



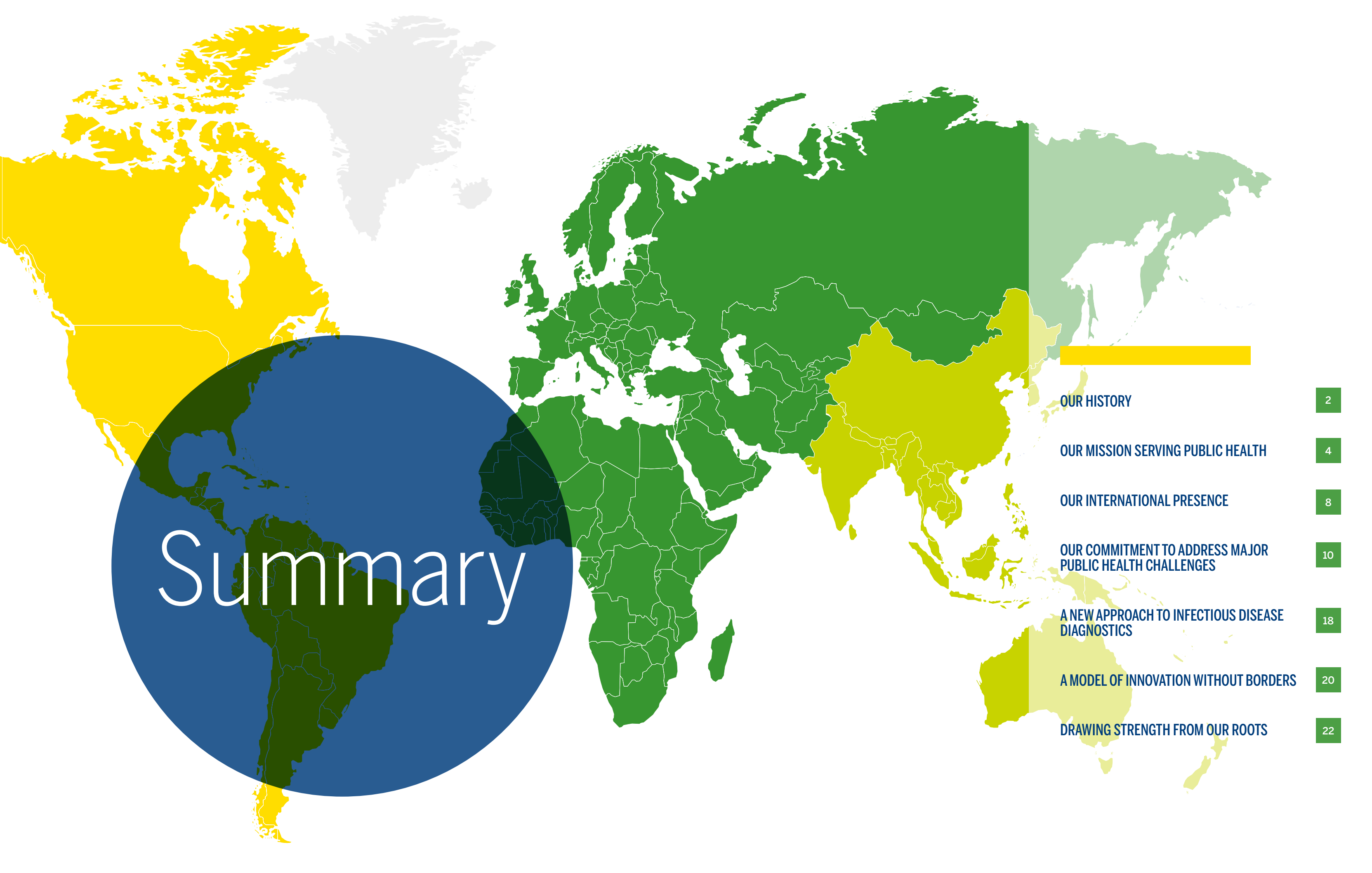
DIAGNOSTICS IS POWER

The power to fight infectious diseases

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PIONEERING DIAGNOSTICS



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Our history

A FAMILY COMMITMENT TO THE FIGHT AGAINST INFECTIOUS DISEASES

bioMérieux is first and foremost a human and scientific adventure that began more than 55 years ago. Its expertise and its commitment to expand the frontiers of knowledge in biology are grounded in an entrepreneurial adventure that has been ongoing for more than one century.

In 1897, Marcel Mérieux, who had studied with Louis Pasteur, founded a laboratory in Lyon where he developed the first antitetanus sera. He called it Institut Mérieux, and from the outset began to lay the groundwork for a bio-industrial edifice that would leave its mark on vaccinology and the diagnosis of infectious diseases worldwide.

bioMérieux, created in 1963 by Alain Mérieux, with headquarters located in Marcy l'Étoile, France, employs over 13,000 people. The Company is present in 44 countries and serves more than 160 countries through a large network of distributors, earning 90% of sales outside of France.

Since 2014, Alexandre Mérieux, the great grandson of Marcel, has taken over the management of this family-owned company as its CEO. In December 2017, he was appointed Chairman and CEO by resolution of the Board of Directors.

“The entrepreneurial adventure of bioMérieux is rooted in a strong family commitment to serve public health. Faithful to our pioneering spirit, our ambition is to remain a major player in infectious disease diagnostics. Thanks to our scientific approach, with no barriers between the disciplines and no geographic barriers, and bolstered by the commitment of our teams across the globe, we remain focused on this goal as part of our long-term vision.”

Alexandre Mérieux
Chairman and CEO





Our mission
serving
public health

THE IMPORTANCE OF DIAGNOSTICS

THE THREE KEY
TECHNOLOGIES
OF *IN VITRO*
DIAGNOSTICS:



DIAGNOSTICS ARE A FUNDAMENTAL SOURCE OF MEDICAL, ECONOMIC AND SOCIAL VALUE.

In vitro diagnostics are an essential link in the healthcare chain.

They are used for 70% of medical decisions of general practitioners and 80% in hospitals*. bioMérieux, a major player of *in vitro* diagnostics and world leader in clinical microbiology and industrial microbiological control, contributes to the quality of patient care and the safety of consumers.

bioMérieux develops and produces *in vitro* diagnostic solutions (instruments, reagents, software and services) for private and hospital laboratories, mainly for the diagnosis of infectious diseases. The results obtained from a patient sample (blood, urine, stool, cerebrospinal fluid, saliva, etc.) provide doctors with information to support their decisions.

For more than 25 years, bioMérieux has also applied the expertise acquired in the clinical sector to meeting industrial microbiology needs, making it possible to manage contamination risks in agri-food, pharmaceutical and cosmetic products, at each step of the production chain.

Microbiology

Microbiology is based on culturing biological samples, identifying microorganisms and measuring their resistance to antibiotics.

Immunoassays

Immunoassays use an immunological reaction to identify and quantify the presence of antigens and/or antibodies in a sample.

Molecular biology

Molecular biology is based on the detection of the DNA or RNA genetic sequences that characterize a disease agent in order to target several bacteria, viruses, yeast and parasites.

* The Lewin Group, "The Value of Diagnostics Innovation, Adoption and Diffusion into Health Care", 2005. This figure concerns all diagnostic tools: *in vitro* diagnostic tests and medical imaging exams.



How diagnostics benefit healthcare systems

Medical biology costs only represent a very little part of all healthcare spendings. This cost is limited when weighed against the medical value of diagnostics and the savings it can generate – both by reducing overprescription of treatments and by shortening the onset of care and the length of hospital stays.

Diagnostics is also a valuable instrument of healthcare policy, in particular for epidemiological monitoring and control.



For improved patient care

Diagnostic tests have a decisive impact on quality at each step of the healthcare chain:

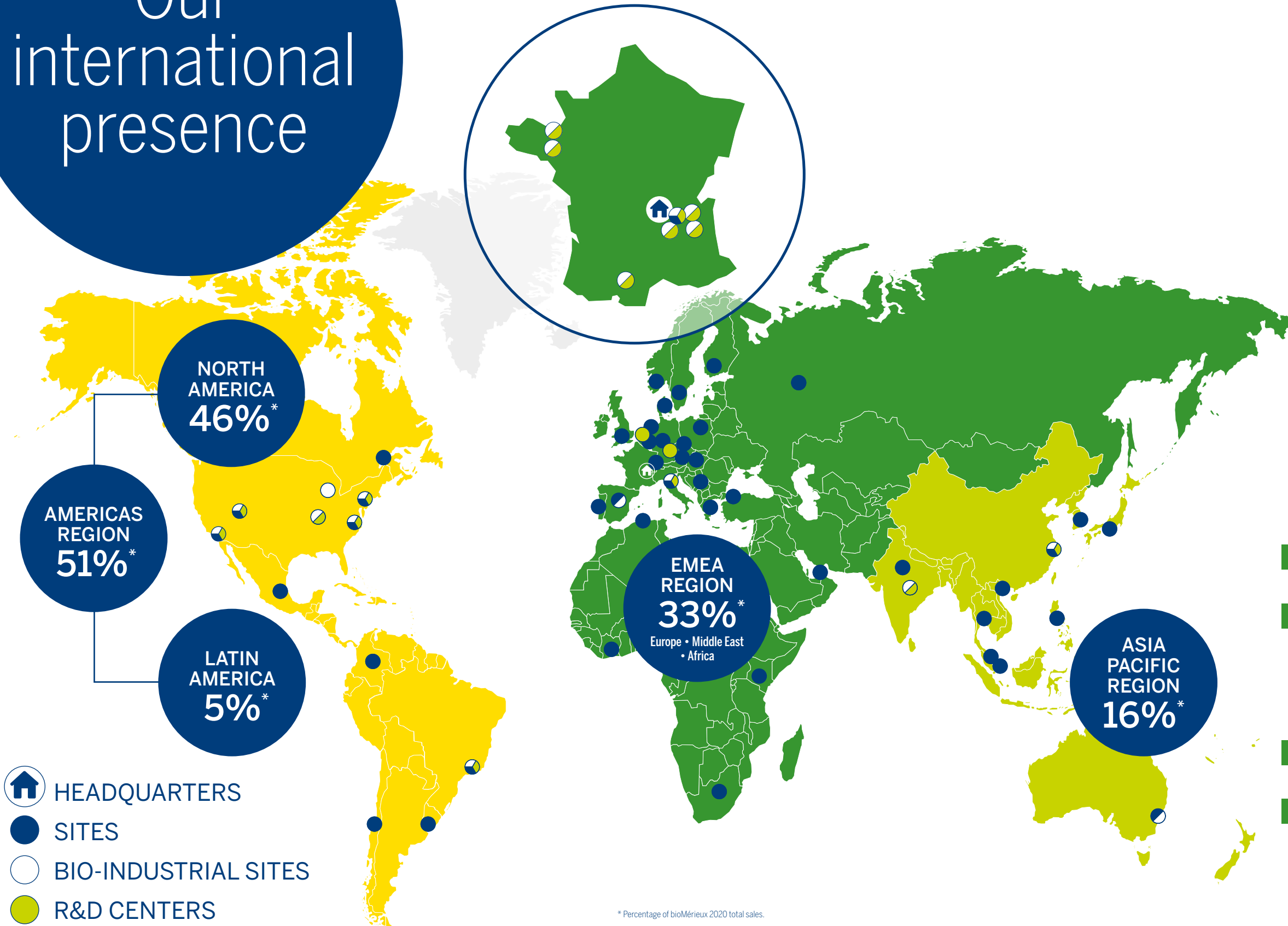
- For screening to help prevent certain diseases when the symptoms have not appeared yet.
- For early diagnosis at the onset of a disease, when symptoms are still very mild.
- For diagnosis and prognosis, in particular of infectious diseases, to identify the disease-causing agent and determine its antibiotic resistance profile.
- For therapeutic decisions and treatment monitoring.



For better consumer safety

Microbiological control tests make it possible to meet the quality demands of the agri-food, pharmaceutical and cosmetic industries. Performed along the entire production chain and for the environmental control of production zones, such tests ensure product sterility, the absence of disease causing bacteria and the enumeration of bacterial flora that indicate the quality of food products.

Our international presence



In a world where viruses and bacteria know no borders, our international outreach is an integral part of bioMérieux's history.

bioMérieux
is present in

44 countries

and serves more than
160 countries through a large
distribution network

15 bio-industrial sites

17 R&D centers worldwide



Our
commitment to
address major
public health
challenges

SOLUTIONS TO SERVE HEALTHCARE PROFESSIONALS AND INDUSTRY

Across the globe, bioMérieux's research teams are working to develop high medical value diagnostic applications that address public health challenges and laboratories' needs.



- Antimicrobial resistance
- Sepsis
- Respiratory infections
- Emerging pathogens
- Emergency situations
- Protecting consumers' health
- Efficiency of microbiology labs

Diagnostic tests

ESSENTIAL COMPONENTS OF ANTIMICROBIAL STEWARDSHIP PROGRAMS



Does the patient need antibiotics?
If so, which one?

Can the antibiotic prescription be optimized?

When can the antibiotic treatment
be safely discontinued?

ROLE OF DIAGNOSTIC TESTS

Confirm bacterial infection and identify the causative pathogen to ensure optimal patient outcomes and avoid unnecessary antibiotic use.

Determine a pathogen's resistance profile to select the most appropriate treatment, limit use of broad-spectrum antibiotics and avoid adverse side effects.

Monitor patient response to personalized treatment duration and discontinue antibiotics as early as possible.

BIOMÉRIEUX'S SOLUTIONS TO SUPPORT MEDICAL DECISIONS AND SERVE PUBLIC HEALTH



EPIDEMIOLOGICAL SURVEILLANCE, PREVENTION AND INFECTION CONTROL SOLUTIONS to avoid outbreaks and limit the spread of resistance



Antimicrobial resistance

A GLOBAL HEALTH EMERGENCY

Every 45 seconds, a person dies from an infection caused by bacteria which have become resistant to antibiotics*.

Diagnostic tests contribute to reducing the improper use of antibiotics and help ensure they remain effective for the treatment of bacterial infections in humans and in animals.

bioMérieux's mission is to contribute to protecting the health of patients and consumers, as well as the health of animals.

Taking a global health approach, the Company develops innovative solutions for clinical diagnostics and industrial microbiological control – particularly in the agri-food sector, environmental monitoring and veterinary diagnostics.

This holistic approach represents an essential asset when it comes to meeting public health needs such as antimicrobial resistance. It also allows bioMérieux to provide the most complete offering on the market.

* Based on the 700,000 deaths caused annually by antimicrobial resistance according to "Antimicrobial Resistance: Tackling a crisis for the health and wealth of nations", Jim O'Neill, December 2014.



The fight against sepsis

EARLY DETECTION, THE FIRST LINE OF DEFENSE

A recent study published in *The Lancet** shows that, although the incidence of sepsis and its mortality declined between 1990 and 2017, sepsis remains a major concern:

- an estimated 49 million cases of sepsis were recorded worldwide in 2017;
- sepsis is responsible for 11 million deaths, or close to 20% of all deaths worldwide in 2017;
- the incidence and mortality of sepsis varies considerably across regions, with resource-limited countries particularly affected.

bioMérieux provides the broadest product offering on the market for the diagnosis of sepsis, based on:

- the host response with the VIDAS® B·R·A·H·M·S PCT™ test;
- the detection, identification and characterization of disease agents, in particular with the BACT/ALERT®, VITEK®, ETEST® and BIOFIRE®;
- microbiology data monitoring with MYLA®.

* Global, regional, and national sepsis incidence and mortality, 1990–2017: analysis for the Global Burden of Disease Study. Kristina E Rudd, MD, Sarah Charlotte Johnson, MSc, Kareha M Agesa, BA, Katya Anne Shackelford, BA, Derrick Tsoi, BS Daniel Rhodes Kievlan, MD et al., *The Lancet*, volume 395, issue 10219, P200-211, January 18, 2020.



Respiratory infections

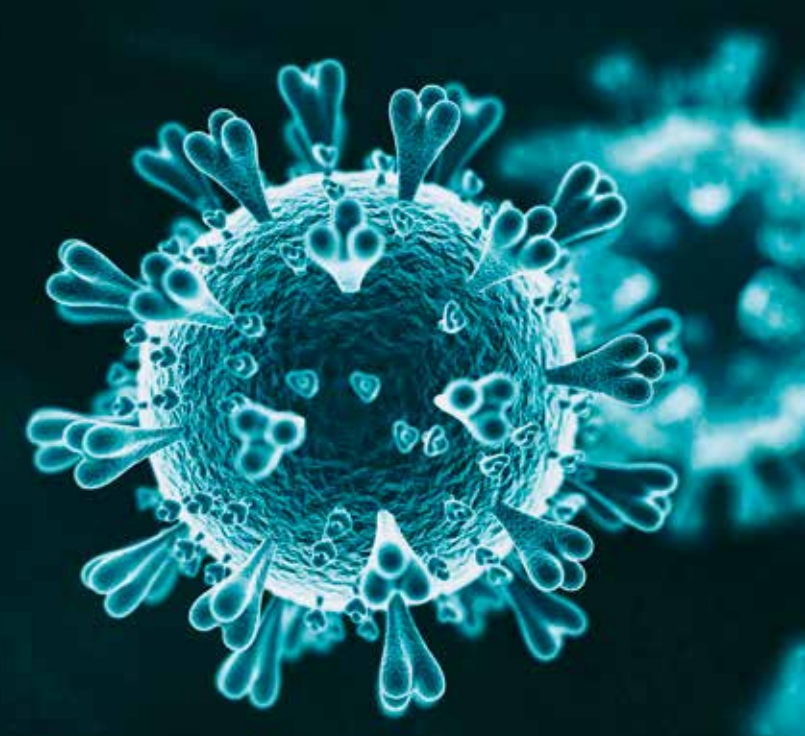
FIGHTING AGAINST THE LEADING CAUSE OF DISEASE WORLDWIDE

Upper respiratory tract infections are the leading cause of new cases of diseases, all diseases combined, both infectious and non-infectious*. Lower respiratory tract infections, including pneumonia, cause nearly three million deaths annually. It is the leading cause of death due to infectious diseases worldwide** and one of the primary reasons for hospitalization in Europe and the United States***.

To fight against these severe infections, bioMérieux proposes an extended offer with:

- PCR molecular biology solutions: the Respiratory Panel, Respiratory 2 (RP2), Respiratory 2 plus (RP2 plus), Respiratory EZ (RP EZ, sold in the United States), Pneumonia Panel and the Pneumonia Panel plus;
- the VIDAS® test for the host response;
- CHROMID® chromogenic culture media for the detection of *Pseudomonas aeruginosa*, *Staphylococcus aureus* and methicillin-resistant *Staphylococcus aureus* (MRSA);
- the VITEK® range for the identification and automated antimicrobial susceptibility testing of bacteria and yeasts;
- the ARGENE® range in molecular biology.

* GBD 2017 Disease and Injury Incidence and Prevalence Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017.
** Global Health Estimates 2016: deaths by cause, age, sex, by country and by region, 2000–2016. Geneva, World Health Organization: 2018.
*** McDermott KW, Elixhauser A, Sun R. Trends in hospital inpatient stays in the United States, 2005–2014. HCUP Statistical Brief #225. June 2017. Agency for Healthcare Research and Quality, Rockville, MD.



Emerging pathogens

ANSWERING APPROPRIATELY IN AFFECTED COUNTRIES

bioMérieux constantly monitors the emergence of new antimicrobial resistance mechanisms and/or the emergence of new resistant pathogens in order to develop its diagnostic solutions accordingly, such as the addition of *Candida auris* to the VITEK® MS database and the BCID2 panel (subject to FDA accreditation at the end of 2019).

In line with its public health mission, bioMérieux is also committed in the event of health crises linked to emerging or re-emerging pathogens, such as the Ebola virus epidemic in West Africa in 2014 or the lung plague epidemic in Madagascar in 2017, through studies to evaluate new rapid and automated molecular diagnostic tests.

bioMérieux is also developing its *in vitro* diagnostic tests for emergency situations generated by the emergence of new viruses such as MERS-CoV and more recently SARS-Cov-2, responsible for the COVID-19 pandemic.



Emergency situations

IMPROVED PATIENT MANAGEMENT

In emergency rooms, healthcare professionals need to initiate patient care as quickly and efficiently as possible. High medical value tests, such as VIDAS® B-R-A-H-M-S PCT™ for the diagnosis of bacterial infection and severe sepsis, the VIDAS® HIGH SENSITIVE TROPONIN I test for myocardial infarction, and the VIDAS® D-DIMER EXCLUSION™ test for pulmonary embolism provide rapid results to clinicians and contribute to optimized patient care.



Protecting consumers' health

MICROBIOLOGICAL CONTROL SOLUTIONS FOR CUSTOMERS IN INDUSTRY

Applying its expertise in clinical microbiology to serve customers in industrial production, bioMérieux offers a broad choice of solutions in industrial microbiological control, ranging from sample preparation to pathogen identification thanks to the BLUE LINE™, VITEK® or VIDAS® product lines.

GENE-UP® is a molecular diagnostics system designed for customers in the agri-food sector. The VERIFLOW® platform now completes this offer for wine and beer producers.



The efficiency of microbiology labs

THE MOST COMPLETE OFFERING ON THE MARKET

Automation is extremely important for microbiology laboratories to standardize analyses, ensure traceability and speed up time to results.

The "Lab Efficiency" offer is the result of a strategic partnership between COPAN's unique know-how in automation and pre-analytic solutions and bioMérieux's leadership in clinical microbiology diagnostics. "Lab Efficiency" makes it possible to automate and standardize each step of microbiology analysis thanks to:

- the WASP® (Walk-Away Specimen Processor) system for the automated plate streaking of Petri dishes;
- the WASPLab™ system for incubation, imaging and digital analysis.

These instruments make it possible to reduce the time required to identify bacterial growth. They complete the Company's range of automated systems, which include in particular BACT/ALERT® and BACT/ALERT® VIRTUO® for blood culture and VITEK® 2 and VITEK® MS for the automated identification of bacteria and antibiotic susceptibility testing.

In addition to these instruments, our "Lab Informatics" service solution, in particular with MYLA®, supervise the flow of information from instruments while providing full traceability of exchanges with the IT system and delivering relevant indicators of laboratory efficiency.



A new approach
to infectious
disease
diagnostics

THE SYNDROMIC DIAGNOSIS

MULTIPLE TARGETS WITH A SINGLE TEST

For most patients with an infectious disease, the first symptoms are not specific to the cause of the infection: fever, diarrhea, coughing, headache, etc.

The syndromic approach, based on using the BIOFIRE® FILMARRAY® multiplex molecular biology system, is especially valuable for this reason.

The BIOFIRE® FILMARRAY® technology delivers results within about 45 to 65 minutes. With a single test, it simultaneously detects, from a single sample, bacteria, viruses, yeast and parasites that may be causing an infectious disease.

These tests provide accurate, rapid answers for clinicians, which speeds up the decision-making process and improves patient care. As a pioneer and leader in the syndromic molecular diagnosis of infectious diseases, bioMérieux plans to further expand the BIOFIRE® FILMARRAY® menu.

THE BIOFIRE® FILMARRAY® PANELS COMPRISE THE LARGEST INFECTIOUS DISEASE PATHOGEN MENU ON THE MARKET:



RESPIRATORY



BLOOD CULTURE IDENTIFICATION



GASTROINTESTINAL



MENINGITIS/ENCEPHALITIS



PNEUMONIA



A model of innovation without borders

A PIONEERING AND VISIONARY SPIRIT

A combination of daring and an open mind that has been handed down from generation to generation, ambitious R&D programs, and top-notch scientists: innovation is an essential part of bioMérieux's DNA.

To create the diagnostic solutions of tomorrow, the Company has developed an open, multidisciplinary innovation model.

TWO PRIORITIES:

- To enhance the medical value of diagnostics with high clinical value tests that identify and characterize disease agents with growing precision, and deliver faster and increasingly reliable results to support treatment decisions and better patient care.
- To improve lab efficiency and more generally contribute to optimizing laboratories' operational performance.

FIVE DRIVERS:

- In-house innovation programs.
- International collaborations with academic and private research, the medical and scientific community and cutting-edge biotech companies.
- Joint research laboratories with hospitals, in close proximity to patients.
- Structuring, strategic acquisitions to access new technologies.
- Active scientific and technological watch at the international level.



1 800 employees
INVOLVED IN R&D



17 R&D centers worldwide
AND 3 JOINT RESEARCH PUBLIC/PRIVATE
LABORATORIES



Around **30** patents
FILED ANNUALLY



580 patent families
IN THE PORTFOLIO



Drawing strength from our roots

A HUMANISTIC CORPORATE OUTLOOK

The commitment to improve global public health by fighting against infectious diseases brings with it a unique responsibility, upheld by all the Institut Mérieux companies. As an extension of its public health mission, bioMérieux has always been mindful of the importance of its social responsibility.

OUR EMPLOYEES: OUR PRIORITY

The Company owes its success first and foremost to its employees. bioMérieux places great importance on ensuring that the working environment fosters their career development while respecting the balance between their professional and personal lives. Each employee is also expected to behave ethically and with integrity within the Company and in relations with external partners.

As a company that believes in its human capital, bioMérieux encourages internal mobility – to keep pace with jobs in a changing industry in the short term, and to respond to the Company's future development needs in the long term.



Almost **13,000** employees*

MÉRIEUX UNIVERSITÉ was created in 2014 for the employees of the companies that are part of Institut Mérieux in order to support their professional development, foster innovation, promote the expression of talent and contribute to employee engagement. It provides training in France, China, the United States and Brazil, ensures the transmission of a strong entrepreneurial culture and builds bridges within the Group.

* Full-time-equivalent employees and temporary staff.



A GLOBAL VISION OF HEALTH

bioMérieux, an Institut Mérieux company

bioMérieux is 59% owned by Institut Mérieux. Within the scope of a global, long-term vision, Institut Mérieux contributes its experience in industrial biology to improving medicine and public health across the globe. To fight against infectious diseases and cancers, the Institute designs and develops new approaches in the fields of diagnostics, immunotherapy, food safety, and nutrition.

Institut Mérieux employs more than **21,000** people around the world. It is present in **45** countries.

5 COMPANIES
with complementary activities

A FOUNDATION AS A REFERENCE SHAREHOLDER

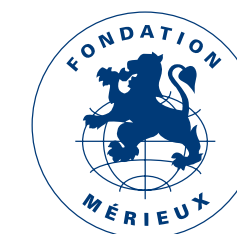
Fondation Christophe et Rodolphe Mérieux is Institut Mérieux's reference shareholder, with one third of its capital.

FIGHTING INFECTIOUS DISEASES THROUGH THE FOUNDATIONS

Within the framework of its sponsorship activity, bioMérieux supports the work of the Mérieux Foundation and the Fondation Christophe et Rodolphe Mérieux. Thanks to the support of bioMérieux and other partners, these two independent family foundations focus on the fight against infectious diseases that affect developing countries, in particular by helping them improve their clinical diagnostic capabilities.

- They are active today in close to 30 countries, including: Haiti, Guinea, Mali, Madagascar, Lebanon, Iraq, China, Laos, Cambodia and Bangladesh.
- 17 laboratories built and 34 renovated since 2005. The Rodolphe Mérieux Laboratories of excellence are dedicated to training biologists, diagnosing diseases specific to developing countries and conducting applied research.
- Through the Christophe Mérieux Prize, worth €500,000, the Fondation Christophe et Rodolphe Mérieux encourages research in developing countries. Since it was created in 2007, this prize has been awarded each year to scientists who work in the field to combat diseases devastating their countries.
- The Mérieux Foundation, an independent family foundation with public interest status, has been active in the field in outbreak-prone regions for over 50 years. With its network of laboratories, the foundation's work is focused on diagnosis, an essential aspect of patient care and an indispensable tool for disease surveillance and control.

The Mérieux Foundation works closely with Fondation Christophe et Rodolphe Mérieux, an independent family foundation under the aegis of the Institut de France, sharing the same public health goals.



FONDATION
CHRISTOPHE & RODOLPHE MERIEUX
SOUS L'EGIDE DE L'INSTITUT DE FRANCE