BioSenic

Company Presentation

Autoimmunity and Cell Repair

“It is estimated that today 5 to 8% of the world's population is affected by an autoimmune disease *(INSERM France).”*

January 2024

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PROFILE

Dual listing on Euronext Brussels and Paris, Compartment C

- Creation of BioSenic on October 2022: Reverse merger of Medsenic and Bone Therapeutics
- Late-stage biotech
- Mature organisation: 17 years in Belgium & 13 years in France
- Belgium: Liège and Brussels Universities, France: University René Descartes, Cochin Hospital, Phebra Ltd as key partner
- 2 leading assets with one on track via the 505(b)2 path with the FDA
- 2 main technical platforms
  6 clinical trials (Phases 2 and 3)
  840 patients in total
- 15 employees
- 12 patent families

BIOS LISTED EURONEXT · ELIGIBLE PEA PME · LIÈGE université · Hôpital Cochin Port-Royal AP-HP · phebra

Experienced Top Management Team

President
François Rieger, PhD

- Neurobiologist,
- Former CNRS Research Director, first class
- Doctor of Science, University of Paris VII
- Founder and General Manager of the BioPark Institute in Archamps (74)- 2002-2008
- Director of the GIS Franco- Suisse Vieillissement, Longévité et Bien-Être 2006-2010
- Author of 170 publications in the neuroscience field

Deputy CEO
Véronique Pomi

- Founder and manager of ARC Consulting, consulting for companies in HR, communication and strategy
- IFG Lorraine - SME Manager
- From 1994 to 2008, development and communication manager in a consulting firm in HR management, social audit and organization

CSO-COO
Carole Nicco, PhD

- Doctor of Science, PhD «Human physiology and physiopathology », Hôpital Necker/IFM, University Paris VII, 2000
- Interim team co-director - Institut Cochin, Paris, 2020- 2021
- President of (RMS) Redox Medicine Society non-profit organization, since 2022
- Author of 148 international publications in the field of immunology, reactive oxygen species

CMO
Lieven Huysse, MD

- Medical degree, University Ghent, Belgium 1995
- Registrar in orthopaedic surgery 1995-1998
- Executive MBA, Swiss Business School, Zürich, Switzerland, 2002-2003
- Over 20 years of experience in clinical studies, both in pharma and medical devices
- Experience in trauma products, hip, knee, spinal devices, cardiovascular, allergy/immunology

CIRO
Alexia Rieger

- Bachelor from the
- Ecole Hotelière of Lausanne
- Master degree in Financial Markets and Investments at Skema Business School.
- Portfolio management for Architas (AXA subsidiary)
- Helped startups' fundraises in an M&A boutique based in Geneva (VC: Seed to Serie B)
- Worked as Business and Financial Officer at Medsenic SAS

Experienced Board Team

François Rieger[1], PhD

HARVARD MEDICAL SCHOOL

cnrs

ENS ÉCOLE NORMALE SUPÉRIEURE

BioPark PORTE SUD DE GENÈVE

Jean Stephenne

TiGENIX

Takeda

iba

gsk

CUREVAC the RNA people®

Jean-Luc Vandebroek

ALCOPA on the move

FLUXYS

Ahold Delhaize

auxin surgery

Hyloris PHARMACEUTICALS

Jean-François Rax

INSA INSTITUT NATIONAL DES SCIENCES APPLIQUÉES LYON

InsermTransfert Your partner in health innovation

CAPITAL GrandEst Accélérateur de succès

Véronique Pomi[1]

icn business school ARTEM

JACQUES LORENZI CONSEIL

renaissance

ARC Consulting

Yves Sagot, PhD

EPFL

RELIEF THERAPEUTICS

Merck

serono biotech & beyond

UNIVERSITÉ DE GENÈVE

Revital Rattenbach, PhD

pharmaseed Ltd

4P-Pharma Translating Science to Medicine for Patients

OUR MISSION

Bringing patients innovative treatments in severe and persistent autoimmune/inflammatory diseases and cell repair

ARSENIC TRIOXIDE PLATFORM

- ➔ Successful phase II completed for ATO*
- ➔ Phase III in preparation
- ➔ Estimated go to market in 2027-28 for first indication

Set arsenic as the 1st line treatment for cGVHD before targeting other autoimmune diseases

Next step enlarging the scope to other autoimmune diseases including lupus and systemic sclerosis

**ATO: Arsenic Trioxyde*

ALLOB®* PLATFORM

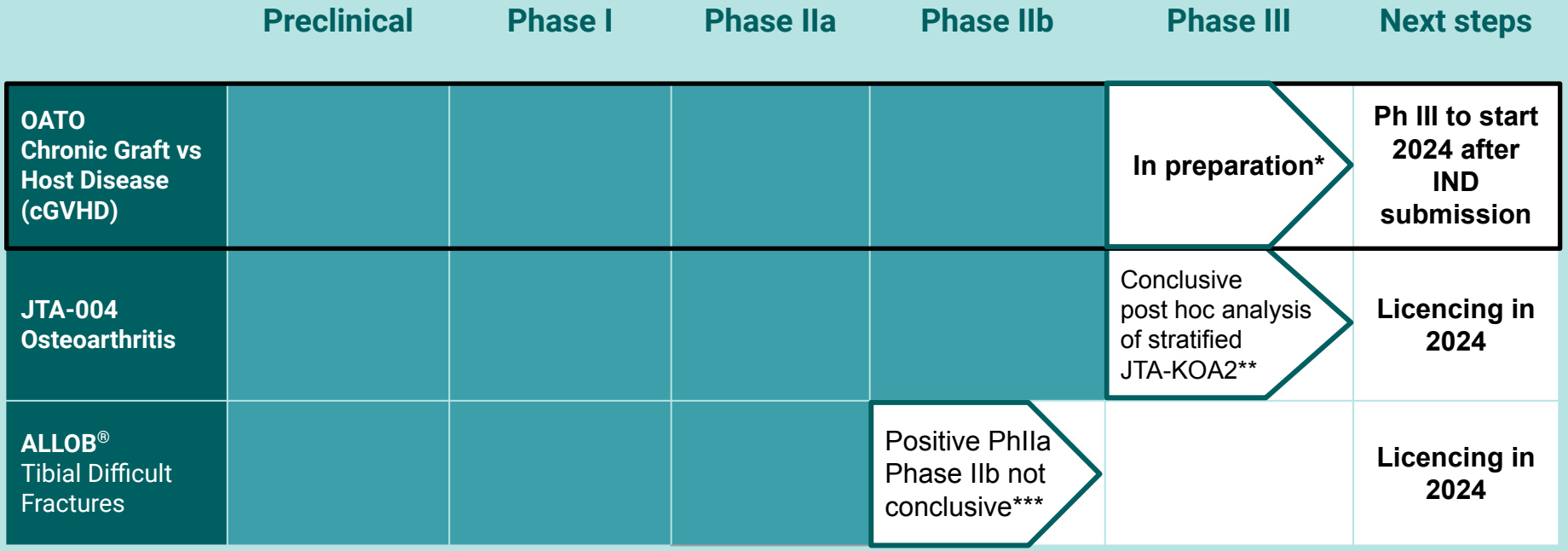
- ➔ Ongoing discussions for licensing

Can target a first line treatment for delayed non-union fractures

Next step enlarging the scope to other tissue repair strategies with partners or licenses

**ALLOB: Allogénique Bone*

Significant milestones expected in 2024 from our late stage clinical pipeline



*On the path to **505 b2** (FDA approved)*

*** In 2023, a post hoc analysis of all JTA-KOA2 data, showed thatJTA-004 is more effective than the comparator Synvisc One® (Sanofi) in the severe, painful and inflammatory disease subtype (1/3 of the patient population)*

****Failure when previous Phase 2 clinical trials were successful. Requires redesign of trial with new schedule*

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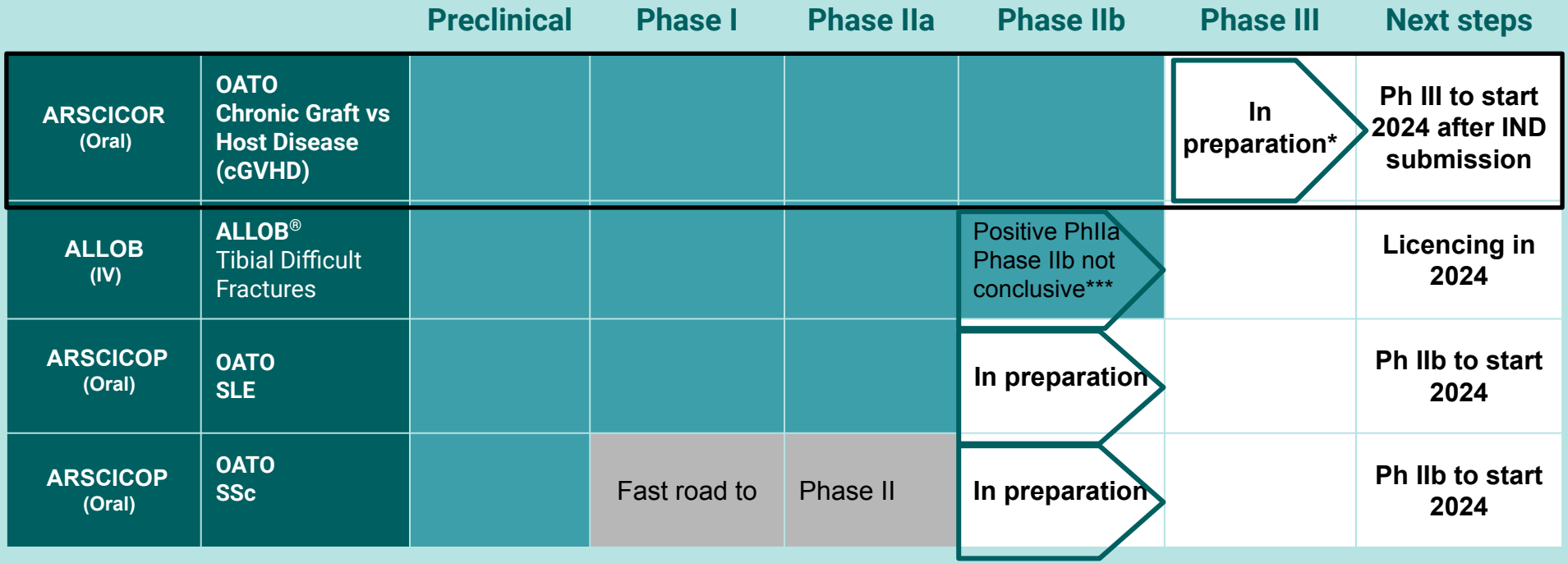

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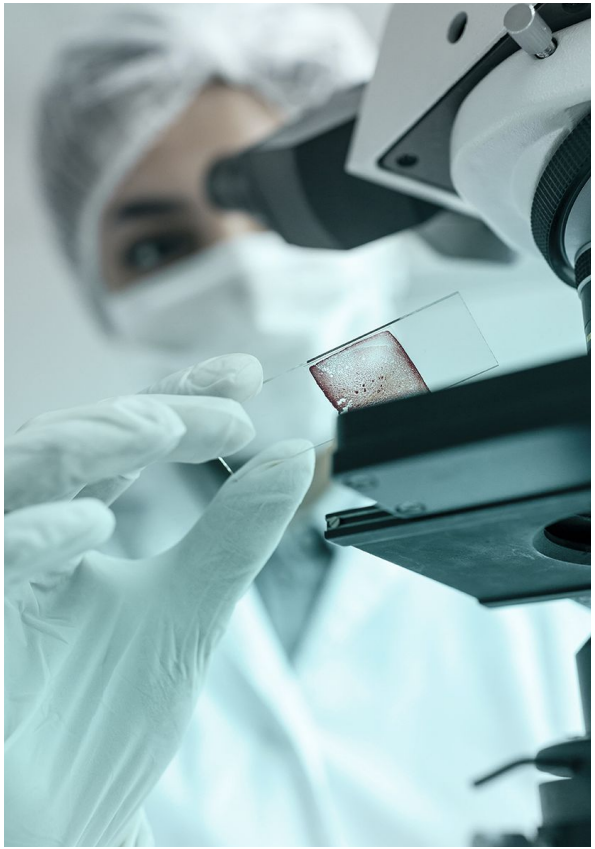
BioSenic

Arsenic Trioxide platform

Intravenous / oral formulation



OUR TECHNOLOGY IP - ATO :
Arsenic Trioxide platform Intravenous / oral formulation

The immunomodulatory properties of ATO have demonstrated multiple effects targeting overactivated cells: immunomodulation or cell-death

- **Exclusive early WW license from CNRS to use Arsenic in autoimmune diseases & in cGVHD (Chronical Graft versus Host Disease)** - Still valid until to 2029 in the US+ extensions possible
- **Recent exclusive license** on oral formulation of ATO - valid up until 2035
- **New pending international patents** on a combination of ATO + Copper for autoimmune diseases and cancer - (Granted in Europe for all indications; in China for cGvHD, in US : pending) - Valid up until 2040
- **ODD for cGVHD** from FDA and EMA
- **Pre-IND meeting (2022):** green light received from FDA for Phase 3
- **505 (b) (2)[1] on track with the FDA - open the road to expedited new indications (SLE-Systemic Lupus Erythematosus, SSc-Systemic Sclerosis)**

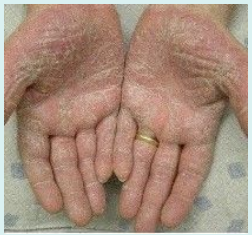
[1] A 505(b)(2) product rely in part on the FDA's previous findings on the safety and efficacy of an active ingredient as well as data available in the public domain

Our lead arsenic products target severe & persistent inflammation

cGvHD (rare disease):

Multisystem disorder triggered by active immune of donor T cells that attack patients' tissues and organs.

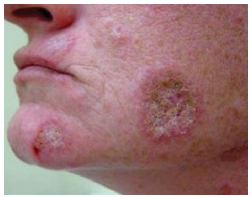
- A to frequent complication after bone marrow transplantation (60 to 70%).
- A high mortality rate (80-90%) in moderate to severe patients with moderate to severe disease.



Lupus :

Chronic auto-immune disease characterized by chronic inflammation and over-activation of the signalling immune system that attacks and damages multiple organs in the body.

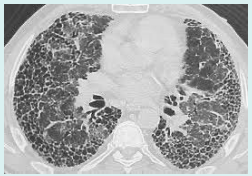
- SLE accounts for 70% of all lupus cases.
- Multiple symptoms ranging from mild to severe, including visible skin red ashes, hair loss as well arthritis, Raynaud phenomenon. It can also target the heart, kidney and lungs.



Systemic Sclerosis (rare disease):

Autoimmune disorder that affects the skin and internal organs characterized by the fibrosis of the skin and other organs.

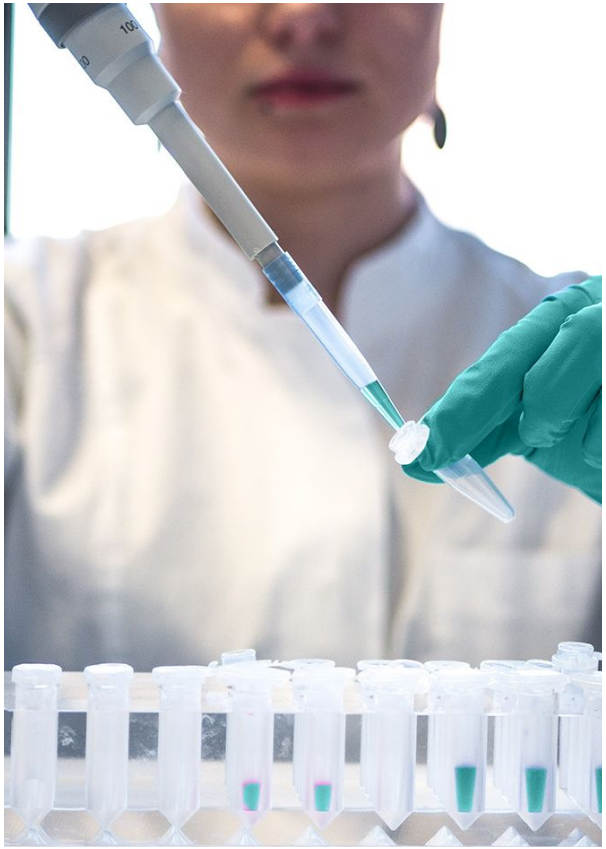
- The mortality estimations range between 40 - 60% with a 10-year survival.
- Patients with systemic sclerosis are attained by renal, gastrointestinal, neurological, ophthalmological, cardiovascular, pulmonary, musculoskeletal fibrosis.



BioSenic

Preclinic - Clinic

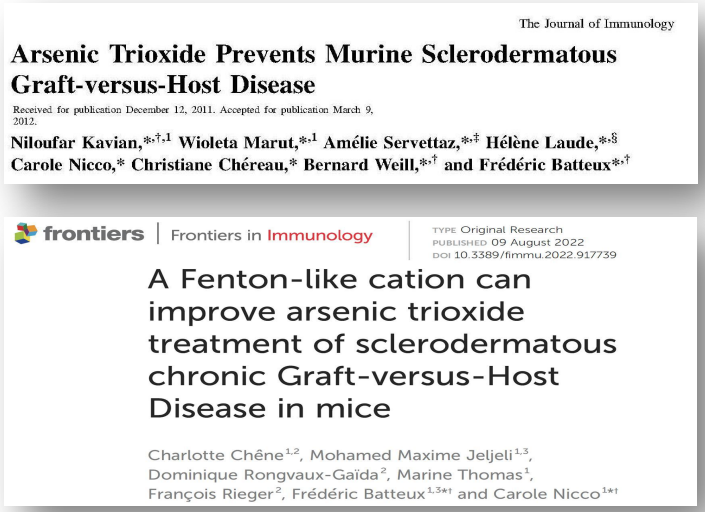
ATO in cGvHD



Chronic GVHD

Severe skin and lung cGVHD are challenging manifestations leading to death

Preclinical



The Journal of Immunology

Arsenic Trioxide Prevents Murine Sclerodermatous Graft-versus-Host Disease

Received for publication December 12, 2011. Accepted for publication March 9, 2012.

Niloufar Kavian,*,†,1 Wioleta Marut,*,1 Amélie Servettaz,*,‡ Hélène Laude,*,§ Carole Nicco,* Christiane Chéreau,* Bernard Weill,*,† and Frédéric Batteux*,†

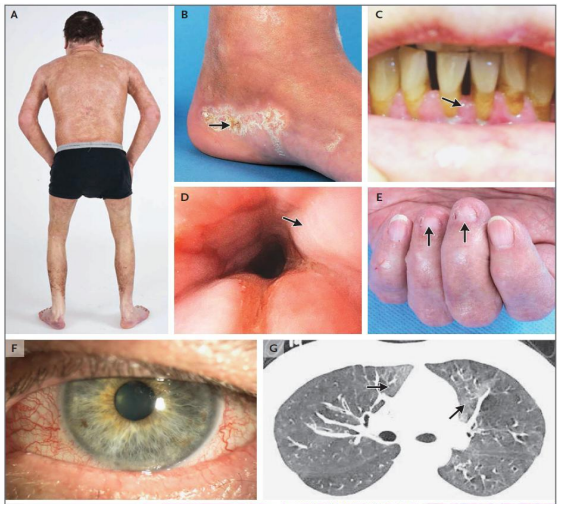
frontiers | Frontiers in Immunology

TYPE Original Research
PUBLISHED 09 August 2022
DOI 10.3389/fimmu.2022.917739

A Fenton-like cation can improve arsenic trioxide treatment of sclerodermatous chronic Graft-versus-Host Disease in mice

Charlotte Chêne[1,2], Mohamed Maxime Jeljeli[1,3], Dominique Rongvaux-Gaïda[2], Marine Thomas[1], François Rieger[2], Frédéric Batteux[1,3*†] and Carole Nicco[1*†]

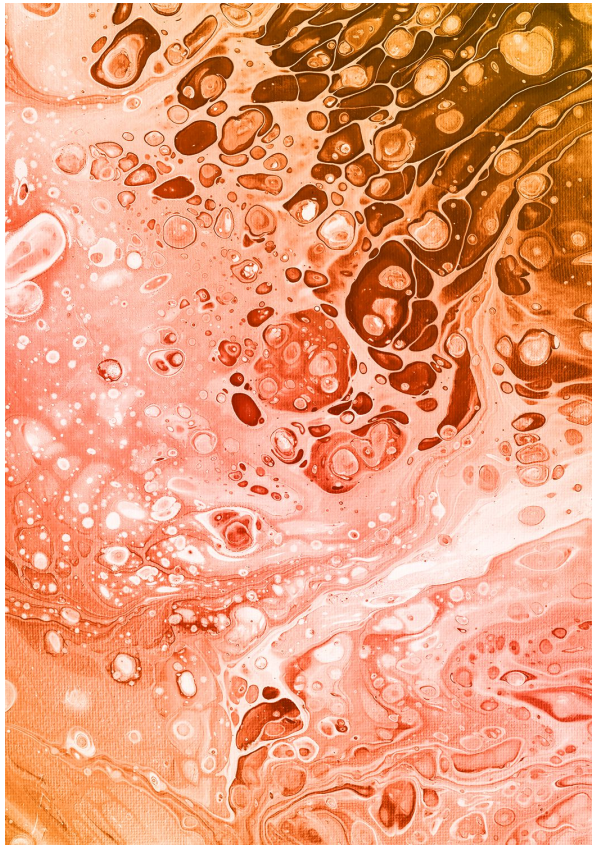
Clinical



N Engl J Med 377;26 nejm.org December 28, 2017

BioSenic

Market Analysis



Competitiveness: no effective treatment on the market

BioSenic's lead candidate, ATO, is one of the **most clinically advanced,** in addition of being **the only one considered, as first line treatment.** However, other drugs are currently under study as second or third line treatment (often repositioning).

	Standard of Care	Tentative drug repositioning as second and third line treatments, or direct competition
cGvHD	Prednisone and corticosteroids	**Ibrutinib** by Janssen **Ruxolitinib** by Incyte **Belumosudil** (Rezurock) by Sanofi ……others
SLE	Hydroxychloroquine and corticosteroids	**Voclosporine** by Aurinia **Benlysta** by GlaxoSmithKline …….others
SSc	Corticosteroids	**Lebanasum** by Corbus Pharmaceuticals Holdings, Inc. (side effects and chronic treatment) …..others

BioSenic

cGvHD clinical trial

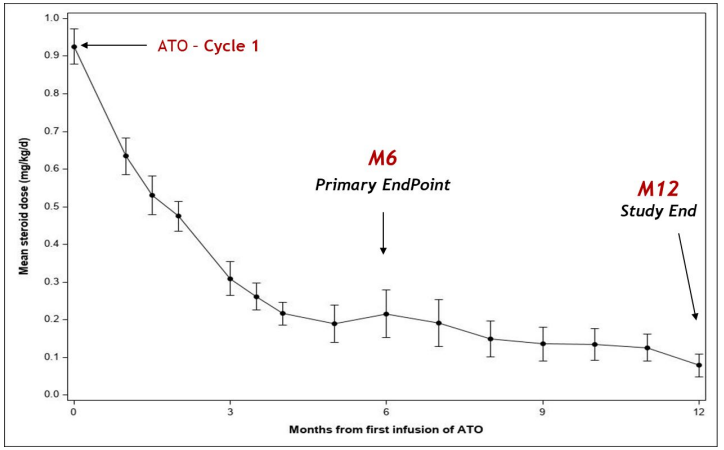
Conducted by BioSenic

Arsenic for autoimmune diseases in phase 2 clinical trials

(Results published in Q2 2022 in the Journal of Transplantation and Cellular Therapy)

Responses	Full Analysis Set Population (N=20)	Restricted Population (Perfect Protocol Followers) (N=17)
Complete and Partial response	**15pts /20 pts : 75.0%**	**14pts/17pts : 82.4%**
Complete response	7pts/20pts : 35.0%	7pts/17pts : 41.2%
Partial response	8pts/20pts : 40.0%	7pts/17pts : 41.2%

ATO acts on already activated immune cells:
1) increases their cellular stress up to cell death induction (Apoptosis)
2) modulates the synthesis and release of proinflammatory cytokines.

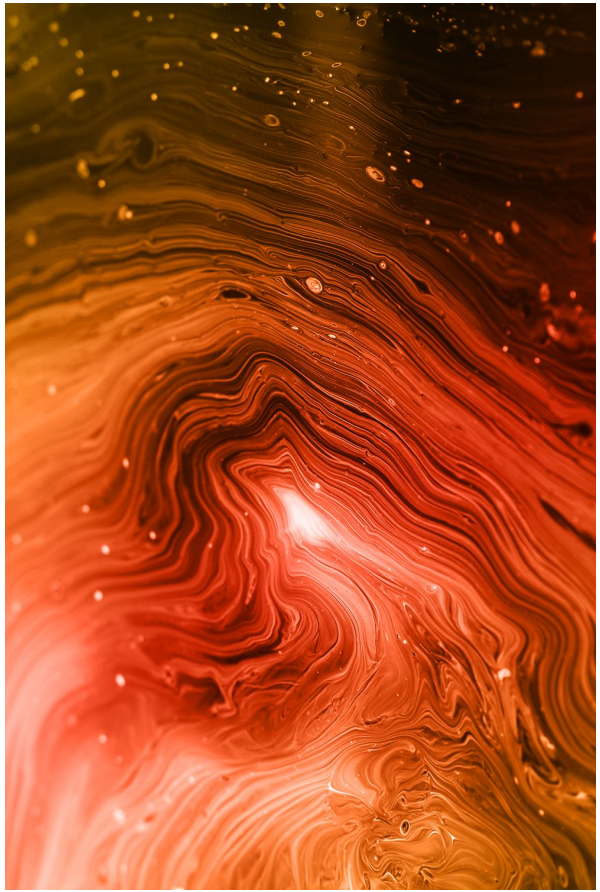


Tolerability and Safety

Transient increase of hepatic enzymes in the blood and some rare transient widening of the QT
Intravenous ATO potentiates and intends to replace standard of care treatment with prednisone with or without ciclosporine.

BioSenic

2024, a decisive year ahead



An out-licensing business model

Stable cash consuming within a highly valued market

1

Innovative approach based on deployment of new treatments using proven benefits of Arsenic

2

Efficacy and safety already demonstrated on the 2 leading assets in the pipeline

3

Agile organization
Decentralized R&D
Outsourced production. Focus on clinical trial supervision

4

Out-licensing model
Marketing model including partners for the US and Asia
Highly valued market

2024, a decisive year with important milestones ahead

Stable cash consuming within a highly valued market

2024

Organization

Reinforce the management team to execute the roadmap

- Appointment of new collaborators
- New board members

Clinical achievements

Phase III initiation in cGVHD

- Late use of therapeutic cells in non-union long bone fractures

Business

Industrial partners search
Commercial partners search

- Partnership with Phebra
- Medsenic recovers full WW commercial rights for GvHD in 2024

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Financial items

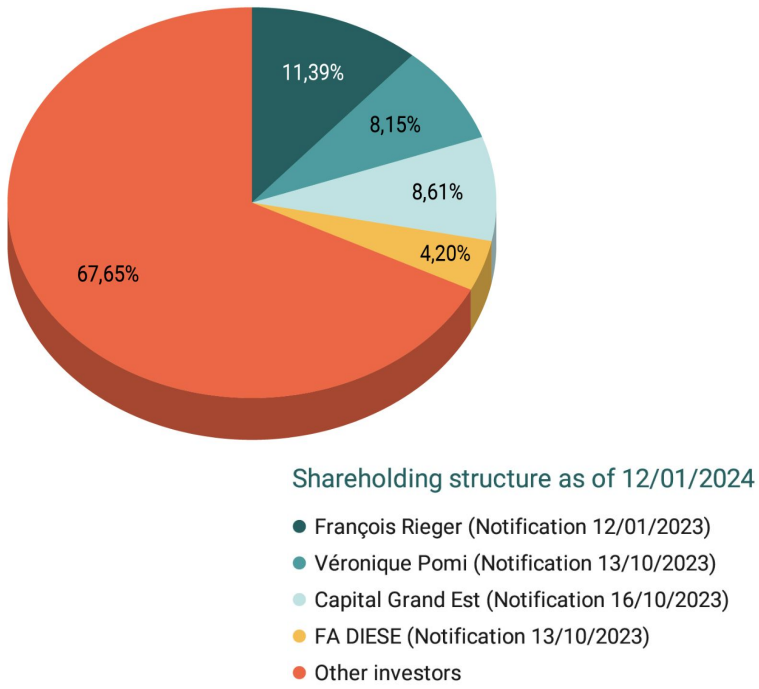
Financial calendar

- April 25, 2024: Full Year Results & Annual Report
- May 27, 2024: Q1 Business and Financial Highlights
- June 12, 2024: General Meeting of Shareholders
- September 5, 2024: 2023 H1 results
- October 28, 2023: 2023 Q3 activity

Stock market data

ISIN code	BE0974280126
Mnemo	BIOS
Compartment	Euronext Brussels and Paris, C
Number of shares	163’181’474
Market cap. on 18/01/2024	€6,9 millions

Shareholders’ structure as of 12/01/2023



Why invest in BioSenic?

2 main platform assets: one under clinical development, the other ready for licencing

2 platforms, and strong synergies for innovative inflammatory, autoimmune or repair treatments

A Phase 3, first line oral treatment of cGvHD using proven benefits of Arsenic

Orphan drug designation in USA and EU for cGvHD

Large market shares expected on cGvHD and future other indications in preparation prepared, via a 505(b)2 FDA track

A derisked business model, with a low cash consuming rate

Alexia Rieger

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