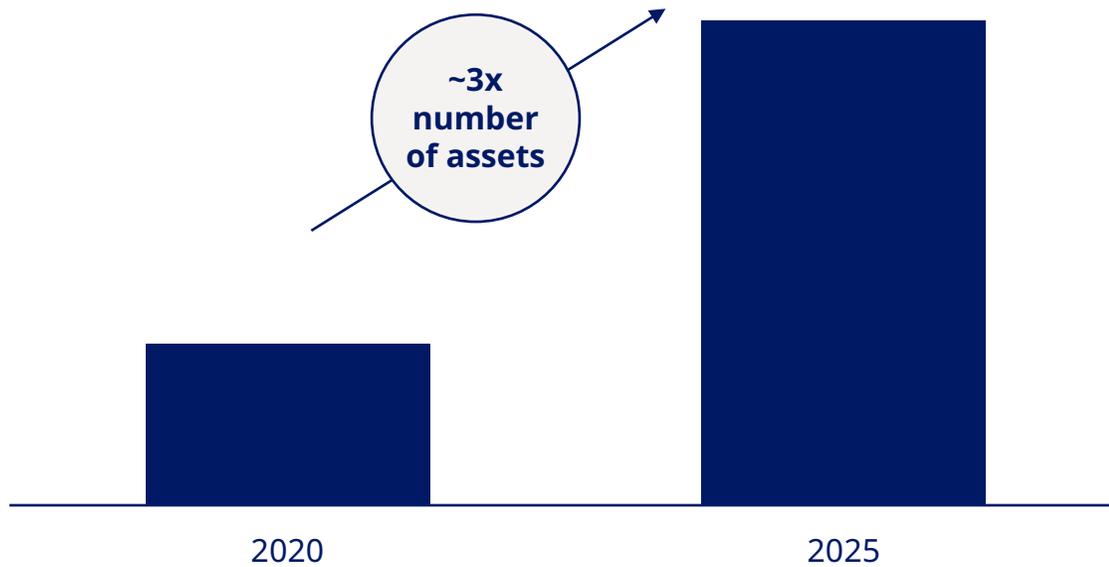


- Novo Nordisk scientists embedded at UCSF lab
- Process development, manufacturing, QA/QC, facilities and operations at Fremont site

Human data-driven decision-making with faster timelines to enable a robust development pipeline

Speed up time to reach FHD and increase number of phase 1 assets

ILLUSTRATIVE



Future R&D trends for Novo Nordisk

- More first human doses pursued to enable a robust late-stage pipeline
- Around 3x faster timeline from lead candidate to first human dose
- First human doses with the new technologies, cell-based therapies and RNAi, expected in 2022

Closing remarks

Building on core capabilities and expanding beyond with new technology platforms

Human data-driven decision-making with faster timelines to enable a robust development pipeline

New platforms with broad application with first human dose for RNAi and stem cells expected in 2022

Expecting 3x increase in first human dose productivity

