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World-leader in drug development in Parkinson’s: Reducing the burden and transforming lives

IRLAB, Q2 2024

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Today's agenda

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News in the period

Gunnar Olsson, CEO

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R&D update

Nicholas Waters, EVP Head of R&D

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Financials

Viktor Siewertz, CFO

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Concluding words

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Q&A session

Key highlights in Q2 2024

Clinical Phase I study with IRL757 started - funded by The Michael J Fox Foundation	IRL757 is our third clinical project
Collaboration with MSRD//Otsuka initiated – Takes IRL757 through clinical Proof-of-Concept in apathy in Parkinson's and Alzheimer's	IRL757 fully funded through clinical P-o-C
The REACT-PD Phase IIb study with pirepemat passes second and final DSMB review	REACT-PD continues towards finalization as planned
Kristina Torfgård is appointed CEO	Starts on August 1st, 2024

IRL757 development collaboration with MSRD/Otsuka

Scope of the collaboration

- Develop IRL757 through clinical Proof-of-Concept for the treatment of apathy in Parkinson´s and Alzheimer´s disease

Secures financing through clinical Proof-of-Concept

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- Receives up-front payment and activity based milestone payments
- Executes the development activities
- Retains ownership of product and IP

MSRD

- Funds the development activities under the terms
- May extend the collaboration beyond Proof-of-Concept, subjuct to new negotiations
- In the event of no extension of the collaboration, MSRD/Otsuka receive low single digit royalty on future sales

Multiple positive aspects of the MSRD/Otsuka agreement

1) Brings near term cash flow to IRLAB – up-front + milestones – 8.5 MUSD
2) Secures full financing of the Development activities through PoC in two populations; Parkinson's and Alzheimer's disease
3) Provides additional external validation of our R&D innovation and quality, and in particular the potential of IRL757

Benchmark
Ca 25 MUSD is the average industry cost from Phase I initiation through Proof-of-Concept

Summary – project progresses in Q2 2024

Mesdopetam

- Preparation for Phase III and support to BD activities

Pirepemat

- DSMB recommendation to drive Phase IIb study to completion without changes

IRL757

- Phase I ongoing and collaboration with MSRD/Otsuka initiated

IRL942

- Preclinical documetation continues according to plan

IRL1117

- Preclinical documetation continues according to plan

Financing aspects in Q2 2024

- Up-front payment from MSRD/Otsuka - 3 million USD
- 25 million SEK drawn from the loan facility provided by Fenja Capital
- Full financing of project cost relating to IRL757 development

Present financing takes the company through key value driving milestones

- Mesdopetam partnering for Phase III
- Pirepemat Phase IIb top line result presentation

Participation and presentation at investor meetings in Q2

- Redeye Investor Forum – April
- ABGSC Investor Days – May
- Redeye Growth Day – May
- Aktiespararna – Stora Aktiedagarna in June

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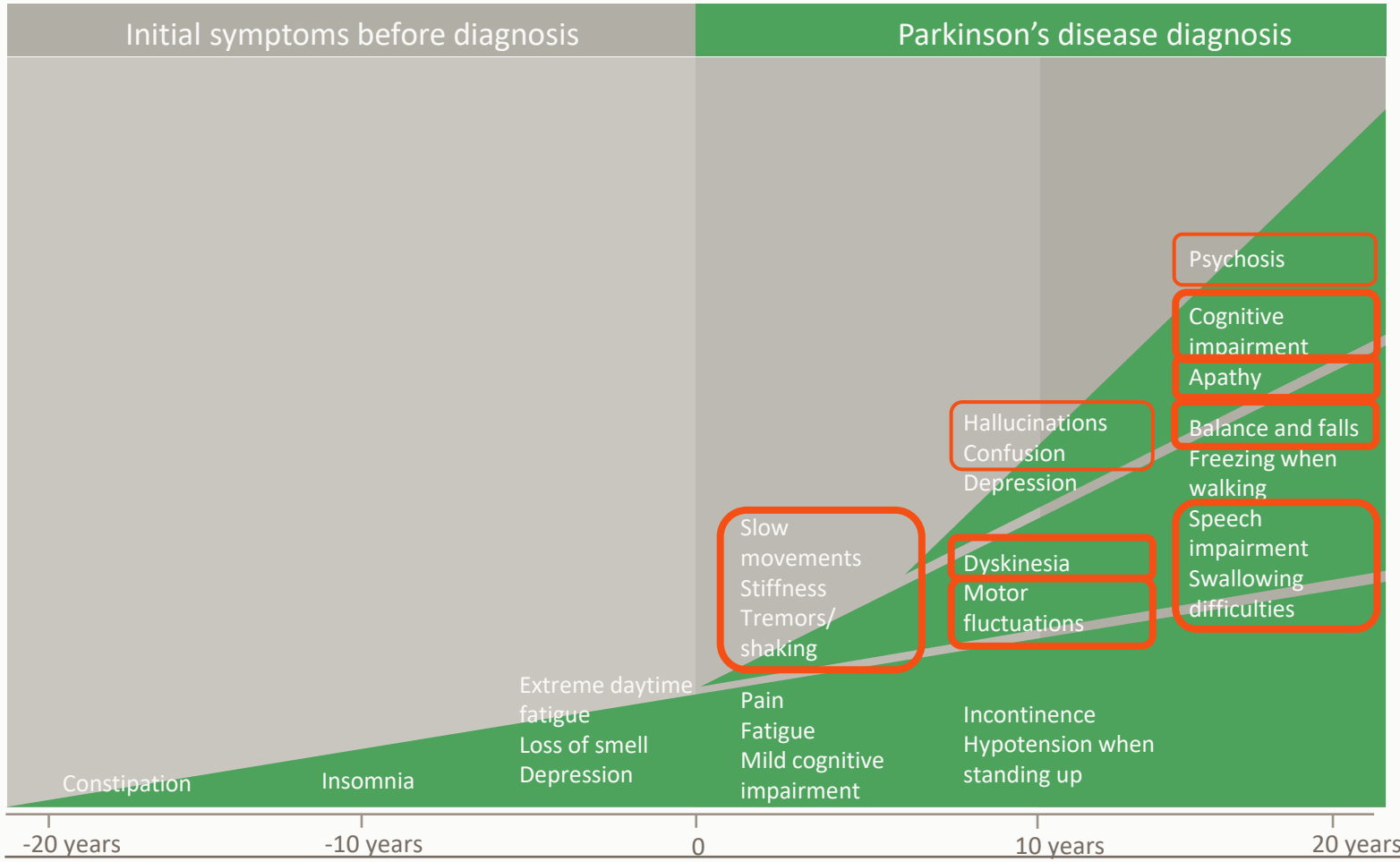
R&D update

World-leading portfolio to improve the treatment of Parkinson's



Psychiatric symptoms

Motor symptoms

Other symptoms

IRLAB's portfolio with first-in-class drug candidates to treat people with Parkinson's during all stages of disease:

- Mesdopetam
- Pirepemat
- IRL757
- IRL942
- IRL1117

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References: adapted from on Kalia, LV. and Lang, AE. Lancet 2015;386-912.

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Mesdopetam

IRL790

Treating levodopa-induced dyskinesias (PD-LIDs) through a novel mechanism – Dopamine D3 receptor antagonist

Mesdopetam (IRL790)

First in class- a novel mechanism

Inhibiting dopamine D3 receptors

Potential for patent-based exclusivity into the 2040s

Lead indication – levodopa-induced dyskinesias (PD-LIDs)

Continued progress with mesdopetam

PD-LIDs –phase III program progress

- Preparation for interactions with European regulatory agencies ahead of Phase III start
- Market research activities for positioning and input to the Phase III program
- Current plans allows start of Phase III study start possible by end of the year/early-25

External validation in publication of an independent academia driven mesdopetam preclinical study*

- Confirms the anti-dyskinetic efficacy described in company lead studies
- Suggest a disease modifying potential of mesdopetam treatment based on re-establishment of lost neuronal connections following treatment

* Reference: Wang X, Zhang W. Front. Aging Neurosci., (30 May 2024), Volume 16 – 2024, https://doi.org/10.3389/fnagi.2024.1401991

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Pirepemat

IRL752

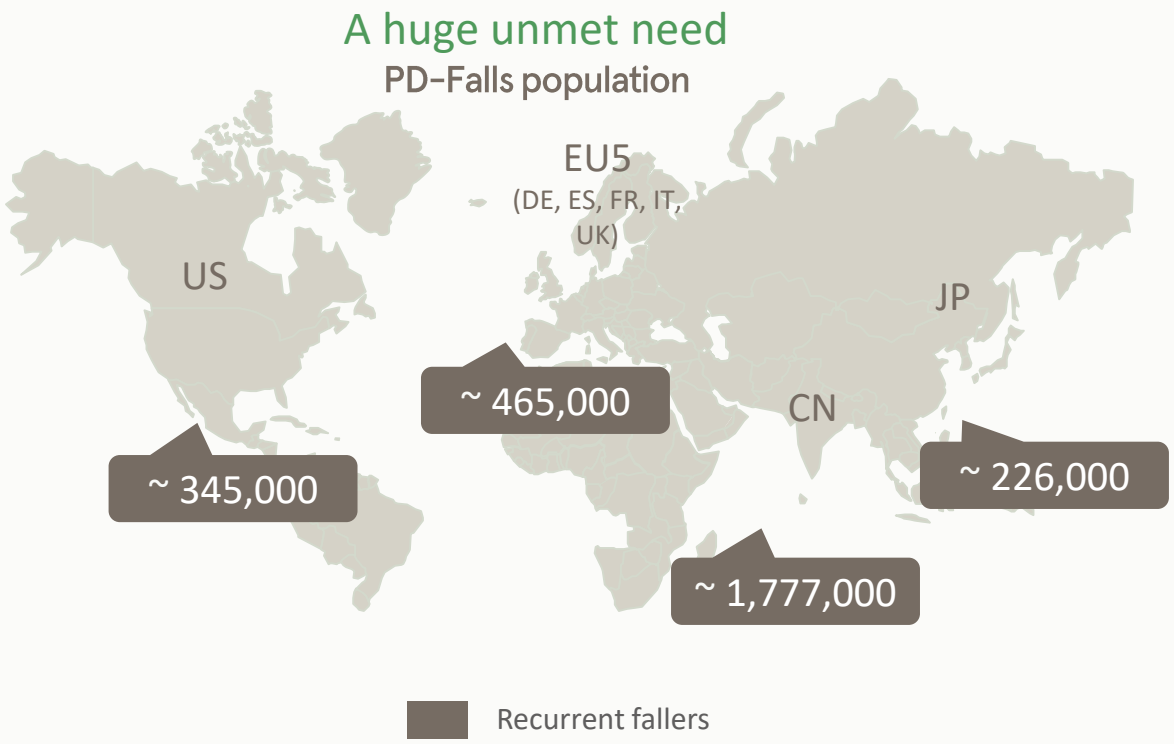
- A treatment to improve balance and reduce falls in Parkinson's (PD-Falls)
- Ongoing randomized, placebo-controlled Phase IIb clinical trial

Pirepemat - in development to improve balance and reduce falls in Parkinson's

- Reducing falls is the greatest medical need and one of the worst aspects of Parkinson's
- 45% of individuals with Parkinson's fall recurrently
- Cost of a fall injury approx. 30 000 USD in patients > 65 years

Status

- Centers in France, Poland, Spain, Sweden, Germany and the Netherlands
- Patient recruitment completion anticipated in Q3 2024
- Followed by 1 month baseline period, a 3-month treatment period, data management and database lock before top line results



Source: 1. Datamonitor [Based on the number of treated patients in the 8 Major Markets (China, France, Germany, Italy, Japan, Spain, UK and the US]

Pirepemat (IRL752)

First in class- a novel mechanism

Inhibiting alpha 2 and serotonin 7 receptors

Potential for patent-based exclusivity into the 2040s

Objective – reduce falls in Parkinson's disease

Pirepemat update

Clinical trial progress

- REACT-PD – a pioneering study in a new patient population
- DSMB for REACT-PD executed the last pre-specified review of the data integrity and safety in late June
- DSMB unanimously recommends the company to continue the study according to plan

Implications

- Anticipated completion of patient recruitment in Q3 2024
- Leading to top line data in the end of Q1 2025

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IRL757 – treatment of apathy

- A novel first-in-class treatment for apathy in neurological disorders

Apathy: loss of initiative, interest, and emotional expression/responsiveness

THE MICHAEL J. FOX FOUNDATION FOR PARKINSON'S RESEARCH

MSRD McQuade Center for Strategic Research and Development

Addressable population:
2-7 million people

IRL757 is aimed at the huge untreated problem with apathy

Huge unmet medical need

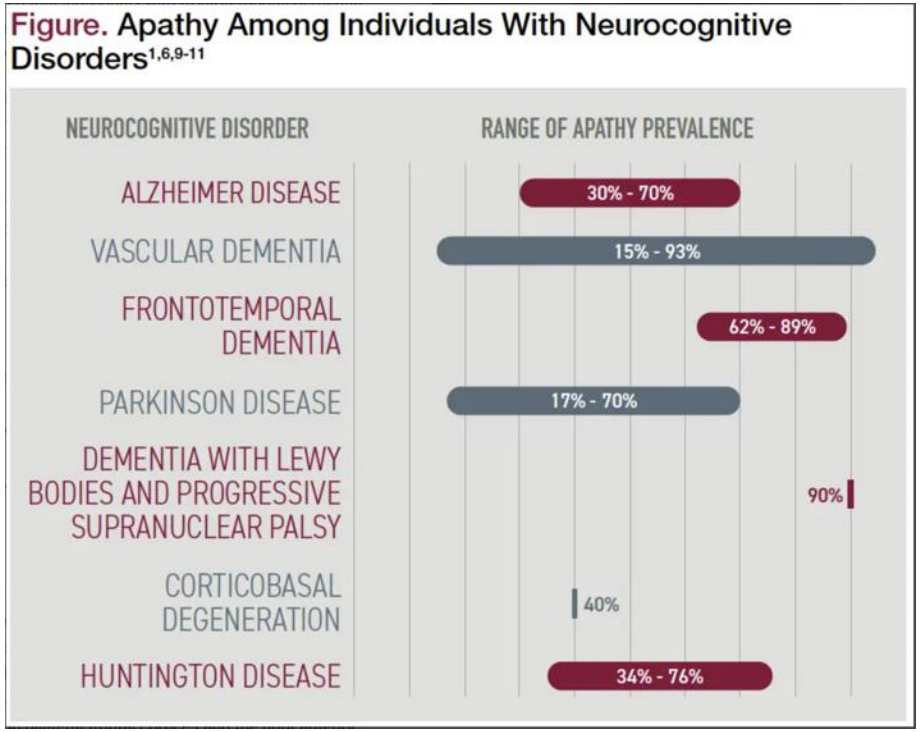
- Several million US and EU citizens may be affected by apathy
- Apathy occurs in 20-70% in people with PD and in 20-90% of people with AD and other CNS disorders

Pathophysiological background

- Disruption of frontal-subcortical neurocircuits are implicated in apathy*

- IRL757 has a unique ability to **increase neuronal activity** in frontal-subcortical neurocircuits
- Potential for both symptomatic relief and disease modification

Apathy
Loss of initiative, interest and emotional expression/ responsiveness, often found in people with dementia.



* T.N Chase Neurotox Res (2011) 19:266–278, DOI 10.1007/s12640-010-9196-9

Graph: from R. R. Tampi, Psychiatric Times, Vol 38, Issue 7, July 14, 2021

IRL757 project progress in Q2

IRL757 has the potential to be **the first drug in a new class** to treat apathy in Parkinson's and other neurological disorders

- Regulatory approval granted
- Phase I study started
- Funding to conduct the Phase I study with IRL757 is secured in through The Michael J. Fox Foundation
- Collaboration started with MSRD/Otsuka funding IRL757 through proof-of-concept in **Parkinson's and Alzheimer's disease**
    - Joint Steering Committee (JSC) in place and operative

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Preclinical projects

IRL942	**Clinical candidate**	-	Improve cognitive function and brain health
IRL1117	**Clinical candidate**	-	Once-daily oral treatment of Parkinson’s without troublesome complications

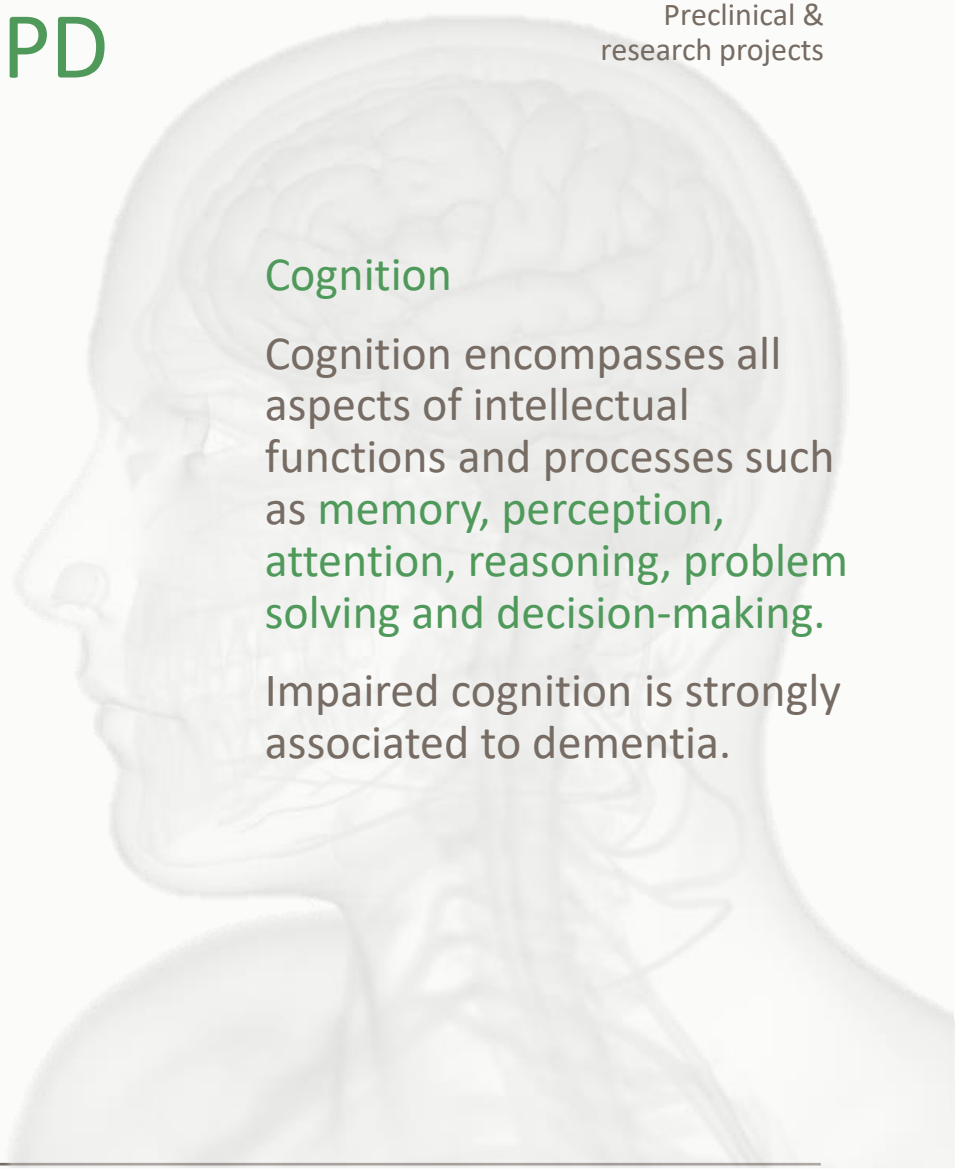
Innovative preclinical pipeline with first-in-class NCEs

IRL942	IRL1117
Improvement of cognitive function	Next generation Parkinson's treatment
Memory, perception, attention, reasoning, problem-solving and decision-making	Once-daily Parkinson's hallmark symptoms (tremor, rigidity, bradykinesia) Without treatment-related complications
Addressable population: 5.8 million people[1]	Addressable population: 5.7 million people[1]
Status: IND-enabling studies; Phase I ready H2 2024/H1 2025	Status: Preclinical development

Source: 1. Datamonitor

IRL942 to improve cognitive function in PD and other neurological indications

- Unmet need among a large population
- **12 %** of adults aged 65 years or more experience cognitive decline (CDC)
- Studies demonstrate a high cumulative risk of dementia in people with PD. Point prevalence is 25–30%.
- Among PD patients without dementia, approximately 25–30% have mild cognitive impairment (MCI), which is evident at the time of diagnosis in 10–20% of patients



Cognition

Cognition encompasses all aspects of intellectual functions and processes such as memory, perception, attention, reasoning, problem solving and decision-making.

Impaired cognition is strongly associated to dementia.

IRL942 shows a unique ability to activate frontal circuits and **improve cognitive function in preclinical models**

Potential for both symptomatic relief and disease modification

IRL942 project progress in Q2

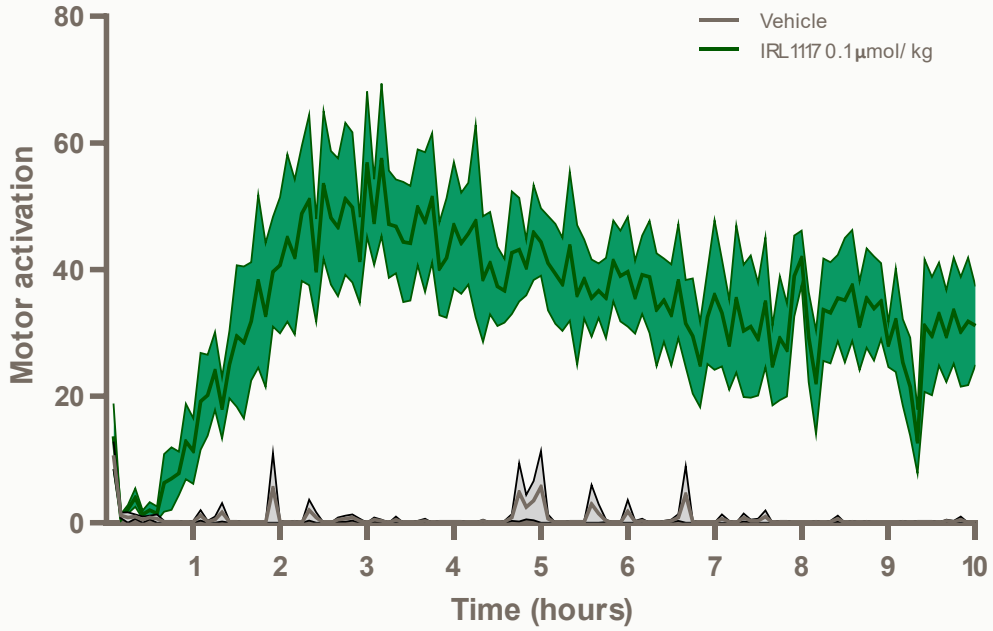
IRL942 has the potential to be the first drug in a new class to improve the cognitive function in people living with Parkinson's and other neurological disorders

- Development in preclinical studies
- GMP manufacturing of API proceeds
- Development of drug product has been initiated and IRL942 is projected to be Phase I ready during H2 2024/H1 2025

IRL1117 – potential to be the first drug in a new class to treat Parkinson's

IRL1117 is a potent dopamine D1 and D2 receptor agonist with the ***potential to be the first drug in a new class*** for the treatment of the hallmark symptoms of Parkinson's.

- Once daily treatment that avoids the troublesome complications caused by today's mainstay levodopa-based treatments.
- In preclinical studies IRL1117 has demonstrated rapid onset and **more than 20 hours of sustained efficacy** without inducing motor complications.
- Currently activities related to substance manufacturing and planning for preclinical regulatory studies necessary for Phase I are ongoing



IRL1117 project progress in Q2:

Building a comprehensive preclinical efficacy, tolerability and DMPK package - Phase I ready end 2024/H1 2025

Models of PD	• Single dose behavioral response >24h • Improvement of motor deficits by IRL1117 over a period of 29 days (once-daily dosing) without signs of tolerance or motor complications • Chronic treatment induces clear functional motor response without motor complications • Switching to IRL1117 reverses existing L-DOPA-induced motor complications
DMPK	• High potency orally active compound • Exposure @ relevant doses quantified over 24h in rodents and minipigs
CMC	• Development of API manufacturing ongoing
IPR	• Composition of matter: patent applications filed in 2022 • The estate potentially allows ultimate case exclusivity into 2040:ies

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Finance report Q2 2024

- Highlights and summary
- Analyst coverage

MJFF and MSRD supports IRL757 through value creating activites

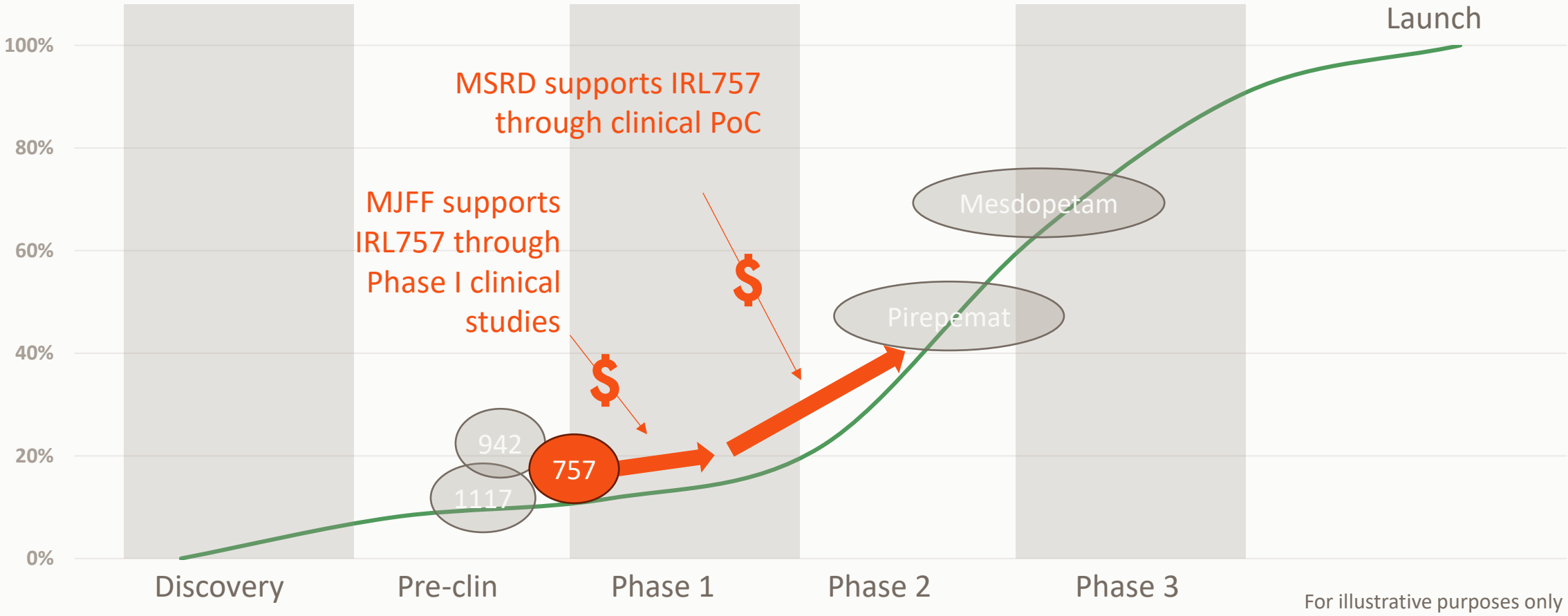
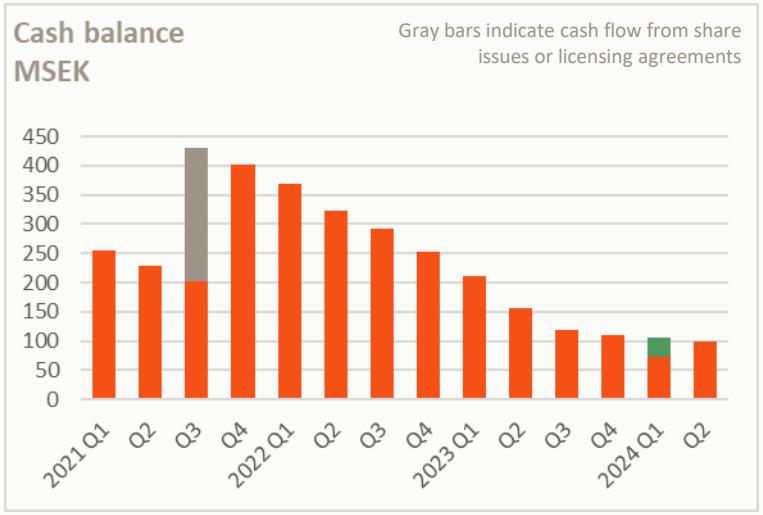
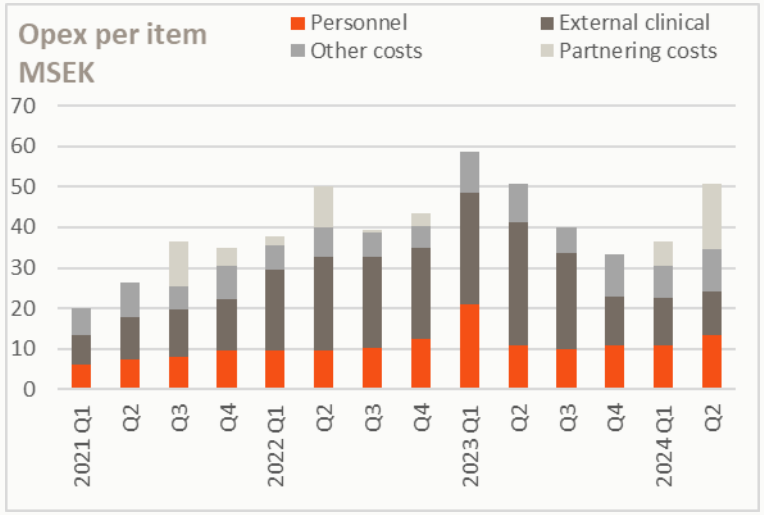


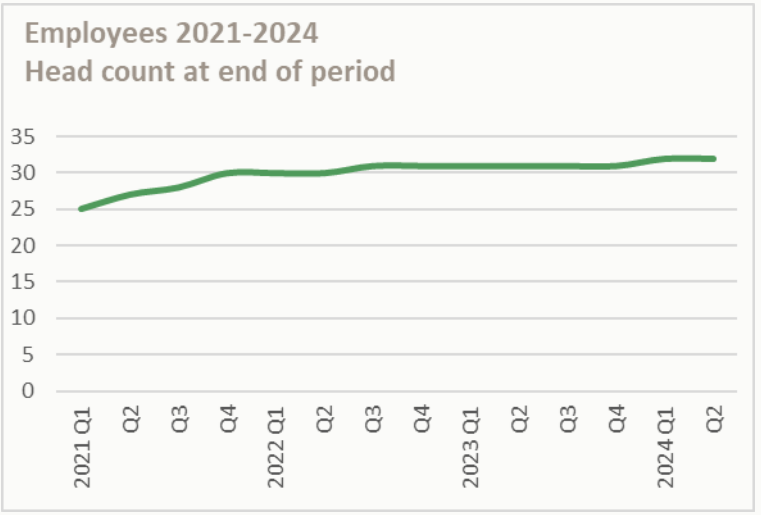
Figure based on Paul et al., 2010, "How to improve R&D productivity: the pharmaceutical industry's grand challenge" DOI: https://doi.org/10.1038/nrd3078

Financial highlights of Q2, 2024

- Cash position SEK 98 million
- Investing in progressing mesdopetam towards Phase III
- Increase in cost compared to Q1 2024 is mainly due to cost related to IRL757, which are financed by MJFF and MSRD/Otsuka
- In preclinical development, advancing IRL942 and IRL1117 CMC development towards tox and Phase I
- Headcount remains stable at around 30 employees







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Partnering cost: Cost for entering licensing agreements and costs which are covered by a corresponding revenue from partners.

Financial summary of Q2, 2024

	H1 2024	H1 2023
Net sales, SEK	42.8m	6.9m
Operating profit, SEK	- 42.7m	- 104.4m
Earnings per share before and after dilution, SEK	- 0.89	- 2.01
Cash and cash equivalents	98.3m	156.4m
Cash flow from operating activities	- 38.1m	- 94.3m
Average number of employees	32	31
Share price at the end of the period, SEK	13.25	8.66

Figures in brackets = same period last year, unless otherwise stated. All amounts in SEK.

Analyst coverage

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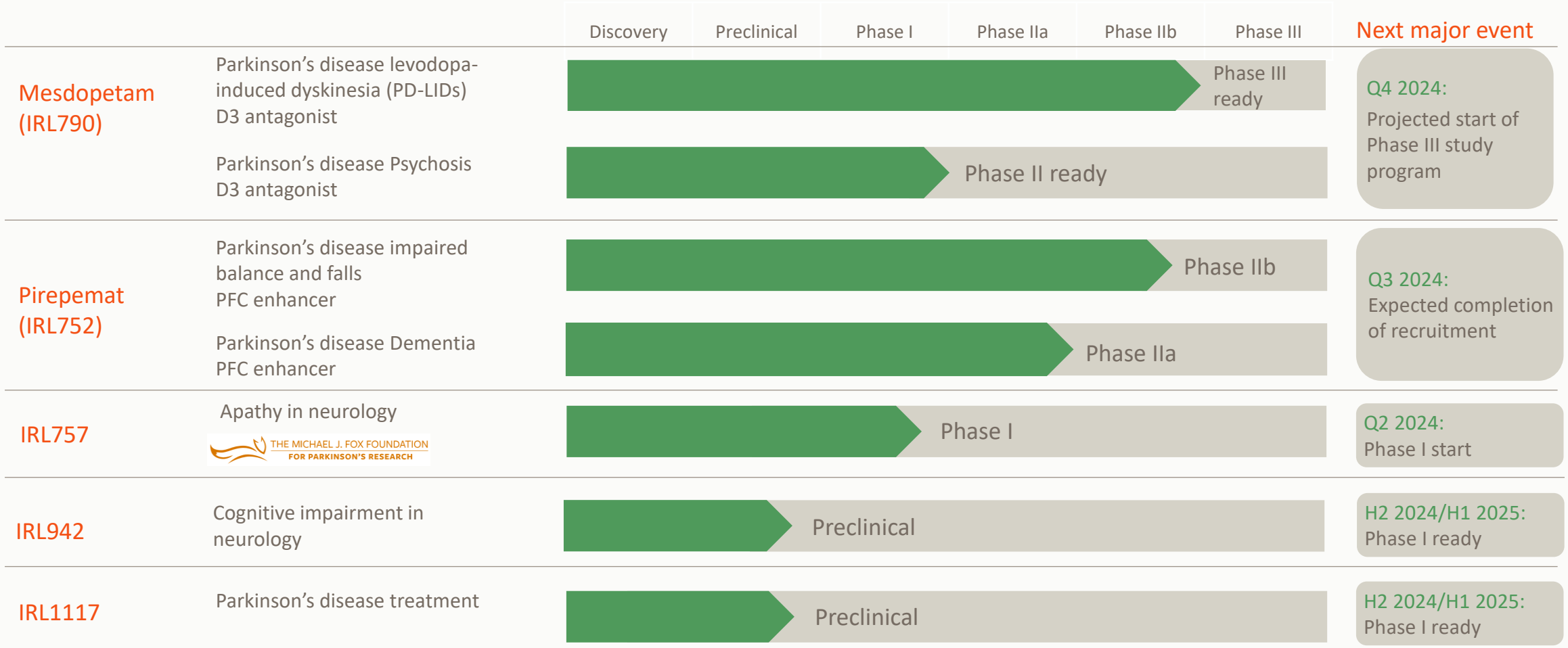
Concluding words

World leading portfolio transforming treatment for people living with Parkinson's



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The REACT-PD Phase IIb study with pirepemat passes second and final DSMB review	REACT-PD continues towards finalization as planned
Kristina Torfgård is appointed CEO	Starts on August 1st, 2024

Intense Business Development activities

Awareness of IRLAB and our development pipeline is increasing

Continuous and frequent dialogue with potential partners

Partnering opportunities being evaluated across the portfolio

Present focus is mesdopetam

Multiple possibilities for high value creation in the project portfolio during the next 12-18 months

Mesdopetam

- BD activities for Phase III

Pirepemat

- Completion of the Phase IIb study in PD-Falls
- BD activities for Phase III

IRL757

- Completion of First in Human Phase I study (SAD/MAD & food interaction)
- Start of first patient study for efficacy and safety signal finding

Preclinical

- **IRL942**
  - Start of Phase I

IRL1117

- Start of Phase I

IRLAB – a world-leading portfolio in Parkinson´s

Pioneering biology & ISP

Deep profound understanding of Parkinson's. Team from Nobel laurate Prof. Arvid Carlsson's research group

Focused strategy

Discover and develop treatments for PD patients throughout their disease journey

Validated business model

From discovery through Phase I and Phase II to Phase III ready projects and dealmaking

Broad & Solid portfolio

Five unique drug candidates each with blockbuster potential generated by our disruptive ISP platform

Organization positioned for success

Experienced international organization. Listed Nasdaq Stockholm

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IRLAB discovers and develops a portfolio of transformative treatments for all stages of Parkinson's disease. The company originates from Nobel Laureate Prof Arvid Carlsson's research group and the discovery of a link between brain neurotransmitter disorders and brain diseases. Mesdopetam (IRL790), under development for treating levodopa-induced dyskinesias, has completed Phase IIb and is in preparation for Phase III. Pirepemat (IRL752), currently in Phase IIb, is being evaluated for its effect on balance and fall frequency in Parkinson's disease. IRL757, a compound being developed for the treatment of apathy in neurodegenerative disorders, is in Phase I. In addition, the company is also developing two preclinical programs, IRL942 and IRL1117, towards Phase I studies. IRLAB's pipeline has been generated by the company's proprietary systems biology-based research platform Integrative Screening Process (ISP). Headquartered in Sweden, IRLAB is listed on Nasdaq Stockholm (IRLAB A).

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