A STORY FOR TOMORROW

- DECEMBER 2013 -

3

BIOMÉRIEUX
AN INTERNATIONAL PIONEER
The many years I spent at the helm of Institut Mérieux, world leader in human and animal vaccines, followed by my tenure heading bioMérieux, have shaped my own personal vision of biology. I have a global vision of this discipline, in the sense that biology transcends all borders: geographical, scientific and human.

Viruses and other infectious agents certainly know no geographical borders. Epidemics now occur on a planetary level, and are much more difficult to contain due to global interactions of all kinds. Diseases that emerge today on the other side of the globe will be at our doorstep tomorrow.

The biology industry is international by definition. With innovation and ongoing learning, it is one of the three points that constitute our companies’ golden triangle.

bioMérieux’s international expansion has followed public health needs in different countries, going where the most critical challenges appear.

We developed first in Europe, then in the United States, and today we are expanding in emerging countries such as China, on the verge of becoming our company’s second-largest subsidiary. We have been pioneers in many regions of the globe, arriving ahead of the game in a number of countries. Because of this, I had the good fortune to establish privileged ties with China 35 years ago, and with Brazil over 40 years ago.

Today bioMérieux operates in 150 countries. Our remarkable international network is one of the company’s great strengths.

We have never gone into a country proclaiming to be keepers of "the" truth. Rather, our approach is to seek to work in each region by meeting its needs while respecting its culture, which means that our employees are open to different cultures and ready to understand and embrace them. This approach also involves relying on local voices to fully understand their expectations and day-to-day realities.

In Europe, North America and Asia, we developed areas of specialization that combine the company’s major functions – marketing, but also production and R&D – in order to encourage multicultural approaches and promote a spirit of outreach.

Our innovation strategy, in particular, is global by design, and we are active in the countries that are home to medical and scientific breakthroughs.

For those of us who are biologists, nothing is worse than "anaerobiosis", and international expansion has been, and remains, a decisive factor in bioMérieux’s success. Such growth has been made possible thanks to our deep roots, which allow us to branch out into the world without losing sight of who we are.

Alain Mérieux
Founder of bioMérieux
Chairman of Institut Mérieux
Jean-François Dehecq

Interview with the founder of the Sanofi pharmaceutical group, which employs more than 110,000 people in 100 countries.

For bioMérieux's 50th anniversary, Jean-François Dehecq has agreed to grant us an interview for this internationally focused edition of our magazine. He looks back on the major milestones of Sanofi's international development and on his own exceptional career at the head of the company, which has become the most valuable company on the French stock market. Having managed nearly 300 mergers and acquisitions over the course of his career, with Synthélabo in 1998 and Aventis in 2004 among the most significant, Mr. Dehecq led the laboratory to its current position as the third largest pharmaceutical company in the world.

In 2007, he withdrew from the operational management of the Group whose foundations he laid in 1973, in order to dedicate himself to the Sanofi Espoir Foundation.

He is a natural leader who is able to speak with honesty and determination of the values that he holds dear and, above all, the respect one must have for one's colleagues in order to make a company to grow. Extracts.
“Disease, even more than mankind, knows no borders“
A LOOK AT BIOMÉRIEUX'S STRATEGY
A GLOBAL ENTITY WITH LOCAL ROOTS

An international outlook has always been an essential part of bioMérieux's DNA, thanks largely to the vision of the company's founder. From the very outset, Alain Mérieux considered bioMérieux's development outside France not as an option, but as an absolute necessity, since, in his own words, "viruses and bacteria know no borders". Therefore, a company in the field of in vitro diagnostics must establish a diversified presence outside its national market.

NO MODEL, JUST PRINCIPLES FOR ACTION

Always proud of its roots in Lyon, bioMérieux, with other companies, now flies the flag for French healthcare abroad. However, according to Alain Mérieux, there is no such thing as a universally applicable "French model". Instead, international development calls for a strong ability to adapt and a large dose of humility.

One of the guiding principles of bioMérieux's international development is the need to serve the interests of the host country. When the Group establishes a presence in a country, it works with the local public health services to understand their needs. By doing so, it develops close relations with the local and national healthcare authorities as well as with international organizations already in the area. To ensure that its presence in a host country is sustainable, bioMérieux also invests in research and development, as well as production facilities.
In this way, the company rapidly becomes an integrated/well-established local entity with the ability to adapt to the specificities of each market as closely as possible. Following the same philosophy of "when in Rome...," bioMérieux works closely with local collaborators in China, India, Russia and every one of the 41 countries in which it is present.

With a view to decentralizing decision-making, the Group is a firm advocate of the principle of subsidiarity, whereby responsibility for actions is entrusted to the entity closest to the ground. When bioMérieux establishes itself in a country, it makes a long-term commitment for the long run. Ever faithful to the principles of consistency and loyalty that it upholds, the company maintains its presence regardless of the hazardous circumstances to which the country may be exposed.

STRATEGIC CHOICES AND OPPORTUNITIES:
THE STORY OF BIOMÉRIEUX’S DEVELOPMENT

bioMérieux's first international steps date from the mid-1970s, within a growing European community. In 1974, Alain Mérieux became the majority stakeholder in B-D Mérieux, a joint venture initially created with Becton Dickinson, and renamed the company bioMérieux. Although this event had an impact on the company’s sales revenue as it ended the distribution
of its former U.S. partner's products in Europe, it nevertheless served to lift all previous restrictions on the distribution of bioMérieux's product ranges. But the company still needed to establish its network of subsidiaries and distributors.

It was in Belgium, in 1975, that the Group’s first subsidiary was created through the acquisition of a local distributor. Between 1976 and 1987, bioMérieux developed its network in Western Europe, continuing with Germany, then the Netherlands, Spain, Portugal, Italy and Switzerland. On each occasion, the initial presence was established via a local distributor.

However, relying solely on its own strengths soon proved insufficient to meet the Group’s international ambitions. A strategy of targeted acquisitions was adopted in order to achieve crucial milestones.

With the purchase of API Systems in 1987, new prospects opened up on the other side of the Atlantic and in Italy, where the markets were ripe for the semi-automated identification of bacteria. In 1988, with the acquisition of Vitek Systems, the world’s leading name in automated bacteriological analysis, bioMérieux gained a solid foothold in North America and took its first steps in Japan. In parallel, it strengthened its foundations in Europe through the integration of Vitek Systems’ European subsidiaries. In 2001, bioMérieux achieved new heights with the purchase of Organon Teknika, the diagnostics branch of Akzo Nobel. This acquisition served to consolidate its position in the U.S., Latin America and Asia. It resulted in the creation of a company employing nearly 5,000 people.

A PIONEER IN EMERGING COUNTRIES

In the meantime, during the 1990s, bioMérieux launched a second phase of development in Europe: in Scandinavia (via Norway), in Central Europe (through its Austrian subsidiary), and in Eastern Europe. Taking into account the U.S. and Western Europe, bioMérieux was already present in two-thirds of the worldwide diagnostics market. But there still remained the emerging markets, where Alain Mérieux was keen to make a breakthrough. A dynamic policy of international recruitment and the sharing of good practices between European subsidiaries created a solid basis from which to launch this new strategy. bioMérieux had long been established in Brazil, following in the footsteps of Institut
Mérieux, which had first arrived during the meningitis epidemic of 1974. Likewise for China, where bioMérieux is a pioneer among the European companies now present, having set up its first facility in 1985.

From the 1990s onwards, each new strategic acquisition created new opportunities. For instance, with Vitek Systems, bioMérieux inherited a Mexican subsidiary that served as a basis for the creation of new subsidiaries in Colombia, Chile and Argentina. In parallel, the Group intensified its distribution and expansion strategy through new subsidiaries: from Russia to the CIS nations from 1995 onwards, from Japan to the Asia-Pacific region from 1988, and in India, where a subsidiary was set up in the early 2000s. Starting in 2009, with the acquisition of several Chinese diagnostics companies, a real bio-industrial hub has been established in Shanghai.

In 2012, sales in emerging countries accounted for almost 30% of worldwide revenue. With average organic growth of 17%, these markets still offer significant long-term prospects, in terms of both clinical and industrial applications.
INTERNATIONAL MOBILIZATION AGAINST HEALTHCARE-ASSOCIATED INFECTIONS AND ANTIMICROBIAL RESISTANCE

The development of healthcare-associated infections has led healthcare professionals, governments and public opinion to gain awareness of an increasingly alarming threat: that of antimicrobial resistance, which itself is linked to the excessive consumption of antibiotics on a worldwide scale.

THE “DAVOS” OF HEALTHCARE-ASSOCIATED INFECTIONS

As a world leader in microbiology, bioMérieux's aim is to contribute to raising awareness of this issue and to mobilize scientific experts on an international scale. Its objective is to create an international network of opinion leaders through a Davos-like conference on the subject of healthcare-associated infections and antimicrobial resistance. Following the success of the first edition in 2007, the World HAI Forum is organized by bioMérieux every two years, on the banks of Lake Annecy in France. It brings together specialists in infectious diseases, microbiology and epidemiology to share their experience and world-renowned expertise, in order to define priorities and draw up recommendations. This network gathers the world's best experts coming from 35 countries.

EXTENSIVE DEPLOYMENT OF EDUCATIONAL INITIATIVES

bioMérieux also carries out awareness-raising activities for healthcare professionals and the general public. In 2006, a reference document was published on the strategies to be implemented by hospital staff in order to manage the risk of healthcare-associated infections. That same year,
a tripartite agreement was drawn up between the Chinese Ministry of Health, bioMérieux and the Assistance Publique des Hôpitaux de Paris (AP-HP) organization. The purpose of this partnership was to organize training courses to be delivered by AP-HP leaders for around 100 Chinese doctors. bioMérieux also actively contributes to the European and worldwide Antibiotic Awareness Days and publishes booklets on the correct use of antibiotics, intended for both patients and clinicians.

A LONG-TERM FIGHT

Through its initiatives over the last ten years, bioMérieux has made a major contribution to raising awareness worldwide. Through drastic infection control programs, the progression of healthcare-associated infections has now been stabilized, which in itself represents an enormous success. However, the emergence of NDM-1 pan-resistant bacteria demonstrates the continued severity of this threat and the pressing need to remain mobilized.
bioMérieux's first venture outside France

Having developed bioMérieux's sales activities via a Belgian distributor of medical equipment for eight years, Christiane Clerens-Desmet established a 12-strong team to create bioMérieux's Benelux subsidiary in January 1975.

Production without borders

R&D facilities dedicated to the development of the VIDAS® range are shared between the Marcy l’Étoile site in France, and Florence in Italy. The reagents are manufactured at Marcy and the instruments are produced in Italy. Likewise, for the microbiology product range, the U.S. staff responsible for VITEK® and BacT/ALERT® instrumentation are in daily contact with the specialized R&D staff on the La Balme site in France.
Malaysia: 41 and counting!

Malaysia is the latest addition to the company and is the seventh subsidiary to be established in an emerging country in South-East Asia. It brings the total number of bioMérieux subsidiaries to 41. The Malaysian market offers a promising outlook, with 15% annual growth for bioMérieux products.

Distributors and ambassadors

Certain distributors have been part of the bioMérieux family for 30 to 40 years, as is the case in Israel, Lebanon and some countries in Latin America. At bioMérieux, distributors are treated with the same respect and must meet the same requirements as the Group's subsidiaries.

Nurturing talent

At any given time, bioMérieux has between 20 and 30 international voluntary workers based throughout its subsidiaries around the world. These volunteers, aged under 28 years and with largely technical backgrounds (most are recent graduates from France's top engineering schools), have great potential and an international outlook. Their aim is to join the company permanently at the end of their 12 to 24-month contracts. For bioMérieux, hosting international voluntary workers is a worthwhile investment, as more than half of these fixed-term contracts are converted to permanent positions.
FROM LOCAL TO WORLDWIDE:
PRODUCTS THAT KNOW NO BOUNDARIES

LYME DISEASE

The first cases of Lyme disease were identified in the villages of Lyme and Old Lyme in the U.S. state of Connecticut, where there was an exceptionally high prevalence of joint disease, as well as retarded growth in children. It is for this historic reason that bioMérieux's first test for Lyme disease, VIDAS® Lyme, was developed in 1995 in the United States for the U.S. market. At the time, automated diagnostic instruments were rare, so VIDAS® Lyme quickly became a commercial success and was adopted by reference centers nationwide. In Europe, the disease still had a low incidence rate and was diagnosed using manual immunofluorescence methods.

The first generation of these bioMérieux tests, based on an effective immunoenzymatic method, represented real progress at the time, offering quick, reliable, high-sensitivity results for the detection of the presence of antibodies.

The second generation of the kit, developed by bioMérieux's R&D teams at Marcy l’Étoile, offered improved specificity by providing separate results for IgM and IgG antibodies.

The kit therefore helped to differentiate between active disease from older incidence of the disease. It was therefore possible to classify the different stages of the infection.

The VIDAS® Lyme IgM and VIDAS® Lyme IgG tests offer a second advantage: not only do they recognize the Borrelia burgdorferi strain (sensu stricto), which is the main strain responsible for the disease in the U.S. and also found in Europe, but also, they recognize the two major strains occurring in Europe.
These new tests were launched on the European market in December 2010 and proved a great success, with rapid growth in market share. In 2013, bioMérieux received authorization from the FDA to market VIDAS® Lyme IgM and VIDAS® Lyme IgG on the U.S. market.

INCIDENCE OF LYME BORRELIOSIS

65,400 recorded cases of Lyme disease in Europe
(source: Eurosurveillance)

7 new cases per 100,000 U.S. inhabitants in 2012
(source: CDC)
CHAGAS DISEASE

Chagas disease, or American trypanosomiasis, was first described in 1909 by Carlos Chagas, a Brazilian doctor specializing in infectious diseases. This potentially fatal parasitic disease was initially endemic in the 21 countries of Latin America, where it is one of the principal causes of heart failure. It is a poverty-related disease caused by a vector-borne protozoan that is carried by triatomine (or reduviid) bugs. The disease can also be passed on, to a lesser extent, through blood transfusions and transplacental transmission.

It therefore stands to reason that the very first reagent for the detection of this disease was developed, in 1990, in Brazil for the Brazilian market, by Biolab-Mérieux, as the Group’s local subsidiary was called at the time. The ELISA cruzi test was based on a microplate process and intended for use in Brazilian blood banks.

A second improved version was launched on the market in 2003, and distributed by the subsidiaries of other Latin American countries including Chile, Colombia and Mexico.

Nevertheless, during the late 1990s and early 2000s, as worldwide migration increased, the disease spread from its endemic zone to the U.S. and then to Europe, where questions began to be asked as to the safety of blood transfusions. In 2007, certain countries, including France, introduced a systematic screening process for donors originating from or having visited endemic zones.

Following a comparative study conducted in French Guiana on local blood samples, the EFS (Établissement Français du Sang - French Blood Donation Organization-) adopted the bioMérieux test that uses native antigens. The product obtained CE marking at the beginning of 2008.
MELTING-POT

Working for an international group and in a multi-cultural environment has a tangible effect on employees' day to day activities. Every one of bioMérieux's employees stands a good chance that their immediate team or wider network of contacts will include colleagues based in another country. They must therefore be capable of working in English, collaborating remotely with others (particularly in project mode), and keeping an open mind with respect to other cultures, as even a simple "yes" may have different implications for French, American and Chinese colleagues!

They are also requested – regardless of whether they work in R&D, production or a support role – to "think internationally" because, from design to commercialization, bioMérieux products are intended for a worldwide market.

INTERNATIONAL MOBILITY: A LONG-TERM INVESTMENT

While the vast majority of our activities are impacted by this multinational dimension, employees must also consider this aspect as they manage their careers within the Group. This occurs in two main ways, either via internal mobility or the recruitment of staff from a range of nationalities.

The objective, within the international network, is to develop local talent and promote local management of human resources by the subsidiaries. However, international mobility is a reality that directly affected around 120 bioMérieux staff in 2012, who were either seconded abroad, recruited to work in a different country, or hosted as IVW. To facilitate this mobility, tools such as the in-house job offers site have been set up.

Certain strategic roles, based in France, the U.S. or China, are subject to international recruitment campaigns. The number of such campaigns has quadrupled over the last five years.
In all cases, the decision to expatriate an employee, for a period of three to four years, represents a major investment for the company in terms of support and financing. An international mobility request must correspond to a particular need at a site or subsidiary, such as a lack of local expertise or the need to transfer knowledge and good practices.

**TRAINING AND CULTURAL INTEGRATION: THE MULTI-CULTURAL LEARNING CURVE**

bioMérieux is an independent, family-owned company that remains strongly attached to its roots, as demonstrated by the French cultural influence throughout its operations. Against a multi-cultural background, training plays an essential role in facilitating collaboration between countries at Group level and, at an individual level, in enhancing each person’s employability. bioMérieux University was founded in 2007 primarily to promote a shared leadership model throughout the Group. It very soon developed and implemented multi-cultural training courses. bioMérieux University provides training for managers supervising teams remotely and also delivers language training. It also offers customized training courses to support projects involving international collaboration, as well as in-house coaching to provide guidance during periods of change.
THE BRAZILIAN EXPERIENCE

bioMérieux's Brazilian story starts with a prologue from Institut Mérieux. In 1974, a meningitis epidemic was raging in Brazil. At the request of the Brazilian government, which feared that the disease would spread even further as a result of the Carnival season, Dr. Charles Mérieux mobilized his company resources to airlift a supply of vaccinations into the country. This action enabled more than 80 million Brazilians to be vaccinated between 1975 and 1976, and the epidemic was halted.

This agreement set out that the profits from this operation would be invested in Brazil in order to be of benefit to the country. Therefore, in 1976, a huge building was constructed by Institut Mérieux in Jacarepaguá, in the suburbs of Rio de Janeiro. In 1987, Brazil closed its borders to imported medical products and set a timescale of 18 months during which international companies had to organize local production facilities.

bioMérieux therefore inherited a turnkey factory and pre-empted its competitors, becoming one of the first European companies in the sector to establish itself in Brazil. Production of reagents for the hemostasis and biochemistry ranges was transferred from Marcy l’Étoile to local facilities in Brazil.

In parallel and to supplement the site’s activities, a partnership was established with Rela, a Brazilian research laboratory specializing in South American infectious diseases, such as Chagas disease and dengue hemorrhagic fever. A joint venture was created for the development of reagents and, within a very short time, the production facilities previously dedicated to R&D activities took on industrial proportions. bioMérieux took the reins of the joint venture and carved out a leading position in the national bacteriology market.

The 1990s saw the deployment of automated ranges. In the early 2000s, the Jacarepaguá site was equipped with a production unit for pre-plated culture media, which cannot be transported over long distances due to their short shelf-life.
During the same period, cooperation agreements were signed with the Oswaldo Cruz research foundation, in particular giving access to sera and thereby facilitating the development of kits adapted to local infectious diseases. bioMérieux applied the same integration model in Brazil than later in China. Far from only focusing on the import and distribution of its products, the company invested in, built up and created a network of local capabilities, both in R&D and in production.
A PIONEER IN CHINA

China is probably the area in which Alain Mérieux's influence makes itself felt most strongly. It was at his personal instigation that bioMérieux invested in China, well before other Western companies showed any great interest.

Alain Mérieux took his first steps on Chinese soil in April 1978, a few months before Deng Xiaoping's speech marking a historic political breakthrough with respect to the country's openness to the rest of the world. From the outset, Alain Mérieux forged personal relations at the highest level both in terms of science and politics. For a long time, his name was far better known in China than that of bioMérieux!

The first bioMérieux systems to be installed in China were imported from Hong Kong for use in the country's few official hospitals. Commercial growth continued to develop via Hong Kong. The creation of sales offices in mainland China in the early 1990s, the transfer of the Chinese subsidiary headquarters to Shanghai ten years later, and the company's activities in the Asia Pacific region clearly attest to bioMérieux's desire to be present in China, working both for and with the country. In line with this philosophy, a prestigious scientific cooperation network has been developed. In 2010, bioMérieux adopted a strategy of local production for the Chinese market, proceeding with a series of acquisitions. The launch of a “Reverse Innovation” program also enabled bioMérieux to produce, in China, innovative diagnostic tests intended for the world market.

bioMérieux's policy of "when in Rome…", or indeed, China, consists first and foremost of meeting the country's public healthcare needs.

Lastly, bioMérieux is an official partner in the healthcare system reform initiated by the Chinese government in 2009. To this end, a special range of products has been developed for use in 11,000 general hospitals that will be built or renovated as part of the reform.
Headquarters of bioMérieux China is transferred to Shanghai
MORE INTERNATIONAL THAN EVER

The international prospects open to bioMérieux currently look extremely promising. In the future, the proportion of bioMérieux's activities taking place outside France will continue to gain momentum. China, which was the Group's tenth largest company ten years ago, is currently its third, and looks likely to rise to second place behind the United States and ahead of France.

In highly fluctuating economic climate, bioMérieux must take inspiration from China’s martial arts and combine agility with an ability to adapt so as to stay true to its long-standing vision for the future.

GREATER MEDICAL VALUE

In developed countries with mature economies, current trends lead towards price reductions and the consolidation of medical biology laboratories: bioMérieux's response to these changes in the worldwide diagnostics market has been to develop new products. This is also the case in certain emerging markets, such as the BRIC nations, where healthcare spending is increasing significantly. bioMérieux's future development will depend on the specialization of its diagnostic products and on the medical value that they offer.

NEW MARKET SECTORS

Prospects for development in emerging countries look very good, in both the clinical and industrial sectors. The BRIC nations, in particular, where healthcare systems are being established and a growing proportion of the population is gaining access to treatments, should act as a driving force for bioMérieux's growth in the coming years.
Getting closer to our markets

We have great ambitions for our international development, prompting us to get closer to our markets.

To this end, we intend to invest heavily in deploying resources in emerging nations, both to structure our sales network and to develop our research and production facilities. This strategy is already clearly demonstrated by the presence, in China, of our Global Commercial Operations Vice President. Nevertheless, this does not change the fact that bioMérieux remains, and will continue to remain, deeply rooted in France and the U.S. In these long-standing markets, our product offering is moving towards greater specialization and greater medical value.

Jean-Luc Belingard
Chairman and CEO of bioMérieux