



Transforming life for patients with Parkinson's disease

IRLAB

Interim report July- September 2021



Q3



"The license agreement with Ipsen is a milestone for IRLAB – our business model is validated and our scalable research platform ISP provides the conditions to increase the pace in our value creation."

IRLAB: Better positioned than ever before

- In partnership with a global pharma company
- Strong cash position
- Two programs with exciting prospects in clinical development
- Several development candidates towards clinical trials
- Interest in IRLAB assets is high and growing

We have every reason to view the future with confidence

Our purpose and drive

What?

IRLAB strives to meet the need for novel drugs to treat diseases of the central nervous system, with a focus on Parkinson's disease.

Why?

IRLAB wants to transform the lives of people with Parkinson's disease.

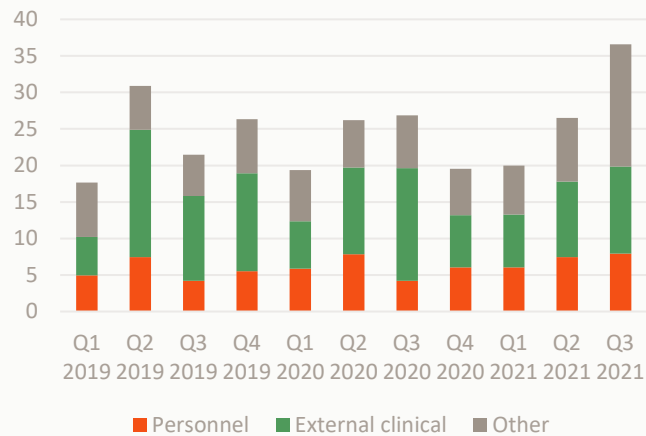
The goal is to offer an increased quality of life with less disease complications.

How?

With IRLAB's cutting-edge expertise in modern discovery and development, effective and successful drugs are created.

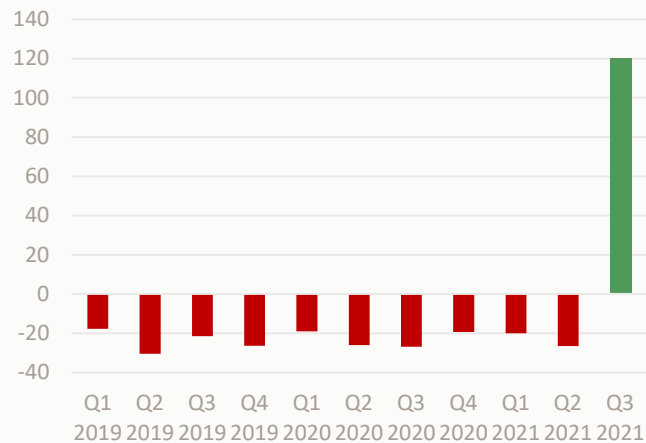
Financial summary

Opex per item



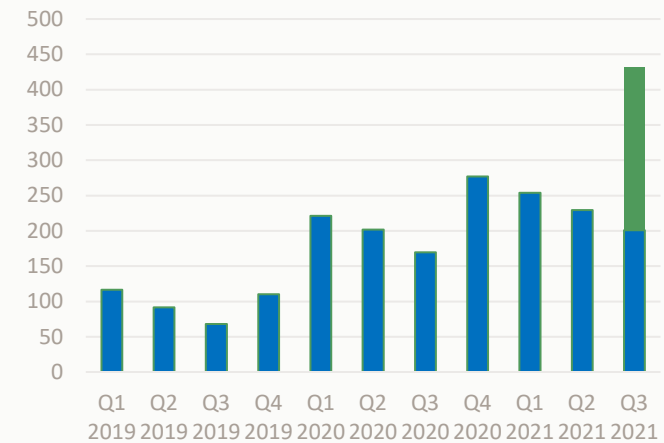
- Cost in line with previous quarters
- Affected by transaction cost related mesdopetam license agreement

Operating result (MSEK)



- Positive result in Q3 2021
- SEK 146m net impact of license agreement

Cash balance (MSEK)



- Cash position SEK 43 lm
- Roughly SEK 230m net impact of license agreement (green bar)

Path to deliver strong growth

Outlook

Foundation for transformative treatments in Parkinson's

2020 - 2022

Mesdopetam

Successful completion of Phase IIb/III study

Pirepemat

Successful completion of Phase IIb study

Pipeline

Initiate Phase I studies with new candidates

Deepen AI in the ISP methodology

Business development

Licensing agreement for the mesdopetam project

Building for the future

2023 - 2024

Mesdopetam

Phase III study initiated with partner Ipsen

Pirepemat

Initiating Phase III study

Pipeline

Development of new drug candidates toward proof-of-concept

Continued ISP development

Business development

Continued work toward new revenue-generating transactions

Delivering first-in-class treatments transforming standard of care in Parkinson's

2025 - 2026

Mesdopetam

Application for marketing authorization

Pirepemat

Application for marketing authorization

Pipeline

Development of new drug candidates toward proof-of-concept

Continued ISP development

One of the largest licensing agreements in Swedish biotech

Mesdopetam

IRLAB licenses worldwide rights for Mesdopetam to Ipsen

IRLAB

- Receives
 - \$28 million upfront
 - \$335 million in clinical, regulatory and sales-based milestones
 - Double-digit royalties on sales
- Is responsible for the ongoing Phase IIb/III trial

Ipsen

- Obtains the **exclusive worldwide license** to develop and commercialize mesdopetam
- Commits to **fully finance all remaining clinical development and worldwide commercialization** of mesdopetam



Type	Global, mid-sized biopharmaceutical company
Employees	approx. 5,700 worldwide
Offices	Paris-Saclay, France (hq); Oxford, UK; Cambridge, U.S.; Shanghai, China
Specialty	Transformative medicines in Oncology, Rare Disease and Neuroscience
Total sales (FY 2020)	over €2.5 billion
Sales operations	Sells more than 20 medicines in over 115 countries, with a direct commercial presence in more than 30 countries

Impact of mesdopetam license

- Internal R&D resources freed up
- Up-front from mesdopetam license + **SEK 240m**
 - Cash position SEK 431m
- Net revenues Q3 SEK 196m
 - License and services
- Operating profit Q3 SEK 120m
- Potential milestones USD 335m
- **Reduced cost** coming 18mo + **SEK 100m**

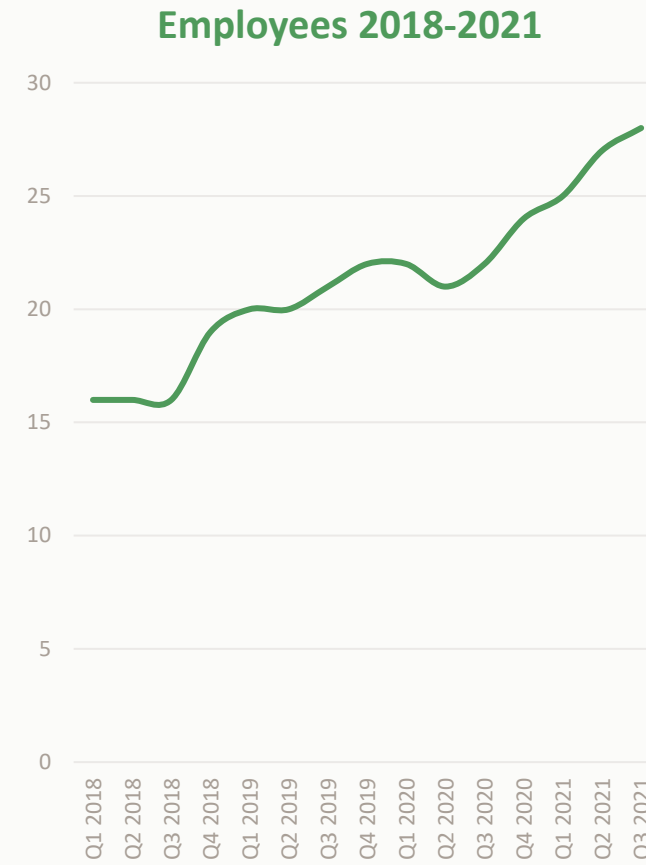
Significant revenue and reduced costs facilitate growth

IRLAB to the next level business-oriented company

- Increased R&D
- Increased clinical operations
- Increased IR and business development

Organizational focus on

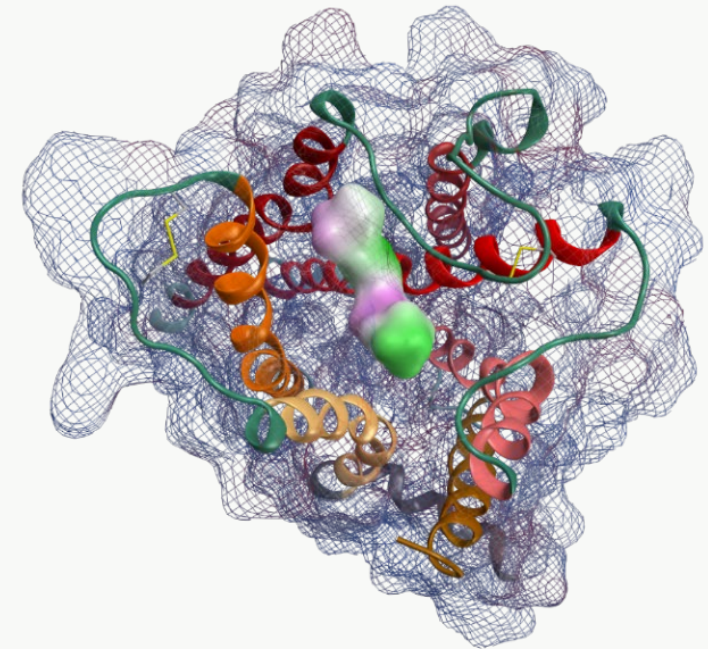
- Pirepemat – Prevention of falls
- P001 – To promote cognitive function & brain health
- P003 – Transforming treatment of core symptoms of Parkinson's



Pipeline generated by proprietary technology platform: ISP

ISP – a new level of rational, systems-oriented drug discovery

- Advanced systems biology interlinked with drug design and machine learning (ML, AI) techniques
- Enabled through extensive, high quality ISP database



IRLAB's ISP generates highly promising drug candidates

Portfolio transforming treatment of patients with Parkinson's

	DISCOVERY	PRE CLINICAL	PHASE I	PHASE IIA	PHASE IIB	PHASE III
PARKINSON'S DISEASE – LEVODOPA-INDUCED DYSKINESIAS (LIDS)						
Mesdopetam (IRL790) D3 antagonist						
PARKINSON'S DISEASE – PSYCHOSIS						
Mesdopetam (IRL790) D3 antagonist						
PARKINSON'S DISEASE – FALLS						
Pirepemat (IRL752) PFC enhancer						
PARKINSON'S DISEASE – DEMENTIA						
Pirepemat (IRL752) PFC enhancer						
NEURODEGENERATIVE DISORDERS – AGING						
IRL942 & 1009 P001 program						
PARKINSON'S DISEASE						
P003 Dopamine substitution						

Mesdopetam *

- To increase "good ON"-time through reduction of dyskinesias (PD-LIDs)
- To treat psychosis in Parkinson's (PD-P)

Partnering strategy

- **2021:** Partnered with IPSEN in a global licensing deal

Pirepemat

- Improve balance and reduce falls in Parkinson's (PD-Falls)

- Partner based on phase IIb data

P001

- Restore cortical signaling in neurological & neuropsychiatric indications

- Option to partner based on preclinical PoC or Phase I clinical studies

P003

- Long-acting, orally active compounds with efficacy on par with levodopa for the treatment of Parkinson's disease

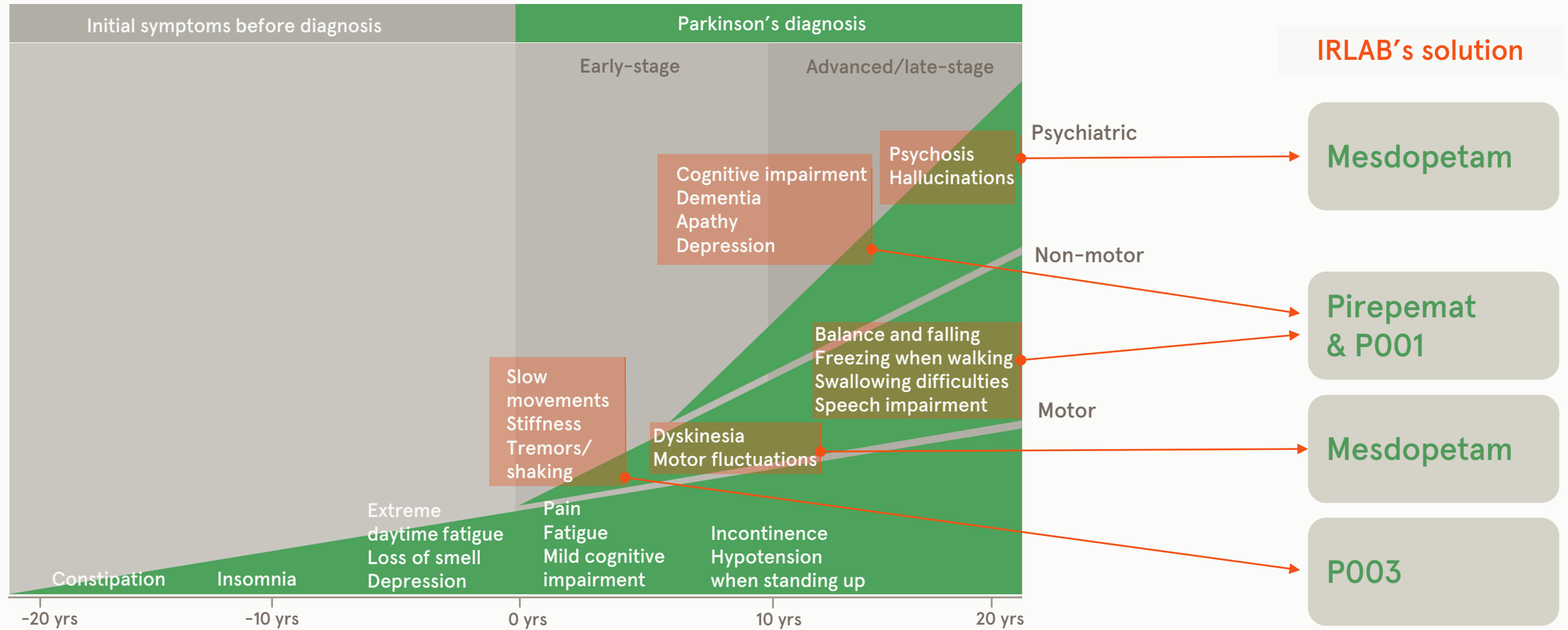
- Option to partner based on preclinical PoC or Phase I clinical studies

IRLAB: Better positioned than ever before

- A partnership with a global pharma company,
- A strong cash position,
- New projects with very exciting prospects in clinical development
- Several development candidates on their way towards clinical trials
- Interest in IRLAB assets is high and growing

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Living with Parkinson's: IRLAB transforms the treatment algorithm



Preclinical: P001 and P003 projects

P001: Innovative strategies to promote brain health. Wide utility in CNS disorders related to cortical dysfunction (PD, dementias, ADHD, schizophrenia, depression)

P003: Innovative strategies to improve the treatment of core symptoms of Parkinson's disease

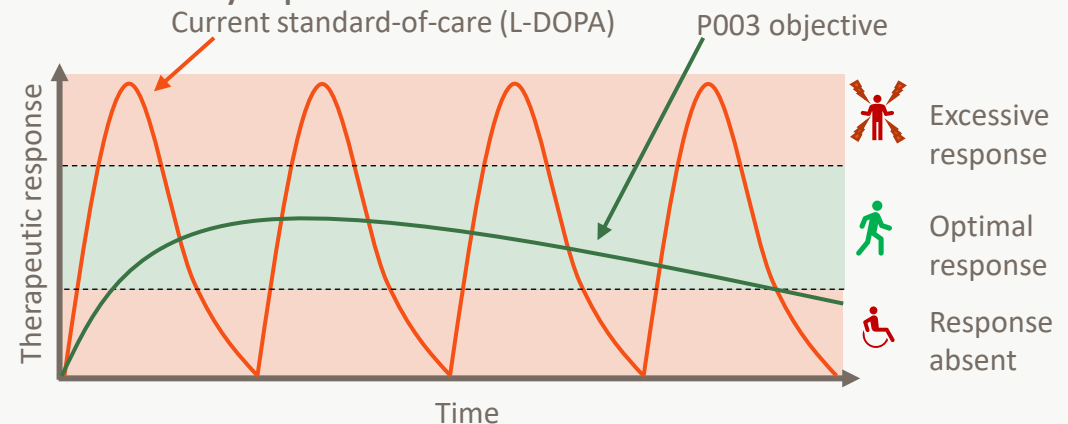
Preclinical projects

P001: Innovative strategies to amplify cortical synaptic connectivity and promote brain health

- Restore cortical signaling in neurological & neuropsychiatric indications with deficient cognitive functioning
- Besides PD dementia, preclinical data supports potential in multiple indications: Dementias, ADHD, schizophrenia, depression
- CMC work ongoing

P003: Innovative strategies to improve treatment of core motor symptoms of PD

- Provide PD patients with the world's first long-acting, orally active D1/D2 agonist with efficacy on par with levodopa
- Potential to transform treatment paradigm in PD
- Lead optimization ongoing



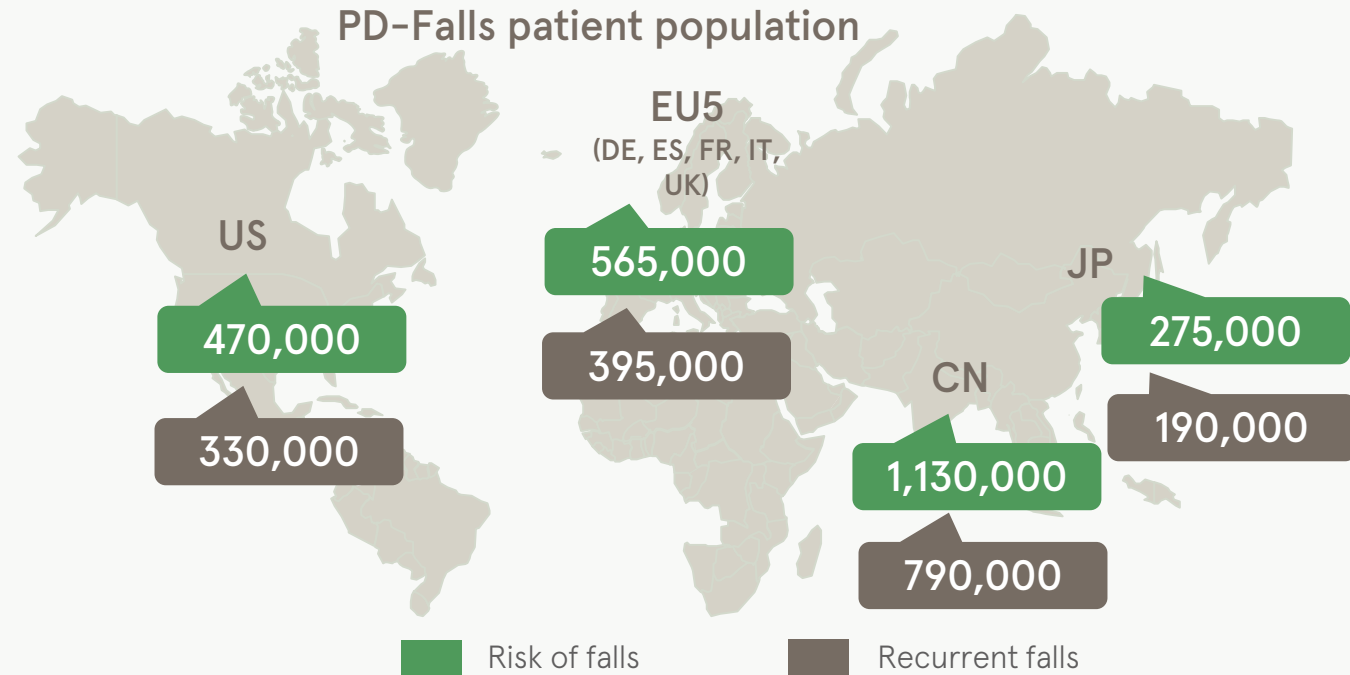


Pirepemat (IRL752)

Improve balance and reduce falls in Parkinson's (PD-Falls)

Pirepemat is designed to improve balance and reduce falls in Parkinson's

- Large unmet need
- **45% of all people with Parkinson's fall recurrently**
- Impaired balance and a fear of falling significantly impair the daily lives of many with Parkinson's
- **Pirepemat is designed to improve balance** by strengthening nerve cell signalling in the cortex via action at 5HT7 and alpha-2 receptors
- The **cost of treatment for a fall** injury is estimated to about **30,000 USD** in elderly > age 65



IRLAB addresses a new, untapped market

Impaired balance in Parkinson's have high prevalence and represent a great unmet medical need. There are currently no approved drugs.

Clinical Phase IIb: Impaired balance/Falls

pirepemat
Phase IIb study

“A Phase IIb to evaluate the effects of pirepemat on falls frequency as compared to placebo.”

Study IRL752C003

Primary objective

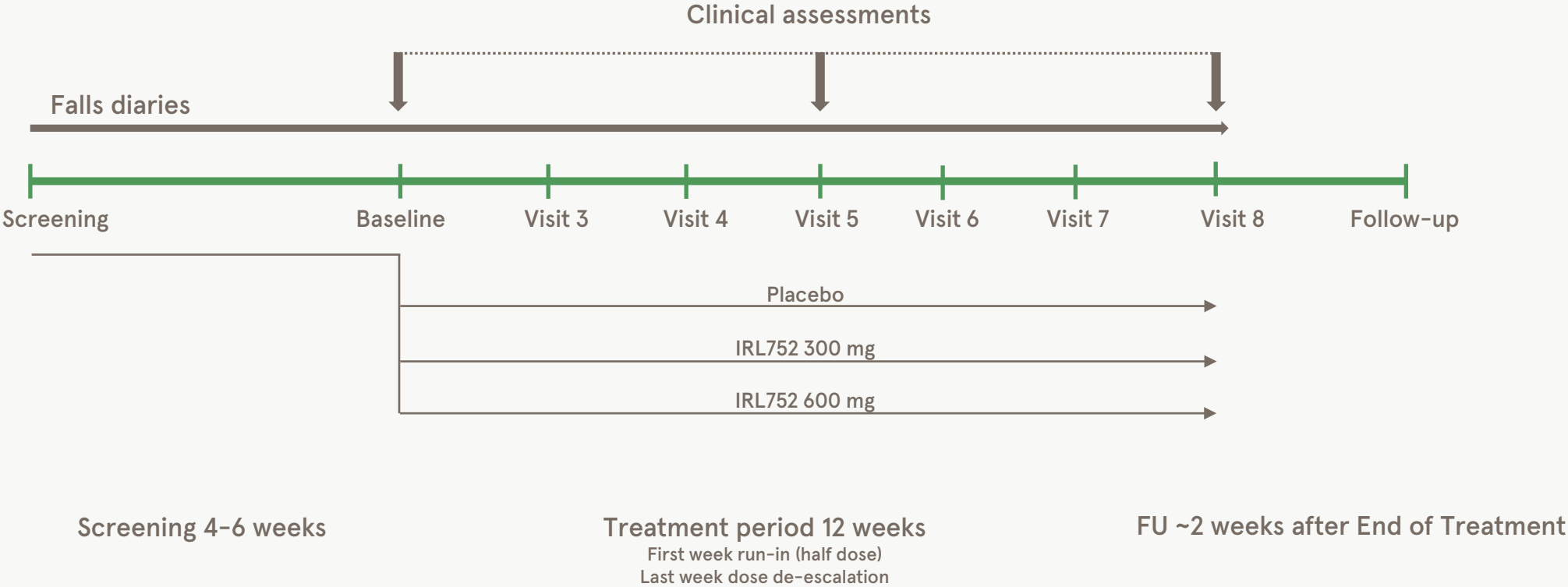
- To evaluate the effects of pirepemat on **falls frequency** as compared to placebo.

Secondary & other objectives

- To evaluate the effects of pirepemat on **cognitive functions** assessed with Montreal Cognitive Assessment (MoCA), as compared to placebo.
- To evaluate the effects of pirepemat on **Parkinson's disease symptoms** assessed with Unified Parkinson's Disease Rating Scale (MDS-UPDRS) as compared to placebo.
- To evaluate the effects of pirepemat on **postural dysfunction**, tandem walking and single leg stance test compared to placebo.
- To evaluate the effects of pirepemat on **global function** assessed with Clinicians Global Impression of Severity (CGIS), as compared to placebo.
- To examine the relationship between dose and plasma concentration of pirepemat and pharmacodynamic effects.

Clinical Phase IIb: Study overview

pirepemat
Phase IIb study



Mesdopetam (IRL790)

Improve motor function through prevention and reduction of dyskinesias (LIDs)

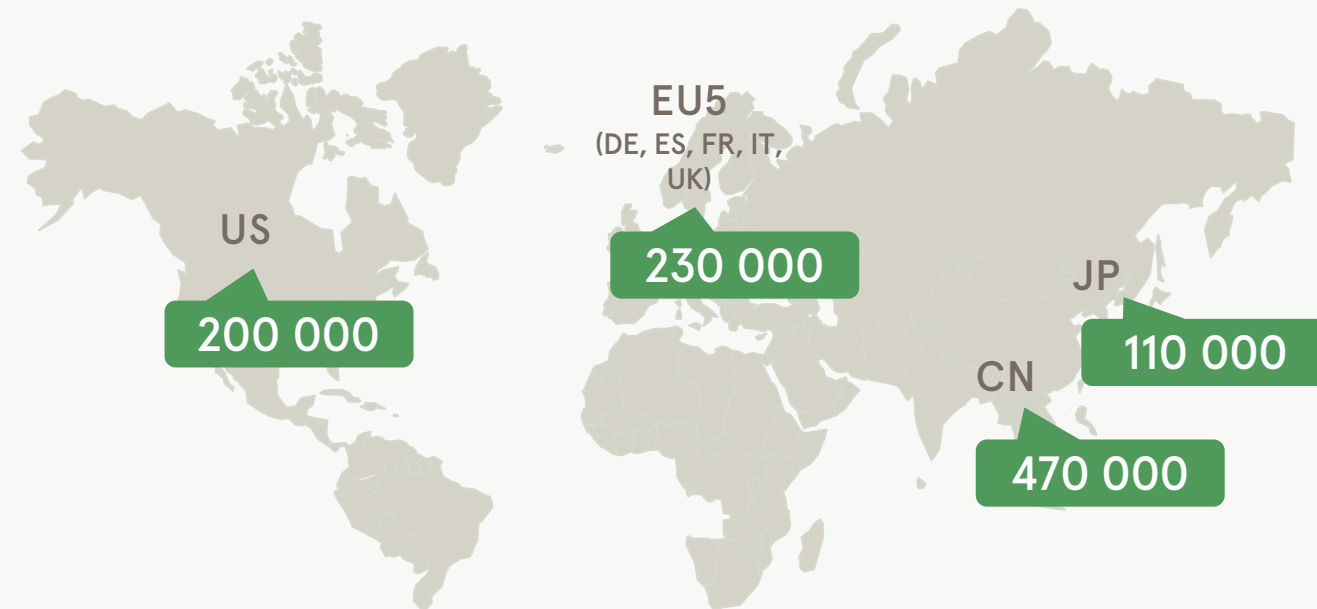
Treatment and prevention of psychosis in Parkinson's (PD-P)

- Currently in development with partner Ipsen who holds an exclusive global license to develop and commercialize mesdopetam
- (<https://www.irlab.se/press-releases/ipsen-and-irlab-enter-exclusive-worldwide-licensing-agreement-aimed-to-improve-the-lives-of-people-living-with-parkinsons-disease//>)

Parkinson's disease levodopa-induced dyskinesia – an unmet need

- >30% of people with Parkinson's disease develop LIDs
- Dyskinesias overshadow the necessary treatment benefits of levodopa treatment and reduces "good ON"-time
- To increase "good ON"-time by reducing dyskinesias is a great unmet medical need
- D3 receptor amplification play a key role in the development of LID
- **Mesdopetam** reduces dyskinesias and increases "good ON"-time by targeting dopamine D3 receptors

PD-LIDs patients globally



Wide clinical potential in unmet medical needs in neurology

PD-LIDs

Levodopa-induced dyskinesias

- Affects about 25% of patients with Parkinson's
- Few treatment options, great unmet medical need

1 million

patients in 8MM*

PD-P

Parkinson's disease psychosis

- Affects about 35% of patients with Parkinson's, often associated with cognitive impairment
- Few treatment options, great unmet medical need

1,5 million

patients in 8MM*

TD

Tardive dyskinesia

- Affects about 25% of psychiatric patients receiving treatment with antipsychotic drugs
- Few treatment options, great unmet medical need
- Strong evidence links DA D3 receptor to underlying disease

~ 3 million

patients globally



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IRLAB is a Swedish research and drug development company that focuses on developing novel treatments in Parkinson's disease. The company's most advanced candidates, mesdopetam (IRL790) and pirepemat (IRL752), both of which completed Phase IIa-studies, intends to treat some of the most difficult symptoms related to Parkinson's disease: involuntary movements (PD-LIDs), psychosis (PD-P) and symptoms linked to cognitive decline such as impaired balance and increased risk of falls (PD-Falls). Through the proprietary research platform, ISP (Integrative Screening Process), IRLAB discovers and develops unique drug candidates for diseases related to the central nervous system (CNS), where significant growing medical needs exist. In addition to the clinical candidates, the ISP platform has also generated several CNS programs that are now in preclinical phase.

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