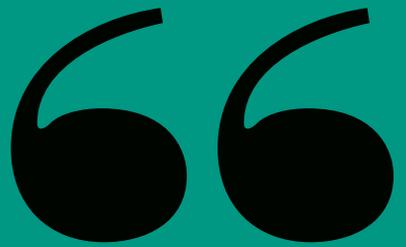


2015



Infectious diseases cause 17 million deaths each year around the world, predominantly in developing countries.

For over 45 years, Fondation Mérieux, an independent family foundation, has been taking action to ensure that every man, woman and child has fairer access to essential healthcare. ””

P.05	PRESIDENT'S MESSAGE	
P.06	PRESENTATION OF FONDATION MÉRIEUX	
P.08	RESPONDING TO THE MIGRANT CRISIS IN THE MIDDLE EAST	
P.13	DIRECTOR GENERAL'S EDITORIAL	
P.15	SUPPORT FOR CLINICAL BIOLOGY LABORATORIES	P.17 ➤ RESAOLAB // P.19 ➤ WARDS // P.20 ➤ AFRICA P.21 ➤ AMERICAS // P.22 ➤ ASIA // P.23 ➤ MIDDLE EAST
P.25	COLLABORATIVE RESEARCH PROGRAMS	P.26 ➤ EMERGING PATHOGENS LABORATORY P.27 ➤ GABRIEL NETWORK // P.28 ➤ THE 2015 CHRISTOPHE MÉRIEUX PRIZE P.29 ➤ RESEARCH PROJECTS
P.35	KNOWLEDGE-SHARING AND PUBLIC HEALTH PARTNERSHIPS	P.36 ➤ TRAINING // P.39 ➤ SCIENTIFIC CONFERENCES P.42 ➤ SUPPORT FOR INNOVATIVE PUBLIC HEALTH INITIATIVES
P.44	FONDATION MÉRIEUX WORLDWIDE	P.45 ➤ AFRICA // P.52 ➤ AMERICAS // P.54 ➤ ASIA P.58 ➤ MIDDLE EAST
P.60	GOVERNANCE	
P.61	MAIN PARTNERS	
P.62	2015 ACCOUNTS & KEY FIGURES	



PRESIDENT'S MESSAGE

Alain Mérieux



Building on our expertise in biology, we are working closely with international and local partners as part of multidisciplinary, complementary and, above all, concerted approaches with a long-term perspective.



The geopolitical upheavals that marked 2015 and the unprecedented migration crisis facing Middle Eastern countries have had major public health ramifications.

These conflict zones are fertile ground for infectious diseases, which thrive on more vulnerable populations.

As a result, refugee camps have been hard hit by respiratory infections, TB cases, and diarrheal illnesses caused by insalubrity... and children are the foremost victims. In some of the most troubled regions where vaccine coverage is decreasing because of obscurantism and insecurity, new polio cases have emerged, along with other diseases that were considered nearly eradicated.

We can of course provide emergency solutions, particularly in the field of diagnostics, to improve patient care and better control epidemics. But our foundations must sometimes take more comprehensive action to provide assistance that goes beyond health needs.

We cannot resolve public health problems by focusing just on medical care. While it's obviously at the core of response efforts, bringing remarkable innovations in prevention, diagnostics and therapy, health professionals must also take a broader approach. It is important to address the safety of water, the environment, food, and more generally nutrition. For countries in crisis, ensuring the physical safety of populations and providing them

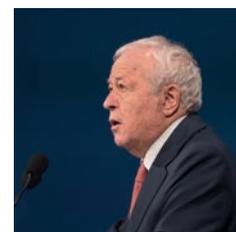
with shelter is also essential. And we must take action in the economic realm as well, providing the most vulnerable patients with the treatment they need and access to education. In this context, social reintegration programs such as micro-credit loans or the creation of schools are important success factors.

Building on our expertise in biology, we are working closely with international and local partners as part of multidisciplinary, complementary and, above all, concerted approaches with a long-term perspective.

One such example is our initiative with displaced persons in Iraq, in collaboration with other foundations in the Rhône-Alpes region, to strengthen diagnostic capacities, house displaced families, and educate children. Unfortunately the need is still immense, which is why we have decided to bolster our efforts in Lebanon, Iran and Tunisia.

I have, however, great confidence in the mobilization of our networks in these countries facing absolute tragedy, and in the ability of teams from different backgrounds and cultures to work together to lessen suffering and restore hope."

..... Alain Mérieux



CONTRIBUTING TO PUBLIC HEALTH WORLDWIDE BY STRENGTHENING LOCAL CAPACITIES IN DEVELOPING COUNTRIES

•

■ 20 COUNTRIES IN WHICH WE ARE ACTIVE ■ 13 TRAINING AND RESEARCH CENTERS ■ 18 APPLIED RESEARCH UNITS FEDERATED IN THE GABRIEL NETWORK ■ 27 COLLABORATIVE RESEARCH PROGRAMS ■ 14 CONFERENCES ■ 10 COURSES AND TRAINING SESSIONS ORGANIZED IN FRANCE AND ABROAD ■ 32 LABORATORIES RENOVATED, INCLUDING 5 IN 2015 ■ 13 LABORATORIES BUILT, INCLUDING 1 IN 2015 ■ 92 PEOPLE MOBILIZED IN 14 COUNTRIES ■ A 20 MILLION EURO BUDGET



A PUBLIC HEALTH MISSION



REDUCE THE IMPACT OF INFECTIOUS DISEASES

Fondation Mérieux, an independent family foundation with public interest status, is committed to fighting against infectious diseases affecting developing countries by reinforcing their clinical biology capabilities. The foundation's action is focused on diagnosis, an essential aspect of patient care and an indispensable tool for disease surveillance and control. In the field, the foundation helps the most vulnerable, with a particular emphasis on mothers and children.

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



3 PRIMARY OBJECTIVES



Increasing vulnerable populations' access to diagnostics by strengthening clinical biology laboratories in national healthcare systems,

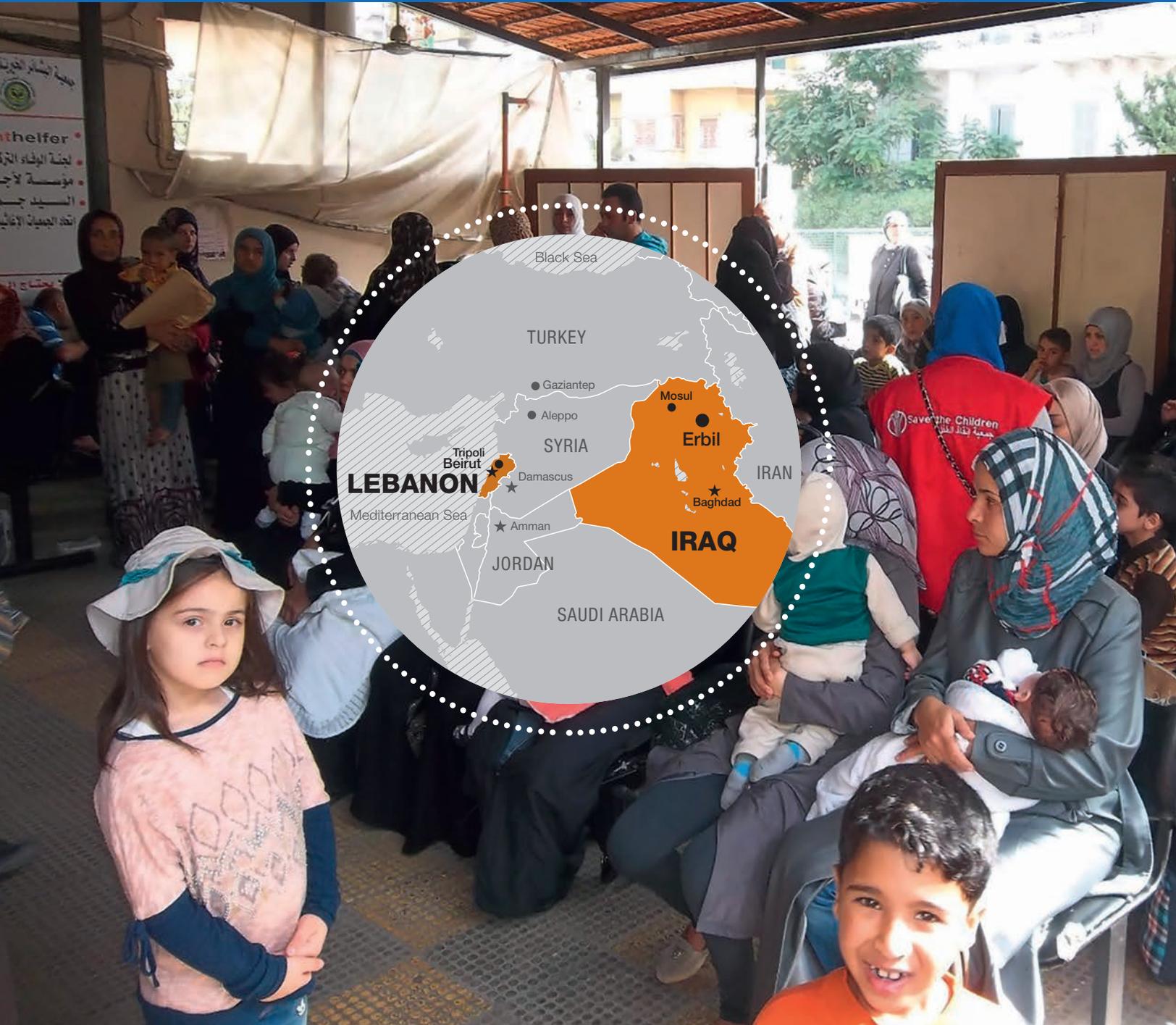
Creating and enhancing local applied research capabilities by training researchers, creating diagnostic tools and developing collaborative programs for diseases that affect developing countries,

Encouraging knowledge-sharing among health professionals, contributing to the emergence of innovative public health initiatives.

A PHILOSOPHY OF ACTION BASED ON:

- **a collaborative dynamic** supported by partnerships with the local players in healthcare, international organizations, academic research, companies, etc.,
- **a long-term vision**, with continued support leading to autonomy and local appropriation of infrastructures and programs,
- **the development of networks**, fostering South-South cooperation to share experience and pool skills,
- **an approach without borders** between human and veterinary medicines.

- EMERGENCY AID IN IRAQ
- RESEARCH PROJECT IN LEBANON
- ETIOLOGY OF RESPIRATORY INFECTION IN SYRIAN REFUGEES



RESPONDING TO THE MIGRANT CRISIS IN THE MIDDLE EAST

In fulfilling its mission to fight infectious diseases, Fondation Mérieux cannot overlook the often extreme conditions in which vulnerable populations live. Over the years, Fondation Mérieux's teams in the field have collaborated with local NGOs working to ensure the health and well-being of populations in distress, with a particular emphasis on mothers and children suffering the consequences of poverty, conflict and natural disasters.

These actions reflect the Foundation's holistic approach to health, and its determination to address the specific needs of the countries in which it operates.



EMERGENCY AID IN IRAQ

With the support of Fondation Christophe et Rodolphe Mérieux, Fondation Mérieux has been working in the Middle East, since the outbreak of the crisis in Iraq, to support populations fleeing Isis. An evaluation mission was conducted in several internally displaced person (IDP) camps in the Kurdistan Region of Iraq in August 2014. This resulted in the delivery of 13 tons of emergency food aid (through a partnership with the Auvergne-Rhône-Alpes Region) and one ton of drugs supplied by the NGO Tulipe (International Emergency and Solidarity by Healthcare Companies). These drugs have been used to stock dispensaries, which now see more than 500 patients each day, around half of whom are children. Again in 2014, Fondation Mérieux joined forces with Fondation Saint-Irénée, Fondation Raoul Follereau, the Auvergne-Rhône-Alpes Region, the City of Lyon, and Grand Lyon to help build 250 new homes in Erbil, providing decent housing for more than 1,000 people.



In 2015, the three foundations decided to continue their collaborative efforts, this time focusing on education. With additional support from Fondation AnBer and the Auvergne-Rhône-Alpes Region, the Saint-Irénée school was officially opened on June 28, 2015. The school has 18 classrooms and accommodates around 1,100 pupils each day. Fondation Mérieux drew up the plans and employed people from local IDP camps to help build the school. A sports field was also created close to the school and efforts are currently ongoing to introduce income-generating activities for displaced persons.



**RESPIRATORY
INFECTION
RESEARCH PROJECT
IN LEBANON**



Lebanon is a country of 4.5 million people, yet it is currently home to some 1.8 million Syrian refugees. Its population has risen by about 10% in the space of just a year. This situation has led to a humanitarian crisis, which was exacerbated by a particularly cold winter. In response to Médecins Sans Frontières' reports of an outbreak of respiratory infections, primarily affecting children, Fondation Mérieux has decided to conduct a study to identify the cause of these infections. The aim of this research project, involving experts from the Rodolphe Mérieux Laboratory in Beirut, is to urgently adapt treatment protocols in order to improve patient care. The Foundation has established a local consortium of project stakeholders: AMEL and El Bashaer (two Lebanese NGOs), Saint Joseph University, Lebanese University and the University of Oxford. Two exploratory missions were conducted between July and December 2015, in Tripoli, the Bekaa plain and Beirut. The framework agreement, which sets out the operational implementation arrangements for the study, was signed in December 2015.



**ACCESS TO DIAGNOSIS
FOR DISPLACED
POPULATIONS**



In 2016, Fondation Mérieux decided to introduce a new project to support IDPs in Erbil living in unsanitary conditions. The project involves the construction of a maternal and child health center, staffed by volunteer doctors and specialists, with support from the charity, Œuvres Pontificales Missionnaires de Lyon. The 400 m² building will include a medical analysis laboratory, which will provide diagnostic testing to target patient treatment. Fondation Mérieux will help to fund the construction of the building, as well as the purchase of equipment and training. The Iraqi government will subsequently take over responsibility for paying the staff, thereby securing the long-term viability of the project.





ETIOLOGY OF RESPIRATORY INFECTION IN SYRIAN REFUGEES

Lebanon's Ministry of Health has formally approved this study as part of its efforts to stem the proliferation of respiratory infections among Syrian refugees. Samples will be taken from patients selected from four recruitment centers. These samples will then undergo rapid tests, performed by BioFire Diagnostics.

The initial results will help to inform public health policy from 2016 onwards. Other studies are also in the pipeline, with a particular emphasis on tuberculosis – a disease that is resurging at an alarming rate.



SUPPORTING LOCAL INITIATIVES



The Foundation has developed local partnerships throughout the world in an effort to support disadvantaged populations. Some examples of these partnerships are detailed below.

BANGLADESH The Foundation supports surgical missions by the NGO AMD (Aide Médicale et Développement) the mother and child hospital in Chittagong.

CAMBODIA The Foundation is working with Magna-Children at Risk, an NGO that supports children living with HIV, and with 1001 Fontaines, an NGO that is currently implementing a drinking water access project in villages and schools.

HAITI Since the devastating earthquake that hit the country in 2010, Fondation Christophe et Rodolphe Mérieux and

Fondation Mérieux have been assisting with reconstruction efforts and working with various local population support facilities (orphanages, professional-training center, dispensary, micro-finance support, etc.).

MADAGASCAR The Foundation is providing financial assistance for a project that aims to improve hygiene conditions in remote villages and to ensure that vulnerable women and children have access to healthcare.

MALI | SENEGAL | PERU Fondation Mérieux supports Samusocial International's work with socially excluded street children.



DIRECTOR GENERAL'S EDITORIAL

Benoît Miribel

•

Supporting innovative public health initiatives



The last Ebola crisis, and more recently the Zika virus, have shown how important it is to be able to rapidly channel institutional funding towards research priorities to respond to epidemic risks as quickly as possible.

In the midst of a health crisis, only network-based collaboration between international public and private stakeholders will allow us to react more quickly and effectively to imminent danger. This is why the European Union's Global Research Collaboration for Infectious Disease Preparedness (GloPID-R) initiative was created, with Fondation Mérieux and the University of Oxford jointly managing the secretariat. This innovative public health initiative is just the most recent among all those that Fondation Mérieux has become associated with in recent years.

The Partnership for Dengue Control (PDC) initiative was also born of the desire to develop a holistic approach to dengue, with partners - universities, foundations, non-profit organizations, and companies - that are pooling their resources to achieve common objectives. Fondation Mérieux has managed the secretariat of this initiative for the past two years.

By providing the resources needed to strengthen local capacity, these partnerships make it possible to durably change the scale of the response and meet specific local needs for organizing and structuring public health activities.

In 1972, long before the development of initiatives such as GABRIEL, RESAOLAB, PDC and GloPID-R, Fondation Mérieux created the Agence de Médecine Préventive (AMP) in the field of epidemiology. Fondation Mérieux also created Bioforce, in 1983, to train health logistics professionals for international humanitarian work. Dr. Charles Mérieux favored this kind of cross-disciplinary approach involving a variety of complementary partners and was known for his development of innovative public health initiatives.

Following in his grandfather's footsteps, Dr. Christophe Mérieux initiated LyonBiopole in 2005 and planted the seed for the GABRIEL network, which we created in 2008 to connect the Rodolphe Mérieux Laboratories and foster collaborative applied research across borders.

As we approach Fondation Mérieux's 50th anniversary, this cross-disciplinary approach focused on innovative public health initiatives is more relevant than ever to successfully combat the infectious diseases that we are all mobilized to overcome."



..... **Benoît Miribel**



SUPPORT FOR CLINICAL BIOLOGY LABORATORIES

IMPROVING ACCESS TO BIOLOGICAL DIAGNOSIS AND STRENGTHENING EPIDEMIOLOGICAL SURVEILLANCE

Since 2007, the Foundation has been taking a holistic approach to supporting clinical biology infrastructure in developing countries. A total of **eight medical biology laboratories were renovated** in 2015, in Cameroon, Madagascar, Mali, Bangladesh and Cambodia. To reach compliance with international quality and biosafety standards, these facilities receive dedicated training and support to ensure the improvement in the quality of their service lasts over time. The Foundation has also launched and participated in a range of other projects to improve and expand access to diagnostic testing for disadvantaged populations.



DIAGNOSTIC TESTING INFRASTRUCTURE IMPROVEMENTS SINCE 2005

29 facilities renovated
13 technical assistance missions
+ 23 expertise projects conducted
on behalf of partners, including
WHO and the UN

HOLISTIC, LONG-TERM SUPPORT

Fondation Mérieux's clinical biology capacity building efforts focus on the following interventions:

- renovating existing laboratory infrastructure and designing new facilities,
- supporting governance by helping to define national development policy,
- delivering initial training and Continuing Professional Development (CPD) to laboratory staff,
- introducing standardized quality management systems to improve quality,
- supporting epidemiological surveillance through electronic data transmission and the establishment of sample transport circuits,
- auditing facilities and producing data maps, with a view to establishing a baseline situation and identifying needs,
- creating laboratory networks to pool expertise and resources,
- strengthening biosafety and biosecurity,
- providing laboratory computing resources to improve data management and reliability.



STRENGTHENING LOCAL CAPACITIES FOR DIAGNOSIS THROUGH TRAINING

BACHELOR OF SCIENCE IN BIOLOGICAL AND APPLIED MEDICAL SCIENCES

The **Bachelor of Science in Biological and Applied Medical Sciences (BAMS)** program is currently running in Mali (9th year) and in Haiti (5th year). The course is delivered in partnership with the School of Biology, Biochemistry and Biotechnology (ESTBB) of the Catholic University of Lyon.

The program is intended for senior laboratory technicians, and aims to improve their theoretical, practical and organizational skills, with a view to enhancing service quality. 28 students from West Africa and 18 Haitians completed the course in 2015. In Mali, the course is currently being incorporated into the program of the Ministry of Teaching and Scientific Research (conversion into a Master I course).



DIPLOMA OF SPECIALIST STUDIES (DES) IN MEDICAL BIOLOGY

In Cambodia, Fondation Mérieux has supported the **Diploma of Specialist Studies (DES) in Medical Biology** awarded by the University of Health Sciences since 2003. This course is open to physicians and pharmacists going into careers as biologists.

The seven students who began the course in 2014 completed their second year in 2015. The DES receives support from the Institut Pasteur du Cambodge, Fondation AnBer, and French universities from which lecturers are seconded. The program will be converted into a Master's of Medical Biology in 2016.

FOCUSING ON INTERNATIONAL HEALTH SECURITY CHALLENGES

Diagnosis is the first stage of the healthcare pathway.

This activity, performed by clinical biology laboratories, also plays an important role in epidemiological surveillance. It is a key component of the **WHO International Health Regulations (IHR)**, which seek to prevent serious risks to global public health.

Strengthening global surveillance capacities has been a major priority since the 2014 Ebola epidemic. Efforts in this area have attracted substantial funding and have been subject to various calls for projects, particularly from U.S. CDC (Centers for Disease Control and Prevention) and USAID (United States Agency for International Development) under the **Global Health Security Agenda (GHSA)**.

In recognition of its experience and its success in scaling up the RESAOLAB laboratory network in West Africa, Fondation Mérieux has been invited to participate in a number of epidemic risk containment projects.

These actions also contribute to attainment of the United Nations Development Programme's (UNDP) **Sustainable Development Goals (SDGs)**, with a particular emphasis on goal 3 - "good health and well-being".

GHSA FUNDING FOR TWO PROJECTS IN AFRICA

Fondation Mérieux obtained funding from the **Global Health Security Agenda** for two projects in 2015:

- a project in Mali to evaluate the national laboratory network and strengthen biosecurity/biosafety capacities, as part of a consortium with two other NGOs (Catholic Relief Services and Mali Health),
- a project in Senegal to support the implementation of a laboratory policy and a strategic plan, and to strengthen the activities of the National Laboratories Directorate, in partnership with the NGO PATH.

RESAOLAB

EFFECTIVE TREATMENT THROUGH RELIABLE AND ACCESSIBLE DIAGNOSIS

The West African Network of Biomedical Analysis Laboratories (RESAOLAB), was launched by Fondation Mérieux in 2009. The aim of the network is to strengthen national medical biology laboratory systems through a regional approach that incorporates all factors impacting laboratory governance and performance.

The RESAOLAB network now includes more than 500 public and private facilities across seven countries (Benin, Burkina Faso, Guinea, Mali, Niger, Senegal and Togo), and makes an active contribution to epidemic surveillance.

It played a crucial role during the Ebola outbreak in 2014, delivering training to health workers, distributing biosafety equipment and establishing a system for diagnostics.





RESAOLAB TRAINING SINCE 2013

7 training centers

120 Continuous Professional
Development training courses with
20 laboratory professionals in each course

13 training modules approved
(5 new modules in 2015)

29 DES grants awarded



In 2015, RESAOLAB sought to strengthen capacities in its key priority areas, including:

- **construction work** on a new training center in Togo, on a new technical and administrative center in Guinea, and on new premises for the future National Laboratories Directorate in Niger,
- providing **training programs** and grants for laboratory technicians,
- strengthening **Quality Assurance** by helping 250 laboratories to implement a quality assurance process, establishing quality supervision teams, and conducting 14 external quality assessment sessions,
- supporting **epidemiological surveillance** by overhauling the Lab-Book laboratory information management software (used by 45 laboratories within the network),
- allocating training grants for the DES in Medical Biology for physicians and pharmacists.

**The external quality assessment process involves a comparison of the test results from a given laboratory with an external benchmark, thereby providing objective evidence of the quality of laboratory results.*

RESAOLAB GOVERNANCE AND FUNDING

RESAOLAB is firmly aligned with the regional health policy established by the **West African Health Organisation** (WAHO). This policy was developed in conjunction with the WHO Regional Office for Africa, and with the Ministries of Health of the seven member countries. RESAOLAB is supported by the Agence Française de Développement (AFD), the Islamic Development Bank, the Department of International Cooperation of the Principality of Monaco, the Stavros Niarchos Foundation and Fondation Mérieux.

The program underwent its first financial audit in May 2015, when auditors from KPMG formally approved the program's accounts for the 2013-2014 period.

WARDS EPIDEMIOLOGICAL SURVEILLANCE IN ECOWAS COUNTRIES

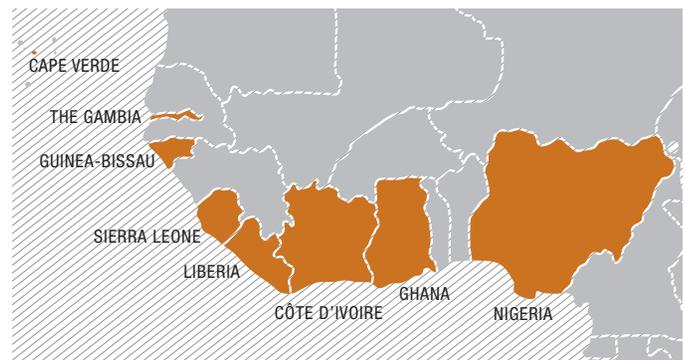
In recognition of the success of RESAOLAB, the World Bank and WAHO have asked Fondation Mérieux to coordinate **laboratory support activities under the WARDS** (West Africa Regional Disease Surveillance) program. The aim of this program is to strengthen the epidemiological surveillance system in West Africa, and in particular to establish surveillance centers at the district level. The Foundation is providing expertise and technical assistance to help improve the skills of laboratory personnel in the eight member countries of the Economic Community of West African States (ECOWAS) that are not currently covered by the RESAOLAB network (Cape Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea-Bissau, Liberia, Nigeria and Sierra Leone).

WARDS: AN AMBITIOUS PROJECT IN THE 15 ECOWAS MEMBER STATES

- Two key components:
 - strengthening regional capacities
 - improving the skills of surveillance center staff at the peripheral level
- 60 new epidemiological surveillance centers will be fully equipped and operational
- 6 partners: Centre for International Cooperation in Health and Development (CCISD), University of Oslo, WHO, U.S. CDC, University of Ghana and Fondation Mérieux
- US\$ 11.5 million of funding (co-funded by the World Bank and WAHO), including US\$ 1 million for the laboratory component coordinated by Fondation Mérieux

In 2015, Fondation Mérieux conducted eight field evaluation missions (Cape Verde, Côte d'Ivoire, Ghana, Guinea-Bissau, Nigeria, Sierra Leone and The Gambia) to learn more about existing national systems and to prepare to roll out activities.

The first trainer training session, for French speakers, was held in Abidjan (Côte d'Ivoire). The WARDS project also helped to organize the first **regional laboratory policy workshop, with the support of WAHO** and with expert input from RESAOLAB.





**COLLABORATIVE
RESEARCH
PROGRAMS**

•

**STRENGTHENING AND COORDINATING
LOCAL RESEARCH CAPABILITIES**

Local research capacity-building is a strategic focus for Fondation Mérieux. It seeks to achieve this through a unique international collaboration framework, drawing on the expertise of the **Emerging Pathogens Laboratory** in Lyon, which coordinates and supports the work of the laboratories belonging to the **GABRIEL** (Global Approach to Biological Research, Infectious diseases and Epidemics in Low-income countries) network. The **Rodolphe Mérieux Laboratories** form part of this network. These laboratories of excellence are located in infectious disease hot spots in developing countries and meet the most exacting international standards. Their role is to conduct epidemiological surveillance and research, and to deliver training. The eighth Rodolphe Mérieux Laboratory was officially opened in Bangladesh in 2015 (see page 21).

THE EMERGING PATHOGENS LABORATORY

A LABORATORY OF EXCELLENCE AT THE CENTER OF LYON'S SCIENTIFIC ECOSYSTEM



The Fondation Mérieux's Emerging Pathogens Laboratory in Lyon-Gerland works closely with the nearby **P4 Jean Mérieux-Inserm Laboratory** and is able to access this BSL4-level facility for research purposes. The Emerging Pathogens Laboratory held a series of workshops in 2015, with the aim of setting out a research strategy and timetable focusing on two priority themes: **respiratory infections** (including tuberculosis), and **foodborne diseases** (including typhoid). The research program also covers two crosscutting themes: resistance to antibiotics and emerging diseases.



TWO ACTION AREAS

- Developing and transferring technologies for the diagnosis and epidemiological surveillance of infectious diseases.
- Supporting the careers of researchers in developing countries by establishing partnerships and collaborative research programs, and delivering training.

The Emerging Pathogens Laboratory is a **member of several scientific networks of excellence**, including AVIESAN (French National Alliance for Life Sciences and Health), ISARIC (International Severe Acute Respiratory and Emerging Infection Consortium), and the European Union's Horizon 2020 research program. In 2015, the laboratory team was officially recognized as a member of the **CIRI International Center for Infectiology Research** (CIRI). This recognition was awarded by all of CIRI's supervisory entities: Ecole Normale Supérieure de Lyon, Université Claude Bernard Lyon I, CNRS (French National Center for Scientific Research) and Inserm (French National Institute of Health and Medical Research). In 2015, the Emerging Pathogens Laboratory was also assessed by HCERES (High Council for Evaluation of Research and Higher Education), which described the laboratory as having a "very good clinical and translational research team".

THE EMERGING PATHOGENS LABORATORY IN 2015

- 8 publications in international peer-reviewed scientific journals
- 13 presentations at national and international scientific conferences
- 2 priority research themes: respiratory infections and foodborne diseases

GABRIEL NETWORK LOCAL RESPONSES TO LOCAL HEALTH CHALLENGES



The GABRIEL network was created by Fondation Mérieux in 2008 and **now has 18 members in 16 countries**. The network brings together the Rodolphe Mérieux Laboratories of excellence, local reference laboratories, and academic, university and hospital research institutes. Its members work in developing countries and conduct research projects that target local infectious disease priorities (respiratory infections and fevers, waterborne and foodborne diseases, and neglected diseases).



THE GABRIEL NETWORK IN 2015

2 NEW MEMBERS:

- King George's Medical University, Lucknow (India)
- Centre Pasteur du Cameroun

MORE THAN 60 SCIENTIFIC PUBLICATIONS

(articles available at www.gabriel-network.org)

AN HONOR AWARDED

The Paraguayan Congress of Infectious Diseases awarded an Honorary Title to Instituto de Investigaciones en Ciencias de la Salud (National University of Asunción), a GABRIEL network member in Paraguay, for its research on meningitis.

MORE THAN 100 SCIENTISTS TRAINED IN 2015

In 2015, the GABRIEL network delivered a range of training modules for staff at laboratories within the network, as well as academics and health professionals. These included: a molecular immunology module in Mali; a molecular biology module in Haiti, Cambodia and Madagascar; and a workshop on recombinant proteins at the Christophe Mérieux Laboratory in Beijing (a joint unit with the Institute of Biology at the Chinese Academy of Medical Sciences).

The Emerging Pathogens Laboratory also hosted a series of workshops on molecular diagnostics used in tuberculosis and typhoid projects. Scientists working at the Rodolphe Mérieux Laboratory in Beirut (Lebanon) received training on the use of a biosafety level 3 laboratory.



ISO 15189 QUALITY ACCREDITATION

- New training programs were delivered in 2015, in conjunction with Mérieux Université, as part of the adoption of the ISO 15189 quality management standard by GABRIEL network laboratories
- Members from Madagascar, Lebanon, Mali and Haiti took part



**RAPID
TEST CAPACITY-BUILDING**

In 2015, Fondation Mérieux's Scientific Department opened a **new Access to Diagnosis for Neglected Diseases unit**. This unit seeks to improve access by ensuring that effective and accessible tests are deployed in areas with limited healthcare services, and that suitably trained staff are present. The Foundation intends to build on its existing technology transfer activities in developing countries and to introduce new skills transfer modules. Two key areas were approved in 2015: modules on the development, industrialization and production of rapid tests, and modules on test evaluation and control.



Efforts continued in 2015 to **develop Lateral Flow Immuno Assay (LFIA) rapid tests** for typhoid, leptospirosis (an under-diagnosed bacterial disease), and Ebola virus disease.



2015 CHRISTOPHE MÉRIEUX PRIZE

THE 2015 CHRISTOPHE MÉRIEUX PRIZE WAS AWARDED TO PROFESSOR JEAN-JACQUES MUYEMBE-TAMFUM FOR HIS RESEARCH WORK ON EBOLA HEMORRHAGIC FEVER IN THE CONGO BASIN



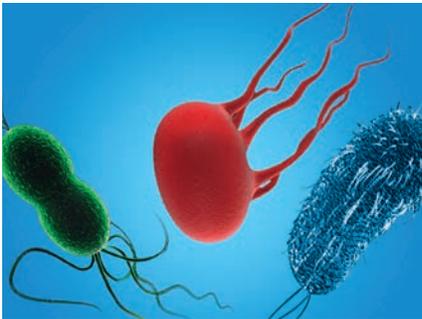
Professor Muyembe-Tamfum was involved in the initial discovery of the virus, and his research now focuses on the clinical, epidemiological and virological aspects of the disease. The control measures that he helped to develop are now used to manage epidemics in Africa.

Jean-Jacques Muyembe-Tamfum is Professor of Microbiology at the University of Kinshasa's Faculty of Medicine, Director-General of the National Institute for Biomedical Research (INRB), and scientific adviser to WHO.

RESEARCH PROJECTS

FOODBORNE DISEASES

EUROPEAN COMMISSION COMPARE PROJECT



Fondation Mérieux is a partner of the COMPARE project (Collaborative Management Platform for detection and Analyses of (Re-) emerging and foodborne outbreaks in Europe), funded by the European Commission's Horizon 2020 program. The aim of this project is to develop a global platform to speed up the detection of infectious diseases using **next generation sequencing technology**.

The project involves a consortium of 29 partners (public and animal health research groups, food safety institutes) and is coordinated by the Technical University of Denmark and Erasmus MC. Fondation Mérieux is working closely with **GABRIEL network members in Bangladesh**, focusing on three types of foodborne infection:

- *Escherichia coli* (EPEC) with the Institute for Developing Science and Health Initiatives (ideSHi),
- Diarrheal diseases, as part of a surveillance program run by the International Centre for Diarrhoeal Disease Research, Bangladesh,
- *Salmonella* Typhi and Paratyphi A bacteria, with the Child Health Research Foundation.

EXTENSION OF THE TYPHOID SCREENING PROJECT IN AFRICA

Having developed a **molecular typhoid screening test** from clinical samples from several sites in Bangladesh, the Emerging Pathogens Laboratory compared the performance of this test with the standard blood culture technique in 2015.

Based on the initial results, Fondation Mérieux received new funding from the Bill & Melinda Gates Foundation in 2015 to continue working on the project and to **test the approach in an African context** (in Burkina Faso, Ghana and Malawi). If the performance levels are confirmed, the test will be included in the Bill & Melinda Gates Foundation surveillance network.

SCHISTOSOMIASIS PREVALENCE STUDY IN MADAGASCAR

In 2015, Fondation Mérieux began working on a new project to establish the **prevalence of schistosomiasis among children in Madagascar**.

Schistosomiasis is transmitted by a freshwater mollusc and is the world's second most common endemic parasitic disease after malaria. Around 600 samples were taken at 12 primary schools, with more than 120 positive cases identified. These patients were then treated in accordance with the WHO recommended protocol. The Foundation also introduced a training program for staff at community health centers, covering the risk factors associated with the disease and measures for raising awareness among the population.



TYPHOID

Typhoid is an infection caused by *Salmonella* bacteria. The infection is transmitted by ingesting contaminated food or water.

It is suspected to be involved in various co-infections, including malaria.



RESEARCH PROJECTS

TUBERCULOSIS AND OTHER MYCOBACTERIAL DISEASES

TUBERCULOSIS CONTROL IN BANGLADESH PRISONS

Tuberculosis risk is especially high in prisons throughout the world. Moreover, the prison environment favors the emergence of drug-resistant strains of the disease.

A project conducted in the largest prison in Dhaka (Bangladesh) is seeking to identify the underlying transmission chains and risk factors and to **produce a set of recommendations for prison and health authorities.**

This study, supported by the Foundation's Emerging Pathogens Laboratory, has revealed the major impact of interventions implemented by ICDDR,B (International Centre for Diarrhoeal Disease Research, Bangladesh). Prisoners are actively screened on arrival and throughout their imprisonment, and this has led to a dramatic decline in the tuberculosis transmission rate between prisoners. Three years after the program was introduced, transmissions in prison accounted for less than 25% of all tuberculosis cases, compared with over 50% previously.

LEPROSY DRUG RESISTANCE SURVEILLANCE IN MADAGASCAR

Leprosy is a major public health concern in Madagascar, where more than 1,500 cases are reported each year (9% of which are children).

The first phase of this project involved the delivery of **training on early screening**, with a view to improving leprosy diagnosis. The second component of the project focuses on **leprosy antibiotic resistance surveillance.** In 2015, the Charles Mérieux Infectiology Center in Madagascar received new microscopy and molecular biology equipment.

This work was conducted in partnership with the Dermatology Department of the University Hospital Center in Befelatanana (Antananarivo), Fondation Raoul Follereau, the National Leprosy Program, the National Reference Center for Mycobacteria and Mycobacterial Resistance to Tuberculosis Drugs, the Ministry of Health, and the WHO Country Office in Madagascar.

TROPICAL MYCOSIS CONTROL IN MADAGASCAR

Despite the high number of cases reported by physicians throughout the country, the figures do not reflect the true prevalence of tropical mycoses in Madagascar.

The fungi responsible for these diseases are found in the soil and on plants, and the condition is contracted through contact with a wound. A study to analyze the incidence of these diseases was launched in 2013, in partnership with Université Joseph Fourier in Grenoble, the Charles Mérieux Infectiology Center, and the Dermatology Department of the University Hospital Center in Befelatanana (Antananarivo).

This work has led to improvements in diagnosis, through the provision of simple and accessible molecular technologies and the creation of a network of clinicians and biologists capable of identifying and treating patients. The study is being conducted by a post-doctoral researcher, who has received an ARTS (Research Grant for a Thesis in the South) grant, jointly funded by Fondation Mérieux and the French Institut de Recherche pour le Développement (IRD).



RESEARCH PROJECTS

RESPIRATORY DISEASES



CHARACTERIZATION OF PEDIATRIC PNEUMONIA CASES IN CAMBODIA

As part of efforts to **introduce a *Streptococcus pneumoniae* vaccine in Cambodia**, a study was conducted to determine the characteristics of the disease, particularly among children under 15.

The project is being carried out in conjunction with the Cambodia-Oxford Medical Research Unit (COMRU) and the Wellcome Trust. The study benefits from operational support from the Rodolphe Mérieux Laboratory in Phnom Penh and the Angkor Hospital for Children (pediatric hospital in Siem Reap Province). Around 1,000 cases have been analyzed and the results will be used to assess the impact of vaccination.

MULTI-CENTER PEDIATRIC PNEUMONIA STUDY

The initial results of the multi-center study on the causes of pneumonia among children under 5 in developing countries were presented at the American Society of Microbiology's **Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC)** on September 20, 2015.

These results indicate that almost half of pneumonia cases can be attributed to *Streptococcus pneumoniae*, while the remaining cases are viral in origin. It should therefore be possible to significantly reduce the disease burden of pneumonia in developing countries by vaccinating against *Streptococcus pneumoniae* and developing a vaccine for human respiratory syncytial virus (RSV).

These results were included in two scientific publications in 2015, and a number of other publications are currently being prepared for 2016.



AN UNPRECEDENTED STUDY

The multi-center study, designed and funded by Fondation Mérieux, was conducted by GABRIEL network research centers in eight countries on three continents. The aim of the study is to help reduce pneumonia-related child mortality. The disease is the leading cause of death among children under five in developing countries.



NEW COLLABORATIVE RESEARCH IN LEBANON

In 2015, Fondation Mérieux joined forces with several local partners to respond to the outbreak of respiratory infections among Syrian refugees in Lebanon, launching a collaborative research project to identify the origins of these infections and to improve treatment protocols (see page 11).

RESEARCH PROJECTS

RESPIRATORY DISEASES

VACCINE EFFICACY IN TOGO

The PneumoTone project, funded by the Agence de Médecine Préventive (AMP), entered its second phase in 2015, with the aim of **analyzing the impact of several vaccination campaigns** on respiratory infections in the city of Dapaong (Togo).

The first phase of the project identified *S. pneumoniae* and *S. aureus* as the principal bacteria responsible for pneumonia cases. Two vaccination campaigns were then conducted among infants and children under 4.

The preliminary results suggest that vaccinating young children helps to reduce the prevalence of respiratory infections among the population.

INFLUENZA SURVEILLANCE IN BRAZIL

A program of **active influenza surveillance among hospitalized patients** was conducted at three sites in Brazil (Fortaleza, Rio de Janeiro and Curitiba), as part of a collaborative project with the GIHSN (Global Influenza Hospital Surveillance Network) and with financial support from Sanofi Pasteur. The samples were analyzed at the Fiocruz Foundation's Laboratório de Vírus Respiratório e Sarampo, a member of the GABRIEL network.

The aim of the project is to document the prevalence of severe influenza among hospitalized patients and to assess the efficacy of vaccination. Around 600 patients were recruited in 2015 and 6% of these tested positive for influenza.

PREVENTION OF VIRAL AND BACTERIAL CO-INFECTIONS

This PhD research project (viva completed in October 2015) sought to identify prognostic biomarkers of the **severity of respiratory co-infections among children**.

The study monitored a group of patients in Paraguay, from the cohort that took part in the GABRIEL network multi-center study. This *in vitro* research method was based on an understanding of changes that occur in the immune system during co-infection (viral and bacterial). The results identified two potential biomarkers involved in inflammation control: a pro-inflammatory chemokine and a micro RNA.

STUDY OF RESPIRATORY INFECTIONS IN LAOS

The LaCoRIS project was launched in 2014 with funding from the U.S. Naval Medical Research Unit Two (NAMRU-2). The aim of the project is to measure the incidence of acute respiratory infections in Vientiane and to **identify the pathogens responsible for these infections**.

In 2015, a total of 280 samples were taken and analyzed by the microbiology laboratory at Mahosot Hospital and by the Christophe Mérieux Infectiology Center in Laos.

The study forms part of a wider scientific collaboration program with the Wellcome Trust, the Mahosot Research Unit in Vientiane, the London School of Hygiene & Tropical Medicine field office in Bangkok, and the Emerging Pathogens Laboratory. In total, the study will cover 540 patients with symptoms of a respiratory infection.



RESEARCH PROJECTS



HEMORRHAGIC FEVERS

CRIMEAN-CONGO HEMORRHAGIC FEVER VIRUS PATHOGENESIS STUDY



Since 2009, in collaboration with the French Armed Forces Biomedical Research Institute and Inserm, Fondation Mérieux's Emerging Pathogens Laboratory has been conducting a research project on Crimean-Congo hemorrhagic fever, a viral disease transmitted by ticks.

This study focuses on the pathogenesis of the virus through *in vitro* infection of cell lines. The project will seek to gain a **better understanding of the autophagy phenomenon** observed during replication of the virus and will look to identify potential treatment targets and strategies. The study was presented at the 5th Autophagy Scientific Days, an event organized by the CFATG (French Autophagy Society) on October 5-7, 2015.

MENINGITIS

TREATMENT OF PEDIATRIC MENINGITIS IN MADAGASCAR

The meningitis surveillance project in Madagascar has now entered the analysis phase, having completed and validated the **transfer of real-time multiplex PCR diagnostic technologies** developed by the Emerging Pathogens Laboratory.

Around 300 samples were taken at the Tsaralalana Mothers & Children's University Hospital, and the samples were then analyzed at the Charles Mérieux Infectiology Center in Antananarivo. The aim of this study, conducted in partnership with the WHO Country Office in Madagascar, is to improve patient treatment, monitor strain circulation, and inform vaccination strategy.



BACTERIAL MENINGITIS



Bacterial meningitis is a major public health concern.

An estimated 1.2 million cases occur each year worldwide, leading to over 300,000 deaths.

The majority of meningitis cases are caused by several bacterial strains, most commonly *Streptococcus pneumoniae*, *Neisseria meningitidis* and *Haemophilus influenzae b*.

CERVICAL CANCER

CERVICAL CANCER SCREENING IN LAOS



Cervical cancer is the second most common form of cancer among women aged 15-44 in Laos. However, only 3.9% of this population group receive a screening test. Women living with HIV are five times more likely to develop this form of cancer.

The aim of the LaoCol-VP project, funded by the French National Cancer Institute (INCa) and Fondation Mérieux, is to compare the efficacy of two cervical cancer screening strategies: the detection of high-risk human papillomavirus (HPV) strains using the careHPV™ test, and the cervical smear method. This crosscutting multi-center study was conducted on a cohort of more than 600 women between February 2014 and May 2015. The results were presented at three conferences (in India, Laos and the United States) in 2015, and will be published in 2016. The partners have agreed to extend the project in order to continue offering surgical treatments and to monitor high-risk HPV carriers.



KNOWLEDGE-SHARING AND PUBLIC HEALTH PARTNERSHIPS

SUPPORTING GLOBAL HEALTH THROUGH KNOWLEDGE-SHARING AND TRANSFER

Knowledge-sharing and transfer are two core components of Fondation Mérieux's strategy. The Foundation organizes high-level scientific symposia and conferences as part of its efforts to disseminate medical advances worldwide, with equal access for the North and the South. It also delivers training to health workers in developing countries, helping to transfer key skills that will ensure the long-term viability of its field interventions.

The Foundation also engages in innovative partnerships to support global public health.



EN 2015

11 expertise networks

12 distance-learning modules,
including 2 new modules on combating
counterfeit medicines in 2015

33,000 visitors from 188 countries

1,600 members

SUPPORTING GLOBAL HEALTH THROUGH NEW TECHNOLOGIES

In 2009, Fondation Mérieux created an online information-sharing and training tool for healthcare professionals in developing countries – the GLOBE (Global Link for Online Biomedical Expertise) portal. The portal is available in French and English, and features a range of resources and distance-learning modules based on the programs of the Foundation and its partners. The GLOBE portal played a key role in disseminating information and sharing best practice during the Ebola outbreak in 2014.

TRAINING PROGRAMS

As part of its capacity-building efforts in developing countries, Fondation Mérieux supports the delivery of several international, regional and local training programs, specifically tailored to meet a diverse range of needs:

- intensive courses on key aspects of vaccinology and the diagnosis of infectious diseases;
- degree courses to strengthen clinical biology capabilities (BAMS and DES in Medical Biology, see p. 16);
- short courses related to specific projects and networks.



**FONDATION MÉRIEUX
INTENSIVE
TRAINING IN 2015**

•
More than 200 participants
from 40 different countries
completed an intensive course



INTENSIVE COURSES

ADVANCED VACCINOLOGY COURSE

FRANCE • LES PENSIÈRES
16TH CLASS

Fondation Mérieux's **ADVAC** (Advanced Vaccinology Course) program is delivered in partnership with the University of Geneva. The aim of the course is to provide participants with an overview of vaccination-related issues to **facilitate vaccinology decision-making**.

A total of 72 students took part in the program in 2015. The ADVAC program receives support from the Bill & Melinda Gates Foundation, the European Commission, WHO, CDC, ESPID (European Society for Paediatric Infectious Diseases), ECDC (European Centre for Disease Prevention and Control), the Johns Hopkins Bloomberg School of Public Health, the Fogarty International Center and the NVPO (National Vaccine Program Office).



ADVANCED COURSE ON DIAGNOSTICS

FRANCE • LES PENSIÈRES
6TH CLASS

The **ACDx** (Advanced Course on Diagnostics) program is organized by Fondation Mérieux in partnership with the London School of Hygiene & Tropical Medicine. 26 students participated in the course in 2015.

The aim of the ACDx program is to make diagnostics a central component of global public health interventions and to **strengthen local decision-making capacities**. ACDx is supported by the ASLM (African Society for Laboratory Medicine) and the WHO TDR (Special Programme for Research and Training in Tropical Diseases).

→ A FLOURISHING ADVAC ALUMNI NETWORK IN 2015

- Close to 1,000 former students
- 5 meetings and discussions held in Leipzig, Geneva, San Diego and Rio de Janeiro
- 3 newsletters for teachers and alumni
- 2 "Special Lecturers" podcasts posted on GLOBE



→ LES PENSIÈRES: A PUBLIC HEALTH HUB

The Les Pensières conference center, located in Annecy (France), hosts a range of scientific conferences and training sessions throughout the year, including the international ADVAC and ACDx programs. It also hosts symposia and seminars for organizations and businesses that share Fondation Mérieux's values. In 2015, some 3,500 people attended 98 public health conferences and training sessions at Les Pensières.



INTENSIVE COURSES

VACCIINOLOGY IN AFRICA

AFRICA 3RD CLASS

Following the success of the first two sessions of the Vaccinology in Africa course, held in Ghana and Kenya, the third course took place **in Mali** in 2015.

The 41 participants benefited from a training program delivered jointly by the Mali Faculty of Medicine's Malaria Research and Training Center (MRTC) and the Charles Mérieux Infectiology Center in Bamako. The initiative is overseen by the Jenner Institute (a partnership between the University of Oxford and the Pirbright Institute in the UK) and is supported by Fondation Mérieux and several industrial partners (GSK, Pfizer and Merck).

INTEGRATED WATER/HYGIENE/NUTRITION TRAINING PROGRAM

MALI 2ND CLASS

In 2015, the Bioforce Institute delivered its **Nutrition Project Management and Water-Hygiene-Sanitation Project Management** courses at the Charles Mérieux Infectiology Center in Mali.

The program is jointly funded by UNICEF and Fondation Mérieux, under a partnership with Action Against Hunger and Antenna Mali. A total of 41 students from 10 African countries took part in the course in 2015. The Charles Mérieux Infectiology Center also hosted other Bioforce Institute short courses, including the Emergency WASH (Water, Sanitation and Hygiene) program.

SHORT COURSES

Fondation Mérieux's local teams offer a range of thematic short courses for professionals from clinical diagnostic and research laboratories:

- ➔ Via the GABRIEL network: courses on diagnostic tools, research protocols and immunology,
- ➔ Via the RESAOLAB network in West Africa: 14 modules in total, including a dedicated Ebola course and a series of new programs launched in 2015 that include laboratory data management, preparation of liquid culture media and laboratory management,
- ➔ Via the Quality Initiative: **courses on biosafety, quality standards and processes**, and rollout of the initiative to five new sites in 2015 (Bangladesh, Haiti, Laos, Mali and Paraguay).



SCIENTIFIC CONFERENCES

Each year, Fondation Mérieux works with a network of international experts to organize scientific conferences in France and abroad on themes related to global public health. In doing so, the Foundation seeks to help disseminate the latest advances, develop expert networks and strengthen international synergies.

Some of these conferences are regular events. These include the “**Cent Gardes**” **Conference**, launched by Dr. Charles Mérieux in 1986, and the **Charles Mérieux Conference**, a global health conference first held in 2007 and hosted in Haiti in 2015.



2015 SCIENTIFIC CONFERENCES

- 9 events held at Les Pensières
- 5 events held outside France
- More than 1,400 participants

CONFERENCES & WORKSHOPS AT LES PENSIÈRES

EBOLA VACCINE: WHERE ARE WE? HOW TO MOVE FORWARD?

In partnership with AVIESAN (French National Alliance for Life Sciences and Health) and WHO (January 2015)

15TH "CENT GARDES" CONFERENCE

On HIV/AIDS research, in partnership with ANRS and Inserm (French National Institute of Health and Medical Research) (October 2015)

GFBR MEETING

Global Forum for Bioethical Research with the support of the Wellcome Trust, the National Institutes of Health (NIH) and the Bill & Melinda Gates Foundation (November 2015)

WORKSHOP ON THE SHARING OF RESEARCH DATA AND BIOLOGICAL SAMPLES IN LOWER-INCOME COUNTRIES

Organized jointly by the Inserm Ethics Committee, GFBR and Fondation Mérieux (November 2015)

SOCIAL INNOVATION IN HEALTH INITIATIVE (SIHI)

Led by the WHO TDR (Special Programme for Research and Training in Tropical Diseases) (December 2015)

■ In partnership with Sanofi Pasteur

- ➔ Vaccination ecosystem health check (January 2015)
- ➔ Off-target effects of vaccination (June 2015)
- ➔ Beyond Efficacy: the full public health impact of vaccines (June 2015)
- ➔ Demand side interventions to increase and sustain vaccination uptake (September 2015)
- ➔ Pertussis: biology, epidemiology and prevention (November 2015)



FOCUS ON...



EBOLA VACCINE: WHERE ARE WE? HOW TO MOVE FORWARD?

JANUARY 12-13, 2015 • LES PENSIÈRES
60 PARTICIPANTS

➔ The aim of this event was to assess the most promising options for Ebola vaccines, confronting the challenges faced by researchers with those faced by international, governmental and non-governmental organizations working in the field to respond to the Ebola epidemic in West Africa. The discussions focused on progress and next steps in the development of three vaccine candidates in clinical trials.

SOCIAL INNOVATION IN HEALTH INITIATIVE (SIHI)

DECEMBER 2-3, 2015 • LES PENSIÈRES
57 PARTICIPANTS

➔ What success factors and strategies are needed to encourage innovative social initiatives for public health? This event, attended by representatives of the Ministries of Health of Uganda, Malawi and Swaziland, featured presentations on community-based solutions, detailing their impact on local healthcare systems. The meeting was organized by the WHO TDR, the Bertha Centre for Social Entrepreneurship and Innovation (University of Cape Town) and the Skoll Centre for Social Entrepreneurship (University of Oxford).

INTERNATIONAL CONFERENCES



5TH CHARLES MÉRIEUX CONFERENCE

HAITI • Organized in partnership with the GHESKIO Centers, the Jacques Cartier Center and the Francophone University Association (AUF) (February 2015)

6TH GLOBAL LABORATORY INITIATIVE

SWITZERLAND • Organized by the WHO Global TB Programme and supported by Fondation Mérieux (April 2015)

MIDDLE EAST AND EASTERN EUROPE RABIES EXPERT BUREAU MEETING

FRANCE • Organized in partnership with the Global Alliance for Rabies Control (April 2015)

WORLD RABIES DAY

LAOS • Organized by Laos' Ministry of Health with the support of Fondation Mérieux (September 2015)

ASIAN PACIFIC VACCINOLOGY MEETING

THAILAND • Organized in partnership with Sanofi Pasteur (December 2015)

FOCUS ON...



ASIAN PACIFIC VACCINOLOGY MEETING

NOVEMBER 30TH – DECEMBER 3RD
BANGKOK (THAILAND)
152 PARTICIPANTS



The second Asian Pacific Vaccinology Meeting included workshops on available vaccines, vaccines under development and national prevention strategies. The participants confirmed the need to continue sharing information and exchanging best practices at the regional level, to ensure the effectiveness of vaccination strategies.



SUPPORT FOR INNOVATIVE PUBLIC HEALTH INITIATIVES

Fondation Mérieux supports global initiatives that offer innovative solutions to public health challenges. The Foundation continued its work with three multi-national partnership initiatives in 2015, focusing on dengue fever control, diseases of pandemic potential, and enteric diseases.



PARTNERSHIP FOR DENGUE CONTROL

The Partnership for Dengue Control (PDC) is an alliance that brings together international organizations, scientific experts and public health leaders.

The PDC is hosted by Fondation Mérieux and seeks to **contribute to the elimination of dengue fever** – a disease that affects 400 million people each year in more than 120 countries in the subtropics. In 2015, the PDC advised the Mexican government on the introduction of a new dengue vaccine and obtained a consensus among international experts on the clinical definition of severe forms of the disease, working with the NIH.

Fondation Mérieux also launched a new website to give the program greater visibility in 2015:

www.controldengue.org.

The initiative is supported by the Bill & Melinda Gates Foundation, Sanofi Pasteur, Takeda, bioMérieux and Bayer.

GLOBAL RESEARCH COLLABORATION GloPID-R

GloPID-R (Global Research Collaboration for Infectious Disease Preparedness) is the only alliance of its kind to bring together research funding organizations on a global scale to facilitate an **effective, rapid research response to a significant outbreak of an infectious disease with pandemic potential**. GloPID-R coordinates and shares information among funding organizations, thereby helping to avoid duplication of effort and resources and enabling a rapid response when a health emergency is declared.

The GloPID-R Secretariat is funded by the European Union's Horizon 2020 program and is coordinated by Fondation Mérieux and the University of Oxford. Its key achievements in 2015 included conducting a study to identify and map research funding organizations and networks, and to analyze existing capabilities and potential barriers to a rapid response.

GloPID-R has doubled the number of funding organizations involved since its creation, and it now has over 20 organizations participating throughout the world.

INITIATIVE AGAINST DIARRHEAL AND ENTERIC DISEASES IN AFRICA AND ASIA

The Initiative against Diarrheal and Enteric diseases in Africa and Asia (IDEA-Cholera) is a multidisciplinary, multinational and independent group of health professionals involved in cholera and enteric disease control and prevention efforts. The **initiative draws on the expertise of professionals working on the ground**, who come together at regional workshops.

Two workshops were held in 2015, in India and Benin respectively. Two declarations were drafted at these workshops: the "Delhi Declaration" and the "Cotonou Declaration" – advocacy documents aimed at opinion leaders, institutions and local and national organizations.

IDEA is hosted by Fondation Mérieux and funded by Sanofi Pasteur, and was officially incorporated into the WHO Global Task Force for Cholera Control in 2015.



AN INTEGRATED APPROACH TO ELIMINATING DENGUE FEVER

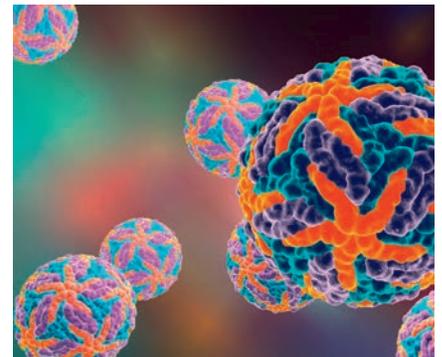
The PDC adopts a holistic approach to controlling the disease, incorporating all existing tools and methods (vaccines, antiviral treatments, insecticides, new surveillance methods, and innovative mosquito control strategies).



GloPID-R RESPONDS TO THE ZIKA OUTBREAK

In response to the Brazilian Ministry of Health's official declaration of the Zika virus as a public health emergency in November 2015, GloPID-R assembled an Outbreak Committee on December 1st.

GloPID-R members produced a report identifying Zika virus capabilities and research activities, and detailing key issues requiring a research response.



FONDATION MÉRIEUX
WORLDWIDE

→ → →



BENIN



BURKINA FASO



GUINEA



MADAGASCAR



MALI



NIGER



SENEGAL



TOGO



BRAZIL



HAITI



BANGLADESH



CAMBODIA



CHINA



LAOS



MYANMAR



IRAQ



IRAN



LEBANON



TAJIKISTAN



2015

▶ ANNUAL REPORT

AFRICA

BENIN



- Fondation Mérieux office: 1 Beninese employee
- RESAOLAB network member since 2013

IN 2015

RESAOLAB PROGRAM ACTIONS

- Launch of the construction of the External Quality Control and Training Center on the grounds of the Ministry of Health of Benin
- Implementation of the quality plan in laboratories: 200 laboratory technicians benefit from the quality assurance training module
- Scholarships: 2 applicants for the Bachelor of Science in Biological and Applied Medical Sciences (BAMS) in Mali and 2 students for the DES in Medical Biology (in year 2)
- 5 training modules administered: quality assurance, biosecurity, inventory management, chronic diseases, data management
- Launch of the renovation and equipping of the practical workrooms of the Ecole Polytechnique d'Abomey-Calavi (EPAC)

TRAINING AND KNOWLEDGE-SHARING

- IDEA workshop on strategies to combat cholera in Cotonou (October 5-9)

BURKINA FASO

- Fondation Mérieux office: 1 Burkinabe employee
- RESAOLAB network member since 2009
- ➊ RESAOLAB PROGRAM ACHIEVEMENTS:
 - Construction of the Continuing Training Center and External Quality Control Unit in Ouagadougou, within the General Directorate of Pharmacy, Drugs and Laboratories, inaugurated in 2013
 - Renovation and equipping of 3 other continuing training centers: Bobo-Dioulasso (DRS), Ouahigouya (Lazaret Medical Center) and Fada N'Gourma (Regional Hospital)
 - Renovation of the laboratory and practical workrooms of the Faculty of Pharmacy of Ouagadougou in 2014*

IN 2015

SUPPORT FOR CLINICAL BIOLOGY LABORATORIES

- Participation in the SOCIALAB study: historical and anthropological research in Senegal, Burkina Faso and Mali on the development and current status of medical laboratory services in national health systems

RESAOLAB PROGRAM ACTIONS

- Quality plan review for the 2015-2017 period
- External Quality Assessment Sessions for 101 laboratories: 74 laboratory workers from public and private structures have been oriented to quality management, bacteriology, parasitology and hematology
- Scholarships: 5 technicians for the Bachelor of Science in Biological and Applied Medical Sciences (BAMS) in Mali and 2 students for the DES in Medical Biology
- 4 modules broken down into workshops and practical training: quality management, antibiotic susceptibility testing, laboratory data management and preparation and management of culture media

SUPPORT FOR LOCAL INITIATIVES

- Support for the NGO Djantoli for the extension of its programs for access to healthcare to 2 new outlying neighborhoods of Ouagadougou

AFRICA

GUINEA



- First Fondation Mérieux mission in 2010
- Fondation Mérieux office: 2 expatriates and 1 Guinean employee
- RESAOLAB network member since 2013

IN 2015

- New Fondation Mérieux office in Conakry

SUPPORT FOR CLINICAL BIOLOGY LABORATORIES

- Launch of the LAB-NET project to begin surveillance of viral hemorrhagic fever syndromes in Guinea: 5 need assessment missions carried out
- Support for the Coronthie Women and Children's Health Center in Conakry: supervision by Prof. Diallo of the Charles Mérieux Infectiology Center in Mali

RESAOLAB PROGRAM ACTIONS

- Foundation stone laid for the Laboratory Directorate in Donka
- Distribution of transport kits and personal protective equipment to laboratories and Ebola Treatment Centers in Guinea
- Scholarships: 2 technicians for the Bachelor of Science in Biological and Applied Medical Sciences (BAMS) in Mali and 2 students for the DES in Medical Biology
- Training sessions for trainers in the RESAOLAB network at the Institut de Perfectionnement Professionnel en Santé (IPPS)
- Training sessions on modules on pre and post-analytical testing phases and Ebola for 246 workers

MADAGASCAR

- First Fondation Mérieux mission in 2006
- Fondation Mérieux office: 1 expatriate and 1 Malagasy employee
- Charles Mérieux Infectiology Center with a Rodolphe Mérieux Laboratory* within the University of Antananarivo (2010)
- One GABRIEL network member: University of Antananarivo
- Renovation of 9 clinical biology laboratories since 2007



RODOLPHE MÉRIEUX LABORATORY RESEARCH FOCUS:

- Leprosy ■ Neglected tropical diseases
- Diarrheal diseases ■ Meningitis

IN 2015

SUPPORT FOR CLINICAL BIOLOGY LABORATORIES

- Renovation of 3 laboratories in 2015: Befelatanana microbiology laboratory, Sambava Hospital bacteriology laboratory and Andapa Adventist Hospital laboratory
- Technical support for the establishment of a network of public hospital laboratories (RESOILAB)
- Deployment of a Laboratory Information Management System and training in 9 laboratories
- Implementation of HIV viral load testing at the Charles Mérieux Infectiology Center
- Support for the pharmaceutical studies program created by Fondation Mérieux in 2006: training to strengthen the capacity of hospital pharmacies

CURRENT RESEARCH PROJECTS

- Molecular surveillance of resistance of *Mycobacterium leprae* to leprosy treatment
- Epidemiology, mycological and molecular diagnosis of tropical mycoses: to assess the current incidence of chromomycosis and sporotrichosis in Madagascar
- Surveillance of pediatric bacterial meningitis at the Tsaralalana Mothers & Children's University Hospital laboratory

- Development and validation of a molecular test for the diagnosis of bacterial meningitis: retrospective study in collaboration with the Charles Mérieux Infectiology Center and the Tsaralalana Mothers & Children's University Hospital on 297 samples
- Assessment of the endemicity rate for intestinal bilharzia by *Schistosoma mansoni* in the Haute Matsiatra region

GABRIEL NETWORK MULTI-CENTER STUDIES:

- Proof-of-concept for the analysis of the microbiome of hospitalized children with pneumonia in developing countries – Biodiversity project

- Development of diagnostic tools for pneumonia: *Streptococcus pneumoniae* strain typing by real-time multiplex PCR
- Development of a molecular biology training module made available in different versions aligned with local needs, adapted for Madagascar (15 participants)

SUPPORT FOR LOCAL INITIATIVES

- Access to hygiene for destitute people in Madagascar alongside the Akamasoa association: construction of waste containers, latrines, urinals and a water tank
- Training in health education for the most vulnerable families, in partnership with school medical services and child protection associations



Fondation Mérieux mourns the loss of Dr. Bénédicte Contamin, its regional director for the Indian Ocean, based in Madagascar for close to a decade. She passed away Friday, August 21st after a battle with cancer.

All those who were fortunate to know Bénédicte appreciated her generosity, her enthusiasm and her passion for access to health for all. She devoted her life to the care of the most vulnerable, especially children.



Bénédicte was a physician, specialized in internal medicine and infectious and tropical diseases. Before joining Fondation Mérieux in 2006, she was the Senior Registrar assistant in infectiology in Prof. Dominique Peyramond's department at the Hospices Civils de Lyon (Lyon Civil Hospitals) where she worked closely with Dr. Christophe Mérieux. She then practiced medicine at the Pointe-à-Pitre University Hospital in Guadeloupe and in Réunion where she was appointed hospital practitioner in 2002.

For almost ten years, she contributed to clinical biology and access to healthcare for the Malgasy population.

Bénédicte launched Fondation Mérieux's first mission in Madagascar in 2006 and oversaw the creation of the Charles Mérieux Infectiology Center, built on the University of Antananarivo campus in 2010. Her first initiative was strengthening the capacities of the Ansirabé Hospital laboratory. The success of this project resulted in the development of a model that could be applied to other sites and a close collaboration with the Madagascar Ministry of Health. Five other laboratories have since been renovated and their personnel and that of other health centers have been trained. Bénédicte brought her expertise to the research projects of the Rodolphe Mérieux Laboratory at the Infectiology Center. Her work focused on diseases that are prevalent in Madagascar: leprosy, neglected

tropical diseases, diarrheal disease in children and meningitis. She also contributed to research projects with an international scope, including the GABRIEL network's multicenter study on the pathogens responsible for severe pneumonia in children under 5 years of age.

Beyond the scientific domain, Bénédicte Contamin was instrumental in Fondation Mérieux's support to local charitable organizations. These include Père Pedro's Akamasoa ("good friends") association for which, most recently, the Foundation renovated a homeless shelter for families, and the Vahatra association, for which it supported the creation of a health insurance plan.

Her death is a great loss, not only for Fondation Mérieux and the Charles Mérieux Infectiology Center, but also for the underprivileged populations she cared for with passion.

AFRICA

MALI



- First Fondation Mérieux mission in 2003
- Fondation Mérieux office: 1 expatriate and 3 Malian employees
- Charles Mérieux Infectiology Center with a Rodolphe Mérieux Laboratory* in Bamako (2005)
- One GABRIEL network member: Charles Mérieux Infectiology Center
- RESAOLAB network member since 2009
- ➔ RESAOLAB PROGRAM ACHIEVEMENTS:
Renovation and equipping of training sites (in 2010):
 - Kayes and Mopti regional hospital laboratories
 - The laboratory of the National Institute of Training in Health Sciences (INFSS) in Sikasso
 - Multimedia rooms at the INFSS in Kayes (with support from the International Cooperation of the Principality of Monaco) and in Sikasso
 - National Quality Control Unit (UNEEQ) at the National Institute of Research in Public Health (INRSP)



RODOLPHE MÉRIEUX LABORATORY RESEARCH FOCUS:

- Tuberculosis ■ Hepatitis B
- Respiratory infections

IN 2015

SUPPORT FOR CLINICAL BIOLOGY LABORATORIES

- Celebration of the 10th anniversary of the Charles Mérieux Infectiology Center on September 17th in the presence of Mr. Alain Mérieux
- Development of the technical capacities of the Charles Mérieux Infectiology Center: implementation of a BSL3 laboratory dedicated to diagnosis and research on tuberculosis and other dangerous viruses and technology transfer for measuring hepatitis viral loads
- Development of specialized biology activities and biological monitoring of viral hepatitis
- Continuation of the mobile laboratory project in partnership with the German Program for Excellence in Biological and Health Security, the Bundeswehr Institute of Microbiology and the GIZ (German Federal Enterprise for International Cooperation): first successful deployment exercise and continuation of the technical training sessions
- Renovation of the laboratory of the Gabriel Touré Hospital maternity ward*
- Support for the LABOMEDCAMP project, aimed at improving the quality of infectious disease diagnosis in front-line laboratories in Mali



- Launch of DJOMI: a U.S. CDC-GHSA (Global Health Security Agenda) project in consortium with Catholic Relief Services and Mali Health for the assessment of the national laboratory network and the strengthening of biosecurity/biosafety capacities
- Participation in the SOCIALAB study: historical and anthropological research in Senegal, Burkina Faso and Mali on the development and current status of medical laboratory services in national health systems
- 9th class of the Bachelor of Science in Biological and Applied Medical Sciences (BAMS): 25 students from 8 countries*

RESAOLAB PROGRAM ACTIONS

- Validation of the quality plan: an external quality assessment mission covered 80 laboratories
- Scholarships: 9 technicians for BAMS Mali
- Writing of a new training module on the production and quality control of culture media and stains

CURRENT RESEARCH PROJECTS

- Research partnership: 3 signing ceremonies as part of the establishment of a research cooperation agreement between the Chinese Academy of Medical Sciences (CAMS), the Charles Mérieux Infectiology Center of Mali and Fondation Mérieux

GABRIEL NETWORK MULTI-CENTER STUDIES:

- Proof-of-concept for the analysis of the microbiome of hospitalized children with pneumonia in developing countries – Biodiversity project
- Development of diagnostic tools for pneumonia: *Streptococcus pneumoniae* strain typing by real-time multiplex PCR
- Quality initiative: Mali is one of 4 pilot sites for an initiative designed to help GABRIEL member laboratories meet the requirements for international ISO 15189 accreditation
- Development of a general teaching module on molecular immunology delivered at the Charles Mérieux Infectiology Center in May (15 participants)

TRAINING AND KNOWLEDGE-SHARING

- Organization of the 3rd Vaccinology in Africa course at the Charles Mérieux Infectiology Center: first edition in a French speaking country (41 students of 12 different nationalities)
- Integrated training program “Water-Hygiene-Sanitation project manager” and “ Nutrition project manager” in partnership with the Bioforce Institute

SUPPORT FOR LOCAL INITIATIVES

- Partnership with Samusocial international (Mali, Senegal, Peru) which provides assistance to children living on the streets*
- Science and health education pilot program in primary schools in Mali



AFRICA



NIGER



- First Fondation Mérieux mission in 2012
- Fondation Mérieux office: 1 Nigerien employee
- RESAOLAB network member since 2013

IN 2015

RESAOLAB PROGRAM ACTIONS

- 3rd RESAOLAB International Steering Committee in Niamey in November with the participation of 4 guest countries: Ghana, The Gambia, Guinea-Bissau and Nigeria
- Foundation stone laid for the Health Laboratories Directorate in the presence of the Health Minister of Niger and the Director-General of the West African Health Organization (WAHO) in November 2015
- Renovation and equipping of the practical workrooms at the National School of Public Health (Ecole Nationale de Santé Publique, ENSP) of Niamey
- Implementation of training modules at the Centre de Recherche Médicale et Sanitaire (CERMES) in Niamey and at the Zinder hospital for 259 technicians: pre and post-analytical phases, inventory management, biosecurity, biological waste management and quality assurance
- Training of trainers in the RESAOLAB network: 20 participants



SENEGAL

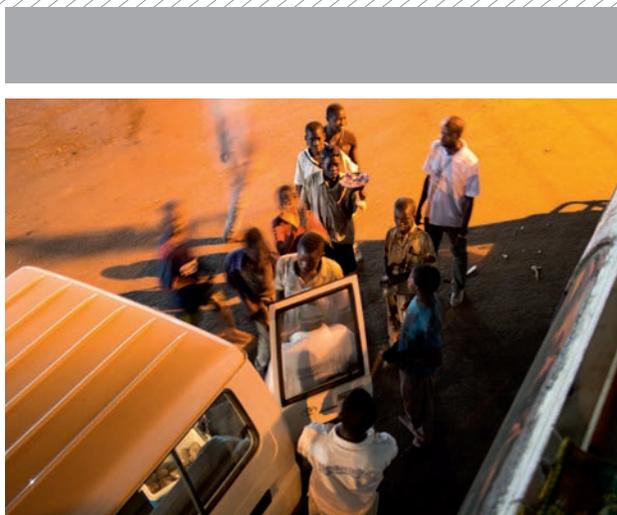


- First Fondation Mérieux mission in 2009
- Fondation Mérieux office: 1 expatriate and 1 Senegalese employee
- RESAOLAB network member since 2009
- ➔ RESAOLAB PROGRAM ACHIEVEMENTS:
 - Support for the creation of a National Laboratories Directorate (2013)
 - Renovation of continuing training centers in Thies, Kaolack (2014)

IN 2015

SUPPORT FOR CLINICAL BIOLOGY LABORATORIES

- Start of the I-LAB project: development of a tool for the automation of epidemiological data collection from laboratories, funded by the Skoll Foundation
- SOCIALAB program whose aim is to understand the social, cultural and historic factors limiting the support of laboratory services during prenatal care: historical and anthropological research carried out in 2015 in Senegal, Burkina Faso and Mali on the development and current status of medical laboratory services in national health systems
- Launch of a project for strengthening the Laboratories Directorate activities in consortium with PATH and financed by the U.S. CDC-GHSA (Global Health Security Agenda)



RESAOLAB PROGRAM ACTIONS

- Supervision of 20 laboratories
- Inspection of 15 private laboratories and non-registered laboratories
- Supervision sessions and collection of antimicrobial resistance data in 18 laboratories
- External Quality Assessment inspection for 40 laboratories specialized in bacteriology
- Scholarships: 5 technicians for BAMS Mali and 18 scholarships for the DES in Medical Biology
- Training of trainers in the RESAOLAB network: 2 sessions on data management and quality systems (50 participants)
- Training of laboratory technicians: 6 sessions on data management (150 participants) and one session on quality systems (53 participants)
- Drafting of a handbook on laboratory techniques by the Laboratories Directorates

SUPPORT FOR LOCAL INITIATIVES

- Partnership with Samusocial international (Mali, Senegal, Peru) which provides assistance to children living on the streets*



TOGO



- First Fondation Mérieux mission in 2012
- Fondation Mérieux office: 1 Togolese employee
- RESAOLAB network member since 2013

IN 2015

RESAOLAB PROGRAM ACTIONS

- Drafting and validation of the National Quality Plan
- Drafting of a training plan for clinical biology personnel
- Training of trainers in the RESAOLAB network
- Scholarships: 1 student in the DES in Medical Biology

CURRENT RESEARCH PROJECTS

- Second phase of the PneumoTone study on etiologic agents responsible for pneumonia in a cohort of patients with respiratory diseases in the city of Dapaong

TRAINING AND KNOWLEDGE-SHARING

- IDEA: AFRICHOL consortium meeting in Lomé in June

AMERICAS



- First Fondation Mérieux mission in 2011
- 2 GABRIEL network members: the Oswaldo Cruz Foundation and the Laboratório Nacional de Computação Científica (National Laboratory of Scientific Computation)
- Foundation stone laid and construction of the Charles Mérieux Infectiology Center with a Rodolphe Mérieux Laboratory in the Fundacre Hospital in Rio Branco (2015)

IN 2015

CURRENT RESEARCH PROJECTS

- Study of active surveillance of severe influenza cases in hospitalized patients carried out in partnership with Sanofi Pasteur at 3 clinical sites in Brazil - Fortaleza (Ceará state), Rio de Janeiro and Porto Alegre (Rio Grande do Sul state): 575 cases recruited

GABRIEL NETWORK MULTI-CENTER STUDIES:

- Proof-of-concept for the analysis of the microbiome of hospitalized children with pneumonia in developing countries – Biodiversity project
- Development of diagnostic tools for pneumonia: *Streptococcus pneumoniae* strain typing by real-time multiplex PCR



- First Fondation Mérieux mission in 2002
- Rodolphe Mérieux Laboratory * within the Institute of Infectious Diseases and Reproductive Health (IMIS) part of the GHEKIO Centers (Haitian Group for the Study of Kaposi's Sarcoma and Opportunistic Infections) in Port-au-Prince (2009)
- One GABRIEL network member: the GHEKIO Centers



RODOLPHE MÉRIEUX LABORATORY RESEARCH FOCUS:

- Tuberculosis ■ HIV/AIDS
- Bacterial resistance



IN 2015

SUPPORT FOR CLINICAL BIOLOGY LABORATORIES

- Refurbishment of the Rodolphe Mérieux Laboratory's BSL3 laboratory
- Establishment of bacteriology activities in the laboratory of the Institute of Infectious Diseases and Reproductive Health thanks to technical assistance in clinical biology
- Launch of the SPHaitiLAB project to strengthen the laboratory network in Haiti
- 5th BAMS Haiti class September 2015 - May 2016: 20 students

CURRENT RESEARCH PROJECTS

GABRIEL NETWORK MULTI-CENTER STUDIES:

- Proof-of-concept for the analysis of the microbiome of hospitalized children with pneumonia in developing countries – Biodiversity project
- Development of diagnostic tools for pneumonia: *Streptococcus pneumoniae* strain typing by real-time multiplex PCR
- Quality initiative: Haiti is one of 4 pilot sites for an initiative designed to help GABRIEL member laboratories meet the requirements for international ISO 15189 accreditation

- Development of a molecular biology module made available in different versions aligned with local needs, adapted for Haiti (30 participants)

TRAINING AND KNOWLEDGE-SHARING

- 5th Charles Mérieux Conference, February 23rd in Port-au-Prince

SUPPORT TO LOCAL INITIATIVES

- 10th year of the micro-credit loan program for women living with HIV (8,900 loans received by 3,900 women since 2005)*
- Support for the children's home in Leogane (Communauté de l'Incarnation): construction of buildings, sanitary facilities and development of an income-generating activity*
- Support for the children's home in Cap Haitian (Our Lady of the Miraculous Medal): medical support and food aid*
- Support for the Klib Timoun Kè Kontan association for disadvantaged children: launch of an income-generating activity*
- Support for the French AAIP association (firefighter's international aid actions) for operating and fitting out the Saline dispensary: development of an income-generating activity*



ASIA

BANGLADESH

- First Fondation Mérieux mission in 2009
- Rodolphe Mérieux Laboratory* in Chittagong, within the Bangladesh Institute of Tropical and Infectious Diseases – BITID (2015)
- 2 GABRIEL network members: the ICCDR,B (International Centre for Diarrhoeal Disease Research) and the ideSHi (Institute for Developing Science and Health Initiatives)

 RODOLPHE MÉRIEUX LABORATORY
RESEARCH FOCUS:
■ Tuberculosis ■ Typhoid

IN 2015

SUPPORT FOR CLINICAL BIOLOGY LABORATORIES

- Launch of the activities of the Rodolphe Mérieux Laboratory in Chittagong, within the BITID, with the diagnosis of resistant tuberculosis strains in partnership with ideSHi
- Support for the NGO Friendship: equipping a laboratory (clinical diagnostics system) and training for technicians through a partnership with the NGO Biologie Sans Frontières (BSF)

CURRENT RESEARCH PROJECTS

- Study of the transmission of tuberculosis in prisons in order to improve early detection and control of the epidemic in Bangladeshi prisons
- Automation of MIRU-VNTR marker typing of *Mycobacterium tuberculosis* on the QIAxcel system within the ICCDR,B
- Diagnosis of typhoid fever: assessment of a new molecular test, developed thanks to clinical samples collected in different sites in Bangladesh with the support of the Bill & Melinda Gates Foundation

SUPPORT FOR LOCAL INITIATIVES

- Support for the NGO AMD (Aide Médicale et Développement)*: purchase of an autoclave to strengthen the diagnostic capacities of the clinical biology laboratory of the Mother & Child Hospital of Chittagong

CAMBODIA



- First Fondation Mérieux mission in 2001
- Fondation Mérieux office: 2 Cambodian employees
- Rodolphe Mérieux Laboratory* within the Faculty of Pharmacy of Phnom Penh (2005)
- New regional platform for research on infectious diseases on the Institut Pasteur campus in Phnom Penh in 2014 (part of Fondation Mérieux's membership in the AVISEAN Sud scientific network)
- Reconstruction of the Faculty of Pharmacy in Phnom Penh in partnership with the Pierre Fabre Foundation in 2003
- 9 clinical biology laboratories renovated since 2007
- One GABRIEL network member: the University of Health Sciences in Phnom Penh

 RODOLPHE MÉRIEUX LABORATORY
RESEARCH FOCUS:
■ Respiratory infections
■ Relationship between pathogens and the environment



IN 2015

SUPPORT FOR CLINICAL BIOLOGY LABORATORIES

- Strengthening the diagnostic capacity of the clinical biology laboratory of the Takeo provincial hospital: installation of a high-throughput biochemistry platform
- Support for CamLab, Cambodia's national clinical biology laboratory network: organization of the external quality control program, EQA 2015, for 32 public laboratories
- 9th class of the Diploma of Specialist Studies (DES) in Medical Biology, open to doctors and pharmacists (7 students)

CURRENT RESEARCH PROJECTS

- PCR technology as a detection tool for invasive pneumococcal disease: study to determine the characteristics of invasive pneumococcal disease and the colonization in Cambodian children before and after introduction of the pneumococcal vaccine on a national scale (PCV13)
- Hepatitis C mono-infection (HCV) and HIV-HCV co-infection in Cambodia: epidemiology, risk factors and burden of disease

GABRIEL NETWORK MULTI-CENTER STUDIES:

- ID-Bio International Research Group: molecular epidemiology of tuberculosis in Southeast Asia
- Proof-of-concept for the analysis of the microbiome of hospitalized children with pneumonia in developing countries – Biodiversity project
- Development of diagnostic tools for pneumonia: *Streptococcus pneumoniae* strain typing by real-time multiplex PCR
- Development of a molecular biology training module made available in different versions aligned with local needs, adapted for Cambodia (30 participants)

SUPPORT FOR LOCAL INITIATIVES

- Support for the NGO 1001 Fontaines for its research on pesticide levels in clean water production in Cambodia*
- Support for the NGO Magna - Children at Risk, for the treatment of orphans living with HIV and prevention of mother-to-child transmission*
- Launch of the hand hygiene promotion initiative with the production and distribution of hydroalcoholic solution in the Siem Reap hospital
- Support for the "Dr. Christophe Mérieux Center" children's home in Phnom Penh*



ASIA



CHINA



- First Fondation Mérieux mission in 2006
- Fondation Mérieux office: 3 Chinese employees
- Christophe Mérieux Laboratory* within the Institute of Pathogen Biology at the Chinese Academy of Medical Sciences (CAMS) in Beijing (2008)
- One GABRIEL network member: the Institute of Pathogen Biology at the Chinese Academy of Medical Sciences (CAMS)
- 3rd international foundation to be officially recognized by the Chinese Ministry of Health in 2014



CHRISTOPHE MÉRIEUX LABORATORY
RESEARCH FOCUS:

- Pneumonia ■ Tuberculosis

IN 2015

SUPPORT FOR CLINICAL BIOLOGY LABORATORIES

- Construction and inauguration of a BSL4 laboratory in Wuhan within the framework of an intergovernmental agreement between China and France to fight against emerging infectious diseases
- Continuation of the program to decentralize tuberculosis diagnosis* through a partnership between Fondation Mérieux and the Chinese Ministry of Health (around 15,000 patient consultations in screening centers in 2015)

CURRENT RESEARCH PROJECTS

- Research partnerships: 3 signing ceremonies as part of the establishment of a research cooperation agreement between the Chinese Academy of Medical Sciences (CAMS), the Charles Mérieux Infectiology Center of Mali and Fondation Mérieux
- Launch of the CARE project: signing ceremony with Fondation Mérieux and its partners, the First Affiliated Hospital of Zhejiang University and the Zhejiang University International Hospital

GABRIEL NETWORK MULTI-CENTER STUDIES:

- Proof-of-concept for the analysis of the microbiome of hospitalized children with pneumonia in developing countries – Biodiversity project
- Development of diagnostic tools for pneumonia: *Streptococcus pneumoniae* strain typing by real-time multiplex PCR

TRAINING AND KNOWLEDGE-SHARING

- Fondation Mérieux was a partner in the “Africa-China Partnership: Caring for an HIV-Free Generation” event in Johannesburg, on December 5th, organized by the Organization of African First Ladies against HIV/AIDS (OAFLA) and the National Health and Family Planning Commission (NHFPC) of China with the support of UNAIDS, WHO and the Bill & Melinda Gates Foundation



LAOS

- First Fondation Mérieux mission in 2005
- Fondation Mérieux office: 2 expatriates
- Christophe Mérieux Infectiology Center and Rodolphe Mérieux Laboratory* within the University of Health Sciences in Vientiane (2009)
- 9 clinical biology laboratories renovated, including 8 in the Khammouane province in 2013
- One GABRIEL network member: the Ministry of Health



RODOLPHE MÉRIEUX LABORATORY RESEARCH FOCUS:

- Respiratory infections and tuberculosis
- HIV/AIDS and human papillomavirus (HPV)
- Hepatitis

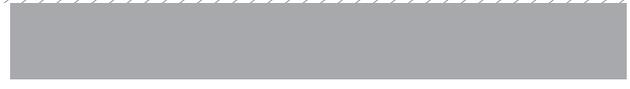
IN 2015

SUPPORT FOR CLINICAL BIOLOGY LABORATORIES

- Extension of the Christophe Mérieux Infectiology Center
- Foundation stone laid for the Food Safety Laboratory
- Continuation of the project to improve diagnostic capacities of laboratories in the Khammouane province and increased training

CURRENT RESEARCH PROJECTS

- ID-Bio International Research Group: molecular epidemiology of tuberculosis in Southeast Asia
- LaCoRIS project: respiratory infections in cohorts in Vientiane
- Lao PDR project: to determine the primary resistance to HIV treatment
- LaoCol-VP project* (cost-effectiveness study of techniques to detect cervical cancer): presentation of the results to Laotian partners
- Quality initiative: Laos is one of 4 pilot sites for an initiative designed to help GABRIEL member laboratories meet the requirements for international ISO 15189 accreditation



TRAINING AND KNOWLEDGE-SHARING

- Antibiguide: the guide on the proper use of antibiotics published for Laotian doctors is now available in French and English
- World Rabies Day organized in Vientiane
- Organization of the first regional symposium on viral hepatitis at the Christophe Mérieux Infectiology Center



ASIA

MYANMAR

- First Fondation Mérieux mission in 2010
- Renovation of 3 units within the Public Health Laboratory between 2011 and 2014* (the molecular biology, bacteriology and virology laboratories)

IN 2015

SUPPORT FOR CLINICAL BIOLOGY LABORATORIES

- Implementation of tests for HIV viral load measurement on 2 sites in 2015 (Yangon and Dawei) and completion of training programs: after Mandalay in 2011, a total of 3 platforms for viral load testing in Myanmar
- Support to maintain the quality of testing at laboratories performing HIV viral load testing and early diagnosis in newborns in the Mandalay region*
- Continuation of the support for the development of microbiology in the National Health Laboratory in Mandalay



MIDDLE EAST

IRAQ

- First Fondation Mérieux mission in 2014

IN 2015

SUPPORT FOR CLINICAL BIOLOGY LABORATORIES

- Equipping the laboratory of a health center at the Bardarash refugee camp, where 11,000 Shabaks are living

SUPPORT FOR LOCAL INITIATIVES

- Completion of the construction and equipping of 250 homes* for the war-displaced of the Nineveh plains, in partnership with Fondation Saint-Irénée, Fondation Raoul Follereau, the Auvergne-Rhône-Alpes Region, Grand Lyon, and the City of Lyon
- Construction of the Saint-Irénée school* for displaced children in Erbil, in partnership with Fondation Saint-Irénée, Fondation Raoul Follereau, Fondation AnBer, and the Auvergne-Rhône-Alpes Region
- Assessment mission for the construction of a medical center equipped with a medical analysis laboratory for the displaced





■ First Fondation Mérieux mission in 2015

IN 2015

SUPPORT FOR CLINICAL BIOLOGY LABORATORIES

- Signature of 2 partnership agreements with the Institut Pasteur of Iran for:
 - the construction of a BSL3 laboratory in Tehran
 - the construction of a training center and BSL2 laboratory in Zahedan



- First Fondation Mérieux mission in 2008
- Rodolphe Mérieux Laboratory* within the Technology Center of the Saint Joseph University in Beirut (2011)
- One GABRIEL network member: Saint-Joseph University

 RODOLPHE MÉRIEUX LABORATORY
RESEARCH FOCUS:
■ Bacterial resistance

IN 2015

SUPPORT FOR CLINICAL BIOLOGY LABORATORIES

- Continuation of specialized testing activities (HIV, HBV, and HCV viral load, HCV genotyping, tuberculosis strain typing)
- Theoretical training on BSL3 laboratory safety regulations for 11 scientists

CURRENT RESEARCH PROJECTS

- Study on the etiology of respiratory infections in Syrian refugees in Lebanon in order to improve patient care



- First Fondation Mérieux mission in 2009
- National Public Health Reference Laboratory (NPHRL) in Dushanbe designed and equipped by the Foundation in 2013

 NPHRL RESEARCH FOCUS:
■ Tuberculosis

IN 2015

SUPPORT FOR CLINICAL BIOLOGY LABORATORIES

- Follow-up on the maintenance of the laboratory through the WHO





GOVERNANCE



BOARD OF DIRECTORS

REPRESENTATIVES OF THE FOUNDING MEMBERS

Alain MÉRIEUX

President

Claudine FRIEH

Karine MEHLER

Alexandre MÉRIEUX

Sophie MÉRIEUX

QUALIFIED PERSONS

Didier CHERPITEL

Prof. François GROS

Prof. David L. HEYMANN

Dominique PELLA

Prof. Dominique PEYRAMOND

Prof. Didier RAOULT⁽¹⁾

Dr. Robert SEBBAG

GOVERNMENT REPRESENTATIVE

The Prefect of the Auvergne-Rhône-Alpes Region

MANAGEMENT COMMITTEE

Benoît MIRIBEL

Director General

Emmanuel DE GUIBERT

Secretary General

Dr. François-Xavier BABIN

International Development

Director

Prof. Hubert ENDTZ

Scientific Director

Dr. Christophe LONGUET

Medical Director

Koren WOLMAN-TARDY

Communication Director

SCIENTIFIC COMMITTEE

Prof. Albert OSTERHAUS

Chairman

Université Erasmus

de Rotterdam (The Netherlands)

Prof. Antoine ANDREMONT⁽¹⁾

Hôpital Bichat-Claude Bernard

(France)

Prof. Françoise BARRÉ-SINOUSI

Institut Pasteur (France)

Prof. Christian BRÉCHOT

Institut Pasteur (France)

Prof. Abdullah BROOKS⁽¹⁾

International Centre for Diarrhoeal

Disease Research, Bangladesh

(Bangladesh)

Prof. Stewart COLE

École Polytechnique Fédérale

de Lausanne (Switzerland)

Prof. Xavier de LAMBALLERIE

Faculté de Médecine de Marseille

(France)

Prof. Ogobara DOUMBO

Malaria Research and Training

Center Bamako (Mali)

Prof. David L. HEYMANN

Public Health England

(United Kingdom)

Prof. Johan NEYTS

Faculté de Médecine

de l'Université de Louvain

(Belgium)

Prof. Jean-William PAPE⁽¹⁾

Centres GHESKIO (Haiti)

Prof. Fabien ZOULIM

Inserm - Lyon (France)

FONDATION MÉRIEUX USA

BOARD OF DIRECTORS

Prof. David L. HEYMANN

President

Public Health England

(United Kingdom)

Dr. Jon ANDRUS

Sabin Vaccine Institute

(United States)

Stéphane BANCEL

Moderna (United States)

Didier CHERPITEL

Fondation Mérieux Board

of Directors (France)

Dr. Kevin DE COCK

Center for Global Health, U.S.

Centers for Disease Control and

Prevention (United States)

Dr. Warren JOHNSON

Center for Global Health,

Weill Cornell Medical College

(United States)

Karine MEHLER

Fondation Mérieux Board

of Directors (France)

Dr. Stanley PLOTKIN⁽²⁾

Vaxconsult (United States)

TEAM

Dr. Louise GRESHAM

CEO

Emily PENROSE

Program Manager



MAIN PARTNERS

Fondation Mérieux is grateful to its many partners for their continuing trust and commitment.

In 2015, thanks to their contribution, numerous capacity-building and research projects were initiated and enhanced to help local stakeholders in their fight against infectious diseases.

FOUNDATIONS

Bill & Melinda Gates Foundation
 Bioaster
 CDC Foundation
 Fondation AnBer
 Fondation Bullukian
 Fondation Christophe et Rodolphe Mérieux
 Fondation de France
 Fondation La main à la pâte
 Fondation Raoul Follereau
 Fondation Saint-Irénée
 Fonds pour eux*
 Skoll Foundation
 Stavros Niarchos Foundation
 Wellcome Trust

GOVERNMENTAL INSTITUTIONS

Agence Française de Développement (AFD)
 Armed Forces Health Surveillance Center (AFHSC/GEIS)
 Auvergne-Rhône-Alpes Region
 Centers for Disease Control and Prevention (CDC)*
 City of Lyon
 Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
 Direction de la Coopération Internationale (DCI) de la Principauté de Monaco
 European Union (7th Framework Program, ACP Science and Technology Programme, H2020, through Research and Innovation (RTD) and the International Cooperation and Development (DEVCO))
 Grand Lyon
 Hospices Civils de Lyon
 Ministère des Affaires étrangères et du Développement international (MAEDI) – through Expertise France, Global Fund 5%
 Ministère de la Santé Publique de Madagascar
 Naval Health Research Center (NAMRU-2)

INTERNATIONAL ORGANIZATIONS & NGOS

Global Fund to Fight AIDS, Tuberculosis and Malaria
 Handicap International
 Indian Ocean Commission (IOC)
 Islamic Development Bank (IDB)
 Œuvres Pontificales Missionnaires de Lyon
 Red Cross
 Special Programme for Research and Training in Tropical Diseases (TDR) - UNICEF, UNDP, WHO, the World Bank
 World Bank - through the West African Health Organisation (WAHO)
 World Health Organization (WHO)

UNIVERSITIES & RESEARCH INSTITUTES

Centre International de Recherche en Infectiologie
 Conférence Internationale des Ordres de Pharmaciens Francophones (CIOPF)
 Institut national de la santé et de la recherche médicale (Inserm)
 Institut National du Cancer (INCa)
 Institut Pasteur

Institut de recherche biomédicale des armées (IRBA)

Institut de Recherche pour le Développement (IRD)
 London School of Hygiene and Tropical Medicine (LSHTM)
 Serum Institute of India
 Université Claude Bernard Lyon 1
 University of Geneva
 University of Oxford

INDUSTRY

Bayer
 Biocentric
 bioMérieux
 Cepheid
 European Diagnostic Manufacturers Association (EDMA)
 Fast-track Diagnostics
 GlaxoSmithKline Biologicals
 Image 7
 Ipharmex*
 Janssen Research & Development
 Luminex
 Merck
 Mérieux Nutrisciences
 Novartis Vaccines
 Pfizer
 Qiagen
 Sanofi Pasteur
 Sanofi Pasteur MSD
 Takeda

2015 ACCOUNTS & KEY FIGURES

BALANCE SHEET

ASSETS (K€)	NET DEC. 31, 2015	NET DEC. 31, 2014
FIXED ASSETS		
Intangible fixed assets	9	10
Property, plant and equipment	1,832	2,023
Investments and other financial assets	26,199	24,582
TOTAL	28,040	26,615
CURRENT ASSETS		
Inventories	4	4
Payments on account	21	34
Accounts receivable	1,203	885
Other receivables	12,275	13,045
Marketable securities	58,126	53,177
Cash and cash equivalents	3,781	4,945
Prepaid expenses	1,835	599
Unrealized exchange losses	8	2
TOTAL	77,254	72,692
TOTAL ASSETS	105,294	99,307
LIABILITIES AND FUND BALANCE (K€)	DEC. 31, 2015	DEC. 31, 2014
FUND BALANCE		
True endowment	64,916	64,916
Reserves	884	884
Retained earnings	12,815	17,749
Net income / loss for the period	5,648	(4,934)
TOTAL	84,263	78,616
QUASI ENDOWMENT		
Allowances for contingencies	105	2
Funds reserved for future engagements	2,783	2,035
TOTAL	2,888	2,037
LIABILITIES		
Loans	5	3
Accounts payable	2,340	2,941
Investment payable	702	750
Other payable	2,888	1,822
Deferred income	11,940	13,001
Unrealized exchange gains	267	137
TOTAL	18,142	18,654
TOTAL LIABILITIES AND FUND BALANCE	105,294	99,307

INCOME STATEMENT

(K€)	ACTUAL 2015	ACTUAL 2014
INCOME		
Services revenue	311	233
Grants	26	28
Reverse on operating allowances	14,121	10,235
Expenses refund	665	545
Other operating income	326	119
TOTAL INCOME	15,447	11,161
EXPENSES		
External purchases and expenses	9,201	5,364
Taxes and duties	1,176	822
Salaries and social contributions	3,662	3,177
Depreciations	313	579
Donations and subsidies received	7,125	6,472
Grants awarded	-	-
Net book value of sold assets	-	-
Other operating income	8	13
TOTAL EXPENSES	21,485	16,426
CURRENT INCOME	-6,038	-5,265
FINANCIAL INCOME		
Dividends	1,044	904
Other financial income	1,088	1,618
Reverse on financial allowances	205	213
Net income from marketable securities	12,008	1,122
TOTAL FINANCIAL INCOME	14,345	3,856
FINANCIAL EXPENSES		
Financial allowances	943	520
Other financial expenses	857	1,272
TOTAL FINANCIAL EXPENSES	1,800	1,792
FINANCIAL RESULT	12,546	2,064
EXCEPTIONAL INCOME		
Exceptional income	-	2
Exceptional reverse on allowances	-	-
TOTAL EXCEPTIONAL INCOME	-	2
EXCEPTIONAL COSTS		
Exceptional expenses	-	115
Exceptional allowances for contingencies	112	-
TOTAL EXCEPTIONAL COSTS	112	115
EXCEPTIONAL RESULT	-112	-113
Income tax	-	-
TOTAL INCOME	29,793	15,019
TOTAL EXPENSES	23,397	18,333
INTERMEDIATE BALANCE		
Prior funds carried forward	2,035	415
Funds reserved for future engagements	2,783	2,035
NET INCOME / LOSS FOR THE PERIOD	5,648	-4,934

USE OF FUNDS STATEMENT

EXPENSES (USES) (€)	ACTUAL 2015
MISSIONS	16,746,601
Clinical biology laboratories	2,625,059
Collaborative research programs	3,696,487
Training and knowledge-sharing	5,544,852
Support for local initiatives	2,099,503
Support for Mérieux Laboratories and Centers	350,686
International expertise (including Quality)	1,014,692
Development of innovative public health initiatives	1,415,321
FUND-RAISING EXPENSES	1,186,449
OPERATING EXPENSES	4,111,324

INCOME (FUNDS) (€)	ACTUAL 2015
DONATIONS AND LEGACIES	324,670
Donations	25,871
Legacies	298,799
OTHER PRIVATE FUNDS	10,787,668
Sponsorship / Patronage	2,286,800
Grants from Fondation Christophe et Rodolphe Mérieux	4,609,524
Other grants	3,891,343
GRANTS AND OTHER PUBLIC FUNDING	3,333,118
OTHER INCOME	15,142,060
Services revenues	310,508
Refund of expenses	664,516
Other financial income	13,114,333
Dividends	1,052,703



TOTAL EXPENSES FOR THE PERIOD	22,044,373
ALLOWANCES	1,039,243
DEPRECIATION	313,387
FUNDS RESERVED FOR FUTURE ENGAGEMENTS	2,783,340
ACCOUNTING RESULTS (PROFIT)	5,647,569
GRAND TOTAL	31,827,912
Evaluation of in-kind patronage	12,953

TOTAL INCOME FOR THE PERIOD	29,587,516
REVERSE ON ALLOWANCES	205,163
PRIOR FUNDS CARRIED FORWARD	2,035,233
ACCOUNTING RESULTS (DEFICIT)	-
GRAND TOTAL	31,827,912
Evaluation of in-kind patronage	12,953

FONDATION MERIEUX

Foundation recognized as being of public utility
17 rue Bourgelat
69002 LYON

Statutory auditors' report
on the financial statements

Year ended December 31, 2015

This is a free translation into English of the statutory auditor's report issued in French and is provided solely for the convenience of English speaking users. The statutory auditor's report includes information specifically required by French law in such reports, whether qualified or not. This information is presented before the opinion on the Foundation's financial statements and includes an explanatory paragraph discussing the auditor's assessments of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing an audit opinion on the Foundation's financial statements taken as a whole and not to provide separate assurance on individual account captions or on information taken outside of the Foundation's financial statements. This report should be read in conjunction and construed in accordance with French law and professional auditing standards applicable in France.

To the Directors,

In accordance with our appointment as statutory auditor by your board of directors, we hereby report to you for the year ended December 31, 2015 on:

- the audit of the accompanying financial statements of FONDATION MERIEUX;
- the justification of our assessments;
- the specific verifications and disclosures required by law.

These financial statements have been approved by the Committee. Our role is to express an opinion on these financial statements, based on our audit.

I. OPINION ON THE FINANCIAL STATEMENTS

We conducted our audit in accordance with professional practice standards applicable in France. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, using sample testing techniques or other selection methods, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made, as well as evaluating the overall financial statement presentation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

FONDATION MERIEUX

2/3

In our opinion, the financial statements give a true and fair view of the financial position and the assets and liabilities of the Foundation as of December 31, 2014 and the results of its operations for the year then ended in accordance with accounting principles generally accepted in France.

II. JUSTIFICATION OF OUR ASSESSMENTS

In accordance with the requirements of article L.823-9 of the French Commercial Code (*code de commerce*) relating to the justification of our assessments, we hereby inform you that:

Net investments recorded in the balance sheet as at 31 December 2015 amount to 15,011,697 euros. They are valued at acquisition cost and depreciated on the basis of their value in use as described in the note "Investments" of the notes to the accounts. Based on the information made available to us, our work consisted in assessing the data underlying these values in use and in checking the consistency of assumptions.

These assessments were performed as part of our audit approach for the financial statements taken as a whole and contributed to the expression of our opinion in the first part of this report.

III. SPECIFIC VERIFICATIONS AND DISCLOSURES

We have also performed the specific verifications provided for by law, in accordance with the professional practice standards applicable in France.

We have no comment to make as to the fair presentation and consistency with the financial statements of the information given in the financial report and in the documents addressed to the Directors with respect to the financial position and the financial statements.

Lyon, May 25, 2016
The Statutory Auditor

DELOITTE & ASSOCIÉS

French original signed by Nathalie LORENZO CASQUET

FONDATION MERIEUX

3/3

As statutory auditors of FONDATION MERIEUX, we hereby confirm that the above translation of our auditors' report on the financial statements of FONDATION MERIEUX for the year ended December 31, 2015 appropriately reflects the content and opinion of our original report issued in French language.

For identification purpose, we also confirm that the financial statements of FONDATION MERIEUX for the year ended December 31, 2015 show:

- revenues of 15,421,243 euros;
- operating income of 4,033,375 euros;
- net income of 5,647,569 euros;
- shareholders' equity of 84,263,374 euros;
- total assets and liabilities of 105,293,597 euros.

This is a free translation into English of the statutory auditors' report on the financial statements issued in the French language and is provided solely for the convenience of English speaking users.

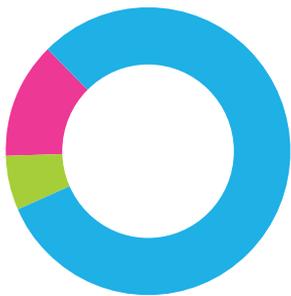
The statutory auditors' report includes information specifically required by French law in such reports, whether qualified or not. This information is presented above the opinion on the financial statements and includes an explanatory paragraph discussing the auditors' assessments of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing an audit opinion on the financial statements taken as a whole and not to provide separate assurance on individual account captions or on information taken outside of the financial statements.

This report should be read in conjunction with, and is construed in accordance with, French law and professional auditing standards applicable in France.

Lyon, May 25, 2016
The Statutory Auditor

DELOITTE & ASSOCIÉS

Nathalie LORENZO CASQUET



BREAKDOWN OF 2015 EXPENSES

(Excluding provisions and exceptional expenses)

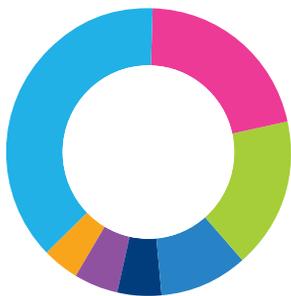
Missions	81%
Administration	13%
Fundraising expenses	6%



BREAKDOWN OF 2015 EXPENSES BY ACTIVITY

(Excluding provisions and exceptional expenses)

Training and knowledge-sharing	33%
Collaborative research programs	22%
Clinical biology laboratories	15%
Support for local initiatives	12%
Development of innovative public health initiatives	8%
International expertise	7%
Support for local structures and Mérieux Centers	2%

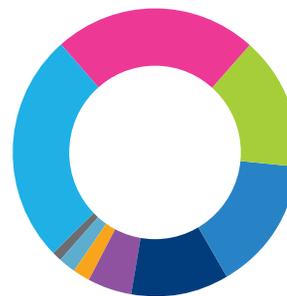


GEOGRAPHICAL SEGMENTATION OF ACTIVITIES

(Excluding funds carried forward to 2016)

Europe ⁽¹⁾	38%
Africa	21%
Asia	17%
South America	10%
Middle East	5%
The Caribbean	5%
Indian Ocean	4%

(1) Mostly activities in developing countries managed from France



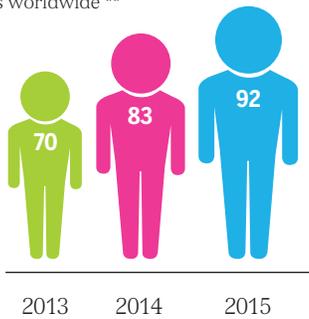
BREAKDOWN OF 2015 INCOME

(Excluding dedicated funds, provisions and non-recurring items)

Endowment income & investment	26%
Fondation Christophe et Rodolphe Mérieux	23%
Sanofi Pasteur sponsorship and partnership	15%
Private partnerships	15%
Public partnerships	11%
Real estate income	5%
Other sponsorships	2%
Donations and Legacies	2%
Other income	1%

GEOGRAPHICAL SEGMENTATION OF EMPLOYEES* AS AT DECEMBER 31ST

92 employees worldwide **

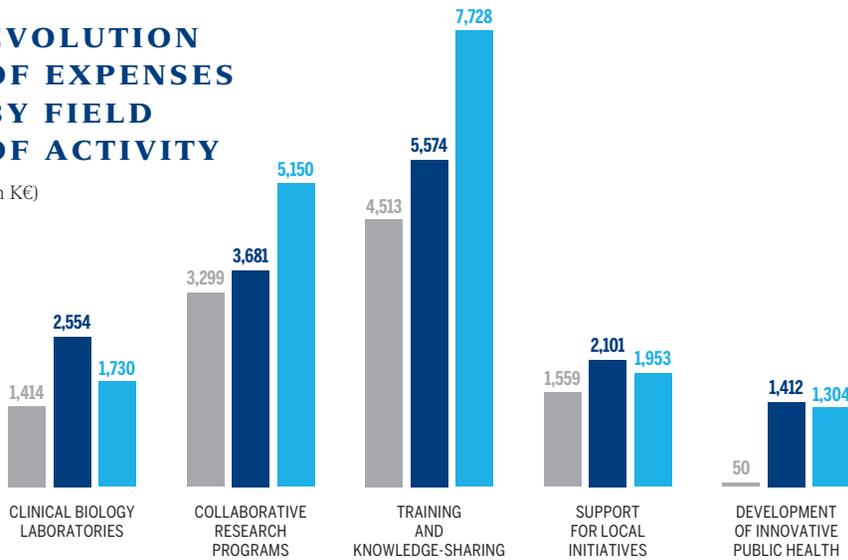


* Full-time equivalents

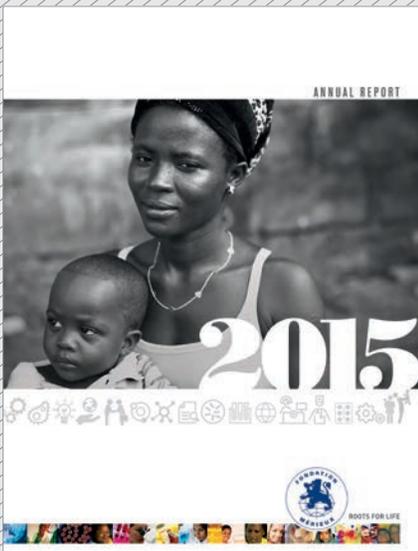
** Excluding interns, temporary employees and local research and training center staff

EVOLUTION OF EXPENSES BY FIELD OF ACTIVITY

(In K€)



■ 2014 ■ 2015 ■ 2016 Estimate



PHOTOS

Khelil Aïtout
AntasH
E. Bergoend
Antonin Bouvier
Alexis Chezière
Moustapha Diallo
Dubray Photographie
Hubert Endtz
Fondation Mérieux
Fotolia
Friendship
GettyImages
Martin Grosjean
iStock
JB Mercier&Studio K
Felix Leclerc
Christophe Longuet
Melon Rouge
©mrcproduction.fr
Didier Plowy-Institut de France
Micka Perier
Pixelle Photography
Adrien Rignol
Bernard Seytre
Régis Sodoyer
Pascal Tournaire
Verse Image

COPYRIGHT

careHPV and QIAxcel
are the property of
QIAGEN

WRITING

Fondation Mérieux
www.fondation-merieux.org
Sophie Poisard-Storz
www.solutions-editoriales.com

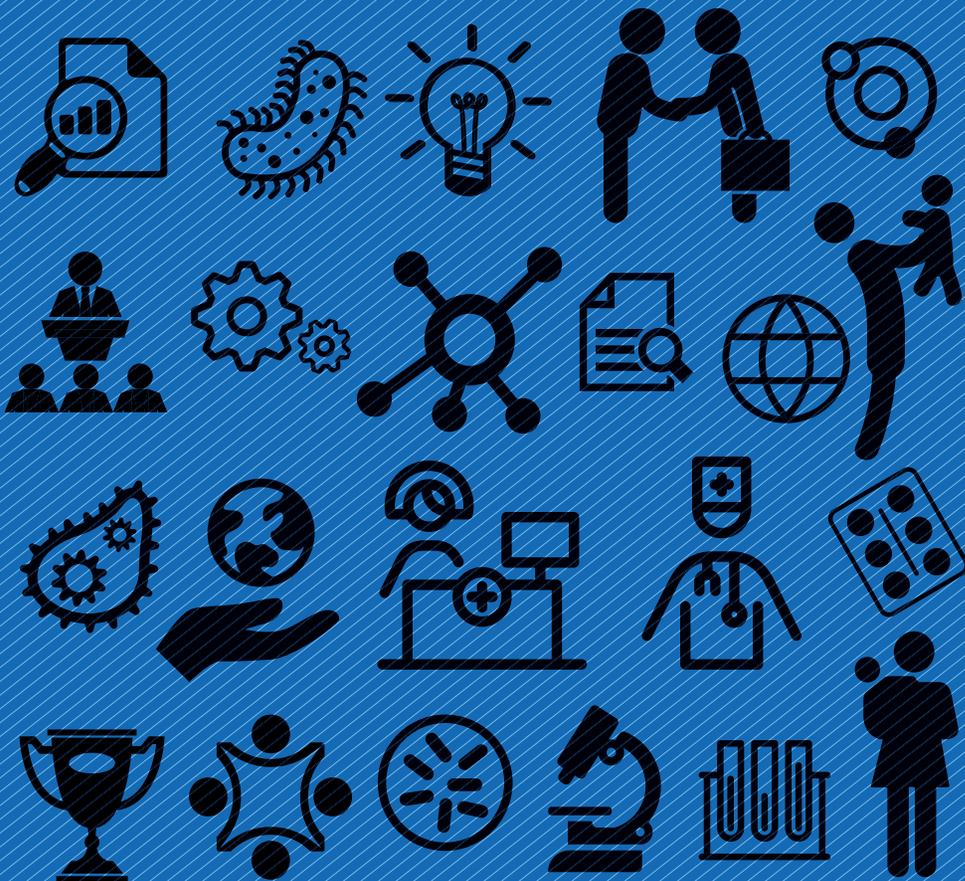
CREATIVE CONCEPT, DESIGN, PRODUCTION

théra
www.theraconseil.com
RCS Lyon B 396 160 242

PRINTING

Imprimerie Daniel Faurite
www.faurite.fr

Printed in France on PEFC paper
from sustainably managed forests
JUNE 2016



2015



17, rue Bourgelat
69002 Lyon • France
Tel: +33 (0)4 72 40 79 79
Fax: +33 (0)4 72 40 79 50
fondation.lyon@fondation-merieux.org
www.fondation-merieux.org