



Biophytis[®]
LIVE HEALTHIER LONGER



September 2021 | 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 Annual 2020 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.

Corporate Highlights

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** and improving functional outcomes for patients suffering from **age-related diseases**. Our **small molecules** are aimed at stimulating **biological resilience** and are developed through a drug discovery platform based on a **reverse pharmacology** approach.

Sarconeos (BIO101), our leading drug candidate, is a small molecule, administered orally, being developed as a 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 (MYODA) for the treatment of **Duchenne Muscular Dystrophy (DMD)**.



HQ location: Paris, France



Founded: 2006



Employees: 35



Euronext growth (ALBPS) : July 2015



Nasdaq (BPTS): February 2021



Market cap: €94M (September 09, 2021)



Cash: €18.8 M as of December 31, 2020



Key partner: Sorbonne University

Executive Team



Stanislas Veillet - Founder & CEO

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



Evelyne Nguyen- CFO

- 30+ years of experience in Corporate Finance for International Pharma & Biotech companies (BMS, LFB, Nicox SA, ANMPartners)
- Expertise in cross-borders transactions between Europe, US and Asia



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)
- 17 years experience in Pharma R&D: Sanofi & Pierre Fabre



Rob van Maanen- CMO

- MD from the University of Utrecht-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)

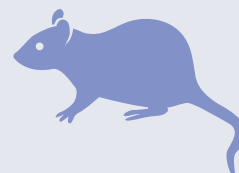
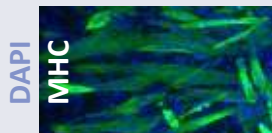
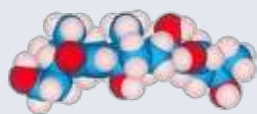
Drug Discovery for Age-Related Diseases

Reverse pharmacology from plant natural molecule stimulating biological resilience to drug candidates

Build a proprietary collection of natural molecules & analogs from medicinal plant, produced under biotic or abiotic stress

Screen in cellular models of age related diseases and identification of targets & pathways

Selection of best drug candidates based on animal models of aging or genetic diseases













- **Sarconeos (BIO 101)**
treatment for neuromuscular and respiratory diseases
- **Macuneos (BIO201)**
treatment for eye diseases

- Small molecules: natural and/or NCE (new chemical entity)
- New key target against aging
- Preclinical proof-of-concept & safety
- IP on use, process and composition of matter
- Second generation drug candidates (BIO103, BIO203)



Our Clinical Pipeline

Candidate	Indication	Program	Preclinical	Phase 1	Phase 2	Phase 3
Sarconeos (BIO101)	Covid-19	COVA				
	Sarcopenia	SARA				
	DMD	MyODA				
Macuneos (BIO201)	Dry AMD	MACA				
	Stargardt					

2020-2021: Transformational Years for Biophytis

Clinical Achievements

Launch of the new COVA study – COVID-19

- Part 1 first interim analysis achieved (50 patients) with positive DMC review in Q1 2021
- Part 2 steadily progressing with 155 patients recruited in May
- The second interim analysis is expected in Q3 2021: safety and efficacy (futility/sample size reassessment using promising zone analysis)
- Top line results for the full study are expected in Q4 2021

Completion of SARA-INT study – Sarcopenia

- Phase 2: positive top-line results on primary end-point (400-meter walk test) published in August 2021
- Phase 3: Expected to start in 2022

IND Approval to start MYODA - DMD

- US IND & Belgium authorization obtained
- Study to start in 2021 depending on the evolution of the pandemic



Financial achievements

- \$20.1 million (€16.6 M) raise from Nasdaq IPO in Q1 2021
- €23.4 million raise in private placements on Euronext in 2020
- €18.8 million in cash and cash equivalents as of December 31, 2020

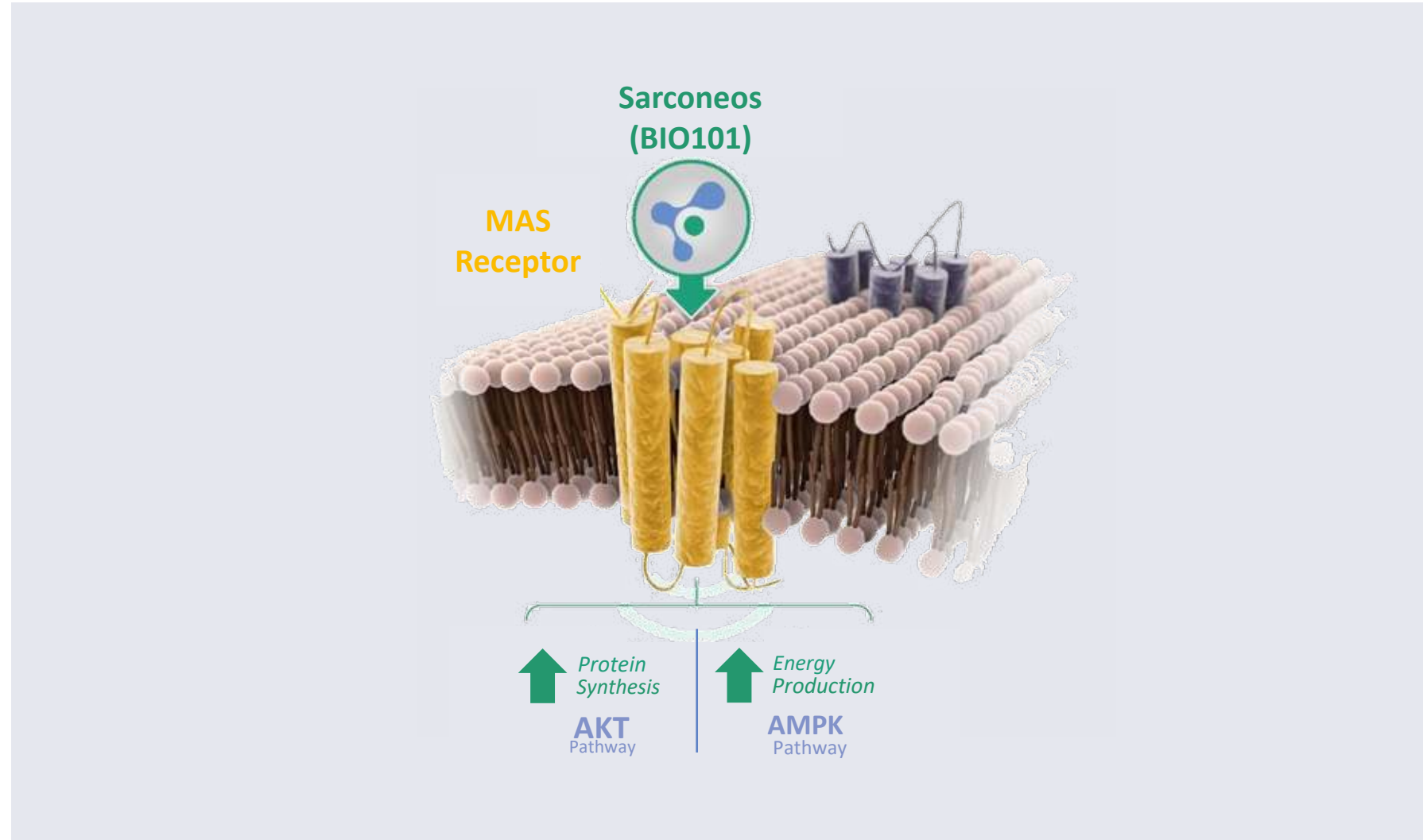


Sarconeos (BIO101): Mechanism of Action

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

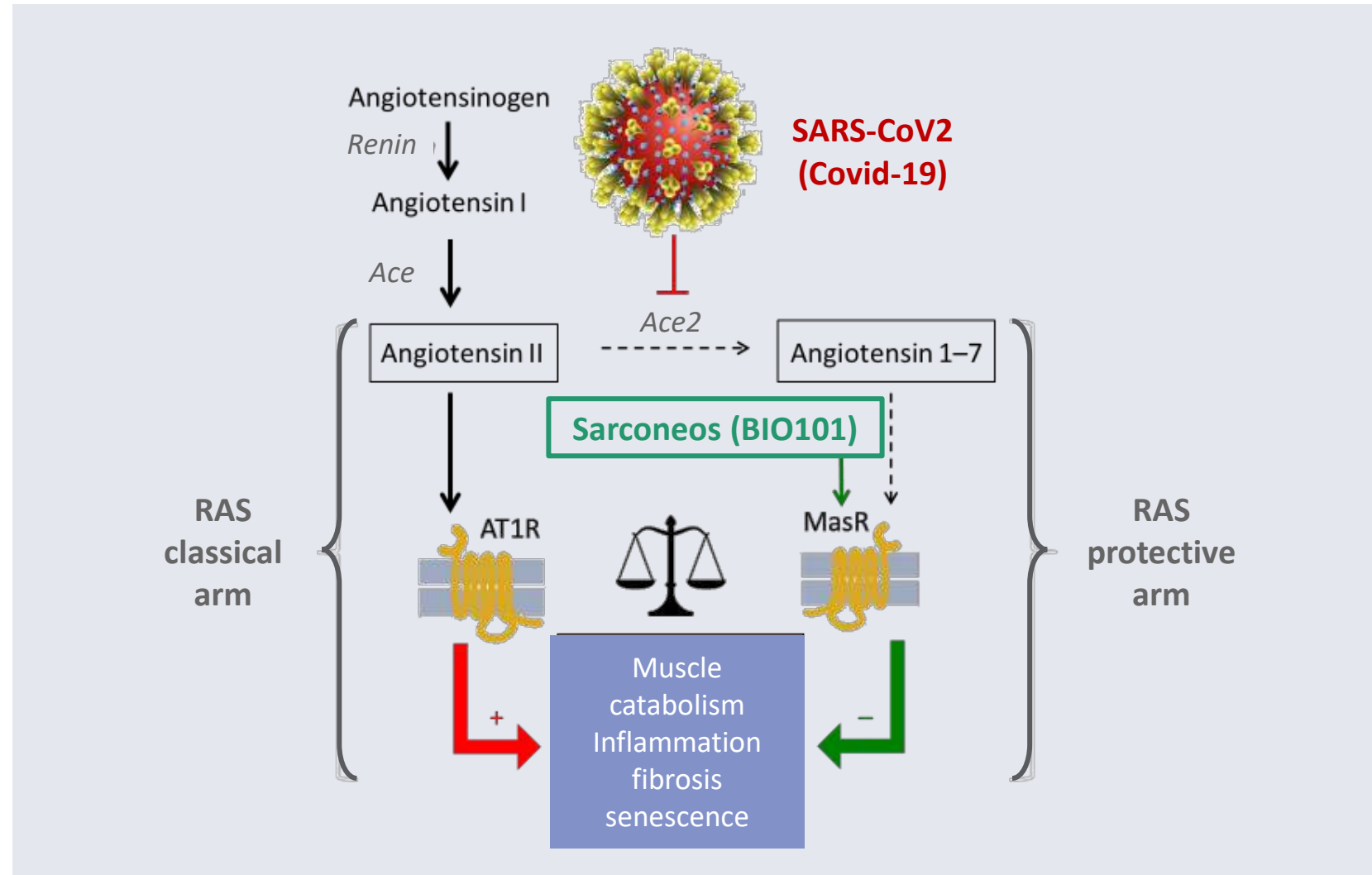
- **PI3K/AKT/mTOR:** Increases protein synthesis
- **AMPK/ACC:** Stimulates energy production

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



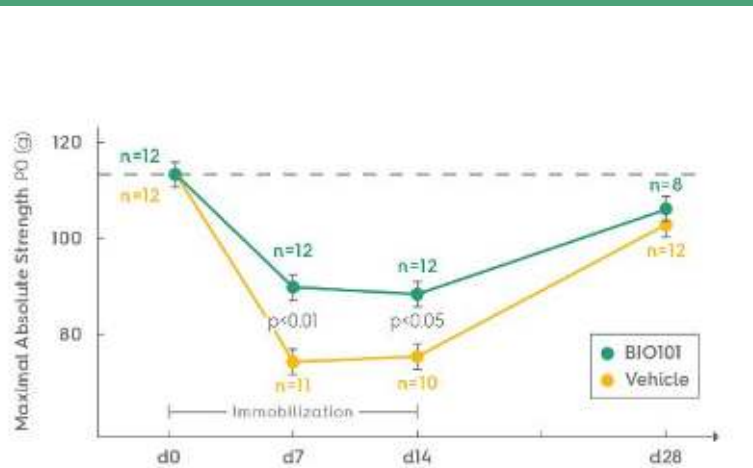
Sarconeos (BIO101): Potential Treatment for COVID-19 Patients

- 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



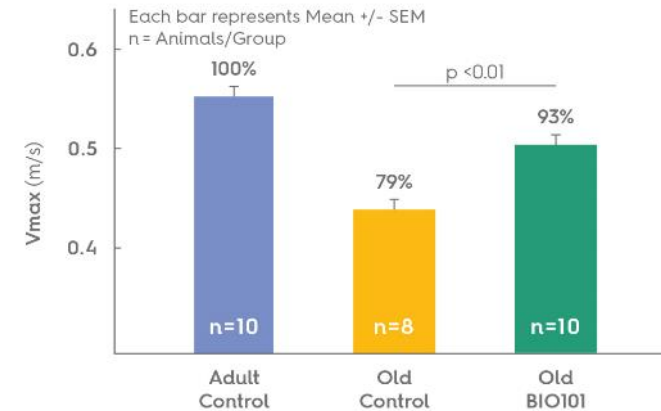
Sarconeos (BIO101): Improves Muscle Strength and Mobility in Animal Models

Preservation of muscle strength in immobilized mice



Administration of 50 mg/kg/day of Sarconeos (BIO101) demonstrated a preservation of muscle strength while immobilized (d0-d14) compared to vehicle control in hind limb-immobilized mice

Beneficial effect on mobility in aged mice fed with high fat diet¹



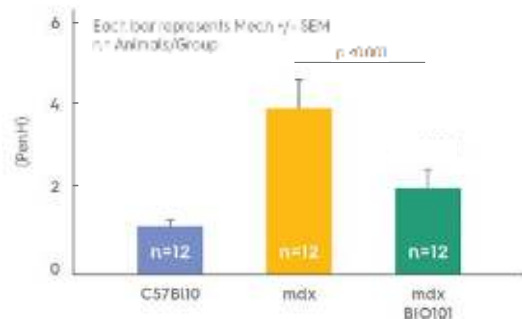
Administration of 50 mg/kg/day of Sarconeos (BIO101) demonstrated a statistically significant (p < 0.01) improvement in maximum running velocity (Vmax) compared to "old" control mice, compensating almost completely for the loss of mobility due to aging

1. Results were presented in a poster at the SCWD conference in December 2016 in Berlin, Germany.

Sarconeos (BIO101): Pre-Clinical Animal Models Showcase Respiratory Function Improvements

Pre-clinical DMD model

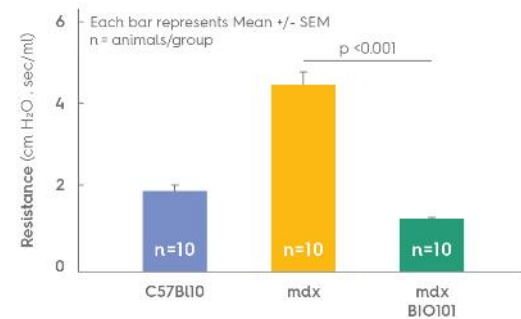
Improves respiratory function (Plethysmography)



C57BL10-mdx mice treated with 50 mg/kg/day of Sarconeos (BIO101) over 8 weeks showed an **improvement in airway responsiveness (PenH)** as compared to untreated control C57BL10-*mdx* mice

Pre-clinical DMD model

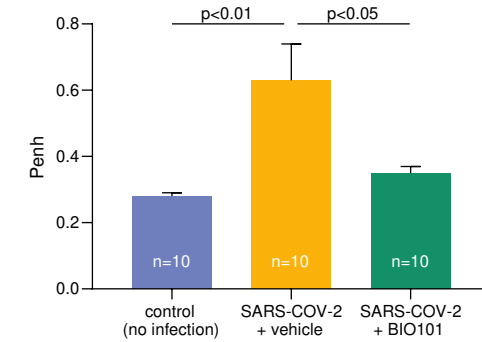
Improves lungs mechanical properties (Flexivent)



Chronic (8 week) daily administration of 50 mg/kg/day of Sarconeos (BIO101) **statistically significantly (p<0.001) improved lungs mechanical properties** measured by airway resistance

Pre-clinical COVID-19 model

Preserves respiratory function (Plethysmography)



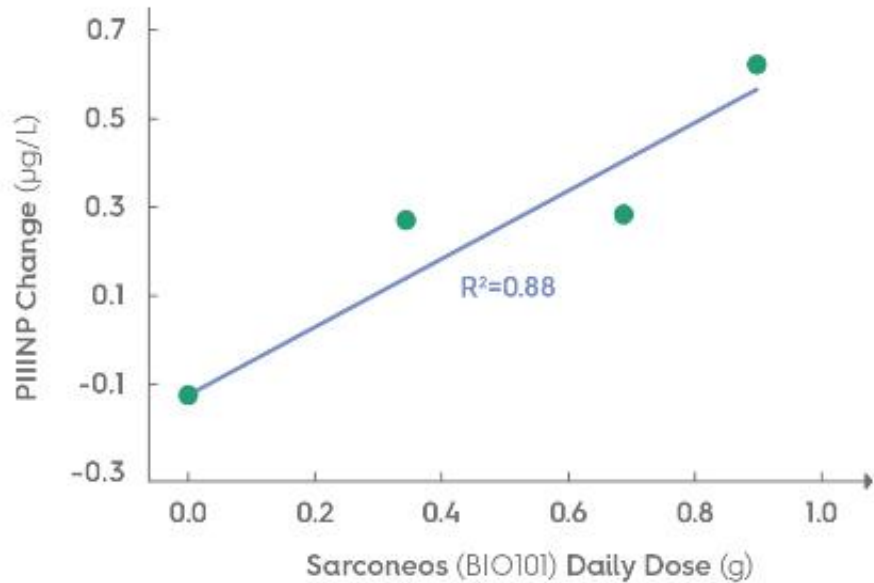
SARS-CoV-2 infected Golden Syrian Hamster treated with 10 mg/kg/day (ip) of Sarconeos (BIO101) during 7 days showed an **improvement in airway responsiveness (PenH)** as compared to untreated control Hamsters


Results were presented in October 2019 during the WMS conference in Copenhagen with posters, and in March 2019 at the annual international congress of Myology in Bordeaux, France

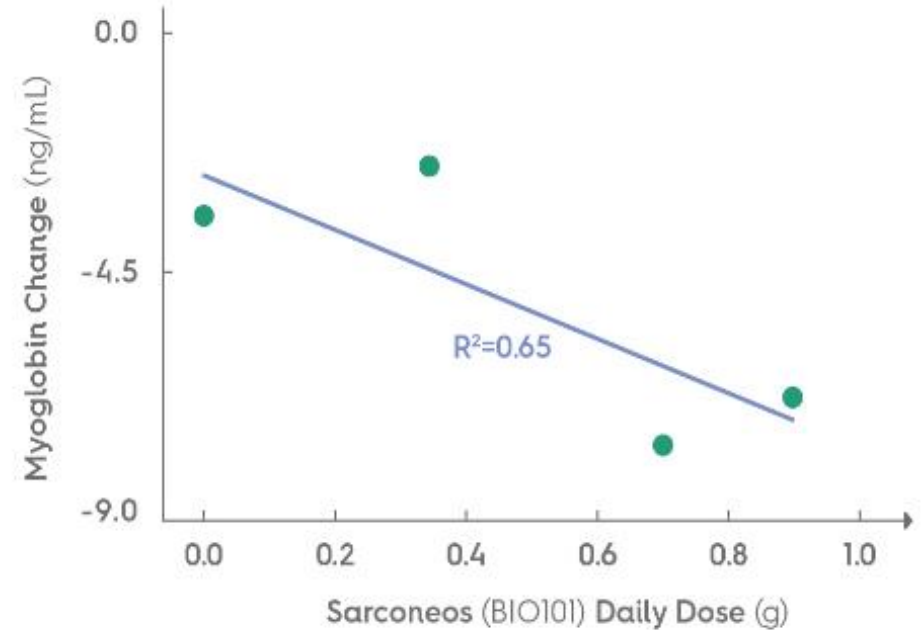
Results were presented in July 2021 during the ECCMID conference (online)

Sarconeos (BIO101): Phase 1 Study (SARA-PK) Results

ELDERLY HEALTHY VOLUNTEERS




Sarconeos (BIO101) showed a dose dependent effect on biomarkers of muscle growth and repair (PIIINP) and a dose dependent negative effect on muscle wasting (myoglobin)



 Single and multiple ascending doses tested in 54 healthy adult and elderly (over 65 years) volunteers

 **Safety profile:** No Severe Adverse Events

 **Two active doses** (175 & 350 mg b.i.d.) have been selected for the Phase 2 study

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



Patients **aged 45 and above**, with proven COVID-19, and severe respiratory symptoms:

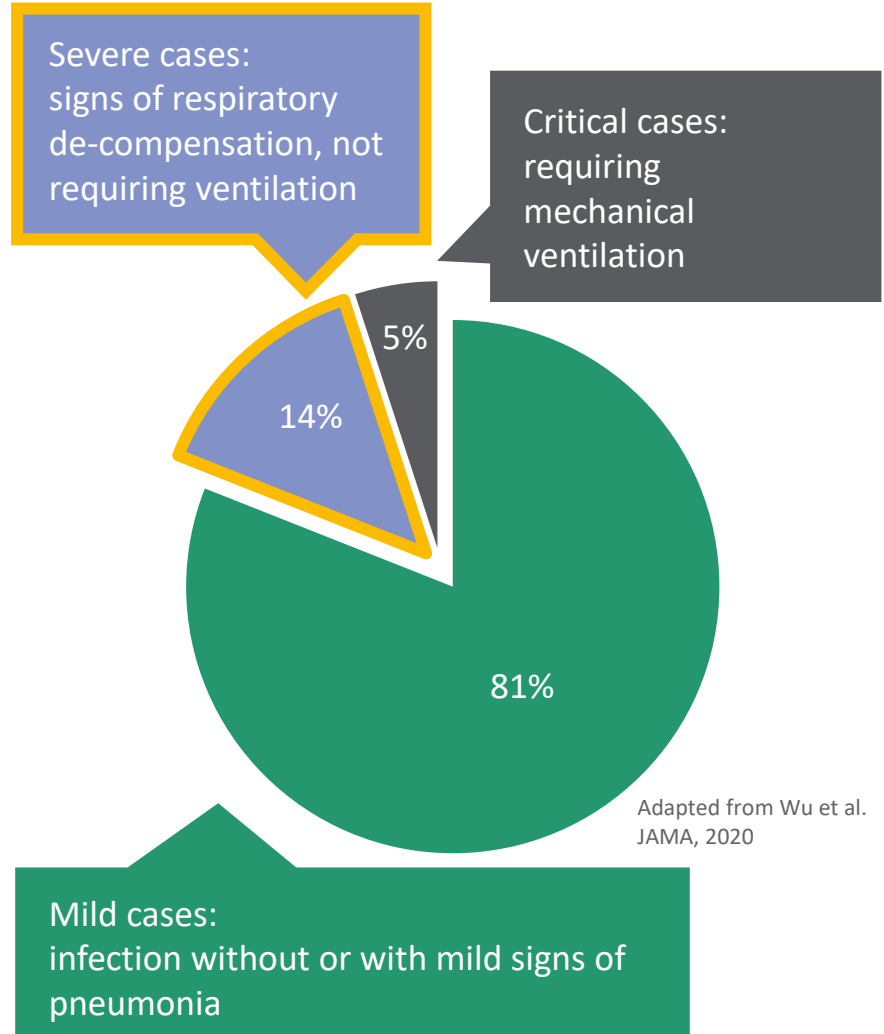
- With evidence of respiratory decompensation ≤ 7 days before start of study medication, meeting one of the following:
 - Tachypnea: ≥ 25 breaths per minute
 - Arterial oxygen saturation $\leq 92\%$



Allowed medications:

- Antiviral agents such as remdesivir, bamlanivimab
- Anti-inflammatory agents such as dexamethasone

Targeted populations



Adapted from Wu et al. JAMA, 2020

COVA Study: Phase 3 Trial Overview

Design	Endpoints	Patient Population
<ul style="list-style-type: none"> A Phase 2-3 seamless study design Global, multi-center, double-blind, placebo-controlled group sequential (2 parts), adaptive design International study including 34 clinical centers in US, Brazil, France & Belgium iDMC is monitoring the safety and efficacy of the treatment by running two interim analyses 	<ul style="list-style-type: none"> Proportion of participants with ‘negative’ events: all-cause mortality & respiratory failure (requiring mechanical ventilation or ECMO) Part 1 (N=50): First interim analysis (IA1), Q1 21, based on safety; Positive recommendation from DMC to progress into part 2 Part 2 (N=155): 2nd interim analysis (IA2), Q3 21, based on safety and efficacy (futility, sample size reassessment using promising zone analysis) Part 2 (N=310): Final analysis, Q4 21, confirmation of the effect of Sarconeos (BIO101) in preventing further respiratory deterioration 	<ul style="list-style-type: none"> Age: 45 years old or over Hospitalized for severe respiratory symptoms and with proven Covid-19 infection Patients with respiratory failure not yet requiring mechanical ventilation Oxygen saturation less than 92%



*Independent Data Monitoring Committee

SARA-INT: 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




Sarconeos (BIO101):

- ✓ First drug candidate to complete Phase 2 with clinically meaningful outcome on mobility
- ✓ Myostatin inhibitors halted for lack of effectiveness in neuromuscular diseases

- 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 2050¹

¹United Nations' World Population Prospects: 2017 Revision

SARA-INT: Phase 2 Trial Overview

Design	Endpoints		Patient Population
<ul style="list-style-type: none"> Global, double-blind, randomized, placebo-controlled trial: NCT03452488 Assess safety and efficacy of two doses of Sarconeos (BIO101) administered orally with a meal over 26 weeks, as compared to placebo Treatment effect on improvement of physical function and on decrease of risk of mobility disability 	<p>Primary</p> <ul style="list-style-type: none"> 400-meter walk test (400MWT) - 0.05 m/s is considered the minimal meaningful change <p>Secondary</p> <ul style="list-style-type: none"> Handgrip muscle strength Patient reported outcomes (PRO) 		<ul style="list-style-type: none"> Age: 65 years old or over Low mobility measured by Short Performance Physical Battery (SPPB) ≤ 8 out of 12 DEXA body composition as measured by ALM/BMI (appendicular lean mass / body mass index) Able to exercise for 30 minutes per day 5 days per week
Product	2019	2020	2021
175 & 350 mg b.i.d of Sarconeos (BIO101)	 <p>SARA-INT Phase 2</p>		

SARA-INT: Phase 2 Top Line Results

- **Sarconeos (BIO101) at the highest dose (350 mg bid) showed a clinically meaningful improvement in the 400-meter walk test (400MWT), the primary endpoint of the study***
- **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**

Save the date

A full report of the results, including analysis of other secondary end-points and biomarkers and analysis in sub-populations, will be presented during a dedicated seminar at the **International Congress on Frailty and Sarcopenia Research (ICFSR)** to be held virtually from September 29 to October 02, 2021



KOL feedback

“The SARA-INT results are encouraging based on the 400MWT gait speed improvement at certain doses, a critical assessment for seniors at risk of mobility disability.”



Roger A. Fielding, PhD, Head of the Nutrition, Exercise Physiology & Sarcopenia team at Tufts University in Boston and Principal Investigator of SARA-INT trial

*Sarconeos (BIO101) at the highest dose of 350 mg bid showed a clinically meaningful improvement compared to placebo in gait speed, as measured in the 400MWT after 6 months of treatment, of 0.09 m/s in the FAS population and 0.10 m/s in the PP population (treatment effect significant, $p < 0.01$). The effect of Sarconeos (BIO101) at 350 mg bid is close to the Minimal Clinically Important Difference (MCID) in sarcopenia (0.10 m/s), associated with a reduction in mobility disability and mortality in elderly

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.

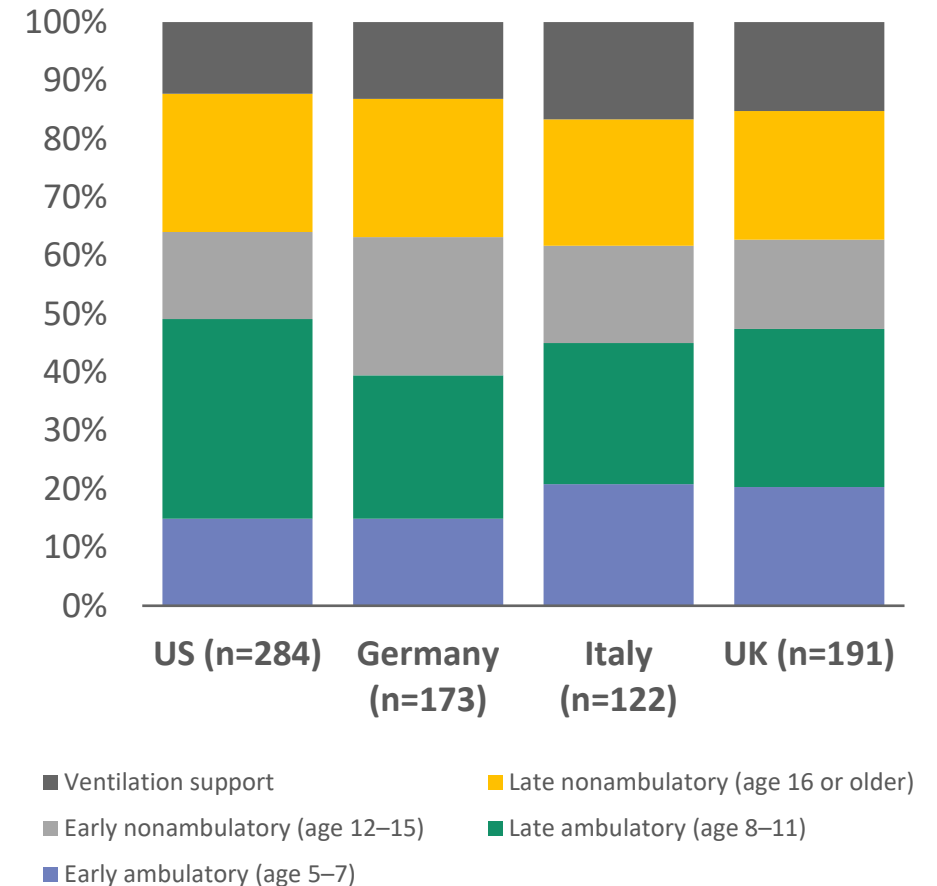


No known cure and limited treatment options, including corticosteroids and targeted therapies (exon-skipping in U.S. & stop codon in EU) that treat approximately 13% of DMD patients with specific genetic mutations.



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

Proportion of ambulatory class in DMD¹



MYODA: Overview of Clinical Trial Aimed to Start in H2 2021*

Design	Endpoints	Patient Population
<ul style="list-style-type: none"> Global, double-blind, randomized, placebo-controlled trial: NCT03452488 Assess safety and efficacy of two doses of Sarconeos (BIO101) administered orally with a meal over 26 weeks, as compared to placebo Treatment effect on improvement of physical function and on decrease of risk of mobility disability 	<ul style="list-style-type: none"> Part 1 (N=18): Safety, tolerability & PK (initial 7 days of dosing of escalating dose of Sarconeos BIO(101)) Part 2 (N=48): Efficacy of Sarconeos: Respiratory function after dosing for 52 weeks Part 3 (N= up to 200): Efficacy of Sarconeos BIO(101): Respiratory function after dosing for 52 weeks 	<ul style="list-style-type: none"> Age: ≥12 years old Non-ambulatory DMD patients Patients with respiratory failure not yet requiring mechanical ventilation

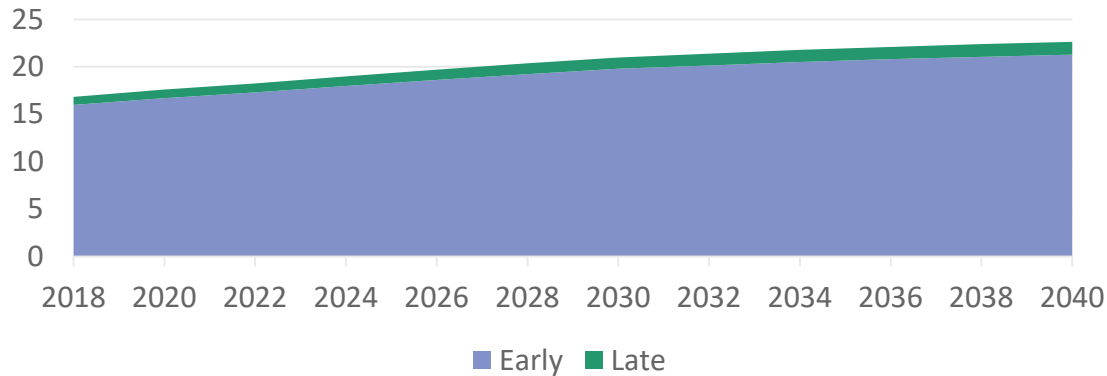
Product	2020	2021	2022	2023
Sarconeos (BIO101)	FDA IND and CTA in Belgium granted in 2020		MYODA Phase 1-2-3	

1. Independent Data Safety Monitoring Board

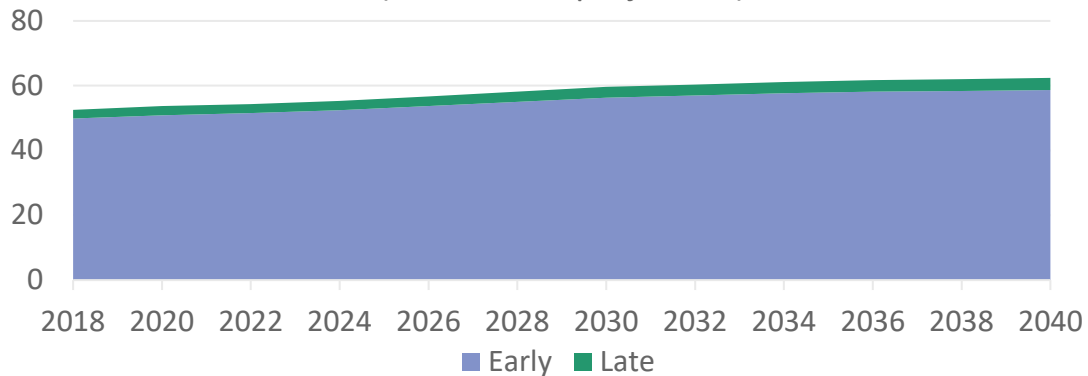
*Timing is subject to COVID-19- pandemic and availability of financial resources

MACA: Treatment Overview for Dry AMD

Projection of AMD prevalence in North America
(in M, mean projection)¹



Projection of AMD prevalence in Europe
(in M, mean projection)¹



- AMD is a common eye disorder among people 50+ that affects the central part of the retina, known as the macula
- Can impair functions such as reading, driving, and facial recognition, and has a major impact on QoL and the ability to live independently
- Multifactorial disease we believe is mainly caused by accumulation of A2E (a byproduct of the visual pigment cycle) that leads to retinal degeneration
- 85 – 90% of AMD patients have dry AMD in some form; either early, intermediate or late stage, known as geographic atrophy (GA)
- No approved treatments for any stage of dry AMD, including GA
- We are developing Macuneos to treat patients with intermediate dry AMD to prevent the development to advanced stages (wet AMD + GA), which lead to severe vision loss

1. Source: Wang *et al.*, Lancet Glob Health 2014; 2: e106–16. Supplemental Table 7: Projection of Number of People with Early, Late and Any AMD by Regions

MACA: Mechanism of Action

- We believe Macuneos potentially counteracts the phototoxic effects of A2E by selective non-canonical activation of the trans-repressive activity of PPAR α and PPAR β/δ in the retina
- Most other PPAR ligands mainly exhibit canonical activity and are associated with side effects



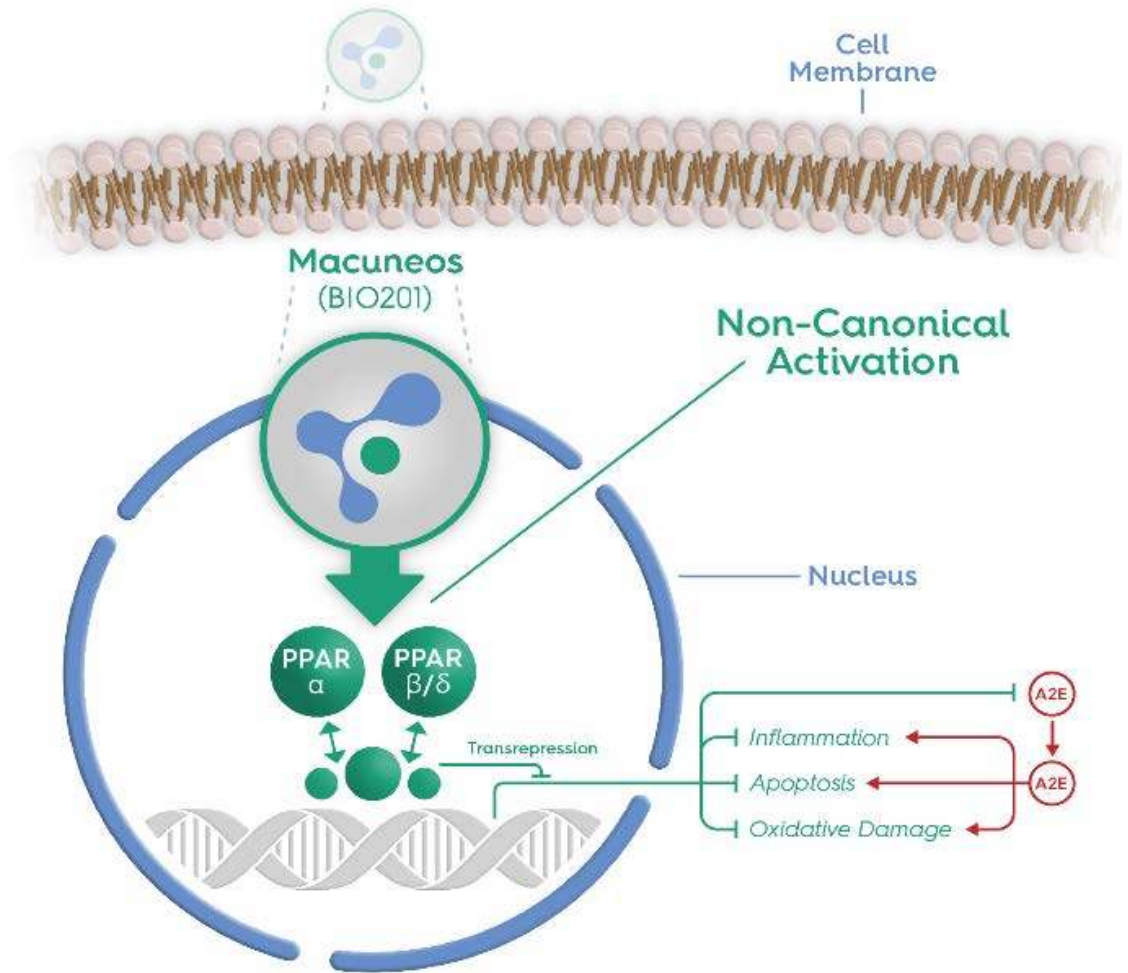
Anti-inflammatory activity (promotes the expression of anti-inflammatory genes)



Anti-oxidant activity (promotes the expression of anti-oxidant genes)

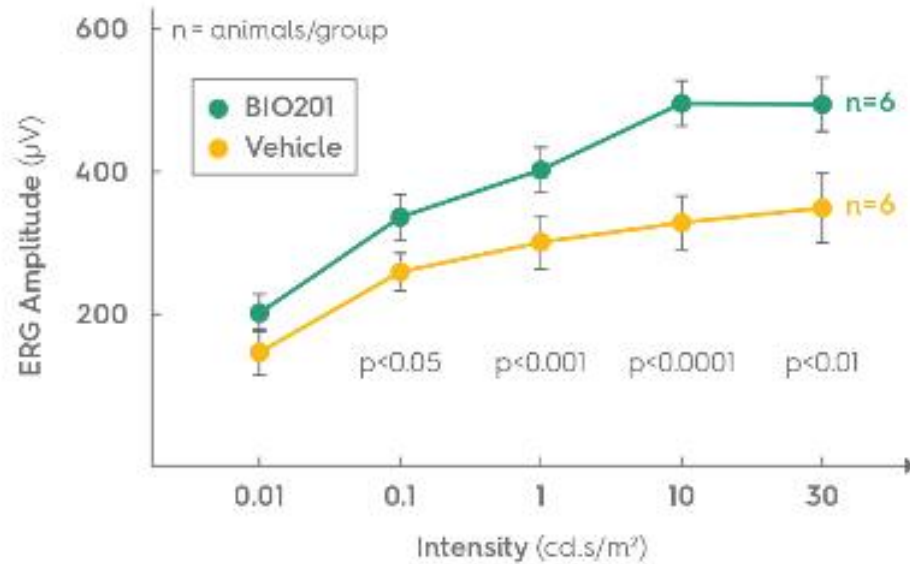


Anti-apoptotic activity (enables pathways that prevent cell death)



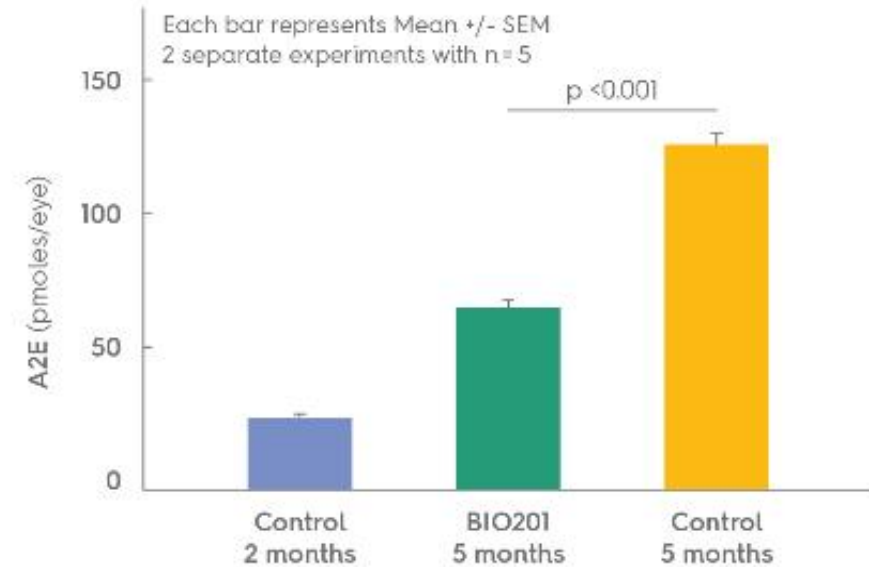
MACA: Protects the Retina of Dry AMD and Stargardt Disease in Animal Models

Preservation of visual function in mice



Chronic oral administration of Macuneos for 3 and 6 months **increases ERG amplitude** in ABCA4^{-/-} RDH8^{-/-} mice

Reduced A2E accumulation in mice



Chronic oral administration of Macuneos decreased A2E accumulation by **approximately 45%** in Abca4^{-/-} Rdh8^{-/-} mice as compared to vehicle control mice

Results were presented in May 2016 at the ARVO conference in Seattle, WA in a poster presentation and published in PLoS ONE (Fontaine *et al.*; 2016).

Key Milestones

<input checked="" type="checkbox"/>	COVA	Recruiting in Belgium, Brazil, France and US
<input checked="" type="checkbox"/>	COVA	Completion of Part 1 patient enrollment (50) in January 2021
<input checked="" type="checkbox"/>	COVA	Interim analysis of Part 1 (50 patients) in Q1 2021
<input checked="" type="checkbox"/>	COVA	Approvals to start Part 2 in Q1 2021
<input type="checkbox"/>	COVA	Interim analysis for Part 2 (155 patients) expected in Q3 2021
<input type="checkbox"/>	COVA	Final study results (Part 1 and Part 2) expected in Q4 2021
<input checked="" type="checkbox"/>	SARA-INT	Patient enrollment in the USA and Belgium completed in March 2020
<input checked="" type="checkbox"/>	SARA-INT	Last patient out (LPO) completed in Dec 2020
<input checked="" type="checkbox"/>	SARA-INT	Positive topline study results in August 2021
<input type="checkbox"/>	SARA-INT	Full study results to be communicated at ICFSR in September 2021

**€ 18.8M Consolidated cash as of
December 31, 2020**

VS

12M€ vs December 31, 2019



**Support from the Financial
Community**

- Kepler Chevreux: Pierre Alexandre Désir
- Invest Securities: Jamina El Bougrini
- HC Wainwright: Yi Chen, Ph.D., CFA





** Timing is subject to COVID-19- pandemic and availability of financial resources*

The COVA study

- Final study results (Part 1 and Part 2) expected in Q4 2021.
- Assuming positive data, subject to any COVID-19 related delays, the Company anticipates applying for EUA in the US and conditional market approvals in EU by end of 2021.
- Assuming authorizations for the above applications, marketing preparation could start in 2022.

The SARA -INT study

- Positive top-line results of the Phase 2 announced in August 2021.
- Preparation for Phase 3 is on going , with active BD activities for partnering underway.

The MYODA study

- Subject to any COVID-19 related delays, the Company intends to start the Phase 1-2-3 MYODA trial in 2021.

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



Dr. Thomas Voit

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



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. 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, ...)



Dimitri Batsis

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



Nadine Coulm

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



LIVE HEALTHIER LONGER

THANK YOU

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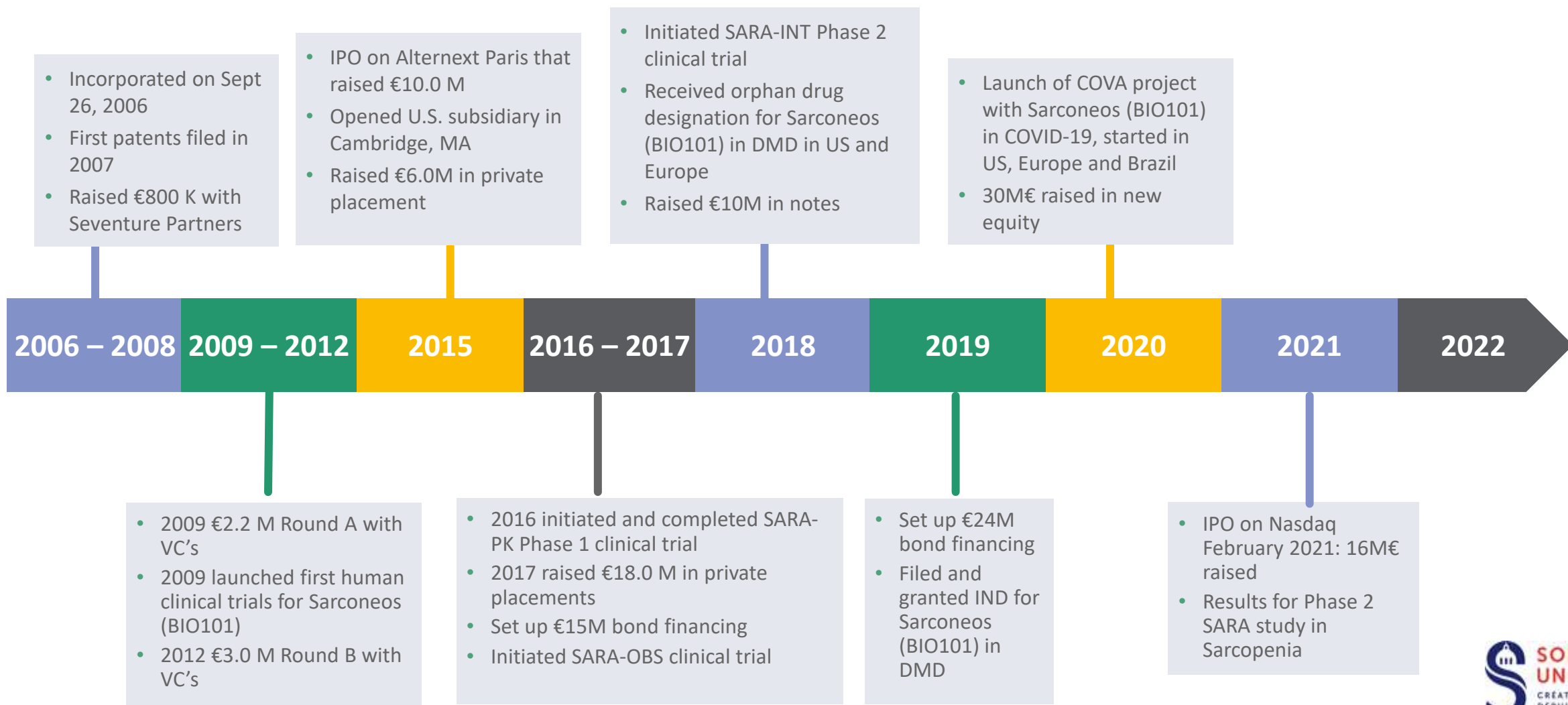


Appendix



From a Sorbonne University spin-off to a successful clinical-stage Biotechnology Company

100M€ Raised Since Inception



Intellectual Property Portfolio: Neuromuscular & Respiratory Diseases

- We hold exclusive commercial rights through licenses of each of our drug candidates.
- IP is jointly owned with Sorbonne University & sometimes with other academic research institutions¹.
- Patent portfolio covers 10 patent families, including a total of **24 co-owned issued patents** and a total of **26 co-owned patent applications**.
- Issued patents: 5 European, 2 U.S., and 17 in ROW, including **China, Japan**.
- Pending applications: 2 European, 5 U.S., and 19 in ROW, including **China, Japan, South Korea**



24 co-owned issued patents

26 co-owned patent applications

Neuromuscular and respiratory diseases

10 families of patents covering production process, second generation compounds and various applications such as sarcopenia, myopathies (DMD), disuse atrophy, spinal muscular atrophy, respiratory function and COVID-19



Intellectual Property Portfolio: Retinal Diseases

- We hold exclusive commercial rights through licenses of each of our drug candidates.
- IP is jointly owned with Sorbonne University & sometimes with other academic research institutions.
- Patent portfolio covers 5 patent families, including a total of **16 co-owned issued patents** and a total of **10 co-owned patent applications**.
- Issued patents: 4 European, 3 U.S., and 9 in ROW, including **China, Japan**.
- Pending applications: 10 in ROW, including **China, Japan, South Korea**.



16 co-owned issued patents

10 co-owned patent applications

Retinal diseases

5 families of patents covering 2 classes of compounds and their applications for dry age-related macular degeneration (AMD) and Stargardt disease

