# biophytis

#### LIVE HEALTHIER LONGER

June 2022 | Euronext: ALBPS - Nasdaq: BPTS

## Forward Looking Statements

This presentation contains forward-looking statements. Forward-looking statements include all statements that are not historical facts. In some cases, you can identify these forward-looking statements by the use of words such as "outlook," "believes," "expects," "potential," "continues," "may," "will," "should," "could," "seeks," "predicts," "intends," "trends," "plans," "estimates," "anticipates" or the negative version of these words or other comparable words. These forward-looking statements include statements regarding Biophytis' anticipated timing for its various Sarconeos (BIO101) clinical trials and expectations regarding commercialization. Such forward-looking statements are based on assumptions that Biophytis considers to be reasonable. However, there can be no assurance that the statements contained in such forward-looking statements will be verified, which are subject to various risks and uncertainties including, without limitation, delays in patient recruitment or retention, interruptions in sourcing or supply chain, its ability to obtain the necessary regulatory authorizations, COVID-19-related delays, and the impact of the current pandemic on the Company's clinical trials. The forward-looking statements contained in this presentation are also subject to risks not yet known to Biophytis or not currently considered material by Biophytis. Accordingly, there are or will be important factors that could cause actual outcomes or results to differ materially from those indicated in these statements. Please refer to the "Risk Factors" section of the Company's 2021 Full Year Financial Report available on BIOPHYTIS website (www.biophytis.com) and to the risks discussed in the Company's registration statement on Form F-1 and other reports filed with the Securities and Exchange Commission (the "SEC"). We undertake no obligation to publicly update or review any forward-looking statement, whether as a result of new information, future developments or otherwise, except as required by law.

## biophytis

## Today's Corporate Highlights



HQ location: Paris, France

Founded: 2006



Employees: 27 (May 30, 2022)

Euronext growth (ALBPS) : July 2015



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Nasdaq (BPTS): February 2021

Market cap: €20 M (May 30, 2022)



Key partner: Sorbonne University

#### **Biophytis SA**

- Is a clinical-stage biotechnology company specialized in the development of therapeutics that are aimed at slowing the **degenerative processes associated with aging.**
- Our **small molecules** are aimed at stimulating **biological resilience** to stress during aging.

#### Sarconeos (BIO101)

- Our leading drug candidate is administered orally, for the treatment of mobility disability in elderly patients with sarcopenia, with positive results in a Phase 2 clinical study (SARA) completed in the United States and Europe.
- It is also being studied for the treatment of severe respiratory manifestations in COVID-19 in a Phase 2-3 clinical study (COVA) in Europe, Brazil, and the US.
- A pediatric formulation of Sarconeos (BIO101) is being developed with IND granted in the US and Belgium (MYODA) for the treatment of Duchenne Muscular Dystrophy (DMD).



### **Executive Team**



#### Stanislas Veillet - Founder & CEO

- PhD in genetics, AgroParisTech
- 25+ years in biotech; Pharmacia-Monsanto, Danone Group



#### Philippe Rousseau - CFO

- Nearly 15 years of experience in Finance for Pharma & Biotech companies (Genset, Therabron, Cytoo, ExonHit, Vivalis)
- Expertise in cross-border transactions and management of strategic partnerships



#### Pierre Dilda - CSO

- PhD in pharmacology (Paris V)
- 25 years experience in pharmaceutical research, in both academic and industrial settings



#### Waly Dioh - COO

- PhD in phytopathology (Paris XI) and MBA
- 21+ years biotech experience in France and the U.S. and R&D at Monsanto



#### Benoit Canolle- CBO

- PhD in Neurosciences (Aix-Marseille University), execMBA (Kedge Business School)
- 17 years experience in Pharma R&D: Sanofi & Pierre Fabre



#### Rob van Maanen- CMO

- MD from the University of Ultrech-NL, MBA from UvA Amsterdam-NL
- 20 years of experience in both large pharmaceutical companies and small biotechs (Khondrion, Astellas, Roche, Novartis, Eisai and Organon)



## Our Clinical Pipeline as of today

Candidate	Indication	Program	Preclinical	Phase 1	Phase 2	Phase 3
Sarconeos (BIO101)	Covid-19	COVA				
	Sarcopenia	<b>#</b> SARA				
	Duchenne Muscular Dystrophy	MYODA				
Macuneos (BIO201)	Dry AMD	MACA				
	Stargardt					

XXX : orphan diseases



## Our strategic objectives

## DEVELOP A PORTFOLIO OF DRUG CANDIDATES IN AGE-RELATED DISEASES, IN PARTICULAR MUSCULAR AND OPHTHALMOLOGICAL DISEASES

- Demonstrate the efficacy of Sarconeos (BIO101) in the treatment of sarcopenia
- Demonstrate the therapeutic benefit and obtain conditional approval of Sarconeos (BIO101) for COVID-19 patients
- Move forward with the development of our second molecule Macuneos (BIO201) in Age-Related Macular Degeneration (DMLA)

## EXPLORE THE POTENTIAL OF OUR DRUG CANDIDATES IN ORPHAN NEUROMUSCULAR AND OPHTHALMOLOGICAL DISEASES

 Launch the clinical development of Sarconeos (BIO101) for the treatment of Duchenne muscular dystrophy



STRENGTHEN OUR PRESENCE IN THE UNITED STATES, THE LEADING BIOTECH/PHARMA MARKET

- Develop the company in the United States, in particular its clinical, regulatory and financial operations
- Forge partnerships with pharmaceutical laboratories to co-develop and market our drug candidates, in particular Sarconeos (BIO101)





## Strengthening of the company's fundamentals over the past 18 months

#### VALIDATIONS OF THE THERAPEUTIC POTENTIAL OF SARCONEOS (BIO101)

#### **COVA Study – COVID-19**

- Part 2 interim analysis achieved in Q3 2021 with positive DMC review to finalise the study without modification of the protocol (interim analysis of efficacy in the promising area, and satisfactory safety profile)
- Early Access Program (EAP) authorization in Brazil in February 2022
- 237 patients recruited in March 2022
- Early termination of patients' recruitment due to global drop of COVID-19 hospitalizations

#### SARA-INT Study – Sarcopenia

• Phase 2: positive top-line results on primary end-point (400-meter walk test) published in August 2021. Full results presented at the ICFSR 2021

#### IND Approval to start MYODA - DMD

• US IND & Belgium authorization obtained

**STRENGTHENING OF THE FINANCIAL STRUCTURE** (Nasdaq IPO)

- \$20.1 million (€16.6 M) raise from Nasdaq
   IPO in February 2021
- €23.4 million raise in private placements on Euronext in 2021
- €23.9 million in cash and cash equivalents as of December 31, 2021
- ORNANE contract with Atlas to raise €32 million over 3 years



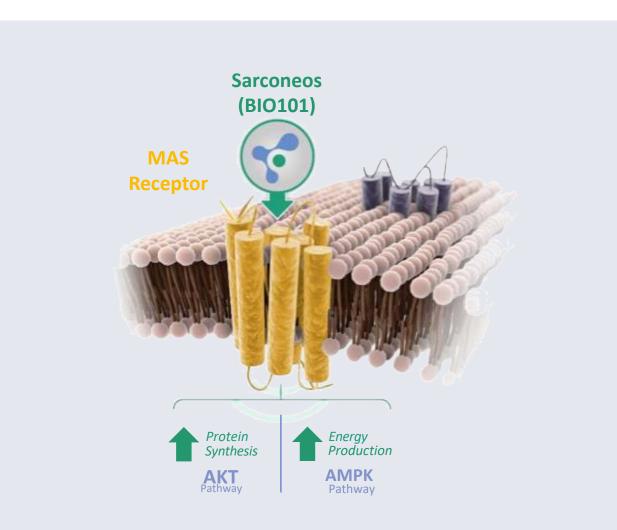


## Sarconeos (BIO101): Mechanism of Action

Sarconeos (BIO101) triggers two important MAS receptor downstream signaling-pathways in myocytes:

- PI3K/AKT/mTOR: Increases protein synthesis
- AMPK/ACC: Stimulates energy production

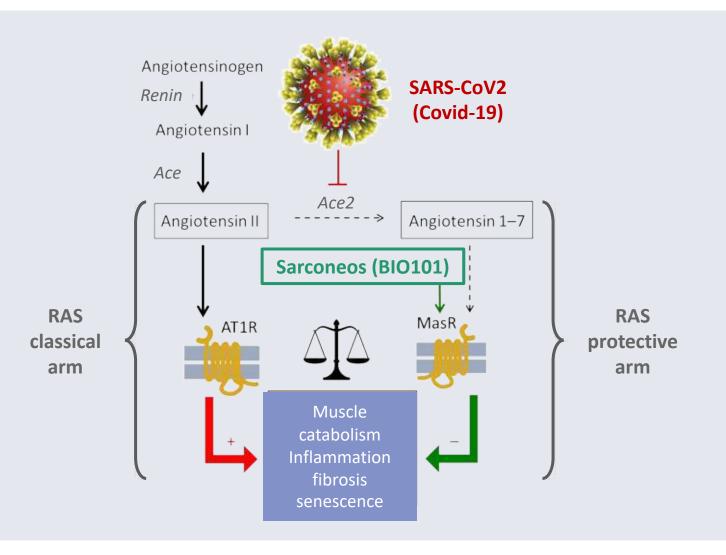
MAS activation in **skeletal and smooth muscles** stimulates muscle metabolism and strength with a potential impact on **mobility and/or respiratory functions** 





## Sarconeos (BIO101): Potential Treatment for COVID-19 Patients

- Sarconeos (BIO101) activates the MAS receptor, a key component of the protective arm of the Renin-Angiotensin System (RAS), known for protecting muscles against catabolism, inflammation or fibrosis
- The production of Ang 1-7, the natural ligand of MAS receptor, is impaired by SARS-CoV-2, which uses ACE2 to penetrate the lungs, causing respiratory failures
- Sarconeos (BIO101) by reactivating the RAS protective arm, has the potential to restimulate respiratory capacity in COVID-19 patients





Introduction to COVA study



## COVA Study: Targeting COVID-19 Hospitalized Patients with Respiratory Failure





#### Allowed medications:

of the following:

 Antiviral agents such as remdesivir, bamlanivimab, paxlovid

Patients aged 45 and above, with proven COVID-19,

≤7 days before start of study medication, meeting one

• With evidence of respiratory decompensation

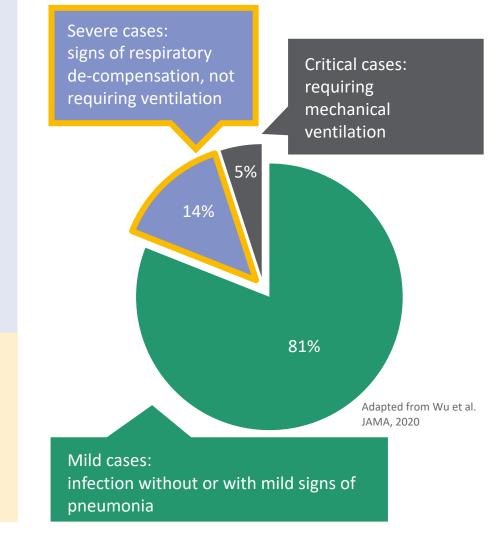
• Tachypnea:  $\geq$  25 breaths per minute

• Arterial oxygen saturation ≤92%

and severe respiratory symptoms:

• Anti-inflammatory agents such as dexamethasone

#### **Targeted populations**





## COVA Study: Phase 2-3 Trial Overview

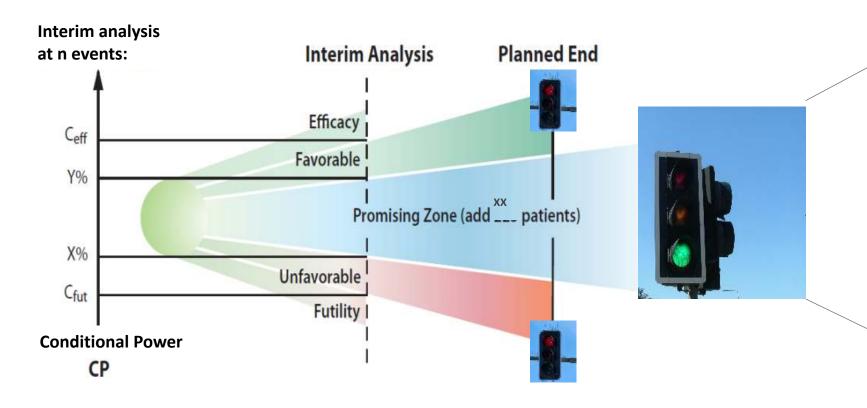
Design	Endpoints & Study Follow-Up	Patient Population
<ul> <li>Global, multi-center, double- blind, placebo-controlled group Phase 2-3 sequential (2 parts) adaptive design</li> <li>International study including 34 clinical centers in US, Brazil, France &amp; Belgium. 15 additional sites to be opened soon, including UK.</li> <li>iDMC is monitoring the safety and efficacy of the treatment by running two interim analyses</li> </ul>	<ul> <li>Proportion of participants with 'negative' events: all-cause mortality &amp; respiratory failure (requiring mechanical ventilation or ECMO)-Target efficacy : ≤ 25% (BIO101) with 15% difference vs Placebo.</li> <li>Part 1 (N=50): First interim analysis (IA1), Q1 21, based on safety; Positive recommendation from DMC to progress into part 2</li> <li>Part 2 (N=155): Second interim analysis (IA2), Q3 21. Positive recommendation from DMC to complete the study w/o protocol modification (good safety profile, efficacy data in the promising zone)</li> <li>Part 2 (N=237 early termination of the study) Q3 2022, final analysis of the effect of Sarconeos (BIO101) in preventing further respiratory deterioration</li> </ul>	<ul> <li>Age: 45 years old or over</li> <li>Hospitalized for severe respiratory symptoms and with proven Covid-19 infection</li> <li>Patients with respiratory failure not yet requiring mechanical ventilation</li> <li>Oxygen saturation less than 92%</li> </ul>
Product	2020 2021	2022 2023
50 mg b.i.d of Sarconeos BIO101)	COVA Phase 2-3	EAP Brazil TLRs Commercialization Feb 22 Q3 22 H1 2023

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Interim Analysis 2 September 2021: a major clinical achievement Positive feedback from DMC based on Promising Zone of efficacy

COVA STUDY PRIMARY ENDPOINT: % OF PATIENTS WITH NEGATIVE EVENTS

- All-cause mortality and Respiratory failure requiring intubation
- Target: 25% (treatment) vs 40% (Placebo)





Recommendation from DMC based on results of the Interim Analysis 2:

No futility, Good Safety Profile & Promising Zone of Efficacy.

Continue with no modification of the protocol





Introduction to SARA study





## SARA project: Treatment for Sarcopenia, A Large Unmet Medical Need

#### **NO CURRENTLY APPROVED DRUGS**

- Age-related degeneration of skeletal muscle characterized by a loss of muscle mass, strength and functional issues such as the ability to stand and/or walk
- A major cause of mobility disability, resulting in a loss of independence and increased risk of adverse events (for example falls), which can shorten life expectancy
- Prevalence estimated between 6-22% in the elderly (defined as over 60 years of age), a population expected to double from approximately 962 million in 2017 to 2.1 billion by 2050<sup>1</sup>

Sarconeos (BIO101):

- ✓ First drug candidate to complete Phase 2 (SARA-INT) with clinically meaningful outcome on mobility
- ✓ On track to prepare the Phase 3 program
- ✓ Myostatin inhibitors halted for lack of effectiveness in neuromuscular diseases

<sup>1</sup>United Nations' World Population Prospects: 2017 Revision

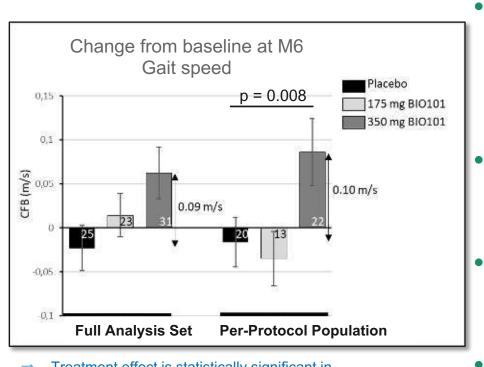




## SARA-INT: Phase 2 Trial Overview

Design			Endpoints		Patient Population
<ul> <li>Global, double-blind, placebo-controlled to NCT03452488</li> <li>Assess safety and eff doses of Sarconeos ( administered orally v over 26 weeks, as co placebo</li> <li>Treatment effect on it of physical function ( and on on decrease of mobility disability</li> </ul>	rial: icacy of two BIO101) vith a meal mpared to improvement gait speed)	0.05 n meani Seconda • Handg	neter walk test (400MW n/s is considered the m ingful change <b>ry</b> grip muscle strength at reported outcomes (F	inimal	<ul> <li>Age: 65 years old or over</li> <li>Low mobility measured by Short Performance Physical Battery (SPPB) ≤8 out of 12</li> <li>DEXA body composition as measured by ALM/BMI (appendicular lean mass / body mass index)</li> <li>Able to exercise for 30 minutes per day 5 days per week</li> </ul>
Product	2019		2020	2	2021 2022
175 & 350 mg b.i.d of Sarconeos (BIO101)			SARA-INT Phase 2		TLRs Q3 2022 and Phase 3 program Aug 21 EMA H2 2022 and FPI H2 202

## Sarconeos (BIO101) significantly improves the gait speed in the 400 MWT, the primary endpoint of SARA-INT Phase 2 trial



Treatment effect is statistically significant in  $\Rightarrow$ PP population at M6 (p = 0.008).

- Sarconeos (BIO101) at the highest dose of 350 mg bid showed a clinically meaningful improvement of 0.09 m/s in the FAS population (not significant) and of 0.10 m/s in the PP population (significant, **p=0.008) compared to placebo** for the 400MWT in gait speed after 6 months of treatment
- Clinical Relevance: the **Minimal Clinically Important Difference (MCID)** in sarcopenia (0.1 m/s) is known to be associated with a reduction in mobility disability and mortality in elderly
- Sarconeos (BIO101) showed a very good safety profile at the doses of 175 mg bid and of 350 mg bid with no Serious Adverse Events (AE) related to the product
- Based on these encouraging results, a Phase 3 protocol is currently being discussed with the FDA and the EMA with the aim of having a **first** patient in for this study at the end of the second half of 2022 17

## SARA – Phase 3 development plan, pending FDA & EMA CTA advice and approval

Design		Endpoints			Patient Population		
<ul> <li>Global, double-blind, randomized, phase 3 placebo-controlled trial</li> <li>Assess safety and efficacy Sarconeos (BIO101) 350 mg BID administered orally over at least 52 weeks, as compared to placebo</li> <li>Treatment effect based on estimation of the risk of mobility disability</li> </ul>		<ul> <li>Primary</li> <li>Major Mobility Disability (MMD) assessed by the inability to complete the 400 meter walk test (400MWT) within 15 min</li> <li>Secondary</li> <li>Handgrip Strength (HGS)</li> <li>Patient Reported Outcomes (PRO)</li> </ul>		MD) k test •	<ul> <li>Low mobility measured by Short Performance Physical Battery (SPPB) ≤7</li> <li>Low Handgrip Strength (HGS &lt; 20 and &lt;35 kg in female and male)</li> </ul>		
Product	2023		2024	202	5 2026		
350 mg b.i.d of Sarconeos (BIO101)			SARA Phase 3		Filing for Marketing Authorization		





## Introduction to MYODA study





## MYODA: Treatment Overview for Duchenne Muscular Dystrophy (DMD)



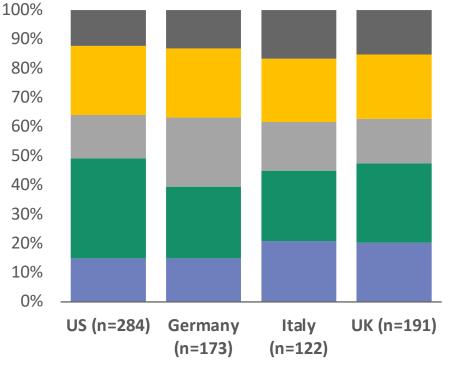
Rare, genetic neuromuscular disease in male children characterized by accelerated degeneration of muscles, responsible for loss of mobility, respiratory failure and cardiomyopathy, leading to premature death.

No known cure and limited treatment options, including corticosteroids and targeted therapies (exon-skipping in U.S. & stop codon in EU) that treat approximately 13% of DMD patients with specific genetic mutations.



We received **orphan drug designation (ODD)** in 2018 from the FDA and EMA for Sarconeos (BIO101) in DMD.

#### **Proportion of ambulatory class in DMD<sup>1</sup>**



Ventilation support
 Early nonambulatory (age 12–15)
 Early ambulatory (age 5–7)

Late nonambulatory (age 16 or older)
 Late ambulatory (age 8–11)



## MYODA: Overview of Clinical Trial Aimed to Start end of 2022/beginning of 2023\*



Design	Endpoints	Patient Population
<ul> <li>A 3-part, Randomized, Double-Blind, multicenters, Adaptive Seamless Phase 1-3 Study</li> <li>Evaluate the Safety, Efficacy, Pharmacokinetics, and Pharmacodynamics of Sarconeos (BIO101) in Non-Ambulatory DMD Patients with Respiratory Deterioration.</li> <li>Pedriatric oral formulation (powder sachet) of Sarconeos (BIO101)</li> </ul>	<ul> <li>Primary: change from baseline on Peak Expiratory Flow (PEF)</li> <li>Secondary: The Forced Vital Capacity (FVC), Performance of Upper Limbs (PUL) scale, Grip strength (MyoGrip)</li> <li>Part 1 (N=18): Safety, tolerability &amp; PK - 7 days of dosing of escalating dose</li> <li>Part 2 (N=48): Safety and efficacy on respiratory function (PEF) after dosing for 52 weeks</li> <li>Part 3 (N= up to 200): Safety and efficacy - Confirmatory part</li> </ul>	<ul> <li>Age: ≥12 years old</li> <li>Non-ambulatory DMD patients</li> <li>Patients with respiratory failure not yet requiring mechanical ventilation</li> </ul>
Product 2020	2021	2022 2023

	Product	2020	2021	2022	2023	
Sarconeos (BIO101)	Sarconoos (PIO101)	ODD in the USA and in Euro	MYODA			
	Salcolleos (BIO101)	FDA IND in the USA and CT	A in Belgium in 2020		Phase 1-2-3	

1.Independent Data Safety Monitoring Board

\*Study should start end of 2022 or beginning of 2023, depending on the evolution of the pandemic



## Key milestones in the development of Sarconeos (BIO101)

Achieved over the last 12 months

- Interim analysis for Part 2 (155 patients) in Q3 2021
- **COVA** Early Access Program (EAP) authorization in Brazil in February 2022
  - Early termination of patient enrolment in April 2022

- Anticipated in the next 12 months
- Phase 2/3 study results expected in Q3 2022
- Application for conditional approval in Europe and the EUA in the US in 2023

- Positive topline study results in August 2021
- Full study results communicated during ICFSR in September 2021
- Regulatory agency meetings (FDA, EMA) in Q2/Q3 2022
- Start of Phase 3 study with 1st patient enrolled in H2 2022

- US and Belgian IND regulatory approvals in Q1 2020
- **MYODA**

•

**SARA** 

Clinical batch production in 2021

• Study to start end of 2022 / beginning of 2023



## Appendix





## Scientific Advisory Board



#### Pr. Jean Mariani

- Professor of neuroscience and biology of aging and Director of Charles Foix Institute of Longevity at Sorbonne University
- Emeritus Professor (PU-PH) at the Sorbonne University's School of Medicine



#### Dr. Roger Fielding

- Professor of Medicine, Tufts University School of Medicine
- Director and Sr. Scientist Jean Mayer USDA Human Nutrition Research Center on Aging



#### **René Lafont**

- Co-Founder & Professor emeritus and former Dean of the life sciences department at Sorbonne University
- 185 scientific articles + 59 reviews and book chapters



#### Pr. Jose-Alain Sahel

- Chair of the department of ophthalmology at University of Pittsburgh School of Medicine and director of the UPMC eye center
- Founder and director of the Vision Institute in Paris and professor at the Sorbonne's medical school



#### Dr. Thomas Voit

- Professor, University College London
- Director of the Research Centre of the Great Ormond Street Hospital for Children



#### Dr. Ivana Kim

- Associate Professor Harvard Medical School, Massachusetts Eye and Ear
- Co-Director of the Harvard Medical School Department of Ophthalmology AMD Center of Excellence; Associate Scientist, Massachusetts Eye and Ear



### **Board of Directors**



#### Stanislas Veillet - Founder & CEO

- PhD in genetics, AgroParisTech
- 25+ years in biotech; Pharmacia-Monsanto, Danone Group



#### Pr. Jean Mariani

- Professor of neuroscience and biology of aging and Director of Charles Foix Institute of Longevity at Sorbonne University
- Emeritus Professor (PU-PH) at the Sorbonne University's School of Medicine



#### Claude Allary

- Independant Director
- Co-founder of Bionest
- Strategic & Management Advisor
- 40 of experience in Life Sciences sectors (Sanofi, Arthur D. Little, Bionest, ...)



#### Nadine Coulm

- Independent Director
- 20 years of experience as CFO in charge of IR & Financing with Korian, FNAC, Darty Danone & Casino



#### **Dimitri Batsis**

- Independant Director
- Entrepreneur, Founder of Zeni Corporation, Drone Volt
- 20 years in the High-Tech sector





## THANK YOU

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