



**French Healthcare**  
**Biotech companies**  
**take over BIO Digital**

June 8-12, 2020

# AGENDA

Please note: all times listed below are Pacific Time, PDT

TUESDAY, JUNE 9 / 8.30 AM - 9.55 AM (PDT)

## International Plenary Session: How are Global Leaders Collaborating to Combat the Pandemic?



Agnès Pannier-Runacher  
French Minister of State attached  
to the Minister for the Economy  
and Finance

The Covid-19 pandemic is creating unprecedented healthcare challenges with far-reaching effects yet to be measured. There is a need for greater global collaboration and communication among researchers, healthcare systems, government agencies, NGOs, and the public at large. How are governments,

regulatory agencies and the global Biotech sector cooperating to combat the current pandemic and facilitate the development of Covid-19 vaccines and treatments.

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## France – Pushing for global co-operation and solidarity: France's approach to addressing this crisis



Philippe Etienne  
Ambassador of France to the USA

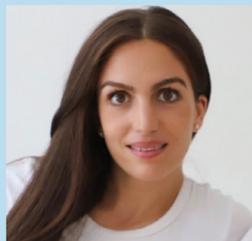
WEDNESDAY, JUNE 10 / 9:00 AM - 10:00 AM (PDT)

## French Biotech companies pitch session contest

Olivier Kitten, Affilogic  
François Pedelaborde, Clean Cells  
Odile Duvaux, Xenothera  
Elisabeth Porcher-Richard, Atlanthera  
Jean-Jacques. A. P. Mention,  
OSE Immunotherapeutics

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## France, the most attractive country in Europe for FDI



Elsa Rive  
Managing Director  
of the Healthcare division,  
New York, Business France



Charlotte Abitbol  
Business Development Director,  
Healthcare and Biotech,  
San Francisco, Business France



Charlotte Viard  
Business Development Director,  
Healthcare and Biotech,  
Boston, Business France

## JOIN US TO LEARN ABOUT FRENCH BIOTECH INNOVATIONS!

THURSDAY, JUNE 11 // 9:00 AM - 10:00 AM (PDT)

## Keys to set up a resilient Supply Chain for Biotech Companies



Philippe Bornert  
CEO Agilea Group

Business France and AGILEA North America invites the Biotech industry to discover how to improve its supply chain!

THURSDAY, JUNE 11 // 1:00 PM - 2:15 PM (PDT)

## Protecting our long-term commitment to care in a post-pandemic world



Bill Sibold  
Executive Vice President  
Sanofi Genzyme

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## “Start Me Up”: How Can Europe's Biotech Sector Combat the Coronavirus?



Pierre Courteille  
Chief Commercial Officer & Vice President Business, Development at ABIVAX  
– Vice President at France Biotech

The role of the biotechnology sector in addressing global challenges has become clear during the current pandemic. Nearly 75% of Covid-19 R&D for treatments, vaccines and diagnostics programs are undertaken by small companies.

How has the European Biotech sector contributed to the Covid-19 response? Are small to medium-sized European biotechnology companies equipped to enter the race to find treatments and vaccines?

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## Haliidx

Corinne Danan, EVP, PARTNERSHIPS BU, HALIIDX

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## LNC Therapeutics

Georges Rawadi, CEO, LNC Therapeutics

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## Keen Eye

Sylvain Berlemont, CEO, Keen Eye

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## Genomic Vision

Mario Avarello, BSc, MSc, PhD  
Scientific Account Manager, Genomic Vision

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## Cytoo

Luc Selig, CEO, CYTOO

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## Sanofi

Alban de La Sablière, SANOFI Partnering Head SANOFI

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## Provepharm Life Solutions

Matthieu Leuwers, Chief bd officer,  
Provepharm Life Solutions

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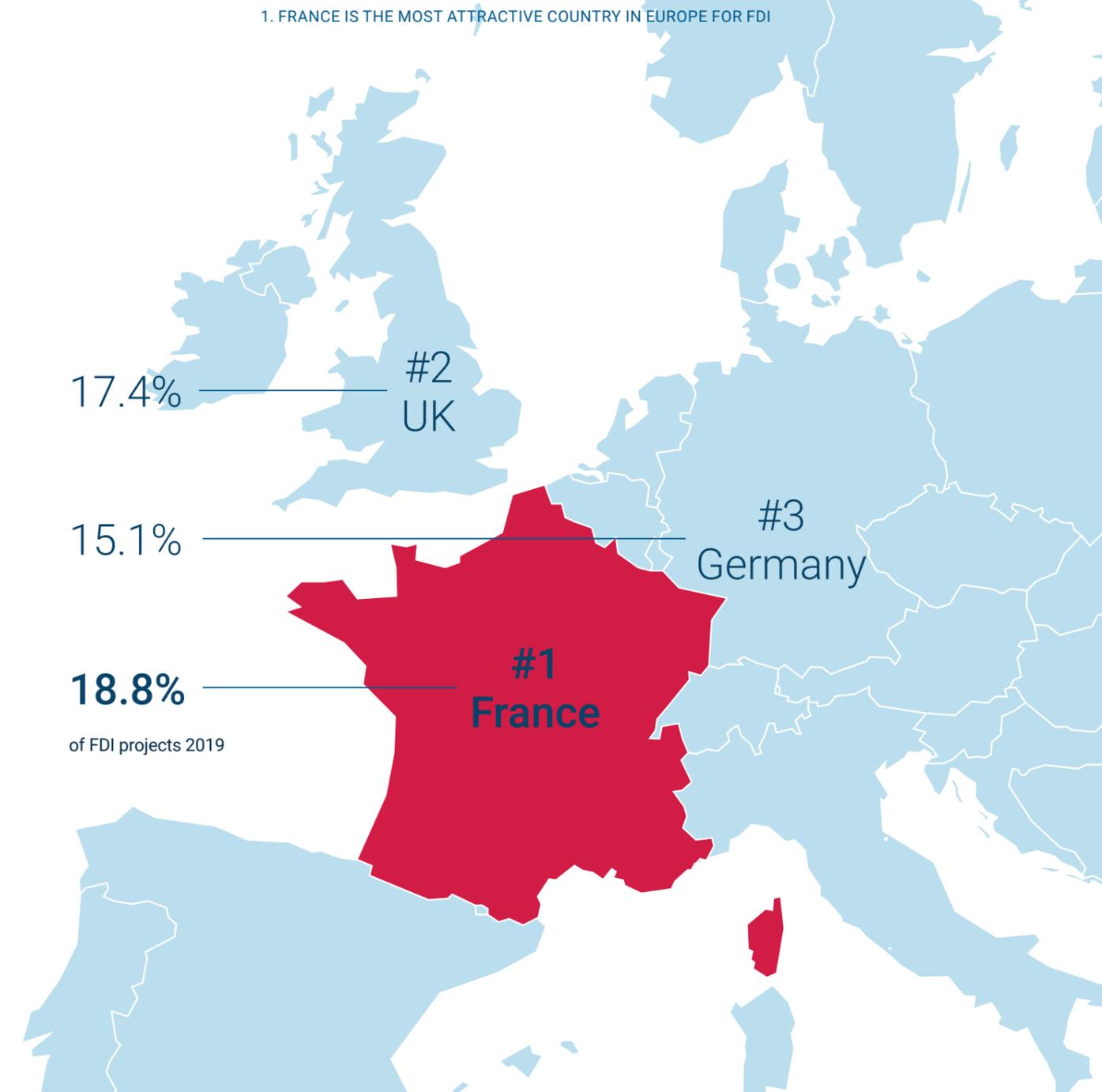
AND SO MANY MORE BIOTECHS SPEAKING  
AT #BIODIGITAL <https://www.bio.org/events/bio-digital>

# 1) France is the most attractive country in Europe for FDI



International investment in France last year reached a record high thanks to an annual investment increase of 10% and nearly 40,000 jobs being created or maintained.

**Bruno Le Maire**  
French Minister of  
Economy and Finance



## 1.1 ) France overtakes the UK as Europe's top FDI destination

France became Europe's top destination for foreign direct investment (ahead of UK and Germany), attracting 1,197 projects in 2019, with a 17% annual increase and a 18.8% market share.

According to EY Europe Attractiveness Survey (May 2020) "For the first time, France attracted more FDI projects than any other country last year. France's resurgence, which has gathered pace since 2017, is a direct result of reforms of labor laws and corporate taxation, which were very well received by domestic and international investors alike."



**1,197**  
foreign investment  
projects



**France,**  
the leading host  
country for foreign  
investment in Europe



**+17%** in foreign  
investment in 2019



France was **#1**  
in hosting R&D  
in R&D activities



Labor laws and corporate  
taxations reforms have  
most contributed to  
increasing France's  
attractiveness

Source: EY Attractiveness Survey Europe May 2020

France's newfound attractiveness stems from the country's ambitious transformation that we have been **leading since 2017**. We have reformed our labor market, reduced capital taxation, lowered corporate tax, helped our SMEs to grow thanks to the PACTE Act, and invested hugely in innovation.

France, in just two years, has once again become **the country to which international investors turn**. The global crisis that we are currently experiencing should not make us lose sight of our success. Beforehand, France boasted a number of key strengths: growth was above the euro zone average, **more than 500,000 jobs had been created in two years, and business investment was at an all-time high**.

Source: Foreign investment in France 2019 Annual Report (May 2020) – Business France



Outstanding is the word that immediately comes to mind for the 2019 edition of the Annual Report on Foreign Investment in France.

**Pascal Cagni**  
Chairman of the Board,  
Business France,  
and Ambassador for  
International Investment

**Christophe Lecourtier**  
CEO Business France

### Cementing France's **strong leadership** in Europe

France's ambition for Europe compels us to add a new twist to our strategy and promote the country's attractiveness in a much more united and European way than we have in the past. We hope to build on our recent strong performance and the rebound of France's attractiveness. In 2019, France became Europe's leading destination for foreign investment, according to EY Europe Attractiveness Survey 2020. **It was no coincidence that France showed such impressive results, which were a direct result of several years of reforms of**

**labor laws and corporate taxation, and the resilience of the French economy**. This transformation of France's "business model" has been very well received by domestic and international investors alike. Business France is willing to play an active role among European investment promotion agencies to continue to attract and relocate investments, which will be key to Europe's recovery and attractiveness.

## 1.2 ) The health sector in **foreign investments** in France

In 2019, there are **44 foreign investment projects** creating jobs in the medical-surgical equipment sector and 28 for medicines. These projects have led to the creation of more than 1,200 jobs.

The main **host regions** for these projects are:



IN 2019  
**Île de France** (32% of projects)  
**Auvergne-Rhône-Alpes** (17%)  
**Hauts de France** (14%)

BETWEEN 2014 AND 2019  
**Île de France** (29% of projects)  
**Auvergne-Rhône-Alpes** (15%)  
**Grand Est** (12%)

The **main investor** countries in these sectors are:



IN 2019  
**United States** (18% of projects)  
**Switzerland** (10%)  
**Italy** (10%)

BETWEEN 2014 AND 2019  
**United States** (18% of projects)  
**Germany** (15%)  
**Switzerland** (9%)  
**United Kingdom** (8%)  
**Japan** (7%)

In 2019, **these projects are primarily in production activities** (41% of projects and 60% of associated jobs) and R&D (24% of projects and 19% of jobs).

The medical-surgical equipment and pharmaceutical sectors will account for 15% of foreign R&D investment projects in France in 2019.

Foreign companies contribute nearly 50% of R&D spending by companies in the Medical Irradiation Equipment Manufacturing sector. They employ 52% of salaried researchers in this sector in France.

Source: MESRI-SIES, 2020

## SUCCESS STORIES OF FOREIGN INVESTMENTS IN THE HEALTHCARE SECTOR IN FRANCE IN 2019

A few examples in the pharmaceuticals and biotechnologies sector:

 ZIMMER BIOMET	<p><b>ZIMMER BIOMET (UNITED STATES)</b>                  Zimmer Biomet, an American manufacturer of robotic surgical assistance devices, which invested €20 million to expand its production facility in Occitanie near Montpellier-Méditerranée Airport, and plans to create 54 jobs.</p>
	<p><b>VIVITRO LABS (CANADA)</b>                  Vivitro Labs, a subsidiary of the Canadian group Starfish Medical based in Victoria (British Columbia), develops equipment for the testing of cardiovascular and endovascular medical devices, offering associated services. After several successful collaborations with the Marseille-based firm ProtomedLabs, which employs five people, Vivitro Labs strengthened its European development with the acquisition of ProtomedLabs, a French business, to develop its operations internationally.</p>
	<p><b>INOVET (BELGIUM)</b>                  The veterinary pharmaceutical company Biové, owned by Belgian group InoVet, which is located in Arques in Hauts de France, will benefit from an investment of €28 million to triple the capacity of its production site. The new investment, divided into four phases, will be used to modernize the factory and to triple production capacity. InoVet is targeting entry into the world's top 50 animal health companies (livestock and domestic) by 2024.</p>
	<p><b>CHIESI FARMACEUTICI (ITALY)</b>                  The expansion project of the La Chaussée-Saint-Victor industrial site (Centre-Val de Loire region) announced in July 2019 by the Chiesi Farmaceutici Spa laboratory is part of the Italian group's social and environmental responsibility strategy. Chiesi is the first pharmaceutical laboratory to receive B Corp certification, which rewards its commitment to social and environmental responsibility and carbon neutrality by 2035. The Italian group wants the La Chaussée-Saint-Victor site to become a technological and strategic platform for the environment, for its customers and for its employees.</p>
 TAISHO PHARMACEUTICAL	<p><b>TAISHO PHARMACEUTICAL HOLDINGS (JAPAN)</b>                  Taisho Pharmaceutical Holdings is the largest Japanese firm for over-the-counter drugs, including anti-inflammatory drugs for the treatment of colds and flu, and is the leader for this type of product in Japan, ranked eighth in the world. Taisho Pharmaceutical Holdings announced the acquisition of UPSA, the French subsidiary of the American group Bristol-Myers Squibb, on July 1, 2019. This business, specializing in anti-inflammatory drugs, including Dafalgan, Efferalgan and Fervex for the treatment of colds and flu, is ranked second for the sale of over-the-counter drugs in France. It employs 1,300 people across its two production sites located in Agen (Nouvelle Aquitaine) and 250 in its head office in Rueil-Malmaison, near Paris (Ile de France). This investment, which will see UPSA's brand and identity maintained, will enable Taisho Pharmaceutical Holdings to have its first industrial base in Europe.</p>
	<p><b>CELLTRION HEALTHCARE (SOUTH KOREA)</b>                  After opening a branch in 2018, the leading South Korean producer of biosimilars and innovative medicines decided to create a sales and marketing office in Paris to strengthen its operations and to develop its own sales network in the French market. Already a leader in the infliximab market in Europe, Celltrion intends to expand its product portfolio with value-added and bioinnovative medicines, creating around ten jobs through this expansion.</p>

Source: Foreign investment in France 2019 Annual Report (May 2020) – Business France

## SOME R&D COLLABORATIONS BETWEEN FRENCH AND US DURING THE COVID-19 PANDEMIC



**Sanofi (France) & Regeneron (USA)**  
 expand testing of potential treatment for Covid-19 virus (drug Kevzara).



**Valneva (France) & Dynavax (USA)**  
 announced a collaboration to advance vaccine development for Covid-19.



**Sanofi (France) & Luminostics (USA)**  
 to join forces on developing a breakthrough Covid-19 smartphone-based self-testing solution.

## RECENT AND NOTABLE INVESTMENTS AND PARTNERSHIPS BETWEEN US AND FRENCH COMPANIES



**Bioserenity (France)** a medtech company in the Next 40 that specializes in remote diagnostics solutions, acquired **SleepMed (USA)** in 2019 to become a leader of Sleep and Neuroscience diagnostics in the US.



In 2017, French biopharma **Dynacure (FT 120)** licensed a drug for the treatment of centronuclear myopathy (CNM), for which **Ionis Pharmaceutical (USA)** earned a \$5 million license fee in the form of Dynacure equity.



In 2017, **Charles River (USA)** and **ENYO Pharma (France)** together identified the mode of action of ENYO Pharma's lead preclinical chemical series, EYP002, using Charles River's newly acquired, molecular target identification tool: Capture Compound Mass Spectrometry (CCMS) technology.



In 2019, **Orbimed (USA)** invested in French biopharma **Alizé Pharma (FT 120)** and as such, became one of their shareholders. The company completed a €67m series A financing round.



In 2019, **Pfizer Ventures (USA)** has co-led a \$53 million (€48 million) series B investment in **ImCheck (FT-120)**, a developer of antibodies focused on gamma delta T cells. **ImCheck (France)** will use the money to move its lead candidate into the clinic in patients with solid and hematological cancers.



A collaboration to co-develop and commercialize Valneva's Lyme disease vaccine candidate. **Valneva (France)** is eligible to receive from **Pfizer (USA)** a total of \$308 million cash payments including a \$130 million upfront payment.

# 2) Rethinking the world post-Covid-19



“As our societies and economies slowly find their way out of the severe restrictions of recent times, we continue to face extraordinary uncertainties. Our goal, however, is clear: Europe will face this crisis together and we will emerge from it stronger.”

Emmanuel Macron  
President of France

## 2.1 ) Europe’s roadmap to future competitiveness

It may seem paradoxical, but Europe’s response has been great, although with some complications. On the positive side, governments quickly supported business and employees.

### A new European strategy to attract and retain foreign investment

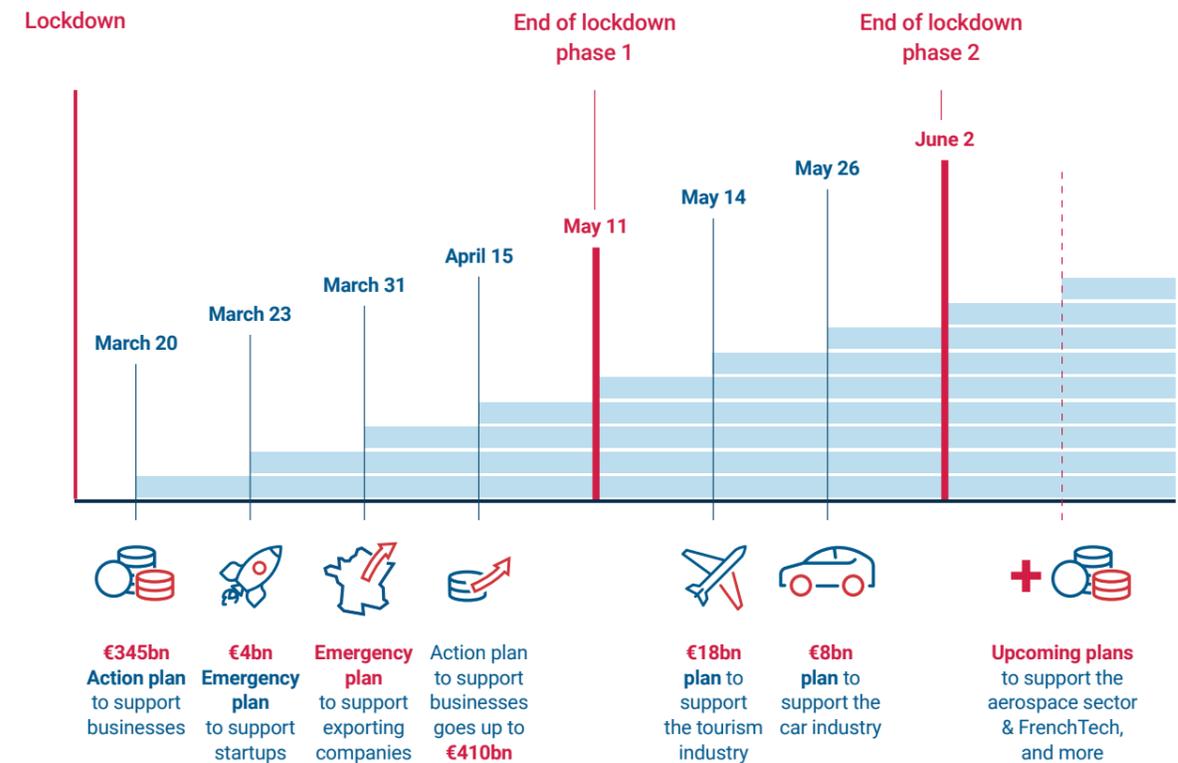
The global economy is now facing the most serious health and economic crisis in recent decades. Covid-19 triggered a sharp decline in foreign investment flows and highlighted the need for companies to reorganize their supply chains. Indeed, 73% of businesses expect Covid-19 to have a severe impact on the global economy, according to EY’s Capital Confidence Barometer launched in March 2020. The experience of the past few weeks – and the EU’s long history – must encourage Europe to intensify its efforts, and Member States to work together.

France and Germany will lead the way to restore Europe’s attractiveness. On May 18, 2020, President Emmanuel Macron and Chancellor Angela Merkel were very clear when they unveiled a Franco-German initiative to support Europe’s

economic recovery, ecological and digital transition, and industrial sovereignty. They insisted that 5G, “a Europe of health” and the green transformation of the continent must be prioritized, with strong support from all stakeholders, governments and businesses. Paris and Berlin will have a common strategy of reducing their dependence on imports in strategic sectors, such as life sciences. However, this industrial autonomy cannot and will not, in any way, prohibit the growth of foreign businesses with strong industrial bases and R&D centers in Europe. All these post-crisis priorities, and the associated funding that will be put in place represent an opportunity for new investments and jobs, starting with companies that are already present in the EU.

Source: EY Attractiveness Survey Europe May 2020

## 2.2 ) France’s Covid-19 Economic Response Plan to fight the crisis and France’s unemployment is decisive



We acted quickly and decisively to safeguard these key strengths. The substantial and immediate support measures helped cushion the shock of the crisis. They were effective, ranging from short-time working, which protected more than 12 million workers, loans guaranteed by the state, which enabled businesses to avoid bankruptcy due to cashflow problems, and help for nearly two million

businesses from the solidarity fund. We have protected the economy; we must now support its recovery. In the coming years, France will continue to promote investment from foreign businesses across our regions so that they can create jobs, make the most of our talent and participate in the construction of this new French economy.

### Will the Covid-19 pandemic jeopardize these foreign investment projects?

In terms of the number of foreign investments and jobs generated by foreign investors in France, 2019 was an outstanding year. However, a global economic slowdown, doubts about the future of the European Union following Brexit, trade tensions between China and the United States, as well as a return to protectionist policies in some parts of the world were all questions that remained unanswered last year. In this changing environment, the French economy’s resilience and the “pro-business” reforms that have been undertaken by the French government have strengthened foreign investors’ confidence.

While it is difficult to say at this stage, we know, however, that such investments are part of long-term strategies that contribute to the changes observed in the global economy during the last decade, such as the reconfiguration of global value chains, getting production facilities less spread out across the world, with greater proximity to markets. The pandemic is expected to encourage such changes since they respond to key environmental issues.

Source: Foreign investment in France 2019 Annual Report (May 2020) – Business France

# 3) An increasingly attractive French Healthcare ecosystem for innovation



requirements, etc. In this context, the Government is standing alongside developers for a two-fold objective: to strengthen both the competitiveness of our companies and the quality of patient care.

France is a land of health industries. With a sector that represents €90 billion in revenues, 35% of which comes from exports and nearly 455,000 jobs, our territories are dense in life sciences businesses of all sizes: more than 3,100, ranging from startups to multinationals.

This is translated by adapting our public policies to create a favorable environment and by supporting innovation through strong actions.

**Agnès Pannier-Runacher**  
French Minister of State attached to the Minister for the Economy and Finance

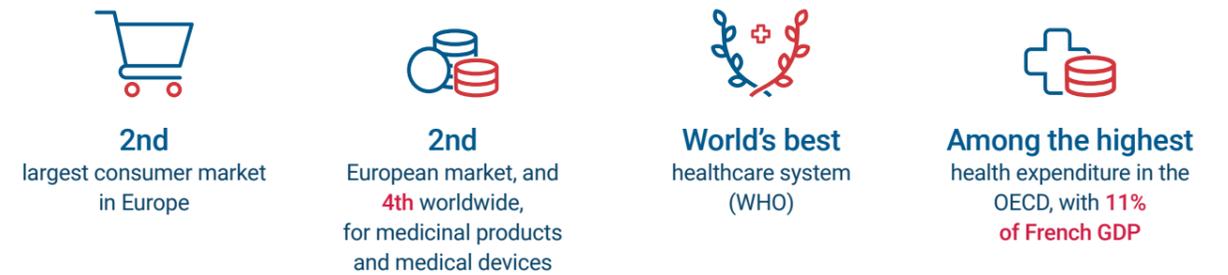
The healthcare sector is undergoing profound changes: a shift towards biotechnology, digital transformation, strengthening of certification

## 3.1 ) French healthcare industries focused on innovation

Healthcare has always been a central industrial activity in the French economy, and is at the heart of a world-renowned research, public health and healthcare ecosystem. Today, there are more than 3,000 healthcare businesses in France, generating revenues of nearly €90 billion. Within these healthcare industries, the 247 pharmaceutical businesses hold a prominent role, being responsible for €54 billion

in revenues and employing nearly 100,000 people. This industry is very internationally focused, achieving half of its revenues through exports. France is the fifth large producer of medicinal products in the European Union. Furthermore, France has the second largest number of healthcare biotechnology businesses (720), of which the great majority are SMEs and startups.

Leading country for **access to healthcare** (OECD)



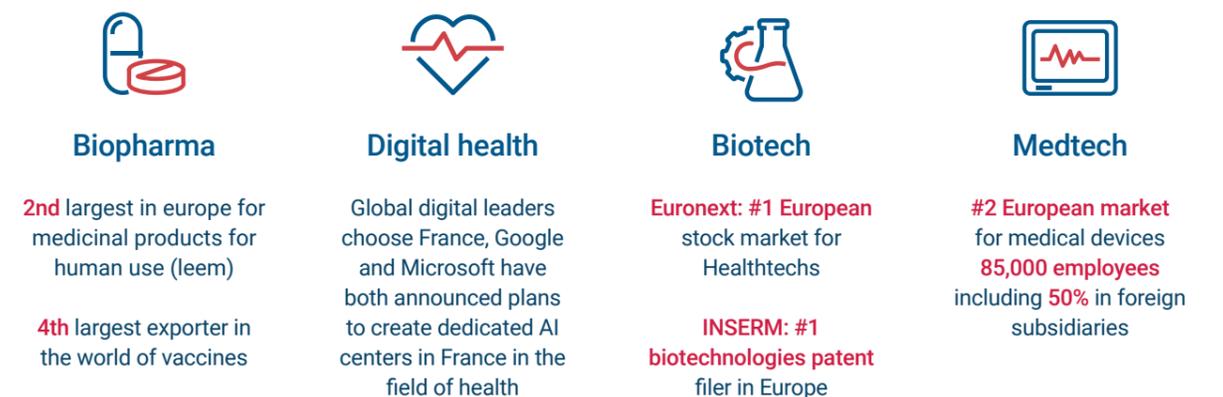
Source: Healthcare, a flagship of French industry (July 2019) – Business France

France, an **innovative** gateway to Europe



Source: Healthcare, a flagship of French industry (July 2019) – Business France

France: Healthcare **facts and figures**



Source: Healthcare, a flagship of French industry (July 2019) – Business France

### Renowned **medical excellence**

France's medical research stands out for its excellence. No fewer than 13 recipients of the Nobel Prize for medicine are French, while numerous medical world firsts have taken place in France, such as the first cord blood transplant in 1988; the first carotid stent implant in 1990; the first partial face transplant in 2005; the first Carmat artificial heart implant in 2013; or the removal of a cerebral tumor from an awake patient using virtual reality glasses.

France is the fourth largest holder of patents for all sectors combined with the European Patent Office, after the United States, Japan and Germany, and was responsible for 6% of all patents filed in 2018. In the pharmaceuticals sector, France is ranked third after the United States and Germany, but ahead of Switzerland. These figures confirm that France is a leading innovative nation.

### Globally **acclaimed research centers**

French research organizations are among the best in the world. France and the United States are the only two countries to have organizations in Scimago's top 15 healthcare research institutes. For France, the French National Institute for Health and Medical Research (Institut national de la santé et de la recherche médicale – INSERM) is ranked **second**, while Assistance Publique – Hôpitaux de Paris (APHP) is in **11th** place. INSERM is also the **leading** patent applicant with the European Patent Office (EPO) in the pharmaceutical sector, and the **fourth** leading patent applicant (but the leading academic institution) for

biotechnologies. The French National Center for Scientific Research (Centre national de recherche scientifique – CNRS) is ranked **fourth** among world research organizations by the Nature Index 2020 due to the large amount of work published by CNRS researchers in acclaimed journals. The French Atomic Energy and Alternative Energy Commission (Commissariat à l'énergie atomique et aux énergies alternatives – CEA) meanwhile is part of the **100 top organizations for innovation**, as ranked by Clarivate Analytics in its Derwent Top 100 Global Innovators 2018-19.

Source: Healthcare, a flagship of French industry (July 2019) – Business France

### Public research, recognised for its **excellence** and at the origin of numerous technologies developed



**52%**

of Healthtech companies were created from academic or public research



**Half**

of Healthtech's partnerships are conducted with public organisations (universities, research institutes)

Source: Panorama France HealthTech 2019 (February 2020) – France Biotech

### 3.2) Government's constant commitment to foster **innovation**



We have secured the research tax credit (CIR), which represents €800 million per year for health industries. Our priority is also to help Healthtech companies adapt to new regulations. It should be noted that the new European regulation regarding Medical Devices (MD), which will come into effect on May, 26, 2020, strengthens surveillance and certification procedures. It enforces the requirement for manufacturers

to carry out clinical trials to prove the safety of high-risk products, random inspections of manufacturers after product launch, provides unique identifiers for medical devices. We have also taken strong action to anticipate the regulatory and tax consequences of Brexit. We can also mention the implementation of measures announced by the President of the French Republic at the Strategic Council for Health Industries (CSIS), particularly, the measure included in the 2020 social security health budget which provides early access to Medtech companies, and the ambitious projects promoted by the Strategic Council for Health Industries, for instance regarding biomanufacturing.

**Agnès Pannier-Runacher**  
French Minister of State attached to the Minister for the Economy and Finance

France has very generous state funding for R&D, with tax breaks such as the **research tax credit**, **innovation tax credit** and the **innovative new companies status**, but also innovation funding programs such as the Major Investment Plan.



France, #1 country for R&D subsidies within OECD countries thanks to the research tax credit, covering 30% of R&D expenses up to **€100 million**

Source: OECD



**88%**

of Healthtechs benefit from the CIR (Research Tax Credit)



**53%**

of companies were eligible to the JEI (Young Innovative Enterprise) status

Source: Panorama France HealthTech 2019 (February 2020) – France Biotech

France is Europe's most attractive country in terms of its **research tax credit** (crédit d'impôt recherche – CIR) which is a tax-incentive scheme to support

research that is open to companies of any size and from any sector: 30% of R&D expenses up to €100 million and 5% above, reimbursed or paid through corporate tax (highest R&D spending tax subsidy rate in OECD countries).

The **"innovative new company"** status (jeune entreprise innovante – JEI), introduced in 2004, offers a variety of tax and social security relief (such as partial

exemption from corporate tax and capital gains, and complete exemption from certain employer social security contributions) to SMEs that are less than eight years old and devote at least **15%** of their total spending to R&D.

The **Major Investment Plan** (Grand Plan d'Investissement – GPI) takes on the work of the National Investment Program focusing on innovation, such as the innovation contest, support for collaborative research, and several funds operated by Bpifrance to strengthen the French

venture capital market in certain segments. It corresponds to a **€57 billion** investment program centered on four priorities, including anchoring competitiveness to innovation and building a digital state. This major investment program notably includes a provision of **€5 billion** to fast-track the digitization of the healthcare and social cohesion system.

Source: Healthcare, a flagship of French industry (July 2019) – Business France

No wonder France has a strong ability to attract major R&D projects, which have increased by **22%**.



**+22%**  
of investment in R&D centers in 2019



R&D activities represented **11%** of all foreign investment in France in 2019 (157 projects)



American companies stood out for their involvement in R&D: they were responsible for **27%** of the decisions identified

Substantial **R&D investments** specific to the life sciences companies



**11%**  
of investment in R&D activities



**60%**  
of company spending



**€ 7 million**  
per company in 2018



**44%**  
of the workforce (10% for clinical development)

Source: Foreign investment in France 2019 Annual Report (May 2020) – Business France

# 4) Making France a world leader in Healthtech



**Franck Mouthon**  
Chairman of  
France Biotech

france  
biotech

biotech | medtech | digital health | IA  
ENTREPRENEURS IN HEALTHTECH

## Healthcare, a vital area which has witnessed major progress in 2019

The most precious asset for humans remains and will remain healthcare. Given this fact, our Healthtech companies are privileged to have the challenge of saving, extending and improving lives by alleviating the scourge of disease.

The change of decade we are experiencing today is a pivotal period for our sector. 2019 has seen the completion of major works by the Healthtech sector giving rise, among others, to the first registered gene therapies, the first CRISPR / Cas9 medical applications in hemoglobinopathies, the reconstruction of human organs by 3D cell printing, the first drug developed using Artificial Intelligence to treat inflammatory diseases and exoskeletons.

These various medical revolutions - to repair, treat, cure and even eradicate diseases that have long been incurable - will have profound impacts on our organisations, impacts for which we must prepare. The advent of new forms of medicine such as precision medicine as well as predictive and preventive care, access to medical innovations for all, the evolution of business models associated with patient recovery, the growing and early involvement of all stakeholders (patients, healthcare professionals, scientists, insurers, manufacturers, policy

makers, as well as financial, regulatory and ethical authorities) will greatly contribute to the transformation of our entire ecosystem.

As five centuries ago, The Vitruvian Man demonstrated the link between many universal sciences including anatomy, art, geometry, mathematics, cosmology, philosophy, etc. In order to integrate the challenges of these medical revolutions, the sense of history for the Healthtech industry will require more cooperation between the numerous players, closer links and synergies between the different disciplines, technologies and stakeholders.

## 4.1 ) French Biotech, an innovative force in the Biotech landscape worldwide

Today, Biotechnology and Healthtech answer new health challenges by developing more targeted, personalized and effective solutions such as shift from a palliative to a curative model (gene therapies, hepatitis C, etc.).

Healthtech companies are among the most dynamic in the field of Artificial Intelligence, particularly for preventive medicine and medical diagnosis. Startups and SMEs, although very agile, also have fewer resources to face changes in their economic and regulatory environments.

To face these challenges, the Ministry has proposed a strong industrial strategy based on innovation. This strategy is carried out through several tools, for instance the Innovation Council with a budget of €250 million per year, dedicated to financing the key challenges of breakthrough innovation. Two of those key challenges related to AI have already been chosen, one of which concerns the health industries and in particular medical diagnostics. This will benefit all ecosystem stakeholders. Let's build on this momentum so that together we can make France a world leader in digital healthcare.

More than 1,700 Healthtech companies in France including:



720  
Biotech



>800  
Medtech



200  
e-health companies

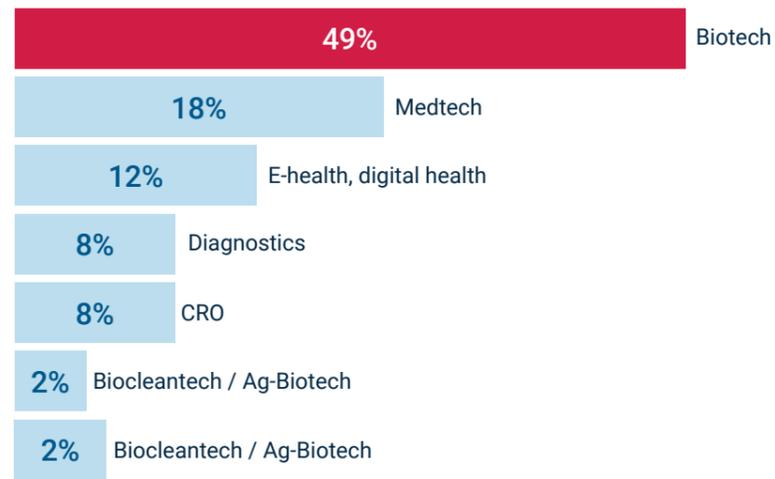
Source: Panorama France HealthTech 2019 (February 2020) – France Biotech

A strong dynamism for business creation



**60**  
new Biotech companies  
created every year  
Source: Féfis

Types of companies



Companies profile



**401**  
companies studied



**8 years old on average**  
and most have fewer than  
10 employees  
(59% of companies)



**10,000**  
employees



**24 employees**  
on average per company

A multitude of products

**>5,000**  
patents

**>400**  
products,  
1/3 in clinical  
phases

**2,7**  
product  
per Biotech

**1,000**  
products  
across all  
Biotech in  
France

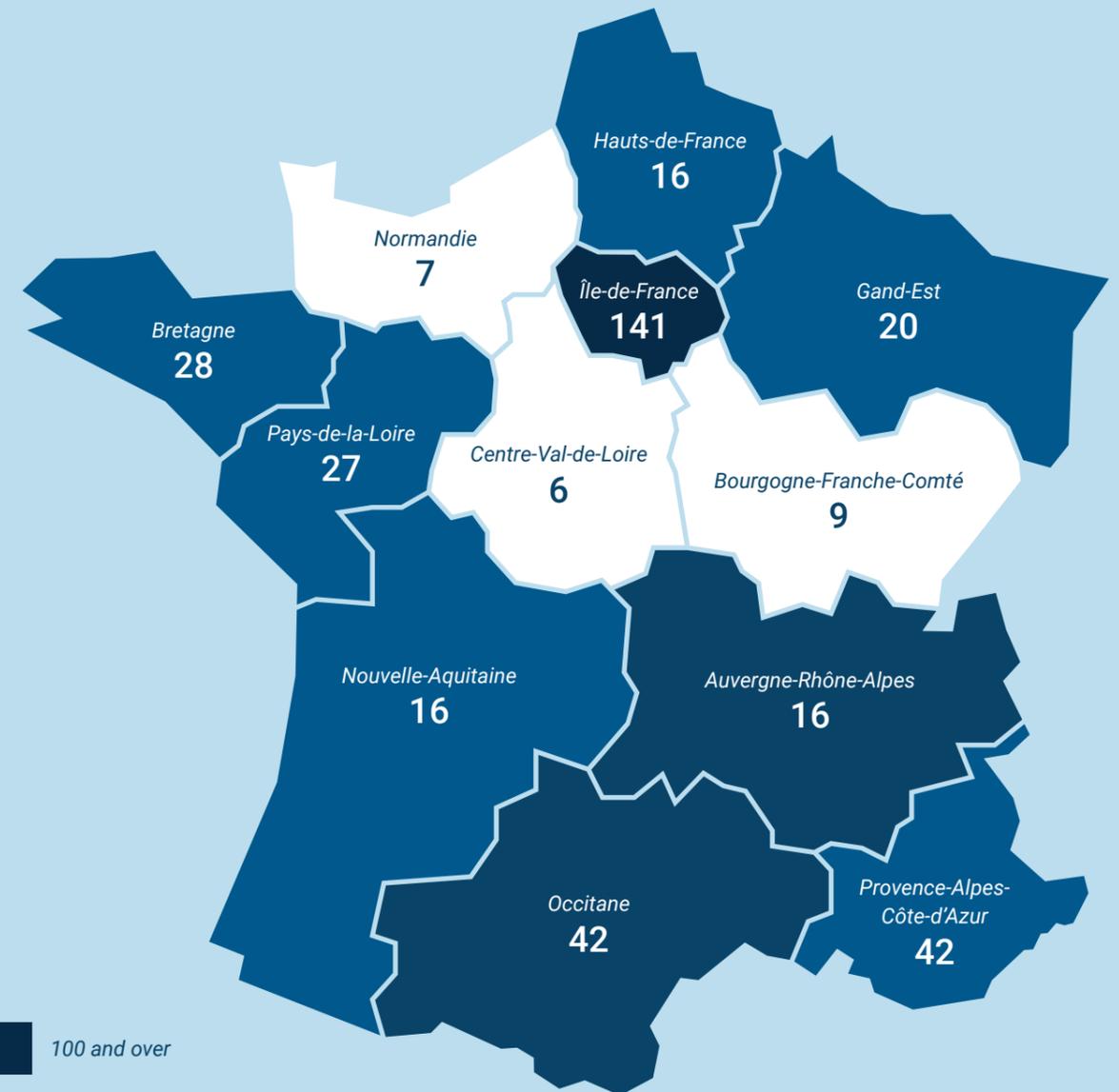
**12%**  
of products  
benefit  
from orphan  
drug status

**252**  
medical devices,  
half of which  
are registered  
or marketed

**French Biotech:**  
A richer pipeline than the 5 major  
French pharmaceutical companies

**Oncology:**  
#1 area investigated  
by French Biotech

Map of sample region (number of companies)



+2 companies for Reunion Island (off map)

## 4.2 ) France, one of the world's leading players in clinical research

### Early access to innovations

France is one of the world's leading players in clinical research and a destination of excellence for conducting clinical trials thanks to measures in favor of France's attractiveness as:

- More transparency and simplification with the complete dematerialization of the procedure for seeking authorization or modification of a clinical trial
- More transparency and simplification with a single convention for research with commercial purposes: an identical contract between the sponsor of the trial, the coordinating investigator center (establishment, home or health center) and, where applicable, the associated investigator centers.
- A fast track authorization procedure (60 days maximum) since October 2018 to accelerate access for patients to innovative therapies



France, #1 in Europe, in terms of number of trials in progress



France: #4 for Phase I trials

Source: Clinical trials in France (September 2019) – Business France

Source: Panorama France HealthTech 2019 (February 2020) – France Biotech

## 4.3 ) France, a Life Science hub at the heart of Europe

**Innovation clusters** play a key role in attractiveness and innovation policies by encouraging partnerships between research organizations and business. In healthcare sectors, there are numerous innovation clusters spread throughout the country.

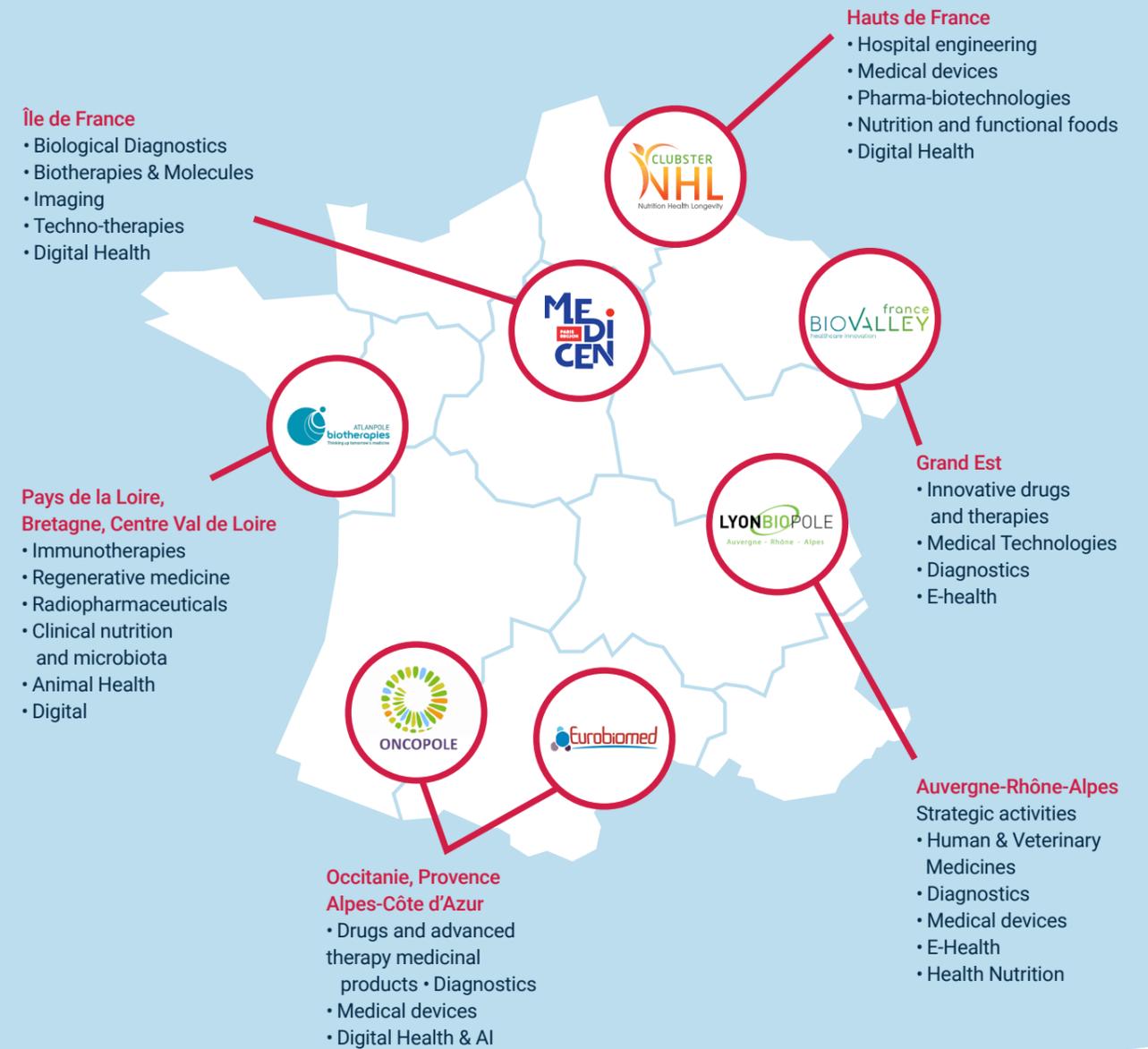
France has six innovation clusters specifically dedicated to life sciences, the healthcare, medical biotechnology and medical devices sectors: Lyon Biopôle, Medicen, Biovalley France, Atlanpole Biothérapies, Eurobiomed and Nutrition Santé Longévité, which bring together 1,300 members, including 1,000 SMEs.

The Ile de France region has been selected as host of the international Venture Centre of Excellence (conceived as part of a collaboration between EIT Health and the European Investment Fund EIF). As such, the region will provide financial support of up to €200 000. The Venture Centre of Excellence is Europe's first life sciences and healthcare open innovation programme, dedicated to attracting more investment to Europe's healthcare and life sciences sector.

A large number of other innovation clusters are involved in the medical devices sector, such as the European Center of Ceramics in Limoges, Minalogic in Grenoble which specializes in digital technologies, and Optitec, a cluster focusing on photonics and imaging, located in Marseille. Some support structures take the form of business mini-clusters (such as Pôle des technologies médicales and Eurasanté), clusters (I-Care, Polepharma), technology clusters (Pôle technologique de Haute-Champagne) or federations (National Association of the Medical Technologies Industry – SNITEM).

It will increase Europe's innovation capacity by providing access to investment for startups, while also building strategic connections between venture capital funds and corporate members, to promote collaboration with disruptive startups. This 15-year pan-European programme is expected to inject €2 billion into the economy. Corporate members and venture capital from across Europe will have the opportunity to leverage their in-kind and own resources with the support of EIT Health and EIF to better finance life sciences and healthcare startups.

Source: Healthcare, a flagship of French industry (July 2019) – Business France



We believe that the Venture Centre of Excellence will have a great economic, social, and health impact thanks to the additional investments that the startups will receive to support their growth. Paris is considered to be an international life science and healthcare hub as well as a robust financial area and EIT Health is delighted that the Region Ile De France will provide both financial support as well as a European base for the Venture Centre of Excellence operational team.

**Jean-Marc Bourez**  
EIT Health France Managing Director  
and Head of the Venture Centre of Excellence

## FRENCH BIOTECH EXHIBITOR LIST

	3-D Matrix is a medical device company which revolutionise surgical outcomes in healthcare with its innovative self-assembling peptide technology.
	Affilogic is a privately-owned biotechnology company discovering and developing affinity proteins called Nanofitins® for therapeutic uses.
	Ai-biopharma is a leading drug discovery Biotech involved in Antiviral drug discovery (functional cure of chronic Hepatitis B and Curative treatment for Coronaviruses).
	Alsachim is one of the world's leading suppliers of stable isotope labeled molecules (13C, 15N, 18O, 2H), for pharmaceutical, agro-food, environmental companies, CRO and hospitals. Alsachim also develops and sells Therapeutic Drug Monitoring's devices to support Hospitals and Bioanalysis service providers.
	Amygen is a pre-clinical CRO offering validated in vivo models of neurodegenerative diseases.
	Preclinical stage Biotech developing NCE for muscle diseases, thanks to a stem cell-based unique proprietary technology.
	Atlanthera is a French drug discovery company focusing on bone diseases.
	Preclinical CRO expert in osteoarticular diseases providing in-vitro/in-vivo/ex-vivo protocols to evaluate drug candidates and biomaterials (osteoporosis, osteoarthritis, bone cancer, biocompatibility, bone reconstruction...)
	Audit & RiskSolutions is an insurance broker dedicated to the Life Sciences industry including biotechnologies companies, medical device manufacturers, laboratories, contract and clinical research facilities, and pharmaceutical companies.
	Axoltis Pharma is clinical stage company dedicated to CNS disorders.
	Transplantation is an early stage pharmaceutical company with fast development timelines focused on kidney Ischemia-Reperfusion Injury (IRI), including Acute Kidney Injury (AKI) and its subsequent transition to Chronic Kidney Disease (CKD) and Kidney Transplantation (KTx).
	Calixar is specialized in the discovery and the isolation of native and functional membrane targets and antigens in all therapeutic areas to improve the quality and reliability of drug, bio drug candidates including vaccines.
	Consultancy (early pre-clin to clin dvpt in Safety, Tox, Pharmaco, International Audits, Outsourcing mngt for critical studies & product dvpt, Ophthalmo, ADME/PK, analytics, QA, CMC-Reg. Affairs & Compliance).
	CardioRenal is dedicated to developing solutions that allow Chronic Cardiovascular patients to be treated safely at home.
	CARPACCIO.cloud operates in the Digital Pathology space offering a custom, high throughput quantitative and qualitative histological image-analysis service with unsurpassed quality and speed.

	Chelatec is a client oriented Contract Research Organization (CRO) specializing in radioactive labelling and preclinical investigations.
	CILcare is the world-leading R&D services company specialized in hearing disorders.
	Clean Cells is a GLP/GMP-licensed company specializing in QC testing of biopharmaceuticals and of raw/in-process material (biosafety, identity, purity, potency), Biomanufacturing activities (GMP cell banks (MCB/WCB), GMP virus seeds (MVSS/WVSS), Cell therapy investigational products and Clinical bacteriophages cocktails) and Bioassay development and validation.
	Crossject develops and will commercialize through partners a portfolio of rescue treatments for emergency situations such as epileptic seizures, opioid overdoses and severe asthma attacks.
	Cytoo is a preclinical stage drug discovery company focused on muscle disorders and operating largely through external alliances.
	Da Volterra is a French clinical stage Biotech company developing novel microbiota-protective therapies to address large unmet medical needs in the infectious diseases, gastrointestinal, hemato-oncology and oncology spaces.
	Domain Therapeutics is a French-Canadian biopharma, discovering and developing GPCR-acting treatments for high-unmet needs in immuno-oncology, CNS and rare diseases.
	Dynacure is a clinical-stage biotechnology company developing new treatments for patients affected by serious orphan neuro-muscular disorders.
	As the civil operator of blood transfusion in France, EFS is an essential french actor for fundamental, applied and clinical research projects that are related to two research axes: transfusion and blood products and cell and tissue engineering.
	As a leading preclinical CRO, ETAP-Lab evaluates drug and medical device efficacy, using in vivo research services in the fields of dermatology and neurology, and in vitro research services in the field of neurodegenerative disease.
	Eukarys develops a pipeline of synthetic gene therapies and vaccinations, based on a radically innovative therapeutic approach.
	Genclis is a French Biotech Company focused on developing therapies for both human and animal health using "Transcription Infidelity" (TI).
	GenSight Biologics is a clinical-stage biopharma company focused on discovering and developing innovative gene therapies for retinal neurodegenerative diseases and central nervous system disorders.
	The Gustave Roussy Cancer Institute is the first Cancer Center in Europe and a private institution participating in the public service. It constitutes a global center of expertise against cancer entirely dedicated to patients. It brings together over 2,100 professionals on a single site whose missions are care, research and teaching.

	HalioDx is an immuno-oncology diagnostic company providing oncologists and Biopharma with first-in-class immune-based diagnostic products and services to guide cancer care and contribute to precision medicine in the era of immunotherapy and combination therapies.
	Iris Pharma specializes in offering preclinical and clinical ophthalmology research services worldwide since 1989.
	MABSilico is a French deeptech company which implements computational solutions for antibody drug development. Based on AI and machine learning technologies resulting of more than 20 years of French scientific research, MABSilico's solutions are used to select, characterise and optimise antibodies to provide within 10 days qualified data (epitope, off-target, humanized sequences, new antibody designed) to our worldwide start-up and Biotech customers.
	NETRI develops disruptive technologies for improving the healthcare pathway for patients suffering from neurological troubles.
	Neurochlore, the objectives of the company Neurochlore are to understand certain neurodevelopmental diseases and to develop new therapeutic approaches applied to the regulation of the electrical activity of the brain, and more particularly to the modulation of intracellular chlorine.
	Neuron Experts is a French CRO specialized in the study of neuro-active compounds on specific neuronal in vitro cell models.
	Nova is a Healthtech company specialized in simulating clinical trials with virtual patients (in silico clinical trials).
	Osivax is a clinical stage biotechnology company developing a pipeline of vaccines and immunotherapies based on its proprietary technology, oligoDOM®, which is designed to induce powerful CD8 T-cell responses ( <a href="http://www.osivax.com/">http://www.osivax.com/</a> ); OSIVAX' lead asset is a disruptive universal influenza vaccine candidate currently evaluated in a phase 2a clinical trial.
	Oxeltis is a medicinal chemistry services company founded in 2010 by former researchers at Idenix Pharmaceuticals in Montpellier - France. The company has a small-scale custom synthesis business, as well as hit and lead optimization services, mainly in the areas of antivirals, antibiotics and anticancer compounds.
	PhysioStim is a CRO with a European high level of cardiac electrophysiology expertise that offers GLP or non-GLP preclinical studies (in vitro, ex vivo, in silico and in vivo) to assess your small molecules or your biologics candidates by answering the ICH regulations and CiPA recommendations.
	ProfileHIT is a French CRO specialized in the evaluation of molecules' behavior within the human vascular system.
	Rheonova markets innovative medical devices for measuring the rheological properties of biological fluids. Rheomuco is a medical instrumental platform dedicated to chronic respiratory diseases to provide personalized tests for diagnosis and prognosis. Rheomuco provides point-of-care tests are done within 10 min and €10, with in-house physical biomarkers used to save healthcare costs, prevent heavy emergency treatments and preserve patients' lung function.

	The SATT AxLR facilitates the establishment of research services adapted to the needs of industrialists and drawing on the very broad field of expertise of academic laboratories in Eastern Occitania. SATT AxLR guides you in the possibilities of laboratory service offers, establishes the link between the laboratories and your operational need and simplifies the formalities.
	Signia Therapeutics is a Biotech company that develops a platform to identify and reposition existing drugs for new indications in particular for viral respiratory infections.
	Soladis is a data expert. Its unique know-how in statistics, biostatistics, clinical trials, data science, IoT, digitalization makes Soladis the perfect partner for your data-related projects.
	Temisis is a therapeutic company focusing on the development of small-molecule assets for the treatment of unmet needs in pathologies possessing a strong inflammatory component.
	Theranexus is a clinical-stage Biotech with candidates in Parkinson's, Alzheimer's diseases and neuropathic pain. We identified the key role of glial cells in the brain's response to the current CNS drugs. Our patented technology allows improving the efficacy of approved CNS drugs, by combining them with a drug repurposed as a glial cell modulator. This strategy can significantly decrease development time, risks and costs by taking benefit of FDA's 505(b)2 pathway.
	TransCure bioServices is the n°1 European CRO offering the Advanced Human Immune System Mouse Models for oncology, inflammation, vaccine and infectious diseases. TransCure bioServices offers pre-clinical contract research services to pharmaceutical, Biotech and academic researchers who need faster, smarter and cost-effective solutions for drug profiling. Uniquely designed animal models with fully functional human immune system have been developed to provide predictive in vivo pharmacology testing in the fields of immuno-oncology and oncology, Patient Derived Xenografts, inflammation (IBD, SLE, MS, RA), autoimmune, antiinfective (HIV), neglected tropical diseases (Dengue) and preclinical lead candidate selection/validation for drug and vaccine development..
	Valneva is a specialty vaccine company focused on prevention against diseases with major unmet needs.
	Vaxxel is a pre-clinical-stage company developing vaccines against bronchiolitis: Metapneulovirus (hMPV) and respiratory Syncytial Virus (hRSV).
	Vect-Horus designs and develops vectors that facilitate targeting and delivery of therapeutic or imaging agents to organs.
	Vetbiobank, a veterinary french Biotech, develops since 2011 cost-effective animal stem cell drugs for treating chronic inflammatory diseases and promoting animal well-being through long term efficacy and without significant side effects.
	Yslab incorporate world class expertise in Marine Biotechnology with innovative delivery systems to offer high quality OTC / OTX products based on marine active ingredients, with unique consumer benefits, scientific evidence, regulatory compliance and reliable manufacturing. The laboratory is assisted by scientific and medical councils that ensure specific and clinical testing within health protocols; Product range dedicated to ENT, Eye and Mouth care includes Medical devices, Nutriment and Cosmetics. The company offers branded products for children (P'tit Bobo) and family use (Ocean Bio-Actif). Private label developments can be studied as well.



**French Healthcare** is an innovative public-private initiative aimed at bringing together the key players in the French healthcare ecosystem (companies, researchers, healthcare professionals, innovation clusters, etc.), to promote their operations, expertise and technologies internationally.



**Choose France** is a registered trademark of the French government that promotes France's economic attractiveness internationally.

Produced by Business France and France Biotech



**Business France** is the national agency supporting the international development of the French economy. It is responsible for fostering export growth by French businesses, as well as promoting and facilitating international investment in France. It promotes France's companies, business image and nationwide attractiveness as an investment location, and also runs the V.I.E international internship program.



**France Biotech**, founded in 1997, is an independent association that brings together the country's leading innovative health companies and their expert partners. As a leader in health innovation and a privileged intermediary with public authorities in France and Europe, France Biotech's mission is to support the development of this industry in France, by improving the tax, legal, regulatory and managerial environment in which these companies operate and by advocating for their recognition as a leading-edge industry.

With the support and contribution of life sciences clusters

