

## WITH THE OPENING OF ITS BUILDING, MI-MABS, THE FRENCH DEMONSTRATOR OF IMMUNOTHERAPY ANTIBODIES EMBARKS ON A NEW PHASE OF GROWTH

- A surface area of 1,500 square meters, this building, the property of Aix-Marseille Provence Metropolis was inaugurated on 5 July at the heart of MI-Biopark, the Luminy biotech business park.
- It will accelerate the demonstrator's R&D programs and complete the immunotechnology training of Master students at Aix-Marseille University

**Marseille September 8, 2017**, MI-mAbs, the French demonstrator of immunotherapy antibodies launched in the framework of «Investissements d'Avenir» inaugurated its building on 5 July in the heart of MI-Biopark. Thanks to this new tool that will soon be expanded by a pilot-scale antibody bioproduction facility, MI-mAbs intends to accelerate the R&D programs of its academic and industrial clients and to ensure its financial autonomy by end 2019. The videos of the inauguration of the MI-mAbs building are available on the [vimeo channel of MI-mAbs](#).



Prof. Yvon BERLAND, President of Aix-Marseille University cuts the ribbon to open MI-mAbs in the presence of Jean Christophe DANTONEL Director of health, biotechnologies program at the General Investment Commission, Lionel ROYER-PERREAU, Mayor of 9<sup>th</sup> and 10<sup>th</sup> districts of Marseille, Jérôme ORGEAS, Vice-chairman of the Economy, New Technology and Higher Education Commission of the City of Marseille, Martine VASSAL, President of the Departmental Board of Bouches-du-Rhône, Xavier CACHARD, Vice-President of the University, Higher Education, Research, Health and Ageing Commission of Provence-Alpes-Côte d'Azur region, Pierre GAROSI, President of Bouches-du-Rhône Committee of the French National Cancer League, Prof. François ROMAGNÉ, Chief Scientific Director of MI-mAbs, Prof. Eric VIVIER, Coordinator of Marseille Immunopole, Dr Hervé BRAILLY, Chairman of Innate Pharma Supervisory Board, Dr Marc BONNEFOI, Vice-President R&D Sanofi France and Prof. Jean-Paul BORG, Scientific Director of Paoli-Calmettes Institute and Director of CRCM.

«MI-mAbs is emblematic of Aix-Marseille University's strategy in terms of knowledge, research and innovation as it both accelerates the transfer of innovation, to support the economic development of our region and offers a real-life testing ground to our students,» **says Professor Yvon BERLAND, President of Aix-Marseille University** «It also testifies to our excellence in the field of fundamental and applied immunology. From the creation of the Immunology Center of Marseille-Luminy to Marseille Immunopole (MI), by way of a successful spin-off such as Innate Pharma, Marseille has progressively imposed itself as the leader in a discipline that is changing the fate of thousands of patients.»

«In 2010, immunotherapy started to keep its promise and Marseille had already contributed to this progress but it unquestionably lacked a tool to accelerate and de-risk the R&D of these new antibodies,» **» recalls Dr Hervé BRAILLY, Chairman of the Supervisory Board and co-founder, Innate Pharma** «With Eric VIVIER, François ROMAGNÉ, Jean-Paul BORG and Bernard MALISSEN our idea was to entrust the crucial phase of target validation and selection of the candidate antibody to an expert center that was positioned at the interface between research and industry. This is what MI-mAbs does today, with a program of antibodies from the collaboration between Innate Pharma and Sanofi and what it will now be able to scale up in this new building».

«Through its commitment to MI-mAbs, Sanofi confirms its determination to bring innovative biotherapies to patients with cancer and inflammatory diseases for which unmet medical needs are still significant » **says Dr Marc BONNEFOI, Vice-President, R&D Sanofi France** «To speed up innovation and to meet patients' needs in these fields, we have chosen one again to associate our expertise with partners of excellence, in this case in immunology».

«As its name implies, MI-mAbs (MI monoclonal antibodies) is at the heart of MI's strategy. The demonstrator is positioned up the bispecific antibody R&D value chain. For a given target, we generate the antibody candidates, we evaluate their development potential by studying their efficacy in vitro and in vivo. Our clinical colleagues at the IPC and scientists at the Center for Immunophenomics (CIPHE) support us in this work by providing us with biological samples from patients and animal models. Once selected, these antibody candidates will be able to integrate the clinical trial programs implemented at the IPC and the AP-HM. Together with the other MI platforms, MI-mAbs contributes to accelerating every stage of R&D, providing academic scientists with the expertise in development that they lack and offering industrial access to original models and an R&D relay that is close to the key players in the world of research,» **adds Prof. François ROMAGNÉ, Director, MI-mAbs** «Initially coordinated by Professor Eric VIVIER, MI-mAbs has already conducted 15 R&D projects and engaged two integrated development programs for different industrial and academic partners. Thanks to support from the State, and local authorities, we now benefit from a high-tech building that will allow us to conduct up to four integrated programs per year».

## MI-mAbs in figures

- Financing from «Investissements d’Avenir» (PIA1): **€19 million** (2012-2019)
- Building: **1,000 m<sup>2</sup>** (1,500 m<sup>2</sup> after opening the bio-production facility)
- Budget to renovate Aix-Marseille Provence building: **€3.4 million** of which **€2.3 million** from « Investissements d’Avenir » and contributions of **400K€** from the Provence-Alpes Côte d’Azur region, Bouches-du Rhône Departmental Board and the City of Marseille
- Team (as of July 2017): **28** members including **24** researchers, engineers and technicians
- R&D projects (as of July 2017): **15**
- Integrated development program (as of July 2017): **2**
- Revenues from industrial contracts (2016): **€1.1 million**

## About MI-mAbs

Launched at the end of 2012, the immunotechnology MI-mAbs is a pre-industrial demonstrator that aims to accelerate the development of new antibodies against cancers and inflammatory diseases.

Open to therapeutic targets of academic research and industry, MI-mAbs determines their expression profile, generates specific antibodies, characterizes their mechanism of action and evaluates their efficacy and safety in *in vivo* models mimicking human diseases and on biological samples from patients. By validating the therapeutic potential of these new antibodies, MI-mAbs allows industrials to immediately focus their efforts on the most promising drug candidates.

Winner of the 2011 «Investissements d’Avenir» in the « pre-industrial demonstrators » category, MI-mAbs was founded by Aix-Marseille University, which also ensures its administration through its Protisvalor subsidiary, CNRS, Inserm, Paoli-Calmettes Institute, three of their research centers (CIML, CRCM and Ciphe), biopharmaceutical companies Innate Pharma and Sanofi, one of the world leaders in healthcare. It has the support of the DRRT PACA, the PACA Region, the County Council 13, the city of Marseille, Aix-Marseille Provence Metropolis and Committee 13 of the French League Against Cancer. Founding member of Marseille Immunopole, MI-mAbs is located at the center of the Marseille-Luminy MI-Biopark. It is directed by Professor François Romagné and has a headcount of 28 persons.

[www.mimabs.org](http://www.mimabs.org)

## MI-mAbs founders

### Aix-Marseille University (AMU)

AMU is the largest francophone university with 77,000 students, including 10,000 international students, 8,000 staff members and a budget of €750 million. Training, professional orientation and integration, research and knowledge translation are the pillars of this multidisciplinary and interdisciplinary establishment. AMU trainings team up with 130 research structures in connection with national agencies. In 2016, AMU and its partners (CNRS, Inserm, CEA, IRD, ECM, IEP, AP-HM) obtained the continuation of their Excellence Initiative (Idex), A\*MIDEX, following assessment and proposition by an international jury.

### Ever bolder research

A research-intensive university, AMU makes a significant contribution to the knowledge-based economy and the dissemination of knowledge, relating to disciplinary and interdisciplinary fundamental research. It is associated with large national players in research: CNRS, Inserm, IRD, EHESS, CEA, IFSTTAR, INRA... with whom it pursues a co-constructed scientific strategy. A strategic growth axis, AMU has set up five interdisciplinary and cross-sectorial research clusters (PR2i), to foster interaction between disciplines.

[www.univ-amu.fr](http://www.univ-amu.fr)

### Inserm

Since 1964, Inserm, the French National Institute for Health and Medical Research, has been the only French public organization dedicated to biological research, medical and human health with close to 15,000 researchers, engineers and technicians and some 300 research laboratories. The Institute is active in all areas of work, from the research laboratory to the patient's bed, and conducts multi-thematic research, to be able to study all diseases, whether common or rare. Inserm is a founding member of Aviesan, the French Life Sciences and Healthcare Alliance created in 2009.

[www.inserm.fr](http://www.inserm.fr)

### CNRS

The National Center of Public Research is a public research institution, under the authority of the Ministry of National Education, Higher Education and Research. It produces knowledge for the benefit of society. With close to 32,000 people, an original budget 2015 of €3.3 billion, including €769 million of own resources, with facilities across the country, the CNRS is engaged in every field of knowledge, drawing on more than 1,100 research units and services.

With a portfolio of 5,629 patent families, 1,281 active licenses, 21 framework agreements with CAC 40 companies, 376 industrial coproperty agreements, 851 institutional coproperty agreements, over 1,200 start-ups created, over 120 common structures of CNRS/enterprise research, 152 laboratories involved in 27 Tremplin Carnot/Institutes and 433 in clusters, 43,000 publications on average per year, 21 Nobel Prize laureates and 12 Fields medal winners, the CNRS has a long tradition of excellence, innovation and transfer of knowledge into the economic fabric.

[www.cnrs.fr](http://www.cnrs.fr)

### Paoli Calmettes Institute

Certified level A by the French National Authority for Health (HAS) in 2015, with no remarks, and member of UNICANCER, the IPC brings together 1,523 researchers and medical and non-medical





personnel, engaged in the overall care of all cancers: research, medical care and support, teaching and training.

The IPC conducted over 82,987 consultations and welcomed more than 9,271 new patients in 2015. The care given at the IPC is based exclusively on the state social security tariffs, and excess fees are not applied in the establishment. Regulated by articles L6162-1 to 13 of the Public Health Code, the Paoli-Calmettes Institute is authorized to receive donations and bequests.

[www.institutpaolicalmettes.fr](http://www.institutpaolicalmettes.fr)

### Innate Pharma

Innate Pharma S.A., a clinical-stage biotechnology company, designs and develops first-in-class therapeutic antibodies that harness the innate immune system to improve cancer treatment and clinical outcomes for patients. Innate Pharma specializes in immuno-oncology, a new therapeutic field that is changing cancer treatment by mobilizing the power of the body's immune system to recognize and kill cancer cells. The goal of the Company is to become a fully-integrated biopharmaceutical company in immunotherapy, focused on cancer indications with high unmet medical needs. Innate Pharma has pioneered the discovery and development of checkpoint inhibitors (IPCI or checkpoint inhibitors) to activate the innate immune system. Three «first-in-class» therapeutic antibodies targeting human killer cells NK («Natural Killer») are currently being tested in the clinic and could address a large number of solid tumors and hematological cancers. Innate Pharma's novel approach has generated other candidates today in preclinical development and innovative technologies. Targeting receptors involved in the immune response also offers the Company the opportunity to develop therapies in the field of inflammatory diseases.

The Company's expertise, notably in the biology of NK cells, has resulted in major alliances with leaders in the biopharmaceutical industry including AstraZeneca, Bristol-Myers Squibb and Sanofi. Based in Marseille, France, Innate Pharma has more than 170 employees and is listed on Euronext Paris.

[www.innate-pharma.com](http://www.innate-pharma.com)

### Sanofi

Sanofi, a world leader in healthcare, undertakes the research, development and commercialization of therapeutic solutions centered on patients' needs. Sanofi is organized in four whole entities: Diabetes and Cardiovascular, General medicine and Emerging markets, Sanofi Genzyme and Sanofi Pasteur. Sanofi is listed in Paris (EURONEXT: SAN) and in New York (NYSE: SNY).

Sanofi Genzyme is specialized in the development of specialty drugs for debilitating diseases, often difficult to diagnose and to treat, in order to bring hope to patients and to their family.

[www.sanofi.fr](http://www.sanofi.fr)

## Associated Centers

### CIML



Founded in 1976, the Marseille-Luminy Immunology Center is an internationally recognized research institute. The CIML is also a visionary center in terms of organization, which, from its inception, has developed specific practices and customs to foster the creativity and risk-taking of its researchers.

From worm to human, from molecule to the whole organism, physiological to pathological, the CIML addresses, on various models and scales, all areas of contemporary immunology: the genesis of different cell populations, their mode of action and differentiation, their implication in cancers, infectious and inflammatory diseases and the mechanisms of cell death.

Founding member of the cluster Marseille Immunopole (MI), the CIML is a Joint Research Center of the CNRS, Inserm and Aix-Marseille University. Directed by Professor Eric Vivier, it consists of 14 research teams and a staff of 200 persons.

[www.ciml.univ-mrs.fr](http://www.ciml.univ-mrs.fr)

## CIPHE

Founding member of the cluster Marseille Immunopole (MI), the Center for Immunophenomics contributes to the development of the first functional encyclopedia of mouse genes associated with immune response. Its mission is at the heart of a global project of the International Mouse Phenotyping Consortium (IMPC): to understand the implication of our genes in major diseases.

To accelerate the generation of animal models, to follow the evolution of their biological and clinical parameters and to evaluate the functioning of their immune system, in normal and pathological situation, CIPHE leans on a high-throughput synthetic biology unit, a clinical and biological examinations center and a high security BSL-3 laboratory, unique in Europe. The data and the models from the platform are made freely available to academic laboratories and accessible, on a contractual basis, to industry.

With the Mouse Clinic Institute in Strasbourg-Illkirch and the transgenesis and archiving center in Orléans-Villejuif, CIPHE has created PHENOMIN, a unique national interface that facilitates the creation, archiving and distribution of human diseases.

Supported by the «Investissements d'Avenir» program and a member of the European network INFRAFRONTIER, CIPHE is a services unit of Inserm (US012), CNRS (UMS3367) and Aix-Marseille University (AMU). It has a headcount of 40 persons consisting mostly of researchers, engineers and technicians.

[www.ciphe.inserm.com](http://www.ciphe.inserm.com)

## CRCM

Created in 2008, the Marseille Cancer Research Center (CRCM) includes the four major players in research in PACA: Inserm, CNRS, Aix-Marseille University and the Paolo-Calmettes Institute. With 250 staff members divided into 17 teams, the CRCM implements innovative research programs in cancer, the most fundamental aspects of clinical research in humans.

The priority scientific and medical activities are, on the one hand, the decoding of molecular bases of oncogenesis and tumor dissemination, and on the other hand, the discovery and implementation of therapeutic innovations in the treatment of breast and pancreatic cancers and hematologic malignancies.

The CRCM is one of the founding members of the cluster Marseille Immunopole.

[www.crcm.marseille.inserm.fr](http://www.crcm.marseille.inserm.fr)

## Funders and supporters



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