OUTSMARTING TECHNOLOGICAL CHALLENGES

Microbiology & Infectious Diseases

FRANCE 2030

BIOASTER
MICROBIOLOGY TECHNOLOGY INSTITUTE

Our beliefs

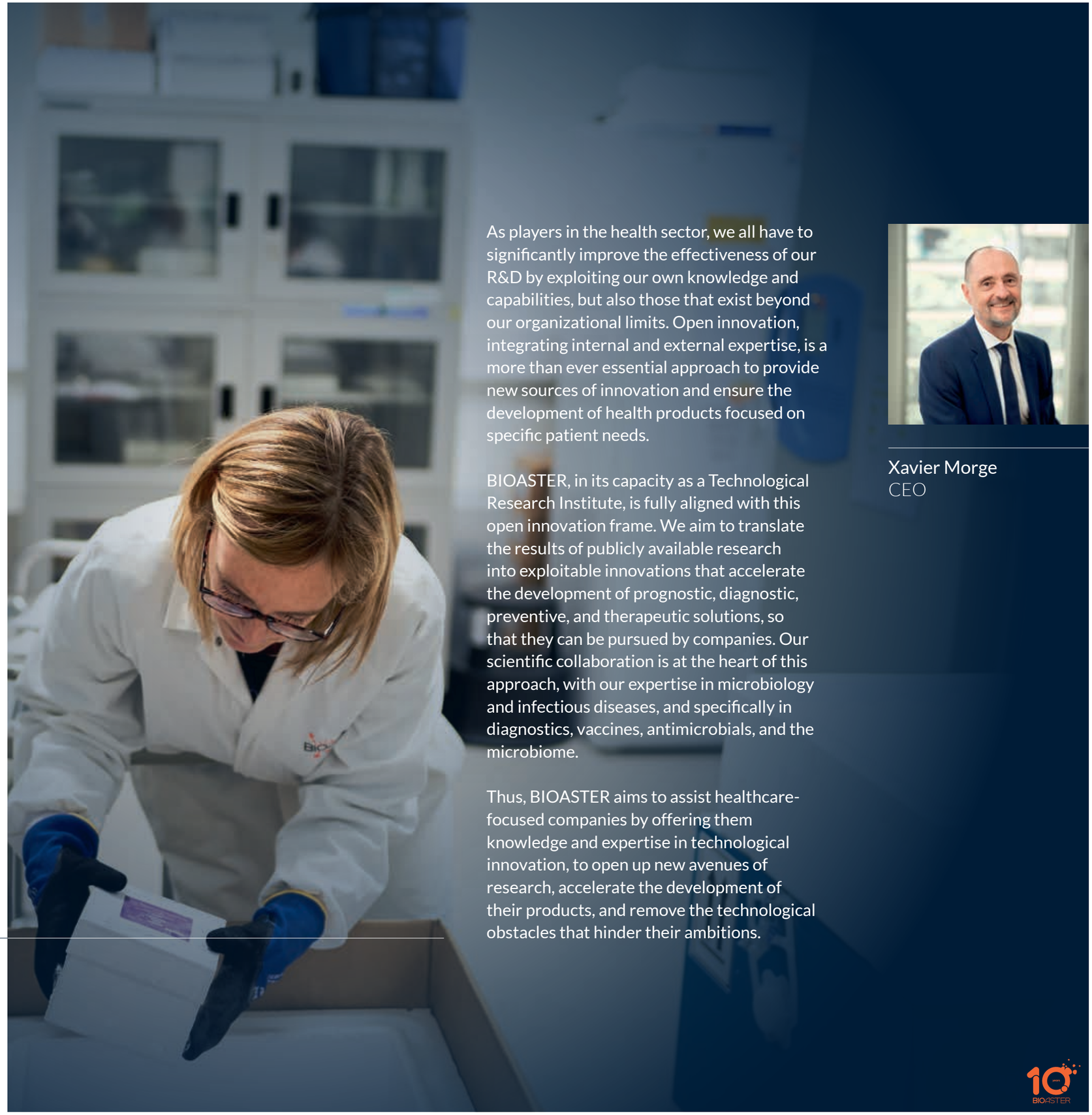
- Microbial diseases are and will remain a public health threat. The threats have multiple causes; for example, emerging diseases, antimicrobial resistance, and vaccine hesitancy.
- These threats can only be addressed by the translation of scientific discoveries by healthcare companies into solutions that benefit patients.
- To achieve this, original, high-impact technologies must be developed through public/private collaborations that involve shared risks and returns.

Our mission

To provide our partners and customers with innovative scientific and technological solutions to accelerate the development of their products.

Our values

Sharing • Integrity • Agility



Xavier Morge
CEO

As players in the health sector, we all have to significantly improve the effectiveness of our R&D by exploiting our own knowledge and capabilities, but also those that exist beyond our organizational limits. Open innovation, integrating internal and external expertise, is a more than ever essential approach to provide new sources of innovation and ensure the development of health products focused on specific patient needs.

BIOASTER, in its capacity as a Technological Research Institute, is fully aligned with this open innovation frame. We aim to translate the results of publicly available research into exploitable innovations that accelerate the development of prognostic, diagnostic, preventive, and therapeutic solutions, so that they can be pursued by companies. Our scientific collaboration is at the heart of this approach, with our expertise in microbiology and infectious diseases, and specifically in diagnostics, vaccines, antimicrobials, and the microbiome.

Thus, BIOASTER aims to assist healthcare-focused companies by offering them knowledge and expertise in technological innovation, to open up new avenues of research, accelerate the development of their products, and remove the technological obstacles that hinder their ambitions.

BIOASTER is a Technological Research Institute (IRT) in health technologies, created at the initiative of the French government and private life science companies.

BIOASTER is a not-for-profit Scientific Cooperation Foundation (FCS) that is dedicated to the study of microbiology and infectious diseases, tackling diseases caused by bacteria, viruses, parasites, and fungi. We offer a new approach to R&D, by integrating the principal scientific and technological disciplines, to better share the risks of innovation.

KEY FIGURES

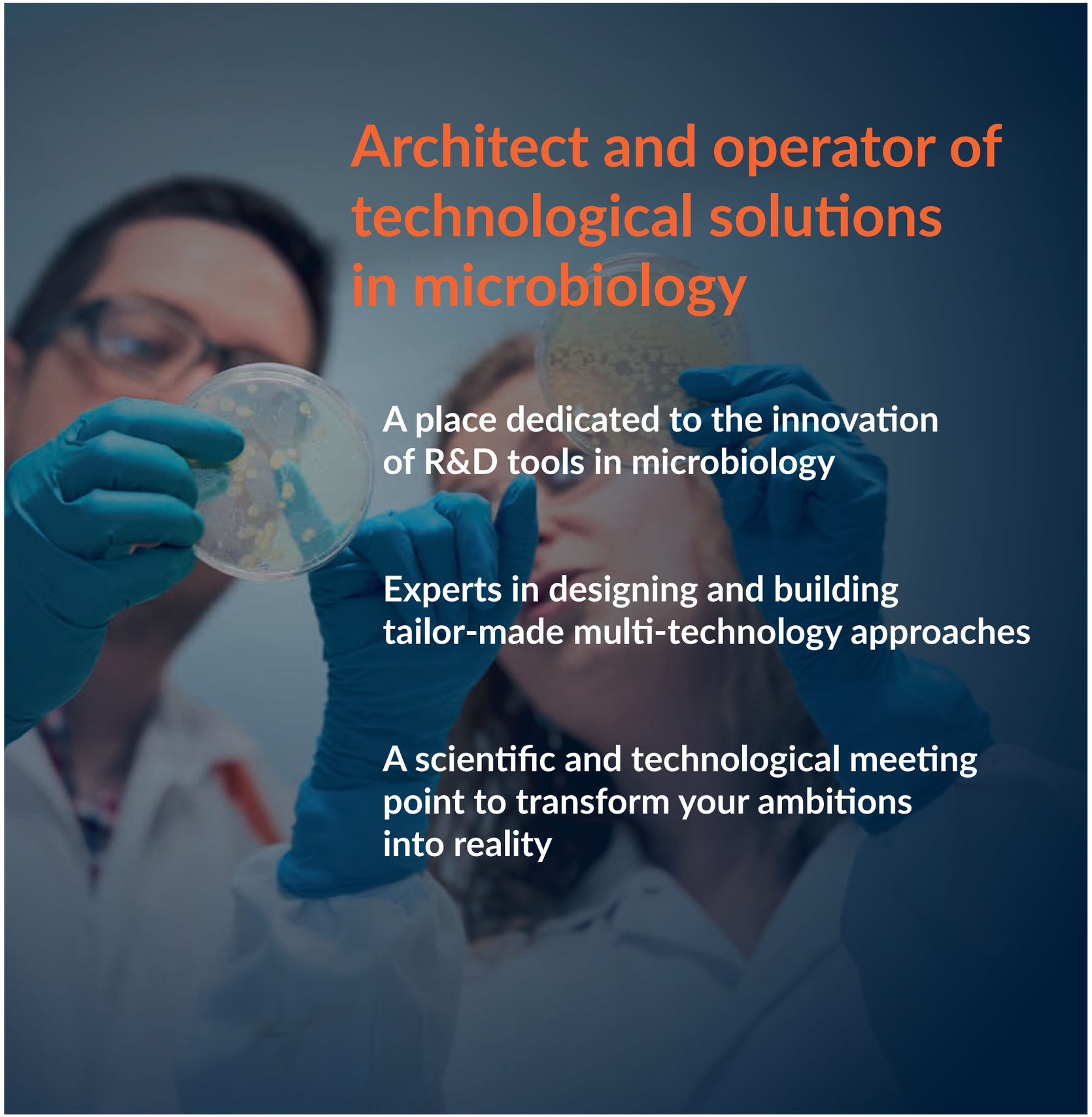
+ 250
research contracts including **66** collaborative projects with academic and indiustrial partners

+ 100
business and industrial partners around the world

18
patents

+ 100
employees of **15** different nationalities

10
grants



Generate more opportunities to accelerate your innovations.

OFFERS

MICROORGANISMS SAMPLES OF INTEREST

Access to well characterized & documented biological samples to explore host-pathogen interactions.

MECANISMS OF ACTION PROPHYLACTIC SOLUTIONS

Decipher the mechanism of action triggered by your prophylactic solutions.

MECHANISM OF ACTION, HOST RESPONSE, ACTIVITY, PROFILING & EFFICACY OF YOUR ANTIMICROBIALS

Assess Mechanism of action, Host Response, Activity, Profiling & Efficacy of your antimicrobials to efficiently fuel the translational pipeline of new drugs for the benefit of patients.

IN VITRO / IN VIVO MODELS

Integrated approach from relevant *in vitro* model engineering to *in vivo* validated models to de-risk and accelerate your product development.

BIOMARKERS

Identify, characterize, exploit, as a translational tool, companion or diagnostic test.

TECHNOLOGICAL DEVELOPMENTS

Developing more targeted, effective and personalized therapies now requires technology to become an integral part of your R&D program.

DATA

Face the data challenges in Life Sciences.

Provide access to **technological solutions** that accelerate your **product** development.

TECHNOLOGIES

MICROBIOLOGY & MOLECULAR ENGINEERING

Design and develop original scientific and technological solutions to accelerate microbiological research for the benefit of animal and human health.

PRECLINICAL MODELS & IMAGING

Provide innovative animal models/technologies for the study of infectious diseases and the microbiome.

BIOASSAYS, MICROSYSTEMS & OPTICAL ENGINEERING

Engineer and customize bioanalytical tools for deciphering, detecting and characterizing infectious disease pathogens, evaluating vaccines and therapies on pathogen and on the immunological host response.

OMICS

Provide problem-oriented innovations in Omics to address technological obstacles.

DATA SCIENCE, DATA MANAGEMENT, & DIGITAL SOLUTIONS

Bring the continuum of Digital Technologies and Advanced Data Analytics Approaches to serve project's Data Science & Data Management objectives.

CLINICAL OPERATIONS

Give you access to well-characterized, tailored, high-value human biological samples to accelerate your health-product development projects.

Combine our **expertise** with yours to take down **technological** barriers and achieve your **ambitions**.

FIELDS OF APPLICATION

ANTIMICROBIALS

- Hit identification and lead selection
- Lead optimization
- Drug candidate characterization

VACCINES

- Decision-making regarding novel vaccine targets
- Personalized medicine and patient stratification
- Characterizing the host response
- Improving vaccine production

MICROBIOME

- Microbiome research
Access key information to take into account microbiome
- Host-associated interactions
Understand and leverage microbiomes
- Microbiomes and biomarkers/ companion diagnostics

DIAGNOSTICS & COMPANION DIAGNOSTICS

- Discovery and validation of biomarkers
- Development of innovative technologies
- Analysis & interpretation of data
- Clinical evaluation of prototypes
- Companion Diagnostics

Our story

2012
- Creation of the IRT
- 3 employees (and numerous supports)
- 4 fields of application: Antimicrobials, Vaccines, Microbiome, Diagnostics

2013
- 61 employees
- Structure: Paris 600m² / Lyon 820m² (offices and labs)
- 15 projects

2015
- 100 employees
- New building in Lyon with 2,200m² of laboratories and 1,360m² of offices, in addition to the 850m² premises in Paris, 7 technological units
- 31 projects

2021
- 110 employees from 15 different nationalities

2022
- 250 research contracts including 66 collaborative projects (since 2012)

2023 & beyond…
- A story to write together

Founders

2
CO-FOUNDING LEADERS

LYONBIOPOLE AUVERGNE•RHÔNE•ALPES
INSTITUT PASTEUR

3
FUNDING SUPPORTS

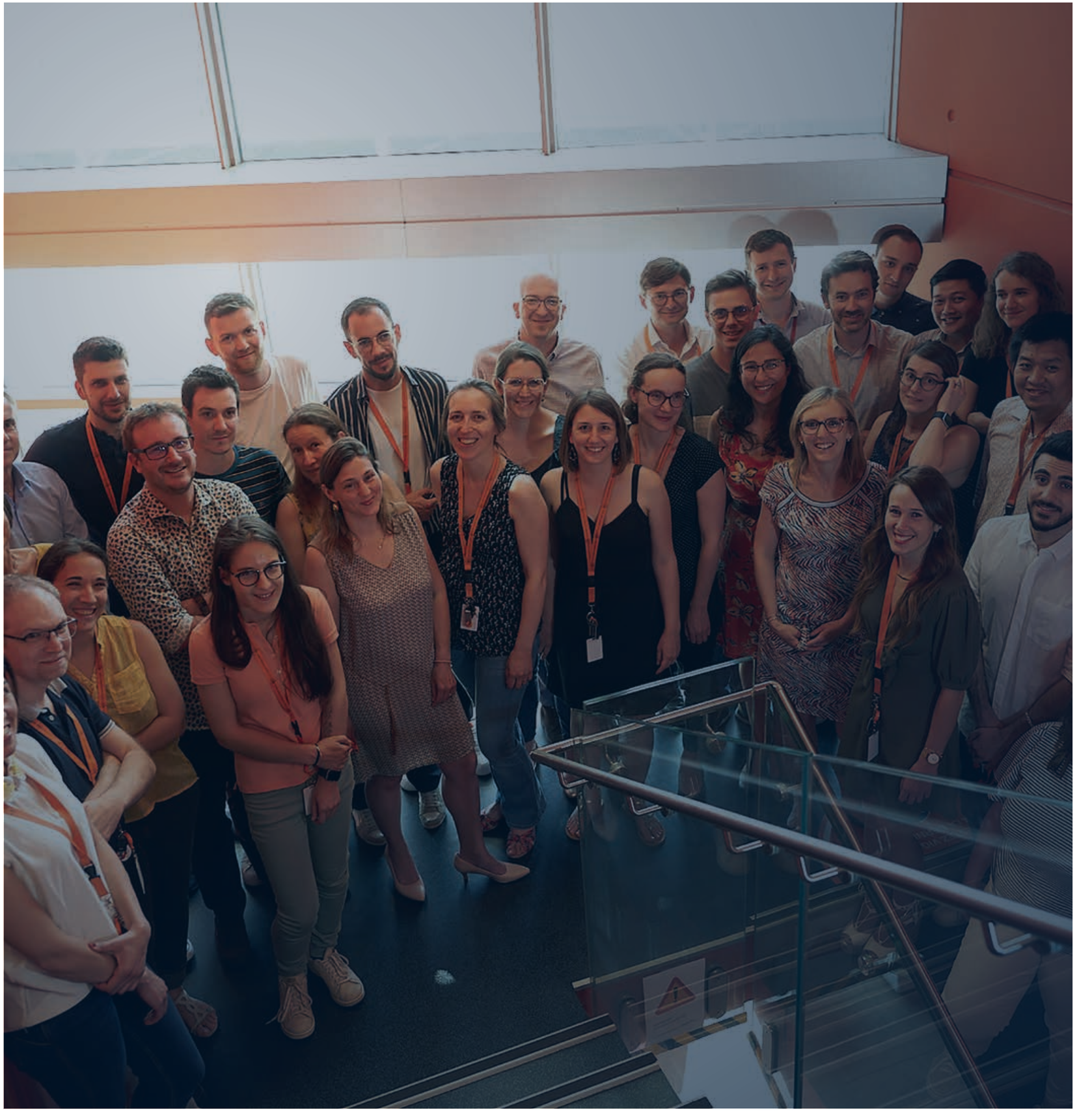
La Région Auvergne-Rhône-Alpes
MÉTROPOLE GRAND LYON
FRANCE 2030

4
PUBLIC RESEARCH INSTITUTIONS

cea
cnrs
Inserm
UNIVERSITÉ DE LYON

5
MAJORS OF HEALTHCARE INDUSTRY

DANONE NUTRICIA RESEARCH
Boehringer Ingelheim
BIOMÉRIEUX
INSTITUT MERIEUX
sanofi



bioaster.org

BIOASTER
MICROBIOLOGY TECHNOLOGY INSTITUTE

LYON
Building BIOASTER
40, avenue Tony Garnier
69007 Lyon - France
+33 (0)4 69 84 26 00

PARIS
Building F. JACOB
28, rue du Docteur Roux
75015 Paris - France
+33 (0)1 44 38 91 82

FRANCE 2030