



Presentation

April 2023







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# An experienced team of 3 managers working together for 14 years



Philippe Genne Chairman and CEO PhD in Pharmacology

- Creation of Oncodesign Biotechnology in 1995: Founder, CEO and CSO
- IPO Oncodesign Biotechnology in 2014
- Creation of the AFSSI
- Vice President SME and ETI Medicen







Jan Hoflack Chief Scientific Officer PhD in Organic Chemistry

AstraZeneca

- Creator of the Nanocyclix<sup>®</sup> technology
- Executive at Marion Merrell Dow, Novartis and AstraZeneca
- Vice President, Medicinal Chemistry and Biosciences at Johnson & Johnson
- Joined Oncodesign Biotechnology in 2009: CSO

oncodesign

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Johnson AJohnson



Karine Lignel Chief Operating Officer Engineer and Master in Finance and Management

- supported more than 60 technology companies, mainly in the health sector (IPO Nanobiotix, Oncodesign Biotechnology and Medincell)
- Has been a member of more than 30 boards of directors or supervisory boards, including Oncodesign Biotechnology from 2008 to 2021
- Joined Oncodesign Biotechnology in 2021: CBO





And led the IPO of Oncodesign Precision Medicine in 2022 on Euronext Growth Paris



# **Identity card**



IPO in September **2022** 



Euronext Growth Paris



25 international employees including 11 PhDs

 $\left( \begin{array}{c} \\ \end{array} \right)$ 

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### **Co-founders:**

- Philippe Genne
- Jan Hoflack
- Karine Lineel



### **Financing history**

- 7 M€ in October 2022 LRRK2 (license option) SERVIER\*
- 0.5 M€ in November 2022 Start Pancreas (upfront) SERVIER.\*
- Capital increase in December 2022 :
  8 M€, of which 5 M€ subscribed by the management



## **Our strengths**



### A successful entrepreneurial path



An experienced and committed team: in-depth knowledge of the pharma, biotech and financial ecosystems and a very strong experience in preclinical R&D



Molecules derived from our technologies already in the clinic addressing huge markets: Parkinson's disease (1% of the population over 60) and Chronic Inflammatory Bowel Diseases (CIBD) with a potential for us of 1 billion € in 2030 (20/30% of reference treatments)



A real partnership culture (Servier, SEngine, Ipsen, BMS, Sanofi, UCB...)



A strong strategic partnership with the CRO Oncodesign Services to control and accelerate preclinical development

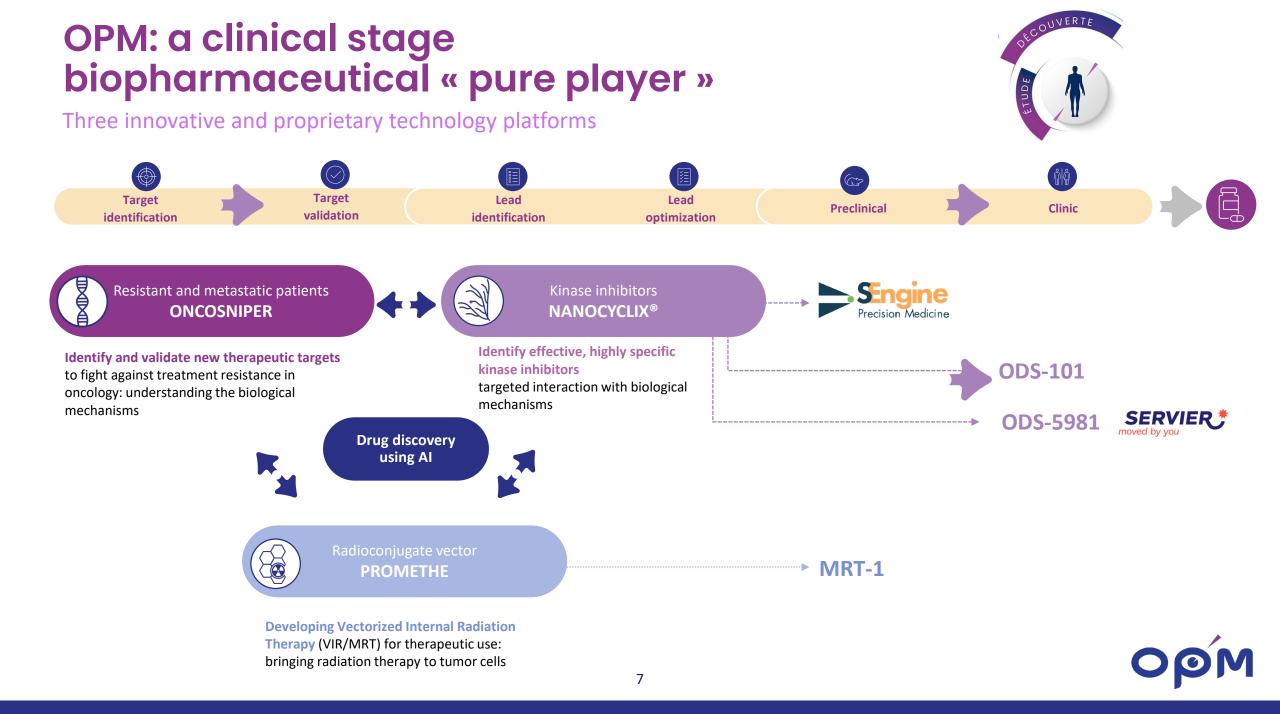


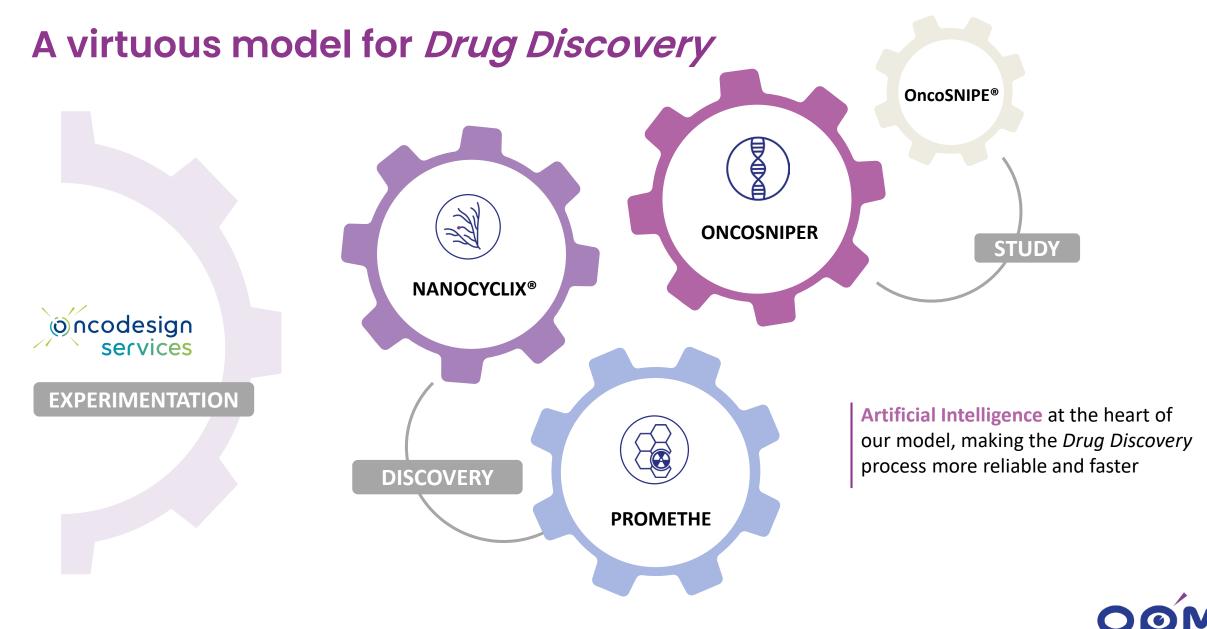
# **OUR MISSION**

Discover and develop new innovative therapies effective against advanced and resistant cancers

# HOW?

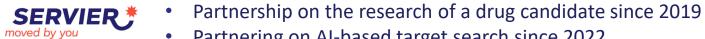
Through precision medicine addressed against therapeutic resistance and metastatic development





# A strong partnership culture

### **Current Partnerships:** ٠



Partnering on AI-based target search since 2022 



Partnership on the search for new targets in oncology since 2022

Past partnerships : •



Bristol Myers Squibb



Strong capacity to create/integrate in consortia: PharmImage, OncoSNIPE



# A pipeline of differentiated clinical and preclinical programs

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	Indication	Target identification & validation	Lead identification & validation	Candidate selection	Preclinical	Phase I	Phase II	Phase III	Next step	
<b>LRRK2</b> ODS'5981	Parkinson's disease SERVIER*					×	>		Results Phase 1: Q2 2024	
<b>RIPK2</b> ODS'101	Chronic Inflammatory Bowel Diseases								Intermediate results Phase 1: end of 2023	
STarT Pancreas	Pancreatic cancer SERVIER*								Identification of the 1 <sup>ère</sup> target: before the end of 2023	
<b>EGFR</b> Florepizole	Radiotracer Oncology							$\geq$	Search for a partner to start Phase 3 directly	
Validation of candidates	Oncology Singine Precision Medicine				•				New target validated in vivo from patient organoids	
RIPK2	Oncology					>			Validation of the value of RIPK2 against aggressive tumors and identification of IND: mid-2024	
MRT 1 HER2	Oncology								Vector technology partnership and progression Phase 1: 2025	
MRT 2	Oncology								Construction of a pipeline of MRTs: 2023/2024	
MRT 3	Oncology								Construction of a pipeline of MRTs: 2023/2024	





# Our Precision Medicine platform based on innovative technologies



Target Target Lead Lead Preclinical identification identification validation optimization rarget evaluatio Public, private and especially proprietary data sources from projects such as IMODI and OncoSNIPE® Analvtica Al Technologies: Machine Learning & Deep Learning Data Drug Discovery Expert Knowledge 9 **Contribution of Oncodesign Services** Target validation experimental platforms Choice of intra and extra cellular therapeutic target families: Kinases/ surface proteins Experts' opinions

# **OncoSNIPER**

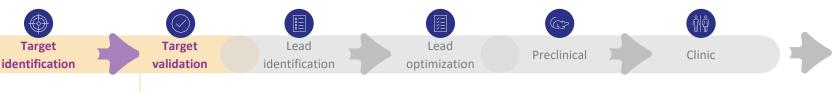
Identify and validate new therapeutic targets to overcome treatment resistance in oncology



To develop partnerships for the discovery of new targets and biomarkers

To enter into licensing agreements with pharmaceutical and biotech companies for previously identified therapeutic targets

OncoSNIPER applications: StarT Pancreas and in the proprietary medicinal chemistry platform, Nanocyclix



**Resistant and metastatic** patients **ONCOSNIPER** 

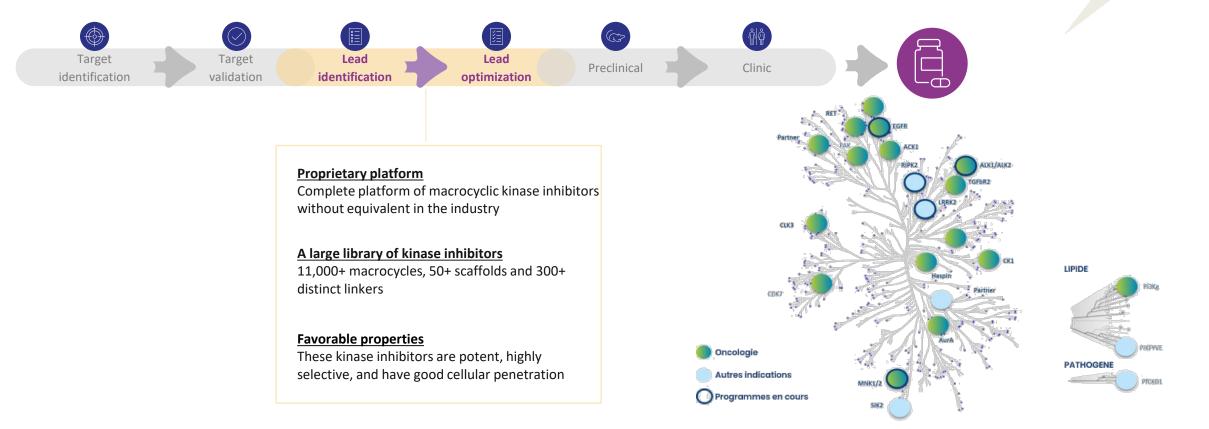


### 13

Two molecules in the clinic: ODS-101 on RIPK2 and ODS-5981 on LRRK2 Several leads identified, both for known kinases and those discovered by OPM: they could become tomorrow's targeted therapies in precision medicine

# Nanocyclix

### proprietary medicinal chemistry technology



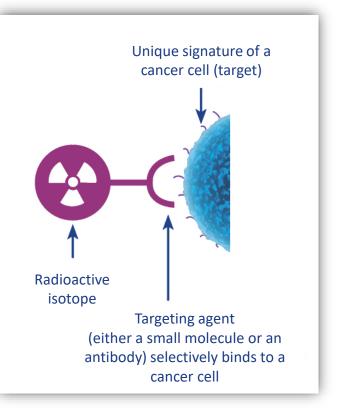






Radioconjugate vector PROMETHE

# Emergence of a revolutionary Vectorized Internal Radiation Therapy (VIRT) technology for therapeutic use

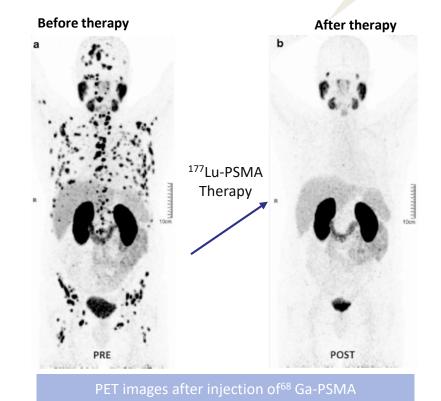


## Molecules targeting proteins expressed on cancer cells

High selectivity, starting from vectors that can be small molecules, peptides, or different forms of antibodies depending on the chosen target.

## To these vectors are coupled a linker and a chelating cage by bio-conjugation

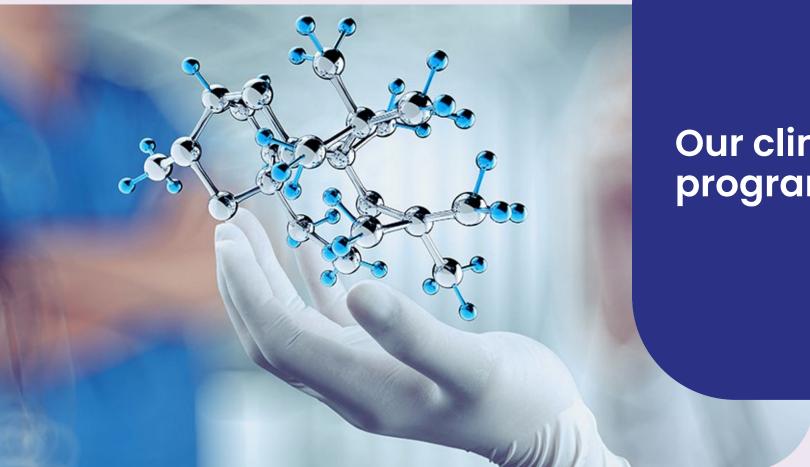
The latter allows the capture of radioisotopes, which, depending on the type of radionuclide used, make them imaging or therapeutic agents



This theranostic approach capitalizes on the proprietary platform of a recognized partner with whom we are in discussion to jointly develop several MRTs through a Joint Venture

Sources: Theranostic in oncology with PSMA // 177 Lu-PSMA radioligand therapy in a 67-year-old man with metastatic castration-resistant prostate cancer. A: PET image evidenced a difuse metastatic involvement. PSA value 50 ng/ml. B: 4 months following the treatment with 177 Lu-PSMA radioligand therapy (8000 MBq), PET showed a complete metabolic result of ng/ml.





# Our clinical development programs



# RIPK2

a kinase of the innate immune system, targeted to treat IBD

RIPK2 is part of a complex activated by bacterial infections, with the purpose of killing infected cells to protect the body.

The pathological hyperactivity of this complex gives rise to inflammatory diseases, especially in the colon.

20 to 30%

of current reference treatment sales (ENTYVIO sales and its successors) estimated in 2030 > 1 billion US\$ Blockbuster potential About Inflammatory Bowel Disease (IBD)



IBD is one of the autoimmune and inflammatory pathologies, linked to a deregulation of the immune system

First indications in IBD for RIPK2:

• Crohn's disease and ulcerative colitis

### Potential to represent a "franchise" target

- Other inflammatory and autoimmune diseases
- Aggressive and metastatic cancers



The <u>clinical proof of concept</u> of ODS-101 in IBD is conducted by OPM prior to the sale of a license to a major pharma company or companies



# **ODS-101**

The leading proprietary program from the Nanocyclix<sup>®</sup> platform to inhibit RIPK2

### A Best-in-Class inhibitor of the RIPK2 target in IBD

- Best-in-Class molecule for RIPK2 target in Phase 1 healthy volunteers
- First compound of series allowing to derisk the program and to position it in multiple indications

### → Potential additional positioning on immunotherapy-induced colitis in oncology



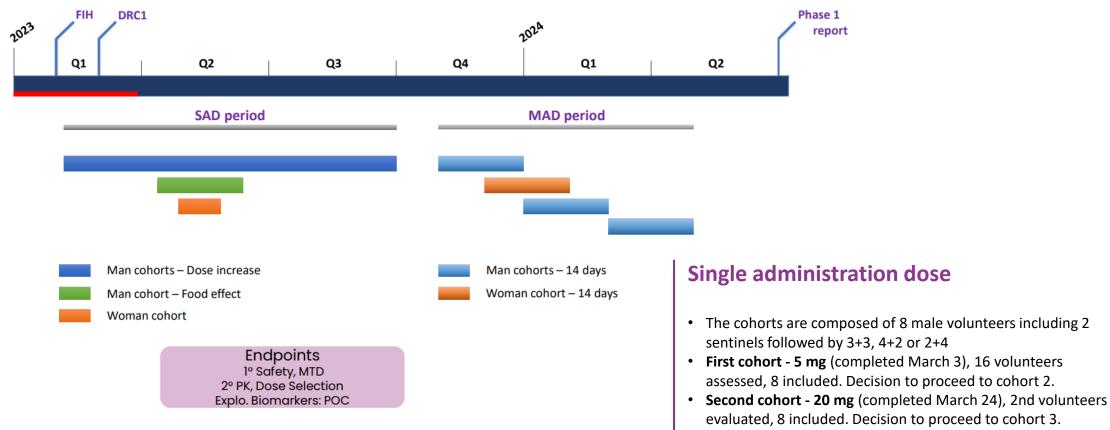
Final results phase 1 healthy volunteers



ase 1b or 2a



# **ODS-101 phase I healthy volunteers**



• Third cohort - 60 mg (started March 27)



# LRRK2

### A kinase with a potential for Parkinson's disease

- A mutation in the LRRK2 target was identified in Parkinson's disease patients in 2004
- A significant increase in LRRK2 kinase activity is observed in vulnerable dopaminergic neurons of Parkinson's patients, suggesting LRRK2 involvement in most Parkinson's disease patients
- **Biogen/Denali have initiated a Phase 3 trial** with their LRRK2 inhibitor BIB122. Denali's license to Biogen represented an upfront value of more than US\$1 billion.
- Use as a neuroprotective agent and preventive treatment may address nearly 3 million patients in the 7 MM

### About Parkinson's disease



Progressive neurodegenerative disease affecting~1% of the population over 60 years old

Only symptomatic treatments to date

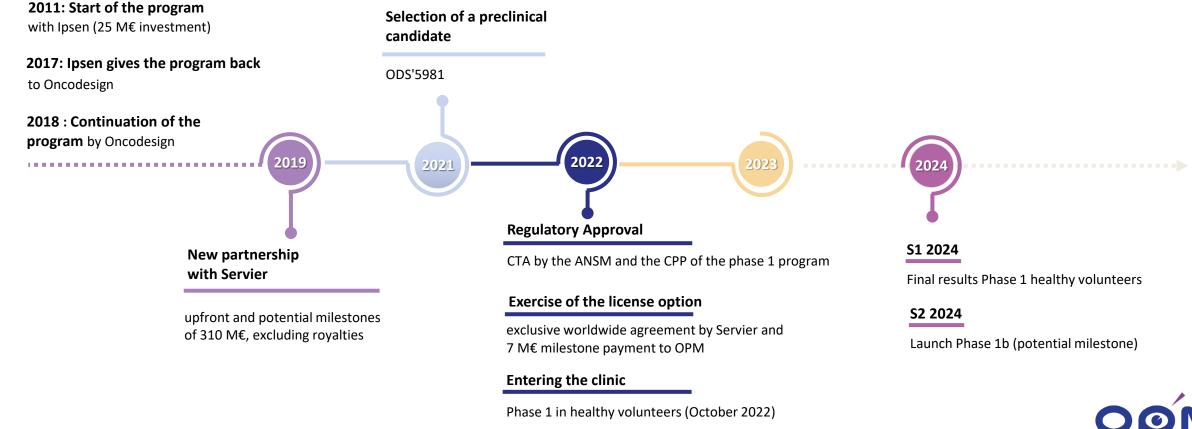
+8.5 million people with Parkinson's disease worldwide in 2019



OPM's LRRK2 program, a potential Best in Class molecule licensed to Servier in 2022 and in Phase 1 healthy volunteers currently, represents a significant potential source of revenue for the Company



A potential Best-in-Class LRRK2 inhibitor, a target with the potential to change the course of Parkinson's disease





a clinical program in partnership with **SERVIER**, to inhibit LRRK2



**310 M€** potential milestones of which **13 M€** already received, in addition to R&D funding (7 M€)

20

# **Pancreatic cancer**

A cancer with no effective therapeutic solution

- One of the most difficult cancers to treat effectively and inherently resistant
- **Cancer usually diagnosed in advanced stages** when abdominal pain or jaundice appear: no effective screening tools: **95% of patients** die
- **Pancreatic cancer remains the deadliest and fastest killing cancer**: 1 in 4 patients die within a month, and 3 in 4 within a year.

About the pancreatic cancer

### 2018 in France:

- 9<sup>th</sup> most common cancer in men
- 7<sup>th</sup> cancer in women
- 14,184 new cases in France per year

### 2023 (estimates) in the United States :

- 33,130 men
- 30,920 women
- 50,550 deaths

## The genomic revolution represents one of the best hopes for future treatments of pancreatic cancer



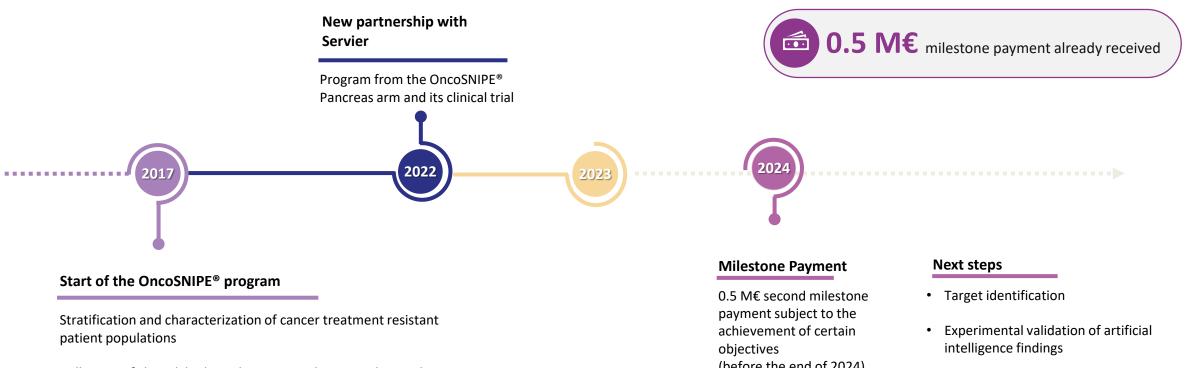
## **STarT Pancreas**

A new strategic collaboration with

SERVIER \*



### Identification and validation of therapeutic targets in the treatment of pancreatic cancer



- Collection of clinical, biological, genetic and imaging data and samples from chemo-naive patients with :
- Triple negative breast cancer, -
- Pancreatic cancer \_
- Lung cancer

(before the end of 2024)

• Other milestone payments until validation of the drug candidate(s) entry into Phase 1

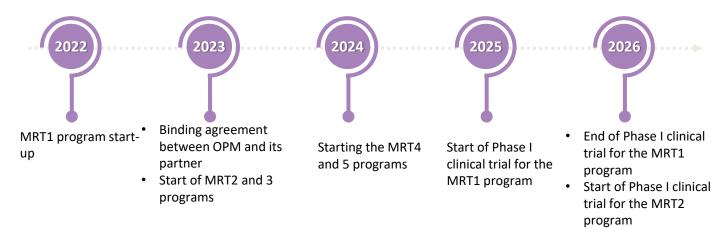


# Vectorized Internal Radiation Therapy (VIR/MRT)

The ultimate tool for precision medicine

### Ongoing joint venture discussions with an identified partner with the mission to :

- Discover innovative and differentiating therapies, effective against advanced, metastatic and resistant cancers and develop them to the clinical stage
- Development of radiotherapeutics for precision medicine



### KEY STEPS

Development platform for a MRT portfolio with the development of 5 theranostic products (MRT 1 to 5)

• VIR/MRT is a kind of "radioactive chemotherapy", which aims at destroying cancer cells wherever they are in the body, by specific and targeted cellular mechanisms



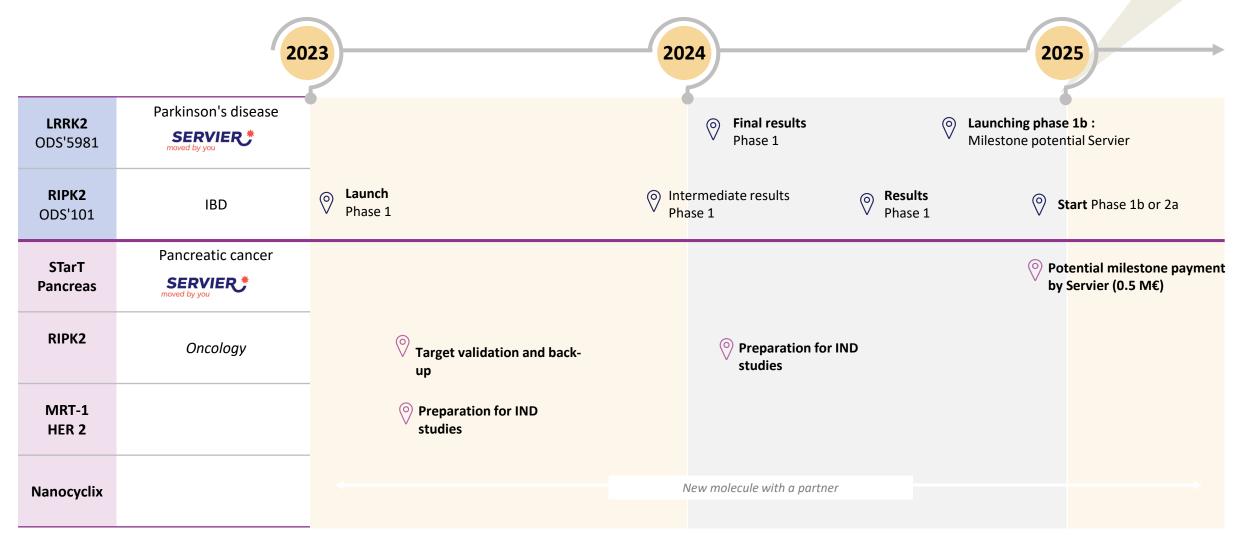




# Strategy and perspectives



# Our clinical and preclinical development perspectives





# **Key financial elements**

### 15,5 M€

### cash as of December 5, 2022 of which

- Initial payment Servier (Start Pancreas): 0.5 M€
- Milestone option exercise Servier (LRRK2): 7 M€
- Fundraising December 2022: 8 M€.

# Numerous investments already made, notably in R&D



\* Excluding expenses incurred directly by the partners of a significant amount (IPSEN then Servier)



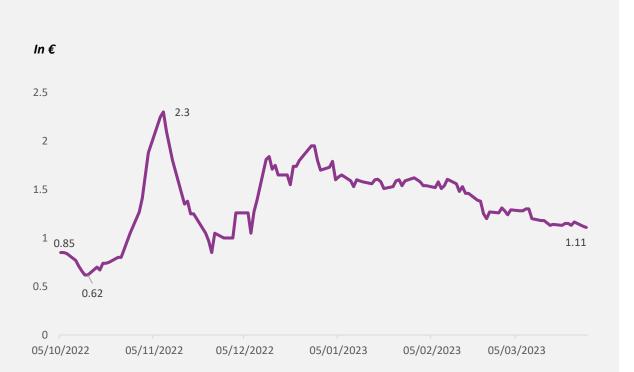
### **Potential Milestones SERVIER**,\* within the framework of our partnerships

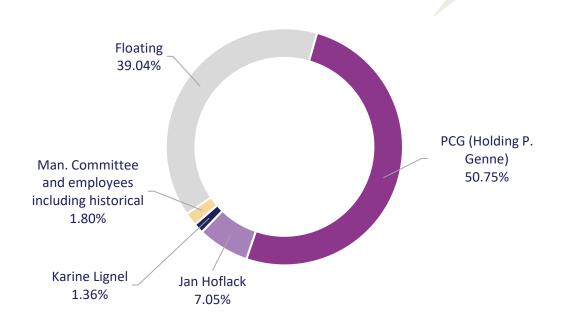
- 310 M€ (LRRK2)
- 0.5 M€ (Start Pancreas) by the end of 2024 + other milestone payments until validation of Phase 1 entry

26

# Share price evolution since the IPO October 5, 2022

Share capital post december 22 capital increase December 31, 2022





A capital increase of 8 M€, 5 M€ of which was subscribed by the co-founders



## **Our strengths**



### A successful entrepreneurial path



An experienced and committed team: in-depth knowledge of the pharma, biotech and financial ecosystems and a very strong experience in preclinical R&D



Molecules derived from our technologies already in the clinic addressing huge markets: Parkinson's disease (1% of the population over 60) and Chronic Inflammatory Bowel Diseases (CIBD) with a potential for us of 1 billion € in 2030 (20/30% of reference treatments)



A real partnership culture (Servier, SEngine, Ipsen, BMS, GSK, Sanofi, UCB....)



A strong strategic partnership with the CRO Oncodesign Services to control and accelerate preclinical development





# Appendices



### **OPM Governance**

### A highly experienced team

### **Executive management**



**Philippe Genne** Chief Executive Officer Founder Oncodesign SA



Jan Hoflack **Chief Scientific Officer** Inventor Nanocyclix® Platform



**Karine Lineel Chief Operating Officer** 



**Thierry Billoué** Chief Human Resources Officer





**Arnaud Lafforgue** Chief Financial & Administrative Officer



Stéphane Gérart Head of Artificial Intelligence, Chief Information Officer

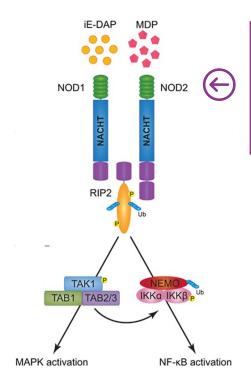


Sylvie Fernandes Forster **Chief Legal Officer** 



### RIPK2





RIPK2 (identified since 2012) Direct signaling partner of NOD1 and NOD2, "Pattern recognition receptors" that protect against bacterial infections, and whose deregulation is linked to several IBDs



# **Our strong intellectual protection**

Precise and multi-level intellectual protection: in line with the usual strategies of pharmas and based on our proprietary innovation platforms

Early submission of patents: a clear strategy and efficient management of our patent portfolio

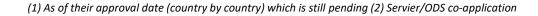
Current patent portfolio on Nanocyclix<sup>®</sup> programs:

- RIPK2
- LRRK2 (co-owned by Servier and OPM) and ;
- the PET tracer Florepizol

When filing patents, the initial search reports issued by patent offices are very favorable, indicating the uniqueness of our technologies

Currently, there are **5** active patents protecting our programs

Patent	Application number	Target	Date of registration	Expiry date	Publication date	Status
ONC-026	WO2016042087	RIPK2 Rig.	17/09/2014	17/09/2034	24/03/2016	National phase
ONC-027	WO2017148925	PET Tracer	29/02/2016	29/02/2036	08/09/2017	National phase
ONC-036	WO2021152165	RIPK2 ONN Lactams	31/01/2020	31/01/2040 <sup>(1)</sup>	05/08/2021	National phase
ODS1 <sup>(2)</sup>	WO2021224320	LRRK2 Carbamates	06/05/2020	06/05/2040(1)	11/11/2021	National phase
ODS2 <sup>(2)</sup>	WO2022194976	LRRK2 Ethers/Amides/Amines	18/03/2021	18/03/2041(1)	22/09/2022	Published







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