

## TARGETING PERSISTENT CANCER CELLS THROUGH IRON-INTERFERING METABOLISM

December 2021

## SideROS is a preclinical-stage biotech company focused on accelerated development of innovative small molecules targeting tumor cells metabolism in high-risk cancers with poor prognosis



Non confidential

## 10 million patients worldwide died in 2018 of cancer, mostly due to relapse & metastasis





Non confidential

#### What we are proposing: Targeted treatment toward persistent cancer cells



#### Persistent cancer cells addiction to iron





### CD44 & HA\* mediated iron endocytosis regulate cell plasticity in persistent cancer cells\*\*



5

Epithelial Mesenchymal Transition (EMT) acts as the **main driver** of metastatic process, tumor cell plasticity, drug resistance, maintenance of stemness and immunosuppression.

Disturbing tumor cells metabolism, through specific inhibition of iron metabolism, is a novel targeted treatment.

\*HA: Hyaluronate / \*\* Observed in CRC, Breast, NHL, AML, PDAC, GBM

Müller et al. Nature Chemistry (2020)Qin et al. Nature - Signal Transduction and Targeted Therapy (2020)Non confidential



## Ironomycin, our 1<sup>st</sup> candidate, triggers persistent cancer cells death by iron deprivation





## Ironomycin is efficient to prevent relapse in PDX mouse model





## 8 Industrial manufacturing scale-up of ironomycin is established



- Starting material sourcing (salinomycin) is secured at low cost
- CDMO partnering until tox GLP batch
- Technical batch (75g) released in February
- Stability studies on going
- Crystallisation process stabilized by CDMO
- Formulation under evaluation

#### **RFP process will be launched to manufacture GMP DS and DP**

Non confidential



### Ironomycin efficacious in hemato and solid tumors

		In vitro	ln vivo
	B lymphoma	4	
Hematology	Leukemia	1	1
	Breast	√	√
	Colorectal	√	TBD
	Pancreas	√	TBD
Solia tumors	Liver	√	TBD
	Lung	√	TBD
	Gliobastoma	√	√



### High iron score is predictive of poor outcome in DLBCL population...



... and identifies the population, who may benefit from ironomycin targeted therapy. Similar results in mantle and follicular lymphoma population. SideROS

(1) Devin et al., ASH conference, December 2019; Moreaux et coll., paper in revision Patented data : EP19306436 Non confidential

## 11 Clinical development plan to target hemato and solid tumors





### **12** Intellectual Property is secured

#### **Applications covered by 5 patents exclusively licensed to SideROS**

Patent 1	"Nitrogen-containing analogs of Salinomycin"	Filed on <b>12/09/2014</b> (EP14306409.5)	CNRS co-owned by Inserm, Paris Descartes University and Paris Sud University	
		International application WO 2016/038223: US, EU, Japan, China and Canada		
Patent 2	"Total cellular iron as a marker of cancer stem cells and uses thereof"	Filed on <b>08/03/2017</b> (EP17055450)	CNRS co-owned by Inserm and	
		International application WO 2017/153475: US, EU, Japan, China and Canada	Paris Descartes	
Patent 3	"Iron-score and in vitro method for identifying high risk DLBCL subjects and therapeutic uses and methods"	Filed on <b>06/11/2019</b> (EP19306436)	CNRS co-owned by CHU Montpellier, INSERM, University Montpellier and Institut Curie	
		PCT/EP2020/081349 on 06/11/2020		
Patent 3 bis	"Iron-score and in vitro method for identifying Mantle cell lymphoma (MCL) subjects and therapeutic uses and methods"	Filed on <b>06/11/2019</b> (EP19306436)	CNRS co-owned by CHU Montpellier, INSERM, University Montpellier and Institut Curie	
		PCT/EP2020/081352 on 06/11/2020		
Patent 4	"Nitrogen-containing analogs of salinomycin for use in Acute Myeloid Leukemia"	Filed on July 2020	CNRS co-owned by Inserm and Melbourne university	



# 13 SideROS, a multidisciplinary team dedicated to accelerate the development of our lead to clinic .... with new talents to come

#### **Operational team**

#### **Chief Executive Officer**



Lucie Mondoulet, PhD, HDR - VP R&D (listed companies) bringing 3 clinical programs in development, 15 leading R&D programs with KoL, and managing 15 people.

#### To be recruited

- CMC Dev director
- Regulatory manager
- Clinical operation

#### International R&D team

## Co-founder, Scientific advisor & SAB Chairman



Raphaël Rodriguez, PhD, HDR Director of research in chemistry & biology of Cancer @CNRS/ Institut Curie.



institut**Curie** 



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unicancer Marseille







#### **Advisor team**



Laurent Martin, PharmD, MBA – Chief development officer in pharma, Regulatory affairs Director in biotech (DBV Technologies) & orphan drug companies, approval of several drugs in EU & US.

#### **Clinical Development**



Alain Herrera, MD, PhD Global oncology strategy & Head of global development in oncology @Sanofi, Chiron Therapeutics & Pierre Fabre Oncology (EU, US, Asia), register worldwide oxaliplatin.





# Multiple indications...but one to prioritize with the faster time to market



### **Business model to accelerate SideROS development through** private & public funding & partnerships



With international Centers of **Excellence** In targeted indications

**Exit & Licensing** Option



16

Financial

Development



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