Biophytis®

LIVE HEALTHIER LONGER

January 2024 I 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 Ruvembri 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.

Today's Corporate Highlights

- HQ location: Paris, France
- Founded: 2006
- Employees: 25
- Euronext growth (ALBPS) : July 2015
- Nasdaq (BPTS): February 2021
- 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

Ruvembri - in regulatory and clinical phases

- Our leading drug candidate is administered orally:
  - for the treatment of severe respiratory events related to **COVID-19** following **positive results in Phase 2/3 clinical study (COVA)**
  - for the treatment of reduced mobility in elderly patients with **sarcopenia**, with **promising results** in a **Phase 2 clinical study (SARA)** conducted in the United States and Europe
- A pediatric formulation of Ruvembri 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

Edouard Bieth – CBO

- Over 18 years' experience in the pharmaceutical industry (Tillotts Pharma, AstraZeneca, Servier, Menarini)
- Master's degree in Biology and Pharmacology of aging, Master's degree in Intelligence Marketing, Training in LeaderShip and Finance

Pierre Dilda – CSO

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

Chiara Baccelli – Director of Pharma Operations & Quality Assurance

- PharmD from Pisa University, PhD in Pharma and Biomedical Sciences from the CU of Leuven and MBA in Innovation and Strategy from IRIIG in Lyon
- 20+ years' experience in the development and production of pharma products, at UCB, Delpharm and Bioprojet

Nicolas Fellmann – CFO

- Over 25 years' experience in finance (Onxeo, BioAlliance Pharma, Pfizer) after several years as an auditor at E&Y
- Expertise in fund raising, mergers & acquisitions and managing strategic partnerships in Europe, the US and Asia

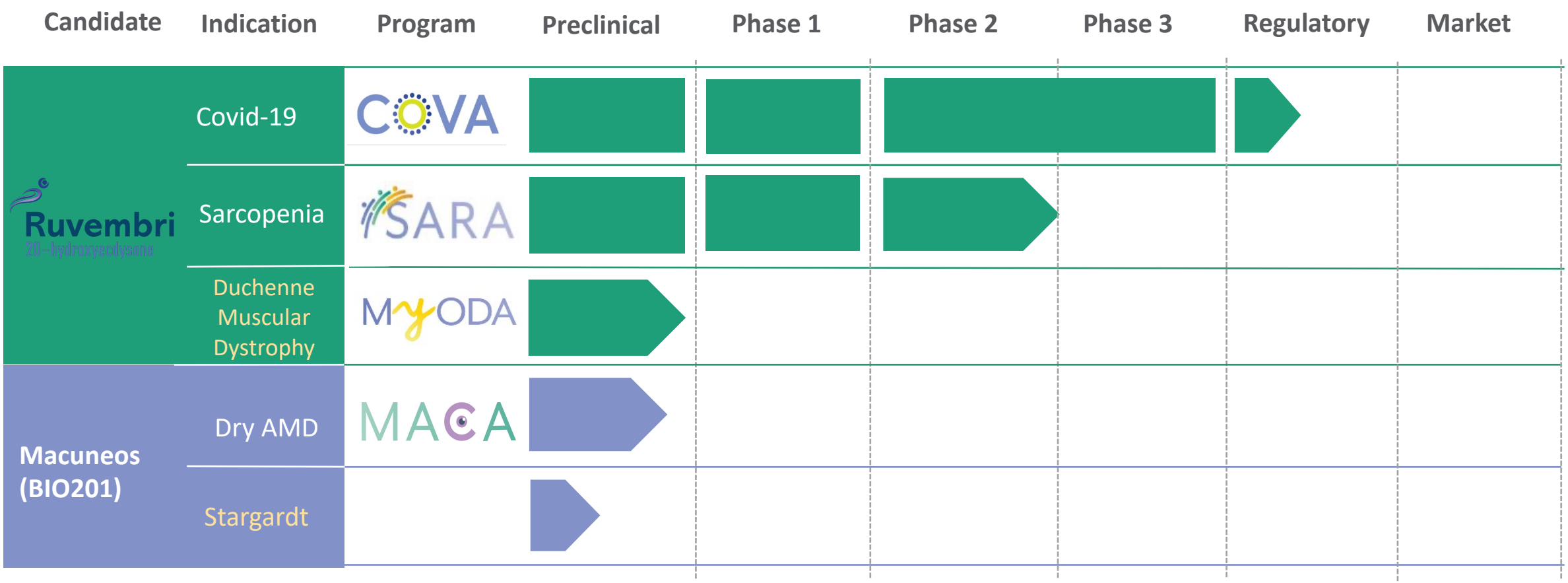
Waly Dioh – COO

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

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



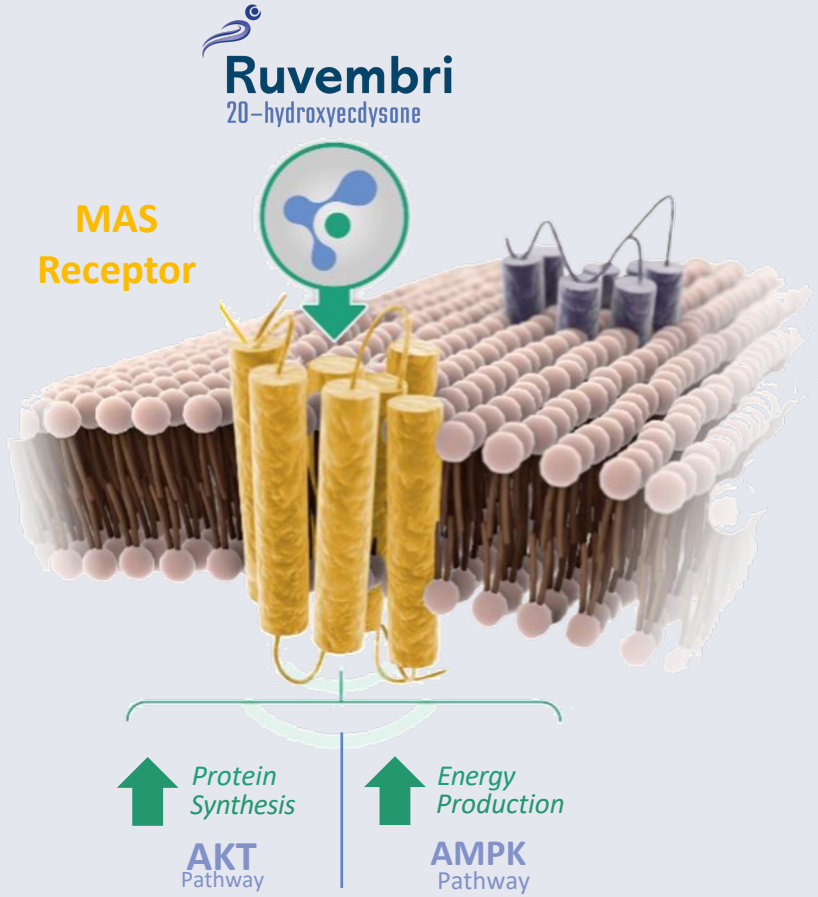
XXX : orphan diseases

Ruvembri: Mechanism of Action

Ruvembri triggers two important MAS receptor downstream signaling-pathways in myocytes:

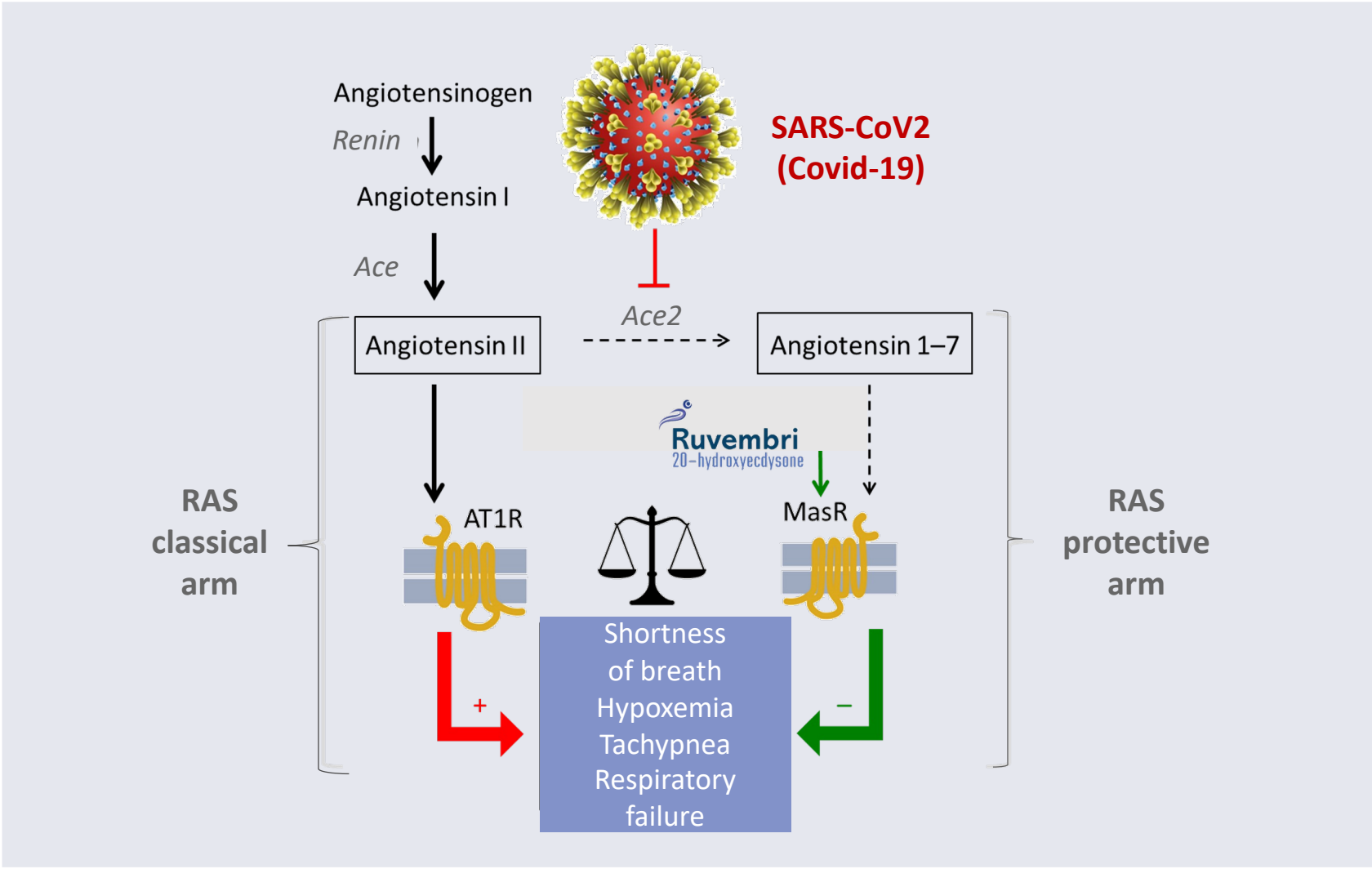
- **PI3K/AKT/mTOR:** Increases **protein synthesis**
- **AMPK/ACC:** Stimulates **energy production**

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



Ruvembri stimulates respiratory function by activating the MAS receptor, a key component in the renin-angiotensin system, the target of SARS-CoV2

- Ruvembri activates the MAS receptor, a key component of the protective arm of the Renin-Angiotensin System (RAS), involved in the balance of the cardiorespiratory function
- 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
- Ruvembri by reactivating the RAS protective arm, has the potential to restimulate respiratory capacity in COVID-19 patients



COVA

Ruvembri

20-hydroxyecdysone

in COVID-19

Biophytis

COVA Study: Targeting COVID-19 Hospitalized Patients with severe COVID-19

45+

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

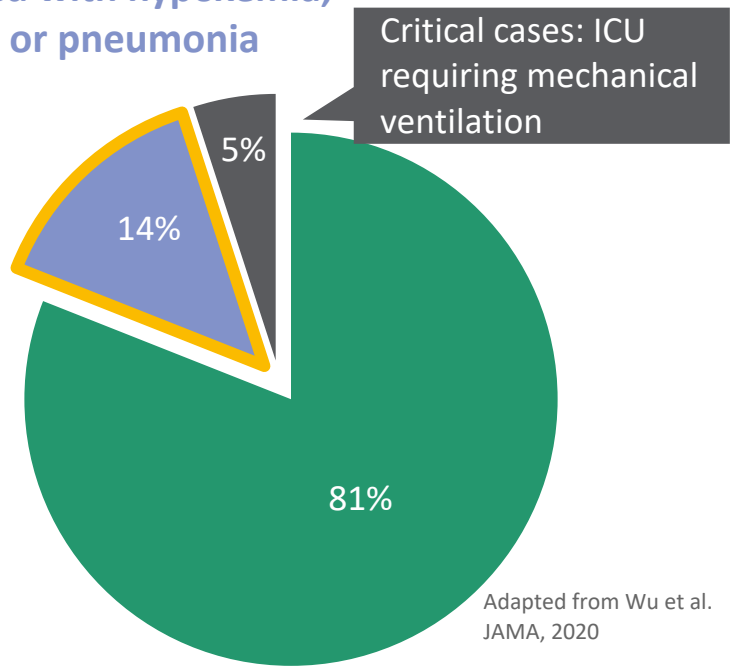
- With evidence of respiratory decompensation ≤7 days before start of study medication, meeting one of the following:
  - Tachypnea: ≥ 25 breaths per minute
  - Arterial oxygen saturation 92% or less

Hospitalized patients with respiratory failure estimated to 15-18% of hospitalized patients: ca **500 new patients per day or 180,000 patients/year in the USA** (*CDC data, October 27, 2022*)

Allowed medications:

- Antiviral agents such as remdesivir, paxlovid
- Anti-inflammatory agents such as dexamethasone, tocilizumab

Severe cases:
hospitalized with hypoxemia, tachypnea or pneumonia



Adapted from Wu et al. JAMA, 2020

Mild cases:
infection without or with mild signs of pneumonia

International Phase 2-3 COVA clinical trial to evaluate the safety and efficacy of Ruvembri in the treatment of severe forms of COVID-19

Design

- Administration of 350 mg b.i.d of Ruvembri
- Global, multi-center, double-blind, placebo-controlled group Phase 2-3 sequential (2 parts) adaptive design
- International study including 37 clinical centers in US, Brazil, France & Belgium

Endpoints & Study Follow-Up

- Primary endpoint: proportion of patients with respiratory failure or early death within 28 days
- Secondary endpoints: mortality at 28 and 90 days; discharge at 28 days
- End of study: Q2 2022 (N=237) after early study termination

Patient Population

- Age: 45 years old or over
- Hospitalized for severe respiratory symptoms and with proven Covid-19 infection
- Patients with hypoxemia (<92%) or tachypnea (> 25 breaths/min)
- All authorized Covid-19 drugs (anti-viral or anti-inflammatory)

EClinicalMedicine THE LANCET

ARTICLE IN PRESS

Articles

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[g]Service de Pneumologie, Groupe Hospitalier Pitié Salpêtrière, Sorbonne Université 47-83 Boulevard de l'Hôpital, Paris Cedex 13, 75651, France

eClinicalMedicine 2023;■: 102383
Published Online XXX
https://doi.org/10.1016/j.eclinm.2023.102383

Summary

Background SARS-CoV-2 binding to ACE2 is potentially associated with severe pneumonia due to COVID-19. The aim of the study was to test whether Mas-receptor activation by 20-hydroxyecdysone (BIO101) could restore the Renin-Angiotensin System equilibrium and limit the frequency of respiratory failure and mortality in adults hospitalized with severe COVID-19.

Methods Double-blind, randomized, placebo-controlled phase 2/3 trial. Randomization: 1:1 oral BIO101 (350 mg BID) or placebo, up to 28 days or until an endpoint was reached. Primary endpoint: mortality or respiratory failure requiring high-flow oxygen, mechanical ventilation, or extra-corporeal membrane oxygenation. Key secondary endpoint: hospital discharge following recovery (ClinicalTrials.gov Number, NCT04472728).

Findings Due to low recruitment the planned sample size of 310 was not reached and 238 patients were randomized between August 26, 2020 and March 8, 2022. In the modified ITT population (233 patients; 126 BIO101 and 107 placebo), respiratory failure or early death by day 28 was 11.4% lower in the BIO101 (13.5%) than in the placebo (24.3%) group, (p = 0.0426). At day 28, proportions of patients discharged following recovery were 80.1%, and 70.9% in the BIO101 and placebo group respectively, (adjusted difference 11.0%, 95% CI [−0.4%, 22.4%], p = 0.0586). Hazard Ratio for time to death over 90 days: 0.554 (95% CI [0.285, 1.077]), a 44.6% mortality reduction in the BIO101 group (not statistically significant). Treatment emergent adverse events of respiratory failure were more frequent in the placebo group.

Interpretation BIO101 significantly reduced the risk of death or respiratory failure supporting its use in adults hospitalized with severe respiratory symptoms due to COVID-19.

Funding Biophytis.

Keywords: SARS-CoV-2; COVID-19; Renin-angiotensin-system (RAS); MasR; 20-Hydroxyecdysone; Respiratory failure

Introduction

Despite massive vaccination campaigns, and the availability of preventive antiviral treatment used as prophylaxis, such as (Paxlovid™), hospitalization and mortality due to coronavirus disease 2019 (COVID-19) remains substantial worldwide (https://covid19.who.int/), particularly in countries where vaccination rates are lower and in which prophylactic antivirals are less available, as well as in specific patient populations such as the elderly with comorbidities or those non-responsive to vaccines.[1,2] Treatment of hospitalized patients with severe COVID-19 symptoms generally includes supportive oxygenation, corticosteroids administration when viral replication has declined,[3,4] remdesivir and immunomodulators. However, antibodies targeting inflammatory cytokines show heterogeneous results[5] and antivirals are of limited efficacy in patients hospitalized with severe COVID-19.[3,6] Thus, new therapeutic options are still required to limit respiratory failure and mortality in this indication.

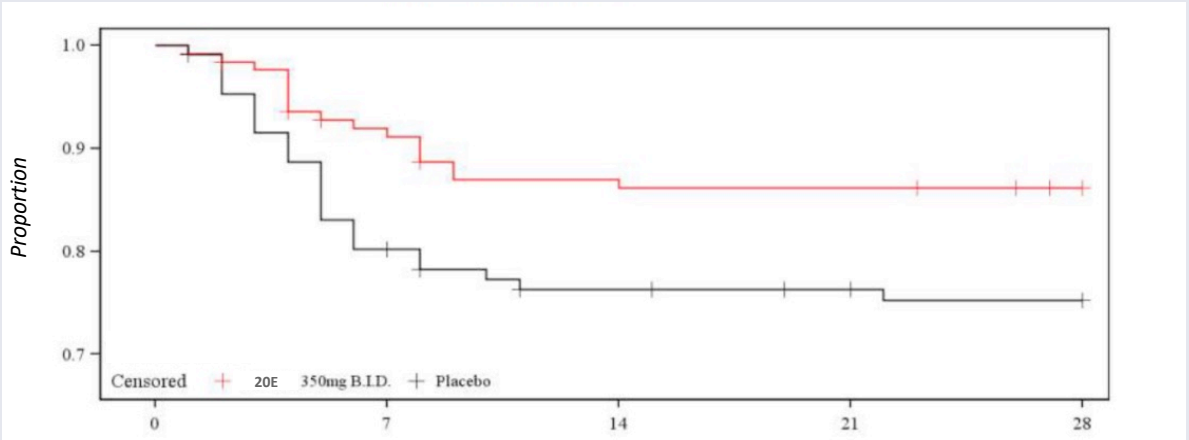
The renin-angiotensin system (RAS) encompasses many peptides (angiotensins), peptidases, and receptors representing two functional pathways in a balance whose equilibrium regulates respiratory functions, among others.[7] The angiotensin-converting enzyme 2 (ACE2) regulates RAS equilibrium by converting angiotensin-II (Ang-II), a ligand of the angiotensin receptor one (AT1R), into angiotensin-(1-7), a ligand of the Mas receptor (MasR).[8,9] The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) uses ACE2 as the receptor to infect lung epithelial and endothelial cells.[10,11] Binding of SARS-CoV-2's spike protein to ACE2 may lead to a dysregulation of the RAS.[12] Accordingly, abnormal plasma levels of Ang-II and angiotensin-(1–7) have been reported in COVID-19

Positive results strongly supporting therapeutic potential of Ruvembri in severe COVID-19: respiratory failure or early death

RESPIRATORY FAILURE OR EARLY DEATH : THE STUDY MET PRIMARY ENDPOINT

- **Reduction in the risk of early death or respiratory failure at day 28 by 44% (p=0.043, CMH test)**
- Time to early death or respiratory failure over 28 days was lower (p=0.022, Kaplan Meier analysis)
- Post hoc analysis confirmed the reduction in the **risk of early death or respiratory failure** in the ITT population and in the PP population

Proportion without respiratory failure or early death, Kaplan-Meier Analysis, ITT population



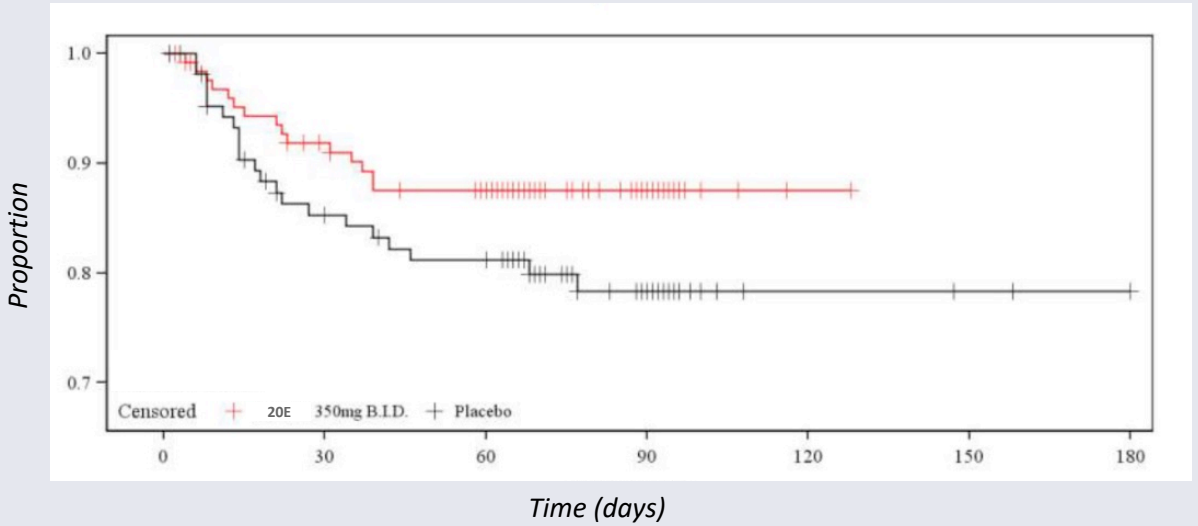
Source: Lobo et al., eClinicalMedicine 2023 : 102383.
Published Online : https://doi.org/10.1016/j.eclinm.2023.102383

Positive results strongly supporting therapeutic potential of Ruvembri in severe COVID-19: mortality and safety

MORTALITY FOLLOW-UP OVER 90 DAYS AND SAFETY

- Kaplan Meier post hoc analysis showed a **reduction in the risk of death at day 90 of 43% (p=0.076)** in the ITT population and **70% (p=0.016)** in the PP population

Proportion without death, Kaplan-Meier Analysis, ITT population



- *Very good safety profile with lower proportion of adverse events, especially respiratory adverse events (57% vs. 64%)*
- *Lower proportion of patients with severe adverse events compared to placebo (25% vs. 31%)*

Source: Lobo et al., eClinicalMedicine 2023 : 102383.
Published Online : https://doi.org/10.1016/j.eclinm.2023.102383

Biophytis initiates market access processes for Ruvembri treatment of severe forms of COVID-19

Early access

- EAP in France: application for early access will be re-submitted as soon as possible
- EAP in Brazil: EAP program authorized by ANVISA with initiation of program expected in Q1 2024 and first patients to be included in March 2023

Market access

- Preparation of the conditional marketing authorization application in Europe and in the US
- Following pre-submission meeting requests with the EMA and the FDA, scientific advice will be requested as soon as possible

SARA

Ruvembri

20-hydroxyecdysone

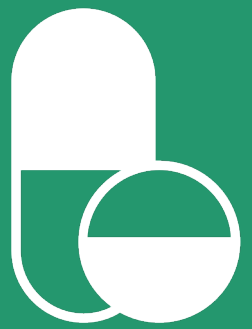
in Sarcopenia

Biophytis

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[1]



Ruvembri:

- ✓ 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

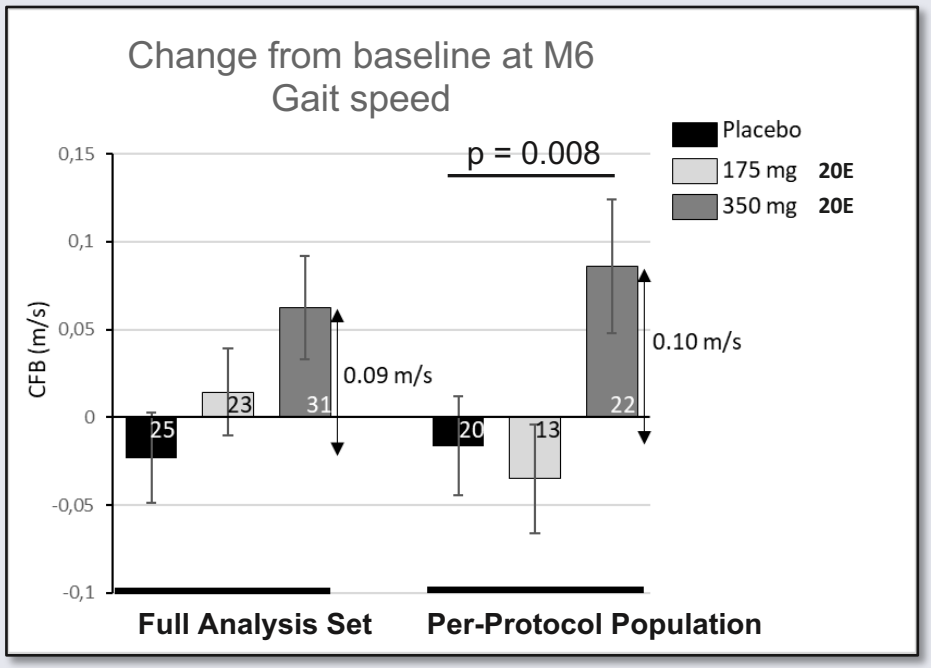
[1]United Nations' World Population Prospects: 2017 Revision

SARA-INT: Phase 2 trial overview

Design	Endpoints	Patient Population
• Global, double-blind, randomized, placebo-controlled trial: NCT03452488 • Assess safety and efficacy of two doses of Ruvembri administered orally with a meal over 26 weeks, as compared to placebo • Treatment effect on improvement of physical function (gait speed) and on on decrease of risk of mobility disability	**Primary** • 400-meter walk test (400MWT) - 0.05 m/s is considered the minimal meaningful change **Secondary** • Handgrip muscle strength • Patient reported outcomes (PRO)	• 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

Positive results obtained in SARA-INT phase 2 trial

**Ruvembri significantly improves the gait speed in the 400 MWT,
the primary endpoint of SARA-INT Phase 2 trial, in the PP population after 6 months of treatment**



⇒ **TREATMENT EFFECT IS STATISTICALLY SIGNIFICANT IN PP POPULATION AT M6 (P = 0.008)**

- Global, double-blind, randomized, placebo-controlled trial in patients with aged-related sarcopenia at risk of mobility disability to evaluate safety and efficacy of Ruvembri
- At the highest dose of 350 mg bid: clinically meaningful improvement 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
- This level **is known to be associated with a reduction in mobility disability and mortality in elderly**
- **Ruvembri 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

SARA-31 – Phase 3 development plan

Design	Endpoints	Patient Population
• Global, double-blind, randomized, phase 3 placebo-controlled trial • Assess safety and efficacy Ruvembri 350 mg BID administered orally over at least 52 weeks, as compared to placebo • Treatment effect based on estimation of the risk of mobility disability	**Primary** • Major Mobility Disability (MMD) assessed by the inability to complete the 400-meter walk test (400MWT) within 15 min **Secondary** • Handgrip Strength (HGS) • Patient Reported Outcomes (PRO)	• Age: 65 years old or over • Low mobility measured by Short Performance Physical Battery (SPPB) ≤7 • Low Handgrip Strength (HGS < 20 and <35 kg in female and male) • Slow walkers (gait speed < 0.8 m/s)

MyODA

Ruvembri

20-hydroxyecdysone

in DMD

Biophytis

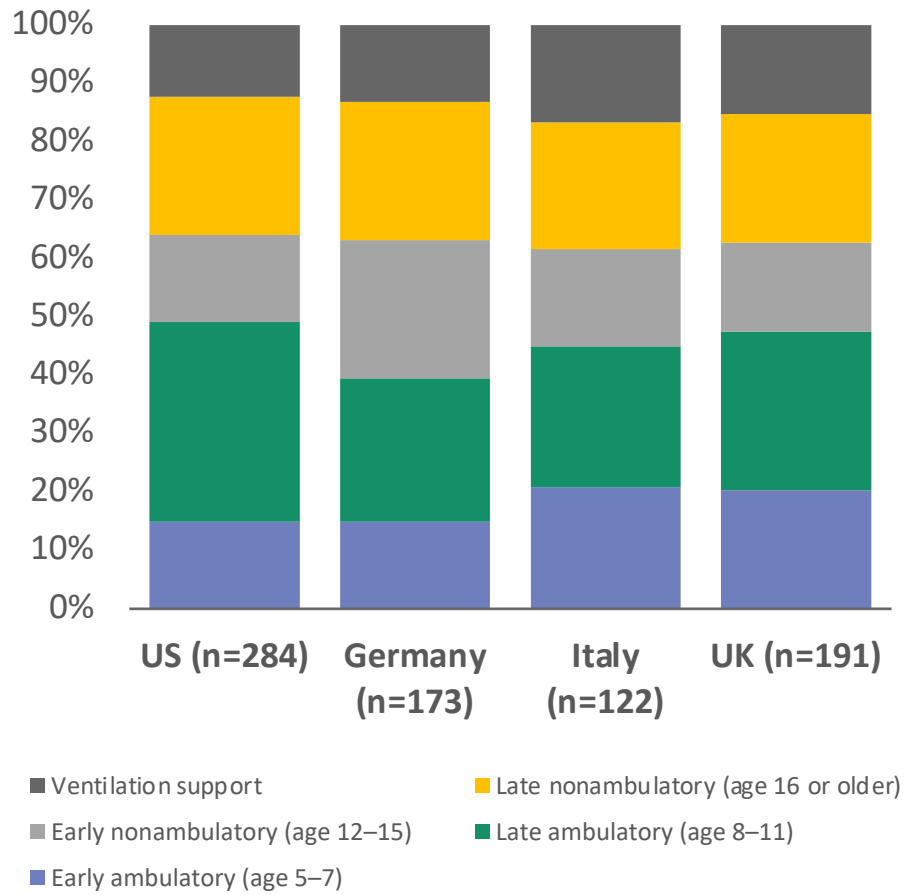
Treatment Overview for Duchenne Muscular Dystrophy (DMD)

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 Ruvembri in DMD.

Proportion of ambulatory class in DMD[1]



1. Source: Landfeldt *et al*., Neurology, 2014.

Preparing to start phase 1-2 clinical study in DMD

Design	Endpoints	Patient Population
• A Randomized, Double-Blind, multi-center Phases 1-2 Study • Evaluate the Safety, Efficacy, Pharmacokinetics, and Pharmacodynamics of Ruvembri in Non-Ambulatory DMD Patients with Respiratory Deterioration. • Pediatric oral formulation (powder sachet) of Ruvembri	• **Primary**: change from baseline on Peak Expiratory Flow (PEF) • **Secondary**: The Forced Vital Capacity (FVC), Performance of Upper Limbs (PUL) scale, Grip strength (MyoGrip) • Part 1 (N=15): Safety, tolerability & PK - 7 days of dosing of escalating dose • Part 2 (N=45): Safety and efficacy on respiratory function (PEF) of one dose for 48 weeks	• Age: ≥12 years old • Non-ambulatory DMD patients • Patients at risk of respiratory failure

Product	2023	2024	2025	2026
Ruvembri 20-hydroxyecdysone	★ Amendment to CTA approval	Phases 1-2 study		

Key milestones in the development of Ruvembri

	Achieved in the last 12 months	*Anticipated in the next 12 months*
COVA	• Phase 2/3 COVA Study : Results published and promising clinical benefits for Ruvembri	• Launch of Early Access programs in France and Brazil • Application for conditional marketing authorisation in Europe and in the US
SARA	• Authorization to start phase 3 SARA-31 study in Belgium and the US	• Start of phase 3 SARA-31 study depending on financial resources and partnership
MYODA	• Preparation of an amended protocol to regulatory agencies (FDA, EMA)	• Submission of an amended protocol to regulatory agencies (FDA, EMA) • Start of phases 1/2 study

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

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

Pr. Bernard Levy

- Professor Emeritus of Physiology and a senior member of PARCC
- Headed the physiology and functional investigations department and the Inserm cardiovascular research center at Lariboisière

Dr. Roger Fielding

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

Dr. Thomas Voit

- Professor, University College London
- Director of the Research Center 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

Dr. Yann Meunier

- Professor and Director of the International Institute of Medicine and Science, Inc (IIMS)
- Has led and participated in clinical trials for new treatments for HIV/AIDS, tropical and infectious diseases, and cardiovascular and respiratory diseases

Financial data

Key financial figures

Listing Euronext (ALBPS) and Nasdaq (BPTS)

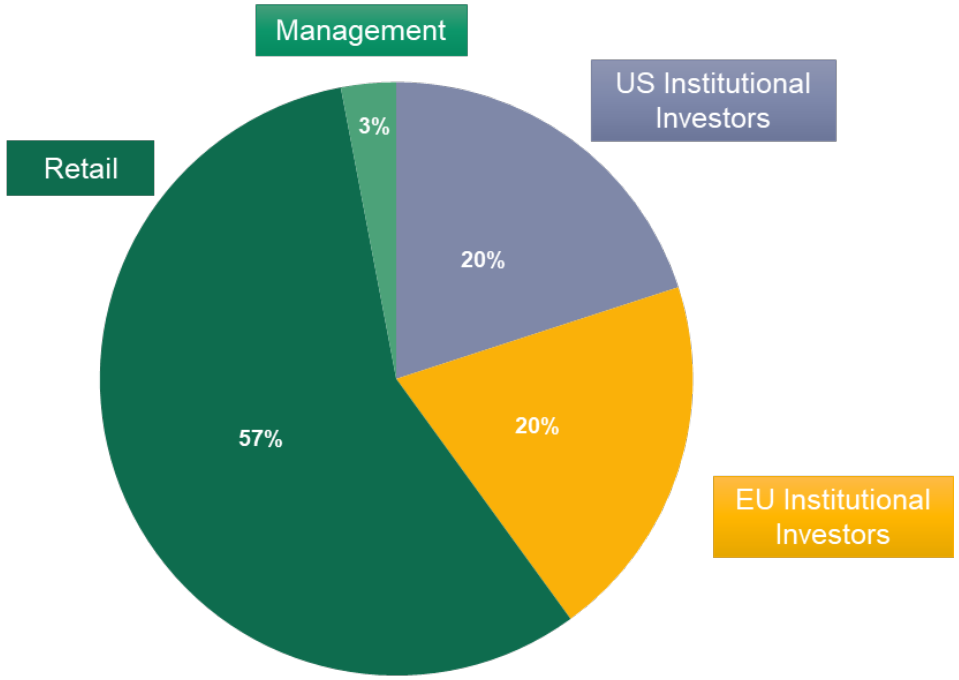
Cash position:

- €5.8m (June 30, 2023)
- €5.4m raised and €2m in convertible bonds drawn down since June 2023

Analyst Coverage

- H.C. Wainwright – *Joe Pantginis, Ph.D.*
- Kepler Cheuvreux – *Nicolas Pauillac*
- Invest Securities – *Jamila El Bougrini, Ph.D.*

Shareholding structure



Number of shares: 1,010,224,384 (31 December 2023)

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THANK YOU

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