A world leader in the field of in vitro diagnostics for over 50 years, bioMérieux is present in more than 150 countries through 42 subsidiaries and a large network of distributors. In 2016, revenues reached €2,103 million, with more than 90% of international sales.

bioMérieux provides diagnostic solutions (instruments, reagents, software) which determine the source of disease and contamination to improve patient health and ensure consumer safety. Its products are mainly used for diagnosing infectious diseases. They are also used for detecting microorganisms in agri-food, pharmaceutical and cosmetic products.
2016 was an outstanding year for bioMérieux. We achieved excellent results in a balanced performance across all areas of the business. Today bioMérieux’s footprint places us among the industry elite. With nearly 10,000 employees and revenues up 9.6% to reach more than €2 billion, the Company is the world leader in microbiology, in both infectious disease diagnostics and industrial quality control. These remarkable results once again demonstrate the relevance of a long-term strategy that we are able to successfully implement in over 150 countries through our extremely solid network.

Innovation was this year’s guiding principle, taking the form of successful launches across all product lines: high medical value tests that respond to major public health challenges, and innovative solutions to support manufacturers in protecting the health of consumers while maintaining efficient production processes. This annual report highlights these achievements.

Our capacity for innovation is the result of a long-term vision that was essential in enabling us to carry out ambitious R&D programs in-house while forming high-level research partnerships with the international medical and scientific community.

Our capacity for innovation is also linked to our entrepreneurial approach to targeted acquisitions through which we gain technologies that are critical to the diagnostics of tomorrow.

With the successful integration of BioFire and, over the past two years, the growing prominence of its syndromic infectious disease diagnostic solutions, we are pioneers in a cutting-edge field for rapid, optimized patient care. In addition, we enjoy a stronger position in the now-essential field of data analytics following the early-2016 acquisition of Applied Maths, which models biological complexity to enhance the understanding of diseases and inform physicians.

Lastly, on the industry side, the acquisition of the company Hyglos, an expert in the development of recombinant proteins for the detection of endotoxins, has further broadened our expertise in quality control of pharmaceutical products.

We are witnessing the explosion of medico-scientific and technological knowledge as well as the arrival, in our business, of new stakeholders coming from beyond the healthcare sector.

Against this backdrop of fast-paced, constant change, bioMérieux enjoys the benefit of its diverse, world-class competencies. We mobilize our multidisciplinary R&D teams comprising more than 1,500 collaborators, including biologists and physicians as well as engineers and biomathematicians. We make use of high-potential technologies that, when combined with our century-old medical culture, represent a unique heritage and a singular advantage in understanding increasingly complex scientific challenges.

It is said that the medicine of the future will revolve around “four Ps”: Preventive, Predictive, Personalized and Participative. Without a doubt, diagnostics will have a key role to play in this new paradigm, and we are making every effort to further strengthen its medical value.

Sustained by our sound innovation strategy, the relevance of our acquisitions, the solidity of our bioindustrial fundamentals and the quality of our international network, we are poised to be a major player in the medicine of tomorrow.

bioMérieux has a clear vision for the future, and today we have the means to support our ambitions. Under the leadership of Alexandre Mérieux, the Company will be ready to evolve and to serve global public health even more closely.
WHAT WERE THE MAJOR TRENDS OF 2016?

In 2016, bioMérieux experienced excellent growth driven by all of our clinical diagnostics and industrial microbiological control activities, as well as all of our regions. Thanks to this balanced performance, sales were up by nearly 10% at constant exchange rates and scope of consolidation. We surpassed the symbolic threshold of €2 billion in 2016. Our contributive operating income grew by more than 14%. Thanks to the commitment of our teams and the relevance of our solutions, our development outpaced that of the market, reinforcing our microbiology leadership position for both clinical and industrial applications.

HOW DID BIOMÉRIEUX PERFORM INTERNATIONALLY?

Every one of bioMérieux’s regions made a positive contribution to our worldwide growth. Special mention goes to the excellent performance of the Americas region, which rose by 19%, buoyed by the success of syndromic diagnostics and the FilmArray® range. The Asia Pacific region also witnessed a strong recovery. As for the Europe - Middle East - Africa region, it maintained growth despite a particularly tense market context.

Our balanced geographic footprint, supported by a solid and extensive network, once again enabled us to progress on all fronts.
YOU MADE SOME MAJOR INVESTMENTS IN 2016. WHAT’S THE THINKING BEHIND THEM?

We feel confident in our strategic choices, and the results speak for themselves. However, we also know that our markets are undergoing profound change, and it is imperative to adapt. For all these reasons, we decided on an ambitious investment program that’s been implemented since 2015: in Marcy l’Étoile – home to bioMérieux since our family started the business, and where we continue to invest 100 years later – and in Salt Lake City to support the development of syndromic diagnostics. We’ve also invested in our bioindustrial facilities in Craponne, Durham, Hyderabad and Shanghai in order to increase our production capacity and to continue improving product quality, customer satisfaction and, ultimately, patient outcomes.

In addition to these investments at our bioindustrial sites, various projects are underway to make internal structural improvements that are designed to improve our responsiveness and efficiency in every area – from human resources to quality, production and information systems.

HOW DO YOU POSITION YOURSELF IN THE MEDIUM TERM? WHAT ARE YOUR AMBITIONS?

Our industry is undergoing substantial transformations: healthcare needs are growing increasingly complex and at the same time we are witnessing technological advances, which creates incredible opportunities for us. In addition to delivering even faster and more reliable results, we want to give healthcare professionals solutions that provide strategic information to further enhance the value of diagnostics in the continuum of care, and to advance public health. At the same time, we intend to contribute to the economic sustainability of healthcare systems thanks to the cost-effectiveness that diagnostics brings.

Our strategic vision is clear, our teams are motivated and our financial house is in order. Across all of the Company’s functions and areas of expertise, we are fully operational and ready to meet ambitious challenges, with confidence in the future!

YOUR AMBITION IS TO PROVIDE HEALTHCARE STAKEHOLDERS WITH HIGH MEDICAL VALUE SOLUTIONS. IN PRACTICAL TERMS, WHAT DOES THIS MEAN?

As we uphold our commitment to public health, we pursue a medical vision that puts the patient at the center of the decisions we make. We envision solutions that will bring clinicians the most relevant information, as quickly as possible, so they can deliver a better quality of care. The solutions we have developed to improve the management of sepsis or to combat antimicrobial resistance – both major public health challenges – are just two examples. In 2016, we further expanded our high medical value offering, in particular with the enhancement of the VITEK® MS database and the FDA* approval for the expanded use of the VIDAS® B·R·A·H·M·S PCT™ test to limit the inappropriate and ineffective use of antibiotics in the event of sepsis or respiratory infection.

Beyond a simple test result, we want to give physicians information that will be pivotal in medical decision-making.

With the rise of smart data, healthcare professionals must deal with ever-increasing quantities of complex data coming from different sources. Our expertise in microbiology combined with the specialized bio-informatics know-how of Applied Maths (a company we acquired in early 2016) enables us to provide doctors with new tools to facilitate data interpretation and decision-making that will further improve medical care for patients.

HOW DOES MOLECULAR BIOLOGY CONTRIBUTE TO THE GROUP’S MOMENTUM?

It is clearly a growth driver with the remarkable breakthrough of syndromic diagnostics and the FilmArray® product line, which we continue to develop. In 2016 it was further enhanced with the addition of the new FilmArray® Torch system, which received FDA clearance and CE marking.

The strong growth of this product line is proof that we are meeting a real medical need. Thanks to our innovative syndromic approach, with a single test and quick turnaround times, we are able to provide physicians working in critical situations the answers to a great number of questions, such as: What is causing my patient’s condition – a virus, a bacterium, a fungus? Which one? Based on the results, what treatments will be most effective? We continue to roll out FilmArray® in Europe, where the reception has been promising, and everywhere these innovative solutions will improve patient care.

Among our other molecular biology solutions, we successfully launched eMAG®, our next generation platform for DNA/RNA extraction.

* The U.S. Food and Drug Administration.
Sales amounted to €2,103 million in 2016, versus €1,965 million in 2015, an increase of 7.4% at constant exchange rates and scope of consolidation.

Contributive operating income before non-recurring items was driven by strong sales growth. It was up 14.5% compared to 2015, to €298 million, or 14.2% of sales.

Sales growth was chiefly driven by strong sales in the Americas region (representing 42% of sales in 2016 compared to 35% in 2015), especially in the FilmArray® line. Americas are now the first region for the Group in terms of sales contribution.

Approximately 60% of sales were generated in clinical and industrial microbiology, two areas where bioMérieux is the world leader. In 2016, sales growth in molecular biology (15% of sales in 2016 compared to 12% in 2015) was driven by the success of the FilmArray® line. Supported by the commercial dynamics of the VIDAS® range, immunoassays represented 21% of sales.

Above the target set at the beginning of the year, the contributive operating income before non-recurring items was €236 million, the results of the industrial investment strategy intended mainly to increase capacity and productivity of the production facilities. The total capital expenditures for the year amounted to €272 million, or 12.9% of sales.

Continuing its innovation efforts, the Group invested €272 million in research and development in 2016, or 12.9% of sales. This increase reflects the intensification of activities associated with the FilmArray™ line.

We reached our objectives in 2016 thanks to several factors: the value of the solutions we provide to our customers, the scope of our geographical expansion, and the rigorous management of our operations, which are essential drivers of bioMérieux’s future development. We continue in this same spirit to pursue our efforts to serve patients and customers.

**“We reached our objectives in 2016 thanks to several factors: the value of the solutions we provide to our customers, the scope of our geographical expansion, and the rigorous management of our operations, which are essential drivers of bioMérieux’s future development. We continue in this same spirit to pursue our efforts to serve patients and customers.”**

Claire Giraut
Corporate Vice President and Chief Financial Officer
Clinical applications represented around 80% of Group sales in 2016, a year of remarkable growth spurred by all our product lines: microbiology, immunoassays and molecular biology.

**MICROBIOLOGY**

Innovation in blood culture lines

In 2016, bioMérieux received CE-marking for a new generation of its automated system BacT/ALERT® VIRTUO™, the first continuously monitoring blood culture microbial detection system. The Company also submitted an application for FDA clearance, which was granted in April 2017. The new version of the BacT/ALERT® VIRTUO™ system features an integrated, scalable configuration to facilitate the management of large volumes of patient samples, reaching up to 100,000 bottles per year. This innovative system allows personnel with any skill level to continuously load bottles into the instrument, any time throughout the day and night, 24/7. It features blood level detection that directly measures the blood volume added to each blood culture bottle to track and ensure collection of the recommended blood volume. BacT/ALERT® VIRTUO™ uses standard blood culture bottles and FAN® Plus bottles, which were developed to promote improved neutralization of antibiotics, thereby encouraging optimal microbial growth performance. This highly automated blood culture solution allows more rapid detection of pathogens by clinical microbiology laboratories, which is of crucial importance so that patient treatments may be adapted quickly, especially in the event of serious infections that could progress to severe sepsis.
More than 15,000 strains in the VITEK® MS database

The VITEK® MS database, for rapid identification of microorganisms using mass spectrometry, has been expanded to enable the detection of mycobacteria, Nocardia and molds that are very difficult to identify. VITEK® MS offers simple, rapid and reliable identification of these pathogens, so that clinicians can more quickly manage the infections they cause, such as tuberculosis, lung and bone, and other serious infections. These are the first CE-marked database and reagent kits for this type of identification.

The extended VITEK® MS database is the largest dedicated to clinical applications in the field of in vitro diagnostics.

A new product in the Etest® range

Commercially available since the end of 2016, the antibiotic susceptibility Etest® Ceftriaxone/Tazobactam test targets bacteria that cause complicated urinary tract and intra-abdominal infections. For these infections, the test enables physicians to determine appropriate antimicrobial therapy with great precision.

Enhancing the range of women’s health solutions

The VIDAS® Anti Müllerian Hormone (AMH) test was launched in 2016 in some countries. Testing AMH is useful for women undergoing fertility treatment and enables personalization of the different stages of ovarian stimulation. In addition, AMH can play a role in the diagnosis of certain types of ovarian dysfunction (for example the polycystic ovary syndrome). The new test enhances the existing range of VIDAS® women’s health solutions for diagnosis and follow-up of the most important types of mother-to-fetus infection and for diagnosis and investigation of reproductive hormone dysfunction.

Ensuring improved management of sepsis patients

The VIDAS® BRAHMS PCT™ test received 510(k) clearance from the U.S. FDA to expand its use for repeated monitoring of procalcitonin (PCT) levels, after the initial diagnosis, to aid in the management of sepsis patients. A study has shown that monitoring PCT levels over four days can help doctors determine which patients with sepsis are at the greatest risk of death, enabling them to quickly adjust or intensify treatment.

In addition, bioMérieux also made a presentation to the FDA Advisory Committee about the value of the VIDAS® BRAHMS PCT™ test: first, to aid physicians in prescribing the most appropriate antibiotic for patients with suspected lower respiratory tract infections such as pneumonia, acute bronchitis, and acute exacerbations of chronic obstructive pulmonary disease, and second, to discontinue antibiotic therapy for sepsis patients in intensive care.

"Clinical microbiology laboratories provide doctors with vital information about the infections affecting their patients. In light of antimicrobial resistance and the major public health threat it represents, they play an essential role. As a pioneer in diagnostics and a specialist of infectious diseases, bioMérieux develops solutions with high medical value to provide even faster, more accurate diagnostic test results and improve patient outcomes."

"In 2016, our teams conducted a number of studies (health economics and outcomes research) to demonstrate the medical value of our diagnostic tests along with their economic value, in particular for the VIDAS® BRAHMS PCT™ tests and the FilmArray® panels. The balance between the strong performance of our tests and their medical and economic impact is particularly important to us. Improving the quality of care and advantages for patients, while at the same time reducing hospital stays, is important for patient outcomes and for the sustainability of healthcare systems. This is a fundamental part of our long-term commitment to serve public health."

"After one year of constructive competition between the three main manufacturers on the market, the bioMérieux-COPAN solution (WASPLab® and VIRTUO®) was selected for the automation of the bacteriological laboratory of the Institute for Infectious Agents of Lyon (IAI). The IAI will be the sole microbiology laboratory for the city of Lyon’s public hospitals; its automated bacteriology platform will be open 24 hours a day, 7 days a week. This ambitious project will be inaugurated in the second quarter of 2017. bioMérieux is a key partner for the lab’s spatial and functional organization, as well as the instruments."

Professor François Vandenesch
Lyon Civil Hospitals, Coordinator, Institute for Infectious Agents

* Walk away Specimen Processor: WASP® is an automated plate streaking system and WASPLab® is an incubation, imaging and digital analysis system.

**For more information:
www.biomerieux-diagnostics.com/vidas-ahh-counties-list

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MOLECULAR BIOLOGY

The success of the syndromic approach

Facing patients with an infectious disease, it is easy for a physician to identify the kind of infection (respiratory, gastrointestinal, blood) but difficult to identify the pathogen causing the infection. This is very important because the type of pathogen defines the type of treatment that will be effective. For this reason, the syndromic approach, based on using the FilmArray® multiplex PCR* molecular biology system, is especially valuable. From a single sample and in about one hour, this pioneering technology simultaneously detects bacteria, viruses, yeast and parasites that may be the cause of an infectious disease.

Five panels are currently available for doctors and laboratories. Today, bioMérieux is the market leader of this high medical value approach, providing the most complete menu on the market for the syndromic diagnosis of infectious diseases.

A system designed for hospital laboratories of every size

The success of the syndromic approach led to an increasing demand from hospitals for a higher throughput system. bioMérieux responded with the launch of FilmArray® Torch. This new platform has both CE-marking and FDA approval for use with most FilmArray® panels. FilmArray® Torch is a high-throughput, very compact system that can continuously test up to 264 patient samples per day.

A FULL MENU FEATURING 5 FILMARRAY® PANELS:

• The FilmArray® Respiratory Panel simultaneously analyzes 20 viruses and bacteria that may cause respiratory infections, directly from nasopharyngeal swabs.
• The most recent addition, the FilmArray® Respiratory Panel EZ (RP EZ), which detects 11 viral and 3 bacterial pathogens associated with respiratory infections, has been FDA cleared and CLIA- waived for use in small point-of-care laboratories in the United States.
• The FilmArray® Blood Culture Identification Panel identifies the 24 pathogens most frequently responsible for bloodstream infections as well as 3 antibiotic resistance genes, directly from a positive blood test.
• The FilmArray® Gastrointestinal Panel identifies 22 of the most common causes of infectious diarrhea, directly from a stool sample.
• The FilmArray® Meningitis/Encephalitis Panel identifies 14 bacterial, viral, and fungal causes of meningitis and encephalitis, directly from cerebrospinal fluid.

"The FilmArray® system was designed to make syndromic diagnostics possible. Thanks to our worldwide teams, patients everywhere benefit from this high medical value approach. Our panels allow physicians to make quick, accurate decisions about the most appropriate therapy for their patients. Our teams are highly committed to expanding the FilmArray® menu, broadening our global reach, and continuously improving our systems so people get on the right treatment fast." — Randy Rasmussen, Corporate Vice President Molecular Biology

A new platform for the extraction of nucleic acids

In late 2016, bioMérieux launched eMAG®, a new generation automated system for the extraction of nucleic acids (DNA and RNA). eMAG® builds on the quality, robustness and ease of use that made the NucliSENS® easyMAG® platform so successful, adding automation from the primary sample tube, greater traceability and higher throughput, as well as an unparalleled degree of flexibility, not previously available on an automated system for the extraction of nucleic acids.

Extraction is the first step of molecular biology testing, making it possible to obtain purified nucleic acids that will subsequently be amplified and detected. The efficiency of the extraction of nucleic acids has a decisive impact on the quality of a diagnostic test’s final result. This step is particularly complex because there may be very different sample types.

THE MENINGITIS/ENCEPHALITIS PANEL RESPONDS TO AN UNMET HEALTH NEED

The FilmArray® Meningitis/Encephalitis Panel is the first to address a critical unmet need for the rapid, accurate identification of central nervous system infections. When a patient is admitted to hospital with symptoms that are typical of meningitis, it is important to be able to quickly identify cases of bacterial meningitis so that the appropriate antibiotic treatment can be prescribed. The FilmArray® Meningitis/Encephalitis Panel delivers this answer to physicians in about an hour. In the case of viral meningitis, a rapid result means that unnecessary treatment with antibiotics can be avoided.

Using BioFire’s FilmArray® Meningitis/Encephalitis Panel has the potential to significantly impact patient treatment for cases of suspected meningitis. In the United States, current diagnostic tools are underutilized and not available in a timely manner to alter the empirical treatment for the majority of patients, especially for those who may have viral meningitis and do not benefit from antibiotics.”

Rodrigo Hasbun, Associate Professor of Medicine at the University of Texas Medical School in Houston

* Polymerase Chain Reaction technology for the amplification of genetic sequences.
* Clinical Laboratory Improvement Amendments.
As is true of all the biosciences, diagnostic technologies generate increasingly large volumes of biological data. When we know how to manage the complexity of such data, they provide a wealth of information to deepen our knowledge of microorganisms and infectious diseases. In January 2016, bioMérieux acquired Applied Maths, boosting the Company’s capabilities in bio-informatics and state-of-the-art solutions for interpreting complex biological data. bioMérieux’s teams are preparing the new generations of the BioNumerics® software platform to transform Big Data into a line of tools and services that will be directly useable by various stakeholders in public health.

Sequencing our collection of microbial strains
bioMérieux oversees the management of a rich, constantly-growing collection of strains that today includes 89,000 micro-organisms. Composed of bacteria, yeast and molds that are particularly representative of real-life clinical conditions, it is one of the largest collections in the world. Thanks to advances in genomics and proteomics, these microorganisms are undergoing in-depth characterization, particularly by fully sequencing their genomes and by using mass spectrometry. All of this amassed information constitutes a precious body of knowledge for the development of bioMérieux’s innovative solutions.

“Information technologies and new numerical datasets make microbiology and its medical and industrial applications even more powerful. By combining our solidly-established expertise in microbiology with new capabilities coming from Applied Maths, we can now offer our customers the advantage of new services based on data analysis, thereby enriching and expanding bioMérieux’s offering. We are taking the first step to be an active player in the digital transformation of our environment. There is no doubt that information technologies will play an increasingly important role in bioMérieux’s future development.”

Alain Pluquet
Corporate Vice President
Chief Data Officer

"By innovating and modernizing both our products and the processes we use to create them – whether in the field of molecular biology, microbiology or immunosassays – we are on the mark and better able to meet our customers’ needs. Our ambition is to develop solutions with high medical value at the best cost, for results that are increasingly accurate, rapid, comprehensive and actionable."

Kirk Ririe
Corporate Vice President
Chief Innovation Officer
TOP-NOTCH PUBLIC-PRIVATE PARTNERSHIPS

**Metagenomics**
BIOASTER / Geneva University Hospitals / Lyon Civil Hospitals / Centre Léon Bérard (France / Switzerland)
Characterization of intestinal, respiratory and blood flora in order to determine the bacterial and viral composition. Alliance of sequencing technologies and bioinformatics in real hospital and clinical settings to demonstrate the value of solutions based on metagenomics.

**Ultra-rapid microbiology**
BIOASTER / Clinique des Cèdres (France)
Ultra-rapid microbiology to deliver results for pathogen identification and antibiotic resistance.

**Sepsis**
BIOASTER / College of Industrial Physics and Chemistry of the city of Paris (ESPCI) / GSK / Lyon Civil Hospitals / Sanofi (France)
This highly original public-private research collaboration combines medical expertise, academic research, diagnostic and pharmaceutical innovation in the fight against sepsis. It is part of the REALISM (REAnimation Low Immune Status Markers) research program, designed to identify and validate new biomarkers to improve the management of patients presenting a high risk of sepsis.

**Innovative Medicines Initiative (IMI)**
bioMérieux has been a member of EFPIA* since 2016. As the only company from the diagnostics sector, it joined the IMI’s Strategic Governing Group dedicated to infection control and is a partner in the project focusing on *Clostridium difficile*, where it represents the viewpoint of industry. This project, organized as part of the IMI’s “New Drugs for Bad Bugs” program, aims to assess challenges and current practices.

**Tuberculosis**
P.D. Hinduja Hospital (India)
Partnership for tuberculosis research to allow faster and more accurate diagnosis and to improve therapy.

**Dengue and Chagas disease**
University of São Paulo (Brazil)
R&D program aiming to develop diagnostic solutions for tropical infectious diseases.

**Cancer**
Fudan University Hospital Cancer Center (China)
Laboratory and joint research projects on biomarkers in oncology.

**Chagas disease and drug-resistant malaria**
Institut Pasteur (France / Cambodia)
The first project focuses on Chagas disease diagnostics, while the second is designed to optimize the first molecular prototype for monitoring artemisinin resistance (the most recent antimalarials are artemisinin-based).

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* European Federation of Pharmaceutical Industries and Associations.

**The project is called “Addressing the clinical burden of *Clostridium difficile* infection: Evaluation of the burden, current practices and set up of a European Research Platform”.”

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99 scientific publications by bioMérieux authors in 2016
104 posters or oral communications presented at international congresses
222 patents delivered in the United States and 141 patents delivered in Europe, at the end of 2016, for clinical applications
With growth of 6.6% in 2016, industrial microbiological control applications delivered a solid performance. They account for around 20% of bioMérieux’s total sales.

The bioMérieux teams concentrated on the specific challenges and needs of major industrial sectors undergoing rapid growth, which are faced with a real microbiological risk: sterile pharmaceutical production and blood banks for customers in the pharmaceutical sector, the dairy industry, the meat industry, service laboratories, and firms that transform food products for customers in the agri-food sector.

The aim is to work with opinion leaders, to understand the regulations that govern and impact the activities of these customers and to better grasp their needs. This approach directs research and development activities towards projects concerning these priority sectors. It also enables the sales force to develop a personalized offering for each customer, which is optimal both in terms of time-to-results and cost, thus enabling them to increase productivity. In addition, in a context of globalization, the Company has a specific commercial organization dedicated to key accounts so that these customers can interact with the same person regardless of where their production infrastructure is located.
AGRI-FOOD SECTOR

A new automated molecular biology system

GENE-UP® is a PCR-based* molecular diagnostic system for the detection of pathogens (bacteria and viruses) that may be present in food products. It was launched on the US market at the end of 2015. Designed for customers in the agri-food sector, it enables the microbiological control of food products, raw materials and the production environment. In 2016, it was launched in Europe with gradual roll-out starting in September for the rest of the world.

In late 2016, the molecular biology solution was adopted by a major player in the New Zealand dairy industry.

PHARMACEUTICAL SECTOR

New products enter the market

In October 2016, bioMérieux launched EviSight™ Compact, a new automated diagnostic solution for microbial detection in pharmaceutical production. Resulting from the acquisition of the company Advencis in October 2014, EviSight™ Compact is an intelligent incubator system that provides real-time culture media reading. Developed for use in pharmaceutical industry R&D and production settings, it performs many tasks with a single system: incubation, intelligent automated detection and enumeration of colonies of bacteria, yeasts and molds.

In late 2016, bioMérieux launched the TEMPO® Challenge Test for customers in the cosmetics industry. This innovative application, available on the TEMPO® system, is the first automated solution that allows the cosmetics industry to test its product formulas, for example, to guarantee the microbiological safety of a skin cream that will be used daily and come into repeated contact with users' hands, which are covered with microorganisms.

In addition to automation, the TEMPO® Challenge Test provides enhanced standardization of tests and valuable time savings during the development cycle of new cosmetic products.

Stepping up manufacturing capacity for production environment monitoring

When bioMérieux invested in the Company’s biindustrial tool at the Craponne (France) site, it had the needs of pharmaceutical customers in mind. Two new lines produce Count-Tact® culture media for the microbiological control of surfaces and culture media for monitoring of air in the pharmaceutical production environment. These investments have accompanied a boost in sales of culture media, observed especially in Europe.

Contract with the UK National Health Service (NHS) renewed

The agreement between bioMérieux and the National Health Service and Blood Transplant (NHSBT) was renewed for two years. It concerns the screening of platelets for the detection of bacteria using automated BacT/ALERT® microbial detection systems.

* PCR: Polymerase Chain Reaction, a technology for the amplification of nucleic acids.
VETERINARY APPLICATIONS

In the current context of efforts to combat resistance to antibiotics, and of programs to promote the judicious use of medicines in farm animals, sales of the VITEK® range for automated identification and antimicrobial susceptibility testing have made excellent progress.

Moreover, professionals in veterinary clinics use the VIDAS® immunoassay platform, in particular for tests related to reproduction; sales of these tests also reflected a dynamic commercial performance.

In line with “One Health”, an integrated approach promoted by international organizations that aims to strengthen the connection between human health, animal health and environmental management, bioMérieux’s veterinary franchise was present in April 2016 on the stand during the European Congress of Clinical Microbiology and Infectious Diseases (ECCMID) for the first time. As the only diagnostics company offering product lines covering both human and animal health, bioMérieux highlighted its diagnostic solutions, especially the VITEK® 2 system for automated identification and antimicrobial susceptibility testing, and Etest®, which determines the Minimum Inhibitory Concentration (MIC) of antibiotics for efficacy against a specific bacterium.

AQUAPAD ON BOARD THE INTERNATIONAL SPACE STATION

In November 2016, a bioMérieux solution for the microbiological control of water took off for the International Space Station (ISS). AquaPad is a microbiological analysis kit developed by bioMérieux and France’s National Center for Space Studies (CNES). It is designed to detect any contamination of the station’s drinking water. French astronaut Thomas Pesquet, on board the ISS from November 2016 to May 2017, performs the diagnostic tests using this innovative kit containing a dehydrated culture media. After water is injected, the kit is left at ambient temperature in the ISS, the time required for bacterial growth and the formation of red-dots colonies visible to the naked eye. These colored dots attest of the microbiological contamination of water.

“We are ever more intent on listening to our customers to deliver tools and solutions that meet their needs and enable them to fulfill their objectives. Our actions were bolstered by this mindset in 2016 and we plan to keep it in 2017. Our aim is to bring microbiological control even closer to the production environment and to enrich our current portfolio. At the same time, we also want to build on the recent acquisition of Applied Maths, whose solutions are already widely used in the agri-food sector, in order to provide decision-making tools to our customers based on the quantity of data available to them.”

Nicolas Cartier
Corporate Vice President
Industry Unit
2016 marked the fifth consecutive year of growth in the EMEA* region, with sales up 2.7%. While performance varied from one area to another, it was buoyed by all our product lines.

**CONTRASTED PERFORMANCE IN WESTERN EUROPE**

In France, as the market responded to a demanding environment, there was a slight slowdown of growth in 2016 that may be explained by the concentration of clinical microbiology laboratories.

Our alliance with COPAN, a leading manufacturer of innovative automated pre-analytic solutions, gave the first customers access to a complete solution for the automation of microbiology laboratories.

The EMEA region is organized into clusters to ensure greater proximity to customers and to address their specific needs, regardless of the country where they are located. In 2016, the Iberia cluster, made up of Spain and Portugal, recorded brisk sales driven largely by bioMérieux’s industrial applications.

In Western Europe, 2016 was a good year for Germany and the United Kingdom as well as Switzerland, where FilmArray® was greeted with enthusiasm.

**MIDDLE EAST, TURKEY, RUSSIA AND CAUCASUS: A VERY POSITIVE YEAR**

Growth was robust in these regions, spurred by all product lines, particularly VIDAS® in clinical applications and microbiology lines in industrial applications. Turkey, Russia and Saudi Arabia were the countries with the most dynamic growth.

At the end of the year, the VIDAS® immunoassay range showed sustained gains in several Middle Eastern countries.

* Europe - Middle East - Africa.
AFRICA
In keeping with its organization into geographical clusters, the EMEA region now includes a cluster covering the African continent, with the creation of a hub in Nigeria to complement existing subsidiaries.

FILMARRAY® IN THE EMEA REGION
The FilmArray® syndromic molecular solution for the diagnosis of infectious diseases is the range that exhibited the strongest growth in the region, especially in Switzerland and the United Kingdom. The FilmArray® solution is being rolled out by a team of dedicated experts. Physicians and biologists, who appreciate the relevance and medical value of the syndromic approach, welcomed the launch of the FilmArray® Meningitis/Encephalitis Panel, which received CE marking in January 2016. A number of medico-economic studies are currently underway in Europe to highlight both the clinical utility of the syndromic approach for healthcare professionals and patients, and its economic value for healthcare systems.

WHAT ROLE FOR SYNDROMIC MOLECULAR DIAGNOSTICS IN AFRICA?
The FilmArray® technology, which was introduced for the first time in Africa in response to the disease epidemic caused by the Ebola virus, demonstrated its benefits to the continent’s healthcare professionals. By late 2016, most countries in this cluster had voiced their interest in the FilmArray® platform for molecular syndromic testing. They are especially interested in the medical value of the panels, as well as the ease of use of this system, which integrates sample preparation, amplification and pathogen detection. Two panels respond particularly well to the medical needs of this region: the Meningitis/Encephalitis Panel and the Gastrointestinal Panel.

ONE REGION – 7 CLUSTERS
Since 2015, the EMEA region has been divided into regional clusters to promote synergies through homogenous processes and certain centralized functions to provide our customers with better service. Each cluster follows a strategy adapted to its sphere of influence and a dedicated management team. Today, there are seven clusters: Northern Europe, Central Europe, France, Adriatic, Iberia, METER* and Africa.

A DYNAMIC YEAR FOR INDUSTRIAL MICROBIOLOGICAL CONTROL
The Company’s activity on the industrial applications market is undergoing strong growth, driven by its dedicated solutions for customers in both the agri-food sector and the pharmaceutical industry.

Food safety
Within the agri-food production business, the VIDAS® immunoassay platform witnessed excellent growth. The GENE-UP® molecular biology solution recorded its first breakthroughs in the meat processing industry, bolstered by its complementarity with VIDAS®. Spain distinguished itself in 2016, in particular for its sales performance in food safety.

Quality of pharmaceutical products
In the pharmaceutical sector, 2016 was marked by the solid performance of our solutions for the environmental control of production zones dedicated to sterile pharmaceutical products. The Company thus reaped the fruits of the launch of the 3P® range in 2015 and investments at the Craponne biobusiness site in France, which has two new production lines dedicated to these products.

Encouraging prospects for veterinary diagnostics
Veterinary diagnostics is a new market for bioMérieux. Sales in 2016 of the VITEK® automated systems for identification and antibiotic susceptibility testing and of the VIDAS® tests, which are used as part of reproduction protocols, suggest that promising opportunities lie ahead.

"With the creation of the Africa cluster, in 2016 we completed the new geographical organization of the EMEA region, which enables us to continually improve our customer service, regardless of country, and strengthen internal collaborations. At the same time, we are committed to forming long-term partnerships with our customers. We want to provide not a one-off response from time to time, but ongoing support and solutions for every challenge they encounter. Therein lies the added value of our solution-based approach, such as for managing sepsis patients. Because it’s a global solution, it allows us to provide a custom-made offering for each laboratory.”

TESTIMONIAL
“The FilmArray® Meningitis/Encephalitis Panel has been a transformational advance in the rapid diagnosis of bacterial and viral infections of central nervous system and an invaluable addition to our laboratory as a robust molecular diagnostic platform. Results are extremely impactful as they provide results in the shortest time, facilitating and targeting treatment to those patients with confirmed positive results. The panel has provided confidence to clinicians to make key management decisions such as earlier discontinuation of empiric antibiotic and antiviral therapy, facilitate earlier discharge of patients and providing assurance to patients and families with confirmation or exclusion of meningitis/encephalitis. The FilmArray® Meningitis/Encephalitis Panel should be available in all diagnostic laboratories as it is cost effective and provides significant quality improvement in diagnosis and management of meningitis and encephalitis.”

Doctor Pradeep Subudhi
Consultant Microbiologist and Department Head, Bolton NHS Foundation

Yasha Mitrotti
Corporate Vice President
Europe - Middle East - Africa Region & Global Commercial Performance
Over the past three years the Americas region has witnessed fast-paced growth, which reached 19% in 2016 thanks to sales in North America and Latin America.

At the end of 2016, the FilmArray® molecular biology range was seen as one of the leading growth drivers in the Americas region. Business activity was also fueled by the rapid development of the VIDAS® immunoassay range, in particular the VIDAS® B-RA-HM-S PCT™ test.

In addition, solid growth was observed for VITEK® and BacT/ALERT® microbiology reagent sales along with industrial applications to test for microbiological quality of food products and to protect consumers’ health.

**BACTERIAL RESISTANCE AND SEPSIS: CHALLENGES THAT REQUIRE ACTION**

Awareness of the threat posed by antimicrobial resistance and sepsis is growing steadily among the general public and within health agencies such as the Centers for Disease Control (CDC) and Centers for Medicare & Medicaid Services. This context provides underlying support for such strong momentum of bioMérieux’s portfolio of diagnostic solutions, currently the most comprehensive on the market to address these challenges.

In 2016, the portfolio was further bolstered with the FDA authorization to expand the utilization of the VIDAS® B-RA-HM-S PCT™ test to monitoring patients with sepsis who present a high risk of mortality. In 2017, its use was expanded again to patients with suspected or confirmed lower respiratory tract infections.

The range of the Company’s solutions makes it possible to accelerate and facilitate medical decision-making while contributing to the appropriate use of antibiotics and shorter hospital stays which benefits patient care. A stronger emphasis was seen for automated susceptibility testing which was represented through increased sales of VITEK® 2 reagents. Additionally, these benefits are felt by hospitals, which are subject to growing budget constraints and look to diagnostic solutions to help bring spending under control.
ROBUST GROWTH OF
INDUSTRIAL APPLICATIONS

In the Americas region, sales in the agri-food market have demonstrated brisk growth, especially with the VIDAS® range. Since the launch of GENE-UP®, bioMérieux now provides a combined offering of immunoassays (VIDAS®) and molecular biology, with enhanced added-value for customers in the agri-food industry.

In Brazil, the agri-food sector is represented by major players, in particular in the meat sector. Among the companies that export worldwide, certain have formed solid ties with bioMérieux. This is also true for other companies in the dairy industry.

“2016 proved to be an excellent year for bioMérieux in the Americas region. While the FilmArray® technology was the primary contributing factor, in a broader sense it confirmed the value of the Company’s solutions to address the major health challenges posed by antimicrobial resistance and sepsis. All teams are mobilized to uphold our mission to help improve patient care.”

Stefan Willemsen
Corporate Vice President
Americas Region,
Group Chief Legal and Intellectual Property Officer

BLOOD CULTURE ACTIVITY: STRONG DYNAMIC

Activity surrounding the blood culture business returned to growth in the Americas region and we were able to continue to meet customer demand thanks to a renewed production capacity. This positive trend reflects the long-term commitment of our teams to improve customer service.

MOLECULAR BIOLOGY SOLUTIONS MEET SEVERAL CUSTOMER NEEDS

One of the year’s highlights came in October 2016 with the 510(k) clearance and Clinical Laboratory Improvement Amendments (CLIA) waiver from the FDA for the new FilmArray® Respiratory Panel EZ (RP EZ). CLIA waiver permits use of the test outside traditional clinical laboratories. From a single patient sample, FilmArray® RP EZ detects 11 viral and 5 bacterial pathogens associated with respiratory infections. It is a simplified version of the FilmArray® Respiratory Panel, which has already received CE marking and FDA clearance.

Supporting the Company’s expanding molecular offering, actions concerning the syndromic approach and the full menu of FilmArray® panels are ongoing throughout the region. In Canada, health-economic studies are being conducted to demonstrate the medical value of FilmArray®. In Latin America, with the exception of Brazil where FilmArray® is not yet commercialized, the molecular biology solution has been met with resounding success. Specifically, in Mexico a strong upsurge in sales was observed. In Chile, where the system of care relies largely on private health insurance, the advantages of the FilmArray® technology are especially powerful for the healthcare system.

More broadly, the medical value of the combination of blood culture solutions, the FilmArray® Blood Culture Identification Panel and the VIDAS® B·R·A·H·M·S PCT™ test for the management of patients with sepsis proved to be especially attractive to customers.

BAC T/ALERT® culture media

AN AGREEMENT TO DISTRIBUTE THE NEPHROCHECK® TEST

In March 2017, bioMérieux and Astute Medical signed a distribution agreement for the NephroCheck® Test in the United States. This test is a biomarker-based early risk assessment tool that is changing the way hospital physicians approach acute kidney injury (AKI). The distribution agreement builds upon bioMérieux’s 2015 licensing and collaboration agreement with Astute Medical, that enabled the Company to develop the NephroCheck® Test for its VIDAS® immunoassay system.

BIOMÉRIEUX DIRECT: E-COMMERCE AND CUSTOMER ACCOUNT MANAGEMENT PORTAL

Now available to U.S. customers, a new online platform allowing customers ease of ordering standard products along with quick access to product shipping and availability information.
Sales were up by 6.3% in the Asia Pacific region, reflecting a gradual return to growth in both clinical and industrial applications.

A DYNAMIC YEAR IN MAINLAND CHINA

The Company’s sales flourished in this region, for both the immunoassay and the microbiology product lines, particularly antibiotic susceptibility tests. Laboratories’ consumption of reagents was especially dynamic. The teams at bioMérieux were also involved in a program called CARE (China Against drug Resistance). Initiated by the Fondation Mérieux and carried out in cooperation with the Chinese health authorities, the program aims to limit the emergence of new types of resistance by implementing a new policy for the prescription of antibiotics in Chinese hospitals.

PERFORMANCE ON THE INDIAN MARKET

In India, the second most important country in the Asia Pacific region for bioMérieux, remarkable growth in sales sustained the positive momentum of previous years.

The Company completed construction of a state-of-the-art research and production unit in Hyderabad to house the 30 employees of the RAS Lifesciences team. This company, acquired in 2012 by bioMérieux, develops and markets molecular biology tests for the diagnosis of infectious diseases.

Growth in India was also driven by the success of bioMérieux solutions for industrial microbiological control, particularly among customers in the pharmaceutical sector.
TARGETED SCIENTIFIC COLLABORATIONS

Teams at bioMérieux are conducting scientific studies in collaboration with health institutes in countries impacted by the specific epidemiological challenges created by antimicrobial resistance, particularly in the Asia Pacific region:
- With the P.D. Hinduja Hospital in India, within the scope of a partnership for tuberculosis research to improve treatments and allow faster, more accurate diagnosis.
- With 301 Hospital in Beijing, where both innovative and routine techniques undergo evaluation to study the specific pathogens and types of resistance that are found in China.

ENSURING QUALITY IN THE DAIRY INDUSTRY

When it comes to industrial applications, major players in the dairy industry in China are gradually opting for bioMérieux’s solutions to ensure the microbiological quality control of their production, following a movement introduced by national authorities several years ago.

In late 2016, Fonterra, a major player in the dairy industry in New Zealand, also selected the GENE-UP® molecular biology solution to ensure the microbiological safety of its production.

A PUBLIC-PRIVATE RESEARCH PROGRAM IN SINGAPORE

bioMérieux has entered into an agreement with the Diagnostics Development (DxD) Hub, an initiative sponsored by A*STAR, the Agency for Science, Technology and Research in Singapore. The agreement concerns a research partnership to develop a multiplex molecular biology test for the diagnosis of three pathogens, the viruses that cause Dengue, Zika and Chikungunya illnesses. This collaboration between DxD Hub and bioMérieux will generate data for the assessment of biomarkers developed by A*STAR.

BRIGHT PROSPECTS FOR THE SYNDROMIC APPROACH

In Hong Kong, the success of FilmArray® for syndromic infectious disease molecular diagnostics has been clearly established since 2015. This was followed in 2016 by promising signs in other countries of the region, primarily those where private players lead the healthcare sector.

MEDICAL EDUCATION INITIATIVES IN INDONESIA

In July 2016, three training sessions were organized in Jakarta and Surabaya, Indonesia, as part of the ACME program (Advancement in Clinical practice through Microbiology Education) for 250 clinicians and microbiology laboratory biologists. The training sessions aimed to improve awareness among healthcare professionals about the benefits of microbiology lab results for medical prescription practices in order to avoid the inappropriate use of antibiotics.

TESTIMONIAL

“There is no question that antibiotics play an important role in patient’s management. Yet, we also have to realize that we need to be continuously enlightened on how antibiotics can become friends or foes.

That’s why I encourage information about antibiotics prescription and usage to be updated regularly.

I hope we could implement what the two speakers have shared, and that such session will be held again soon to strengthen antibiotics rules in Indonesia.”

Dr. Ezy Barnita, Sp.A
RSUP Persahabatan Hospital, Jakarta, Indonesia
ACME Program participant

TESTIMONIAL

“In 2016, our performance in the Asia Pacific region showed a sharp acceleration in sales growth, especially in China and South Korea. In several countries of the region, we leveraged our antimicrobial resistance expertise with medical education approaches specially adapted to their specific needs. These initiatives are fully in line with bioMérieux’s global offering in this field. While clinical applications met with solid success, industrial applications also reported excellent progress, giving this year a strong and balanced performance overall.”

Pierre Boulud
Corporate Vice President
Asia Pacific Region
Portfolio and Strategic Planning
INVESTMENTS

PREPARING THE FUTURE

Several major construction projects moved forward in 2016 to strengthen bioMérieux’s biodiustrial tool and to benefit from state-of-the-art facilities for manufacturing and tertiary activities.

SALT LAKE CITY
BUILDING FOR FILMAARRAY® ACTIVITIES
Construction was completed in 2016 and starting in 2017; this new building will bring together all FilmArray® activities under one roof, facilitating synergies among the different functions: production, R&D and administration. At the same time, it will make it possible to scale up production capacity to support the remarkable growth of the FilmArray® line.

DURHAM
BLOOD CULTURE BOTTLE PRODUCTION BUILDING
This new facility dedicated to the manufacture of BacT/ALERT® blood culture bottles will produce both standard BacT/ALERT® blood culture bottles and the new generation resin-based BacT/ALERT® FAN Plus bottles to drive long-term growth of blood culture sales.

HYDERABAD
RESEARCH AND PRODUCTION UNIT
In 2016, the finishing touches were put on this new building to house the teams of RAS Lifesciences, acquired by bioMérieux in 2011. RAS Lifesciences develops and markets molecular biology tests for the diagnosis of infectious diseases.

SHANGHAI
THE SHANGHAI CAMPUS
A new addition to the Shanghai site, this building wholly dedicated to training will welcome bioMérieux teams as well as customers and distributors in the spring of 2017. The three-story building will further bolster the dynamic training policy being implemented across the Asia Pacific region.

MARCY L’ÉTOILE
THE CAMPUS DE L’ÉTOILE
This new building, which houses the Company’s corporate functions, opened its doors in the fourth quarter of 2016. Located in Marcy l’Étoile at the heart of bioMérieux’s geographical center, it allows the historic Marcy site to concentrate on production, quality, and R&D activities.

CRAPONNE
CULTURE MEDIA PRODUCTION LINES
This site near Lyon boasts two new production lines for the manufacture of Count-Tact® dishes for microbiological monitoring of surfaces in the production environment; and of culture media dishes for environmental air monitoring during production in the pharmaceutical industry.

INVESTMENTS

INVESTMENTS
As an active partner in progress for public health, bioMérieux’s mission entails specific responsibilities. Our commitment to corporate social responsibility is based on three pillars:

- **RESPONSIBILITY TO SOCIETY**, by promoting access to diagnostics for as many people as possible, in particular by supporting local initiatives alongside the Fondation Mérieux and the Fondation Christophe et Rodolphe Mérieux, and by participating in the fight against antimicrobial resistance, a major public health challenge.

- **RESPONSIBILITY TO OUR WORKFORCE**, by paying careful attention to employees’ working conditions and supporting their professional development.

- **RESPONSIBILITY TO THE ENVIRONMENT**, by implementing an ambitious policy for 2020 designed to improve safety in the workplace and reduce the Company’s environmental footprint.

BioMérieux is a pioneer in the field of *in vitro* diagnostics, a company that has been committed to the fight against infectious diseases for more than 50 years. Our ambition is to combine economic development to serve global public health with our vision of society, for both current and future generations. Corporate responsibility is an integral part of our culture, founded on humanistic values upheld by the Mérieux family and the challenges of sustainable development inherent to our public health mission.
Responsibility to Society

Aware of the importance of its public health mission, bioMérieux is committed to providing responses of public interest that contribute to the fight against infectious diseases. Our commitment to social responsibility focuses on four areas: fighting antimicrobial resistance, improving maternal and infant health, promoting widespread access to diagnostics, and combatting epidemics.

Preserving the Efficacy of Antibiotics

Antimicrobial resistance (AMR) to antibiotics is a global public health threat. Forecasts are alarming: by 2050, it is estimated that there will be more than 10 million AMR-related deaths annually, which represents one death every three seconds, with an associated cost of over US$100,000 billion. Diagnostic tests are able to identify the agent causing an infectious disease and to detect its potential resistance to antibiotics. Such tests contribute to the optimal use of antibiotics, used only to treat bacterial infections. Selecting the antibiotic best adapted to the targeted bacterium helps to slow the emergence of resistant bacteria and therefore to preserve the efficacy of antibiotics. As a Company committed to addressing this major public health challenge, developing these high medical value tests remains a priority for bioMérieux.

Global PPS, a Survey of Unprecedented Scope

In April 2016, during the European Congress of Clinical Microbiology and Infectious Diseases (ECCMID), bioMérieux and the University of Antwerp presented the final report of the Global Point Prevalence Survey (Global PPS), which studied antibiotic use and bacterial resistance rates by monitoring the practices of 335 hospital centers providing care for adults, children and neonates in 53 countries worldwide. All participating centers volunteered to analyze their antibiotic prescription practices with the aim of improving patient outcomes. Data collected from over 100,000 patients revealed that:

- One out of two hospitalized patients in Asia and Africa receive antibiotics, compared to one out of three in Europe;
- Second-line antibiotics are over-used (vancomycin in North America, meropenem in Asia and North America);
- Ceftriaxone is the most frequently used antibiotic in the world;
- Diagnostic tests were performed in only one out of three cases to support the chosen antibiotic treatment.

This study highlights the importance of in vitro diagnostics as well as the need to expand the use of diagnostic tests to improve antibiotic prescribing practices in all countries. This prevalence survey will be repeated in 2017, with the continued support of bioMérieux and the participation of even more healthcare centers and countries.

Above all, patients want to understand why they are ill. They want understanding, knowledge and the certainty that their treatment is appropriate. Greater access to diagnostic tests therefore bolsters patients’ confidence. They know that each test reduces the margin of error and decreases the risk of antimicrobial resistance. Each test may reduce the quantity of medicines to take. Patients are convinced that the doctor’s effectiveness depends on having easy access to the most innovative tools, and that the future of medicine will follow that path.”

Garance Fannie Upham
Deputy General Secretary, ACdeBMR
WAAAR World Alliance Against Antibiotic Resistance
Shortlisted by the EU AMR Prize competition
Editor, “AMR Control” (2015, 2016, 2017-ongoing)
http://resistancecontrol.info

“The Global Point Prevalence Survey will allow for targeted quality improvements, the development of local prescribing guidelines, education and practice changes, and also for measuring the impact of these interventions. Furthermore, the participants will be able to implement sustainable improvement programs through repeated Point Prevalence Surveys, which will be conducted in 2016 and beyond.”

Professor Herman Goossens
Director of the Laboratory of Medical Microbiology of the University Hospital Antwerp and the University of Antwerp (Belgium)

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A WEBSITE TO PROMOTE AWARENESS AND INFORMATION

In June 2016, bioMérieux introduced the Company’s website dedicated to resistance to antibiotics: www.antimicrobial-resistance.biomerieux.com.

This educational site, designed for healthcare professionals and the general public, aims to educate people and build awareness about bacterial resistance to antibiotics. It suggests solutions and highlights the medical value of diagnostics to combat antimicrobial resistance. Using illustrations, it highlights the impact of antibiotic resistance on humans, animals, food and the environment.

INTERACTING WITH INTERNATIONAL DECISION-MAKERS

bioMérieux is recognized as a leader in the field of antibiotic resistance. The Company was invited to participate in a meeting held at the United Nations in September 2016, where it was represented by Mark Miller, Chief Medical Officer, who had also accepted the invitation to the White House in 2015.

TARGETED INITIATIVES IN THE FIELD

CARE, a multi-partner program in China supported by many stakeholders

The Fondation Mérieux launched the CARE (China Against drug ReSistance) Program in 2013. With the support of bioMérieux, which oversees its implementation, CARE aims to set up a new policy for prescribing antibiotics in order to limit the emergence of new resistance mechanisms.

The program is already being used by the Paris Public Hospital System (APHP). In addition to hygiene measures, it requires the reassessment of any prescription of antibiotics after 48 hours based on tests results provided by the microbiology laboratory, as well as a maximum treatment duration of seven days, except in exceptional circumstances.

In 2015, the Fondation Mérieux in China and the University Hospital of Zhejiang Province entered into an agreement, and in 2016 the first phase of the program involved validating the new policy in four departments of the pilot center: neurosurgery, orthopedic surgery, hematology and the emergency room.

PERFORM, a project in Europe

The European project PERFORM (Personalized risk assessment for improved management of febrile children across Europe) addresses the problem of identifying a bacterial infection and reducing inappropriate use of antibiotics and antibiotic resistance by developing new tests to differentiate between a viral and a bacterial infection. The PERFORM consortium brings together 18 renowned international organizations from 10 countries. Of the 10, bioMérieux is the only partner from industry.

The PERFORM grant is one of the largest awarded by the European Commission’s Horizon 2020 health program (€18 million). Over a five-year period (2016-2021), it provides funding for the development of novel diagnostic tests to improve care for children presenting with high fever on arrival at a hospital or a health clinic.

IMPROVING MATERNAL AND INFANT HEALTH IN AFRICA

bioMérieux has a longstanding presence in Africa. For some 30 years, the Company has been developing its distribution network for diagnostic solutions while continuing its commitment to programs that facilitate access to diagnostics for resource-limited populations, in line with the U.N. Sustainable Development Goals (SDGs) for 2030.

The Company places particular importance on improving the health of mothers and young children by targeting four priority diseases: respiratory infections, diarrhea, sepsis and meningitis. To reach this objective, initiatives are designed to improve access to diagnostics, provide education and training on in vitro diagnostic tools, form public-private partnerships, and develop innovative products that address the specific challenges facing African countries.

CLINICAL STUDIES WITH FILMARRAY®

In Chad

At international congresses in 2016, two posters presented the results of a study launched in 2015 by bioMérieux and ALIMA (a non-governmental organization), which examines the causes of acute, persistent infectious diarrhea in children suffering from severe malnutrition. These results, which will be published in 2017, illustrate the importance of furthering our understanding of the disease agents responsible for diarrhea in infants, in order to better prevent it and treat young children suffering from severe malnutrition. For the purposes of the study, bioMérieux donated FilmArray® Gastrointestinal Panel kits to the NGO ALIMA, which were used by the Chad-China Friendship Hospital in N’Djamena.
In Botswana

In 2015, a partnership was signed with McMaster University (Canada) concerning the donation of a FilmArray® system and FilmArray® Gastrointestinal Panels to the Botswana National Laboratory, within the scope of a partnership between Botswana and the University of Pennsylvania (United States). A clinical study is under way in Botswana thanks to the financial support of the Grand Challenges Canada Program*

The aim is to optimize the management of acute diarrhea in children by taking an innovative approach – namely, by introducing a rapid diagnostic test to allow for timely, targeted antimicrobial therapy. An initial study concerning rectal swabs for use on the FilmArray® system among children with severe gastroenteritis was described in a poster presented at an international scientific congress in December 2016.

SYMPOSIUM AND WORKSHOP IN BURKINA FASO

In November 2016, bioMérieux sponsored and contributed to the International Symposium on rotavirus gastroenteritis in Burkina Faso, organized by the Ministry of Health, in collaboration with the Linköping Faculty of Medical Sciences of Sweden.

In addition to the symposium, the Company organized a workshop on the detection and molecular diagnostic testing of viruses that cause severe gastroenteritis. During the workshop, participants were trained on using the FilmArray® Gastrointestinal Panel.

DONATION OF RAPID TESTS IN BRAZIL

For the second consecutive year, bioMérieux took part in the Xingu Mission Project, dedicated to improving the health of populations living in isolated regions of Brazil. For people in the town of São José do Xingu, several thousands of hepatitis B and HIV tests were distributed free of charge. These rapid tests are designed for ease-of-use in medical centers, allowing real-time diagnosis and therefore earlier treatment of patients who do not have easy access to a diagnostics laboratory.

CREATION OF A TRAINING PROGRAM ON TREATING FEVER IN GUINEA

In the aftermath of the health crisis facing this country during the Ebola virus epidemic, the association Santé En Entreprise organized a workshop in May 2016 in Conakry (Guinea). The Guinean Chamber of Mines (CMG) and the National Plan to Fight Malaria (PNLP) took part in this forum where participants shared their experiences. bioMérieux led a workshop on the management of patients with fever. A training project was developed in late 2016 on this topic, targeting healthcare professionals working for the mining companies. A training program has been submitted to the Ministry of Health and the WHO, with implementation expected in 2017.

CONTRIBUTING TO THE FIGHT AGAINST EPIDEMICS

SOLUTIONS VALIDATED IN AN EPIDEMIC CONTEXT

bioMérieux pursued initiatives to support the diagnosis and surveillance of epidemic diseases. Following the work carried out in 2015 during the epidemic caused by the Ebola virus, and within the framework of a collaborative project with a team from the Jean Mérieux BSL-4 laboratory in Lyon, research was conducted in the field of biosafety on the FilmArray® BioThreat-E test™, which confirmed the safety of the FilmArray® platform for handling samples containing dangerous pathogens. This research was presented in December 2016 in Cape Town (South Africa), at the African Society of Laboratory Medicine congress.

CENTER OF EXCELLENCE IN BRAZIL

bioMérieux continued to roll out its R&D program to develop diagnostic solutions for tropical infectious diseases. In Brazil, the Company created a Center of Excellence in 2016 and stepped up its partnership with the University of São Paulo, where local teams carry out research projects in this field. A proposal for funding was submitted to the São Paulo Research Foundation (FAPESP) for a research program on markers of viral severity of viruses such as those that cause Dengue, Zika and Chikungunya infections.

AN AGREEMENT WITH THE GLOBAL FUND

bioMérieux has entered into an agreement with the Global Fund, effective until the end of 2018. The Company was selected as part of a new approach to monitoring the viral load of patients living with HIV, which the WHO has recommended since 2013.

After undergoing a technical and commercial evaluation, our NucliSENS EasyQ® range was chosen for a three-year period. This agreement is intended to ensure that diagnostics are financially accessible for people in resource-limited countries.
PROMOTING ACCESS TO DIAGNOSTICS THROUGH THE FOUNDATIONS

Within the framework of its sponsorship activity, bioMérieux supports the work of the Fondation Mérieux and the Fondation Christophe et Rodolphe Mérieux. These two independent family foundations focus on the fight against infectious diseases that affect developing countries, by building capacities, particularly in the field of diagnostics. €1.4 million was earmarked for the Mérieux Foundations in 2016.

The Foundations carry out initiatives in around 30 countries. bioMérieux’s support contributed to organizing a number of projects to benefit disadvantaged communities, including:

In Brazil

In April 2016, the new Charles Mérieux Infectiology Center of Brazil was inaugurated in Rio Branco. It marks an important milestone in the fight against viral hepatitis, a major public health problem in the Amazon. The 400 sqm facility includes a Rodolphe Mérieux Laboratory, the only high biosafety level laboratory (BSL3) in the Amazon region. This center will make it possible to set up training programs in human resources and to develop basic and clinical research in this region. The Rodolphe Mérieux Laboratory in Brazil joins a network of seven other Rodolphe Mérieux Laboratories on three continents (in Mali, Cambodia, Laos, Haiti, Madagascar, Lebanon and Bangladesh).

In Laos

The 8th international meeting of the GABRIEL network (Global Approach to Biological Research, Infectious diseases and Epidemics in Low-income countries) was held in July 2016 in Vientiane. The network brings together 18 public and private research centers, including the Rodolphe Mérieux Laboratories. During the meeting, a symposium day open to the scientific community was organized on the topic of “bacterial resistance surveillance and public health interventions”. Among the speakers were experts working in Cambodia, Vietnam, Thailand and Laos.

The Christophe Mérieux prize awarded to a Congolese scientist

The 2016 Christophe Mérieux prize (€500,000) was awarded by the Institut de France, on behalf of the Fondation Christophe et Rodolphe Mérieux, to Professor Francine Ntoumi of the Faculty of Science and Engineering of Brazzaville (Congo), to encourage her work on infectious diseases in Central Africa. The Christophe et Rodolphe Mérieux Foundation wishes to encourage research in developing countries with this prize. Since it was first conferred in 2007, it has been awarded to 10 scientists who contribute to the fight against infectious diseases affecting their countries at the grass-roots level.

Beyond supporting local capacity building in biology, the Foundations also seek to protect the most vulnerable individuals, in particular mothers and children. With the Foundations’ support, several projects were carried out in 2016.

The Foundations contributed to building a medical center in Erbil and to equipping the center and training personnel. Located in Iraqi Kurdistan, the Pauline-Marie Jaricot Mother and Child Center provides comprehensive, quality medical care for displaced persons, of whom there are many in the Iraqi Kurdistan region. Numerous health problems have been identified in the camps, in particular diarrhea (especially in children), respiratory infections, the risk of pandemic outbreaks, and the complications of pregnancy and childbirth. Both the Foundation’s partners in this project are other institutions from Lyon: Œuvres Pontificales Missionnaires de Lyon and Fondation Saint-Irénée.

In Haiti, the Foundations support the village of Nazareth in Leogane, a center for orphans and children in distress from birth to age six. It was founded in 2012, in the aftermath of the earthquake, thanks to the support of the Christophe et Rodolphe Mérieux Foundation. Currently 60 children live at the center. In 2016, the Foundations enabled the introduction of income-generating activities by providing sheds to raise chickens and pigs. In addition, a new home was built and work got under way to repair the damage caused by Hurricane Matthew.
bioMérieux endeavors to create a stable working environment where each employee is able to thrive. Our employees are vital to the Company’s success. One of the central focuses of our Human Resources policy is based on the ambition that each person can and must continue to learn and adapt, in order to flourish and apply their individual skills to building a more agile organization. bioMérieux is a powerful player in the regional and national ecosystem of the French healthcare sector. This business sector is especially dynamic in the area around Lyon, the city where bioMérieux has its roots. In 2016, the successful project at Marcy l’Étoile to build the “Campus de l’Étoile”, which houses teams from the corporate functions, illustrates the Company’s close ties to this region and its determination to contribute to its international prominence. Everywhere bioMérieux operates around the world, the Company seeks to establish close ties with local communities and renowned public and private stakeholders.

For more than 50 years, the men and women of bioMérieux have focused their expertise and dedication on serving public health all over the world. bioMérieux, owned by its founding family, has always preserved its independence and humanistic values, allowing it to fully embrace its corporate social responsibilities (CSR). In a world of constant change, economic performance goes hand in hand with CSR performance.

RESPONSIBILITY TO OUR WORKFORCE

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Mérieux Université was launched in 2014 to support the professional development of the employees of the companies that are part of Institut Mérieux. It also ensures the transmission of a strong entrepreneurial culture and helps build bridges within the Group. The university is organized around four regional hubs based in France, China, the United States and Brazil, to support employees in a rapidly-evolving professional environment, encourage innovation, foster talent development and bolster employee engagement.

In a sector marked by ongoing change, a dynamic training policy represents a strategic investment and a priority for bioMérieux.

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CAREER TRAINING TO DEVELOP EMPLOYEE SKILLS

One of the chief roles of Mérieux University is to develop training programs and implement them to ensure that the skills of employees of the companies within Institut Mérieux keep pace with the changing needs of customers.

In 2016, two new “career path” courses were added to the 2017 professional training catalogue: Sales Essentials is designed to improve commercial performance, while training to support the transformation of the Supply Chain aims to increase customer satisfaction.

Several modules have also been developed to complement existing “career path” courses, in particular a module devoted to improving the knowledge of financial mechanisms and indicators and internal audit.

ENHANCING THE COMPANY CULTURE

Seventy managers of 18 nationalities have already attended the New Leader Induction program, created in 2015. Training is intended to facilitate the integration of newly recruited managers by providing an opportunity to discover the history, values and strategy of each of the companies that belong to Institut Mérieux while at the same time instilling a shared management culture to help them make a successful transition.

The Mérieux Managers Essentials program was renewed and represented 16,000 hours of manager training in 2016, an average of 10 hours of training per manager.

OFFERING TRAINING PROGRAMS THAT PROMOTE OUR STRATEGY

In May 2016, the GMs & Cluster Heads program for subsidiary and cluster directors was held for the first time. This training seminar aimed to share the Company’s strategy, address the challenges of this function, build a community of common practices and gather participants’ insights and feedback about selected cross-functional initiatives. It will be organized once a year.

Within the Institut Mérieux Group, 24 buyers participated in the Syner’J program, which focuses on pooling a portion of purchases. Launched in 2016, the program led to the creation of a community of common practices and the development of an action plan for 2017. Responsible purchasing was one of the topics it addressed.

Identifying exceptional employees has been the focus of several initiatives in recent years. Fit for the Future is one of our most emblematic programs: in 2016, 22 people took part in this intensive week during which they worked on topics of pressing interest for the company and attended presentations by renowned outside speakers. After six months of work, the participants submitted completed projects; some included recommendations that can be implemented within bioMérieux.

RESPONDING TO THE SPECIFIC NEEDS OF OUR TEAMS

Mérieux Université also serves bioMérieux teams by designing customized training in order to strengthen collective efficiency and collaboration through a transfunctional approach. Some of the topics addressed in 2016 included providing support to a new team manager, facilitating the division of work between two teams, clarifying roles and responsibilities, and helping reposition a team’s project within the Company’s value chain.

“The ASEAN region is a young, dynamic and expanding region, which has around 60 employees and a network of partner distributors. Training lies at the heart of our strategy. Thanks to the Mérieux Université hub in Shanghai, our teams and distributors have access to training sessions taught by professionals. They reinforce our employees’ expertise and the quality of customer service. They also help us create contacts in-house and develop collaborations among teams in Asia Pacific.”

Florent Mulatero
bioMérieux General Manager, ASEAN

* ASEAN: Association of Southeast Asian Nations.
THE IMPORTANCE OF SOCIAL DIALOGUE

bioMérieux has always been very attached to the quality of social dialogue. On numerous topics, Company management works in concert with union representatives. Employee representatives also contribute to social dialogue. The Central Works Council met 11 times in 2016, which far exceeds regulatory requirements. The European Council, gathering personnel representatives from France, Italy, Spain and Germany, met 2 times. This collaborative approach is an important tradition, one that bioMérieux values greatly, and it provides genuine support in terms of labor policy.

Over the last five years, 70 agreements have been signed in France with social partners, and 80% of these were unanimous agreements. In 2016, the mandatory annual negotiation agreement and the renegotiated employee profit-sharing agreement were signed unanimously by both labor unions present in the Company.

GENDER EQUALITY

The first triennial agreement concerning gender equality in the workplace was signed in 2003. It is renewed every three years, providing an opportunity for the social partners to move forward on this issue. Measures to correct pay gaps, improve gender balance within the organizations and increase the percentage of women in management positions are also taken.

Professional equality is essentially evaluated on the basis of 3 indicators: diversity, compensation and promotion. For the social partners, the information provided by this data allows corrective actions to be taken.

At bioMérieux, the Women Ready for Leadership Diversity (WoRLD) internal network works to promote greater gender diversity within management positions. In 2016, its members organized or participated in some 10 events to raise awareness and provide information on the topic of gender diversity. In February 2016, the WoRLD network provided the momentum for the first JUMP Forum in Lyon, a day-long European event devoted to the issue of professional equality and promoting women’s careers. The forum in Lyon was attended by 200 participants; 15% were men from bioMérieux and other companies.

WORK-LIFE BALANCE

Quality of life in the workplace is a major focus of bioMérieux’s human resources policy. In 2015, a Work-Life Balance program was introduced in France to improve the balance between employees’ professional and personal lives. The program continued in 2016 and was expanded to cover additional countries in the EMEA region.

The implementation of a teleworking policy met with remarkable success. In France, for example, 10% of employees with a permanent contract worked from home in 2016. Of these, 90% were executives and 62% were women.

PROMOTING PROFESSIONAL DEVELOPMENT

Nearly 50% of permanent-contract positions are filled through internal mobility.
DISABILITY INITIATIVES
Since 2008, the Company has carried out initiatives within the framework of the Company agreement concerning employees with disabilities. In France, €257,000 were allocated to the “Disability” policy in 2016. This budget was used to finance actions to hire, integrate and train people with disabilities, to raise awareness and train employees involved in integrating disabled workers, and support job retention by adapting workstations (around 65% of the budget).

Initiatives in 2016:
- A recruitment day devoted to people with disabilities at the Craponne (France) site.
- Collaboration with sheltered-employment companies across all French sites.
- 3 “Handibio” days at the sites of Craponne, Verniolle, Ker Lann, Combourg and Ivry (France) to raise awareness about working with a disability.
- Targeted training for Disability correspondents (one at each site) and some managers.
- Financing means of disability compensation and investments in production tools to support the job retention of employees with disabilities and other employees as part of a preventive approach (automation of certain workstations, automated lifting tables, etc.).

EMPHASIS ON WORKPLACE HEALTH AND SAFETY
bioMérieux teams are targeting a 30% reduction in the rate of occupational accidents by 2020. The 2015 rate of 2.1 should be reduced to 1.6, which is especially low for the industrial sector internationally.

The Health, Safety and Environmental policy, initially developed for production facilities, has gradually been expanded to include commercial subsidiaries as well. Our US subsidiary launched a road safety training program in 2016 for all employees who use their vehicle for professional purposes.

In February 2016, the first medical center opened at the St. Louis, Missouri, site in the United States. For 1,100 site employees and their families, the Live Well Center provides access to high-quality medical services for primary and emergency care.

6 BIOINDUSTRIAL SITES
OHSAS 18001* certified
(5 sites in 2015)

IN FRANCE: Marcy l’Étoile, Craponne, La Balme, Saint-Vulbas

IN SPAIN: Tres Cantos

IN ITALY: Florence

* Occupational Health and Safety Assessment Series

“I have been working at bioMérieux for 23 years. I started out in a quality control laboratory but after seven years the work became difficult given my disability, because of the increasingly heavy loads I had to lift. At that point I changed jobs and accepted several positions requiring a good deal of travel. Adaptations were made to my company car, and I take cabs rather than the bus or the subway for certain destinations. The teams at bioMérieux have always been attentive to my needs, and I’ve been able to pursue my professional career path just like my colleagues.”

Lydie Tournier
Bacteriology and Lab Efficiency Application Specialist
To better serve infectious disease diagnostics, bioMérieux has developed a model of open collaboration based on research partnerships with no borders between the different disciplines. The Company forms long-term collaborations with healthcare institutions, universities and industrial firms, combining expertise from both the public and private sectors to support the ultimate aim of constantly improving the quality of patient outcomes.

WITH SCHOOLS AND ACADEMIC INSTITUTIONS

As a corporate citizen, bioMérieux is committed to supporting the integration of young people into the job market. The Company relies on its links with local communities to form close ties with schools and universities.

In the area around Lyon and Grenoble, France, bioMérieux is a partner to several universities as well as les grandes écoles (top-ranking institutions of French higher education), strengthening cooperation with the world of university research and gaining access to a pool of talented individuals for recruitment purposes.

EMYLON Business School

In 2015, the Company established a five-year partnership with EMLYON Business School. bioMérieux was one of the first companies to join the Global Business Network, which brings together major international businesses that are partners to the business school.

It has become the partner with expertise in the life sciences within the scope of the I.D.E.A. program, a novel learning approach adopted by EMLYON.

Fondation Université Grenoble Alpes

bioMérieux is also a founding member of the Fondation Université Grenoble Alpes, created in September 2014. The aim of this foundation is to support top-notch research projects and promote equal opportunity. In 2016, bioMérieux provided funding for five grants, giving excellent students specializing in BioHealth Computing the opportunity to pursue their studies in an international environment.

INSA Lyon Foundation

bioMérieux and the INSA (National Institute of Applied Sciences) Lyon Foundation have been partners since 2010. Thanks to their partnership, a team of students from INSA Lyon took part in the international Genetically Engineered Machine (GEM) Competition in Boston in October 2016. The team presented their project for the rapid diagnosis of sexually transmitted infections and walked away with the Best Diagnostics Project award.

The Company also took on nine interns from INSA in 2015 and 2016, delivered career-related lectures at the engineering school, and participated in INSA’s business forum.

Graduate School of Biology-Biochemistry-Biotechnology (ESTBB)

bioMérieux has established longstanding partnerships with ESTBB, one of the schools of the science faculty of the Catholic University of Lyon. Nearly 130 bioMérieux employees are ESTBB graduates, and every year the Company hires interns and work-study candidates from among its student body.

Since 2008, a representative of bioMérieux has been a member of ESTBB’s Excellence Council, a forum for discussion and exchange with the education team to gather input from professionals.

WITH RESEARCH INSTITUTIONS

Innovation has been at the heart of bioMérieux’s strategy since the Company’s beginnings. This mindset of being open to new possibilities is developed through international, multidisciplinary public and private-sector collaborations with academic research organizations, the medical and scientific community, and cutting-edge biotech companies.

In October 2016, bioMérieux, BIOASTER (the French accelerator of microbiology technology innovation), the College of Industrial Physics and Chemistry of the city of Paris (ESPCI), GSK, Lyon Civil Hospitals and Sanofi joined their expertise to fight against sepsis within a research program named REALISM (REAnimation Low Immune Status Markers). Hosted by BIOASTER and the joint research laboratory HCL-bioMérieux, this project aims to identify and validate new biomarkers to improve care for patients presenting a high risk of sepsis.

“The strong partnership between bioMérieux, BIOASTER and their academic counterparts allows us to be more responsive to the fast pace of innovation in the research sector, by combining the partners’ individual technological and scientific expertise to collectively address the industry’s medical research needs. This partnership offers all the necessary ingredients for effective translational research.”

Nathalie Garçon

CEO & CSO of IRT BIOASTER
On completion of the project, in late 2018, the results will allow the industrial partners to develop diagnostic and therapeutic solutions to fight sepsis.

In May 2016, bioMérieux inaugurated the new facilities of its joint research laboratory with Lyon Civil Hospitals dedicated to sepsis, located within the Edouard Herriot Hospital in Lyon. The collaboration contract, begun in 2002, was also renewed for five years, and the alliance grew with the addition of Claude Bernard University Lyon 1 to the partnership. With the second joint research laboratory created in 2009 in the field of cancer at the Lyon-Sud Hospital (part of Lyon Civil Hospitals), bioMérieux teams have filed 10 patents and published 73 scientific articles by late 2016.

WITH ASSOCIATIVE ACTORS

Through partnerships with French associations such as Sport dans la Ville or the Institut Télémaque, the Company implements a policy to support young people in difficulty and offer equal opportunities.

Sport dans la Ville
bioMérieux and Sport dans la Ville are partners since 2007. Through sport, this association aims to promote the social and professional inclusion of young people coming from underprivileged neighbourhoods. bioMérieux’s commitment takes the form of mentoring and integrating of young people from the association in different departments of the Company.

Institut Télémaque
bioMérieux initiated a partnership with Institut Télémaque in 2015. The Institut’s mission is to help deserving and eager-to-study young people rise in society. For the 2015-2016 school year, the Company financed the support of 16 young people selected by Institut Télémaque.

CONDUCTING BUSINESS IN COMPLIANCE WITH OUR ETHICS RULES

Like all international industrial firms, bioMérieux is exposed to risks, some of them directly connected to its business activity in the healthcare field. In order to protect the Company and ensure employees have access to the necessary tools to anticipate and manage such risks, bioMérieux has put in place internal rules and procedures.

TRAINING PROGRAMS ADAPTED TO RISK EXPOSURE

In 2016, the Ethics and Compliance Department continued its training program to raise awareness among all employees of bioMérieux about international rules and in-house procedures. These training programs allow them to perform their jobs in compliance with applicable laws and regulations, and in line with the Company’s values and culture, wherever they may be.

The mandatory annual training program is composed of a core curriculum for all employees as well as modules specific to their function and risk exposure. Within the first few months of joining the Company, all bioMérieux employees receive training about the Global Code of Conduct, the Anti-Corruption manual and the policy concerning conflicts of interest. Each year, employees must validate a certificate of compliance with the rules of conduct and take a course to improve their awareness of corruption. The specific modules are tailored to bioMérieux’s sector of activity: for example, ethics and compliance training highlights relations with healthcare professionals; and training on the management of personal data addresses the confidentiality of patient data in particular.

A face-to-face training program was introduced in 2015 for distributors, focusing especially on issues related to corruption.

AN UPDATED AND IMPROVED GLOBAL CODE OF CONDUCT

A new edition of the bioMérieux Global Code of Conduct, a reference tool within the Company, was published in 2016. Relations with healthcare professionals, bioethics and money laundering are some of the new items that have been introduced.

In addition, employees can refer to a list of questions & answers, illustrated with real-life examples, to help them find responses to their concerns. The Global Code of Conduct is available in seven languages and may be translated locally into additional languages. It is distributed to all employees, who are required to sign a statement each year stating that they have read the Code.

ETHICS HOTLINE IS 100% OPERATIONAL

Employees with questions related to ethics concerns may contact their regional Compliance Officer in the Europe - Middle East - Africa, Asia Pacific, and the Americas regions. Depending on their country and applicable local laws, they can also send a request via a website or contact a dedicated hotline. Initially introduced in France in 2014, today the hotline is available in 42 of the countries where bioMérieux operates.

It includes a secure and confidential alert system created to help all employees in the fight against corruption, fraud and any serious violation committed in the workplace.

Requests concerning the protection of personal data and patient data are sent to a Global Data Officer. The officer, an expert in the protection of personal data, responds to questions raised by employees across the globe.
RESPONSIBILITY TO THE ENVIRONMENT

bioMérieux is committed to reducing the environmental impact of its activities through the responsible management of resources and energy.

In 2016, we outlined “Vision 2020”, the policy underpinning our commitment to reach ambitious objectives to protect the environment as well as safety and health in the workplace, at all sites where the Company operates.

“VISION 2020”: A HEALTH, SAFETY AND ENVIRONMENT POLICY FOR EVERYONE, EVERYWHERE

“Vision 2020”, the global vision of Health, Safety and Environment (HSE) is built on four pillars: the product life cycle, supply and distribution, ensuring that tools are available to all employees and the participation of Company sites and employee engagement.

This global vision has strengthened our HSE policy. This policy concerns all employees, regardless of their job and the country where they work – whether they are in an office, on the production line, in logistics, in a laboratory, or in the field.

An HSE Steering Committee was created in April 2016 to implement “Vision 2020” and to monitor how it is put into practice. Headed by Alexandre Mérieux, the CEO of bioMérieux, the committee comprises 10 members, including R&D representatives. Its role is to manage the roll-out of the Health, Safety and Environment vision, policy and strategy.

“For bioMérieux, the policy governing Health, Safety and Environment is a global policy. We undertake to provide all of our employees, wherever they are, with a safe and healthy workplace, and to minimize the environmental impact of our products, infrastructure, activities and work methods.”

Pierre Charbonnier
Corporate Vice President Manufacturing & Supply Chain

10% reduction in energy consumption*
10% reduction in waste*
30% reduction in lost-time accident rate*
ISO 14001 and OHSAS 18001 certifications for all bioindustrial sites
ISO 50001 certification of the main French bioindustrial sites

* Between 2015 and 2020.
PRODUCT LIFE CYCLE
The approach bioMérieux adopts is designed to reduce the environmental impact of our products. The principle of eco-design integrates the different phases of a product’s life cycle: manufacturing, delivery, utilization and end of life, in compliance with applicable regulations as well as the Company’s objectives. Beginning in 2018, the environmental impact of the life cycle of new products will be evaluated and by 2020, a product’s environmental performance will be established when it is launched.

Integrating HSE challenges into product specifications concerns first and foremost hazardous materials and product packaging.

Through the work accomplished on eco-design, the Company has adopted a far-reaching program for the remote maintenance of its instruments. It will allow technicians to intervene remotely for certain repairs, maintenance and system updates, the program will make it possible to limit travel.

SITE PARTICIPATION AND EMPLOYEE ENGAGEMENT
The 19 bioindustrial sites of bioMérieux seek to obtain two types of certification:
- ISO 14001 for the environment,
- OHSAS 18001 for health and safety in the workplace.
All new buildings integrate low-consumption objectives and respect environmental quality standards.
A Health, Safety and Environment manager is in charge of HSE at each of the sites. These managers participate in the “Vision 2020” roll-out, attend HSE regional committee meetings to share good practices, provide feedback about concerns, and contribute to the development of bioMérieux standards. Efforts are focused on expanding the HSE policy to all entities worldwide.

SUPPLY AND DISTRIBUTION
bioMérieux collaborates with its network of suppliers and its logistics partners to improve the Company’s Health, Safety and Environment performance. Our HSE standards will gradually apply to our partners in order to support the implementation of a formalized HSE policy among our logistics service providers and our suppliers.
We continue to pursue initiatives in place since 2015 to optimize our carbon footprint. In 2016, we began taking new emissions categories into account: these include direct and indirect emissions as defined by the Greenhouse Gas Protocol, to which we have added emissions related to business travel, the home-to-work commute, and the transportation of goods between bioMérieux sites and our customers’ sites.

PAYING SPECIAL ATTENTION TO RAW MATERIALS
In 2016, the policy governing the management of biological and chemical substances was communicated to all bioMérieux teams affected by decisions about raw materials. The policy provides information and raises awareness of concerns related to these substances, as well as good practices to apply.

A SPECIALIZED IT TOOL
In 2016, bioMérieux finalized the global roll-out of a dedicated IT tool for HSE. It encompasses professional risk assessment, improvement plan management, incident resolution, and environmental and safety reporting.

9 BIOINDUSTRIAL SITES
and subsidiaries
ISO 14001 certified
6 BIOINDUSTRIAL SITES
OHSAS 18001 certified

8% reduction in water consumption in relation to 2016 sales (compared with 5% in 2015)
7% decrease in total energy consumption in relation to global sales between 2014 and 2016 (compared with 6% between 2013 and 2015)
CORPORATE GOVERNANCE

SENIOR MANAGEMENT

Presidence
Jean-Luc Belingard
Chairman

Management Committee
The Management Committee is responsible for implementing the Company’s strategy decided by the Board of Directors. It meets once every three months. As of December 31st, 2016, it is comprised of:
- Alexandre Mérieux
  CEO
- Michel Baguenault
  General Secretary, Corporate VP, Human Resources and Communications
- Pierre Boulad
  Corporate VP, Asia Pacific Region, Group Portfolio & Strategic Planning
- Nicolas Carrier
  Corporate VP, Industry Unit
- Pierre Charbonnier
  Corporate VP, Manufacturing & Supply Chain
- Claire Giraut
  Corporate VP and Chief Financial Officer
- FranÇois Lacoste
  Corporate VP, Clinical Unit

- Jean-Luc Belingard
- Alexandre Mérieux
- Alain Mérieux
- Philippe Archinard
- Harold Boël
- Philippe Gillet
- Marie-Hélène Habert
- Agnès Lemarchand
- Michele Palladino

Censors: Michel Ange and Henri Thomasson

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   Corporate VP, Clinical Unit
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9. Alexandre Mérieux
10. Alain Mérieux
11. Philippe Archinard
12. Harold Boël
13. Philippe Gillet
14. Marie-Hélène Habert
15. Agnès Lemarchand
16. Michele Palladino

Censors: Michel Ange and Henri Thomasson

BOARD OF DIRECTORS

The Board, chaired by Jean-Luc Belingard, met 4 times in 2016.

It is comprised of 9 members:
- Jean-Luc Belingard - Chairman, bioMérieux
- Alexandre Mérieux - CEO, bioMérieux
- Alain Mérieux - Chairman, Institut Mérieux
- Philippe Archinard - Chairman and CEO, Transgene
- Harold Boël - Deputy Director, Sofina (Belgium)
- Philippe Gillet - Chief Innovation Officer, SICPA
- Marie-Hélène Habert - Director of Communication and Patronage, Dassault Group
- Agnès Lemarchand - Administrator, various companies
- Michele Palladino

COMMITTEES OF THE BOARD OF DIRECTORS

The Audit Committee
It is comprised of Mrs Agnès Lemarchand, Mr Philippe Archinard and Mr Harold Boël, its chairman. The Committee met 7 times in 2016.

The Human Resources, Nominations and Compensation Committee
It is comprised of Mrs Marie-Hélène Habert, Mr Michele Palladino and Mr Alain Mérieux, its chairman. The Committee met 2 times in 2016.

The Innovation and Technological Breakthroughs Committee
It is comprised of Mr Philippe Archinard, Mr Michele Palladino and Mr Philippe Gillet, its chairman. The Committee met 2 times in 2016.
### 2016 ANNUAL REPORT

#### CONSOLIDATED BALANCE SHEET

<table>
<thead>
<tr>
<th>ASSETS (in € millions)</th>
<th>12/31/2016</th>
<th>12/31/2015</th>
<th>12/31/2014</th>
</tr>
</thead>
</table>

- **Intangible assets**: 492.6  
- **Goodwill**: 470.6  
- **Property, plant and equipment**: 734.5  
- **Financial assets**: 36.9  
- **Investments in associates**: 0.5  
- **Other non-current assets**: 18.0  
- **Deferred tax assets**: 92.8  

#### NON-CURRENT ASSETS

- **Inventories and work in progress**: 404.4  
- **Accounts receivable**: 465.8  
- **Other operating receivables**: 79.8  
- **Tax receivable**: 25.7  
- **Non-operating receivables**: 28.8  
- **Cash and cash equivalents**: 178.6  

#### CURRENT ASSETS

- **Share capital**: 12.0  
- **Net income for the year**: 1,619.1  
- **Minority interests**: 2.2  

#### SHAREHOLDERS’ EQUITY

- **Net financial debt - long-term**: 365.4  
- **Deferred tax liabilities**: 167.3  
- **Provisions**: 115.0  

#### NON-CURRENT LIABILITIES

- **Net financial debt - short-term**: 87.9  
- **Provisions**: 36.8  
- **Accounts payable**: 175.6  
- **Other operating liabilities**: 324.2  
- **Tax liabilities**: 37.2  
- **Non-operating liabilities**: 98.2  

#### CURRENT LIABILITIES

- **Share capital**: 12.0  
- **Net income for the year**: 1,619.1  
- **Minority interests**: 2.2  

#### TOTAL EQUITY

- **Share capital**: 1.2  
- **Net income for the year**: 1.2  
- **Minority interests**: 0.0  

#### TOTAL ASSETS

- **Share capital**: 1.2  
- **Net income for the year**: 1.2  
- **Minority interests**: 0.0  

### CONSOLIDATED INCOME STATEMENT

<table>
<thead>
<tr>
<th>In € millions</th>
<th>12/31/2016</th>
<th>12/31/2015</th>
</tr>
</thead>
</table>

- **NET SALES**: 2,103.2  
- **Cost of sales**: (1,002.5)  
- **GROSS PROFIT**: 1,100.7  
- **Selling and marketing expenses**: (402.1)  
- **General and administrative expenses**: (167.4)  
- **Research and development expenses**: (271.9)  
- **TOTAL OPERATING EXPENSES**: (841.4)  

#### CONTRIBUTIVE OPERATING INCOME

- **BioFire acquisition’s fees and depreciation costs**: (25.2)  

#### OPERATING INCOME BEFORE NON-RECURRING ITEMS

- **Non-operating income**: 9.9  

#### OPERATING INCOME

- **Cost of net financial debt**: (73.0)  
- **Other financial items**: (5.6)  
- **Income tax**: (73.8)  
- **Investments in associates**: (0.2)  

#### NET INCOME OF CONSOLIDATED COMPANIES

- **Attributable to the minority interests**: 0.1  

#### ATTRIBUTABLE TO THE PARENT COMPANY

- **Basic net income per share**: € 4.54  
- **Diluted net income per share**: € 4.54
### CONSOLIDATED CASH FLOW STATEMENT

<table>
<thead>
<tr>
<th></th>
<th>12/31/2016</th>
<th>12/31/2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net income of consolidated companies</td>
<td>179.2</td>
<td>110.3</td>
</tr>
<tr>
<td>- Investments in associates</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>- Cost of net financial debt</td>
<td>176.8</td>
<td>24.6</td>
</tr>
<tr>
<td>- Other financial items</td>
<td>5.6</td>
<td>(6.3)</td>
</tr>
<tr>
<td>- Current income tax expense</td>
<td>79.8</td>
<td>65.9</td>
</tr>
<tr>
<td>- Operating depreciation and provisions on assets</td>
<td>143.1</td>
<td>120.4</td>
</tr>
<tr>
<td>- Non-recurring items and BioFire acquisition’s fees and depreciation costs</td>
<td>15.3</td>
<td>65.1</td>
</tr>
<tr>
<td>EBITDA (before non-recurring items)</td>
<td>440.9</td>
<td>380.4</td>
</tr>
<tr>
<td>Other non current operating gains/losses (w/o exceptional deprecinations, assets losses and capital gains/losses)</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Other financial items (w/o accrual &amp; disposal of financial assets)</td>
<td>(6.4)</td>
<td>0.6</td>
</tr>
<tr>
<td>Operating provisions for risks and contingencies</td>
<td>12.3</td>
<td>5.1</td>
</tr>
<tr>
<td>Change in fair value of financial instruments</td>
<td>(1.5)</td>
<td>(3.5)</td>
</tr>
<tr>
<td>Share-based payments</td>
<td>3.5</td>
<td>1.2</td>
</tr>
<tr>
<td>Elimination of other gains and losses without any impact on cash or operations</td>
<td>2.9</td>
<td>3.6</td>
</tr>
<tr>
<td>Change in inventories</td>
<td>(41.1)</td>
<td>(40.4)</td>
</tr>
<tr>
<td>Change in accounts receivable</td>
<td>(10.0)</td>
<td>16.0</td>
</tr>
<tr>
<td>Change in accounts payable</td>
<td>(3.4)</td>
<td>(17.5)</td>
</tr>
<tr>
<td>Change in other operating working capital*</td>
<td>21.8</td>
<td>4.8</td>
</tr>
<tr>
<td>Change in operating working capital*</td>
<td>(32.7)</td>
<td>(36.9)</td>
</tr>
<tr>
<td>Other non operating working capital</td>
<td>(3.5)</td>
<td>(9.4)</td>
</tr>
<tr>
<td>Change in non-current assets</td>
<td>4.3</td>
<td>2.2</td>
</tr>
<tr>
<td>Other cashflows from operation</td>
<td>(31.7)</td>
<td>(44.1)</td>
</tr>
<tr>
<td>Income tax paid</td>
<td>(81.5)</td>
<td>(29.9)</td>
</tr>
<tr>
<td><strong>NET CASH FLOW FROM OPERATIONS</strong></td>
<td>335.6</td>
<td>310.0</td>
</tr>
<tr>
<td>Purchase of property, plant and equipment**</td>
<td>(235.0)</td>
<td>(28.2)</td>
</tr>
<tr>
<td>Proceeds on asset disposals</td>
<td>5.3</td>
<td>18.6</td>
</tr>
<tr>
<td>Purchase of financial assets / Disposals of financial assets</td>
<td>8.1</td>
<td>(17.9)</td>
</tr>
<tr>
<td>Impact of changes in the scope of consolidation</td>
<td>(376)</td>
<td>(0.5)</td>
</tr>
<tr>
<td><strong>NET CASH FLOW FROM (USED IN) INVESTMENT ACTIVITIES</strong></td>
<td>(257.2)</td>
<td>(208.0)</td>
</tr>
<tr>
<td>Increase in capital</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Purchases and proceeds of treasury stocks</td>
<td>(14.1)</td>
<td>(0.7)</td>
</tr>
<tr>
<td>Dividends to shareholders</td>
<td>(39.5)</td>
<td>(39.5)</td>
</tr>
<tr>
<td>Cost of net financial debt</td>
<td>(176)</td>
<td>(24.6)</td>
</tr>
<tr>
<td>Change in confirmed financial debt</td>
<td>18.6</td>
<td>2.6</td>
</tr>
<tr>
<td><strong>NET CASH FLOW FROM (USED IN) FINANCING ACTIVITIES</strong></td>
<td>(52.5)</td>
<td>(62.1)</td>
</tr>
<tr>
<td>Net change in cash and cash equivalents</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>NET CASH AND CASH EQUALENTS AT THE BEGINNING OF THE YEAR</strong></td>
<td>25.9</td>
<td>39.8</td>
</tr>
<tr>
<td><strong>TRÉSORERIE NETTE À L’COUVERTURE</strong></td>
<td>136.7</td>
<td>103.9</td>
</tr>
<tr>
<td>Impact of currency changes on net cash and cash equivalents</td>
<td>(15.9)</td>
<td>(6.9)</td>
</tr>
<tr>
<td><strong>NET CASH AND CASH EQUALENTS AT THE END OF THE YEAR</strong></td>
<td>146.7</td>
<td>136.7</td>
</tr>
</tbody>
</table>

* Excluding current provision allowance (revenue).
** Of which €1.78 million in respect of industrial capex in 2016 and €1.75 million in 2015.
Antibiotic Susceptibility Testing
Determines the susceptibility of a bacterium in the presence of antibiotics and classifies it as susceptible, resistant, or intermediate.

Biomarker
Any indicator (nucleic acids, enzymes, metabolites and other types of molecules: histamines, hormones, proteins, etc.) present in the body or excreted by it as a biological response to a disease.

Blood culture
Laboratory analysis used to detect bloodstream infections. It is carried out by taking a sample of venous blood, which is then cultured to reveal the presence or absence of pathogenic microbes.

Chagas disease
This life-threatening disease is caused by the parasite Trypanosoma cruzi. Originally found in South America, Chagas disease has been spread by infected individuals travelling to other continents. Person to person transmission may occur via congenital transmission (present from birth), blood donations and organ donations. Long-term complications affect the gastrointestinal tract and the heart.

Cytometry
General name for a group of biological methods used to measure various parameters of cells including cell size and morphology.

Dengue
Dengue is a viral infection transmitted by the Aedes mosquito that causes flu-like symptoms. A person with dengue may develop life-threatening complications.

DNA Sequencing
Method used to determine the order of the nucleotide bases for a given DNA fragment.

Ebola
The Ebola virus causes severe illness that is often fatal in humans. The virus is transmitted to people from wild animals and then spreads from person to person. Since March 2014, countries in West Africa (Guinea, Sierra Leone and Liberia) have been particularly affected by Ebola.

Enumeration
Counting of the microbes (bacteria or fungi) present in a sample.

Flow cytometry
A technique that consists of passing a stream of cells, particles or molecules at high speed through a laser beam. The light re-emitted (by diffusion or fluorescence) enables the population to be classified and sorted according to several criteria.

Healthcare Associated Infection
An infection occurring in a patient during the process of care in a hospital or other health care facility which was not present at the time of admission.

Immunoassay
Diagnostic test based on an antigen/antibody reaction, enabling the detection of infectious agents (bacteria, viruses, parasites) and pathogen markers.

In vitro diagnostics
Analysis of biological samples (urine, blood, etc.) performed outside the human body.

Mass spectrometry
Technique used to identify a molecule and determine its chemical structure by analysing the mass and the charge of its ions.

Microbiology
Study of microorganisms, bioMérieux uses culture-based microbiology methods for the growth of bacteria from biological fluids, food and pharmaceutical samples. The bacteria are subsequently identified and their susceptibility to antibiotics tested in certain cases.

Molecular Biology
Technique that can detect a bacterium, virus, yeast, parasite or a biomarker through the presence of DNA or RNA genetic sequences in a sample.

Mycobacteria
These bacteria of the genus Mycobacterium are bacilli, or rod-shaped bacteria with an unusual cell wall that distinguishes them from other genera of bacteria. They include, in particular, pathogenic species such as Mycobacterium tuberculosis, the cause of tuberculosis, and Mycobacterium leprae, the cause of leprosy.

Nocardia
Nocardia are bacteria found in the environment (soil and water) that mainly affect patients with weakened immune systems. Nocardia infections occur primarily in three forms, affecting the lungs, the brain and the skin.

Pathogen
A microbe which causes or has the potential to cause an infectious disease.

PCR (Polymerase Chain Reaction)
Molecular biology technology for in vitro amplification of genetic sequences, used to copy known DNA or RNA sequences in large quantities (by an order of magnitude of a billion) from an initially small quantity. This technology is particularly useful for detecting the presence of viruses.

PCT (Procalcitonin)
An early and specific host marker of a bacterial infection, PCT is useful to adapt antimicrobial prescription.

Sepsis
A serious systemic infection characterized by the presence of bacteria, fungi, viruses and parasites in the blood and combined with an inflammatory immune-reaction (host response) that can result in the rapid deterioration of the patient’s general condition leading to possible organ failure.

 Syndromic approach
Medical approach based on analyzing a syndrome (i.e., a set of symptoms) and, with a single test, identifying the disease-causing organisms responsible for this syndrome, whether they are viruses, bacteria, fungi or parasites.