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Press release

From molecules to ecosystems: EMBL and IAB sign a memorandum of understanding

The European Molecular Biology Laboratory (EMBL) and the Institute for the Advanced Biosciences (IAB, Inserm / CNRS / Grenoble Alpes University research center) - have signed a memorandum of understanding, formalizing a fifteen-year collaboration between the two institutes. This collaboration strengthens Grenoble as a European research center in life sciences.

The objective of the agreement between EMBL and IAB is to develop a common vision and scientific program around the theme "From Molecules to the Ecosystem", which integrates the study of life mechanisms at the level of biological macromolecules in the cell to the populations of organisms in their environment. The complementarity of the two institutes represents a continuum of multidisciplinary expertise.

EMBL, the European reference laboratory for fundamental research at the molecular level, provides expertise and platforms in structural biology at its Grenoble site to better understand the biology of RNA and infectious diseases, in particular the protein-RNA complexes involved in gene expression and host-pathogen interactions. For its part, the IAB is developing a set of basic and translational research programs in the fields of epigenetics, environment, and cellular plasticity, applied to cancer, parasitic infections, infertility, and the effects of the environment during the first stages of life.

This international collaboration will promote this vision through a series of joint projects, training programs and hosting of young researchers, high-level seminars and dissemination of knowledge to students and the public.

One of the components of this agreement is also to provide access to the two institutes' state-of-the-art research facilities and equipment. This alliance fits perfectly into the Grenoble ecosystem, which is very much focused on collaborative research, innovation and health. EMBL Grenoble, which has strong connections with the institutes of the European Photon and Neutron (EPN) campus via the Partnership for Structural Biology (EMBL/ESRF/ILL/IBS), has a wide range of cutting-edge technologies such as cryo-electron microscopy, robotics for synchrotron light lines, and high-throughput crystallography applied to drug design. The strong links between the IAB and the Grenoble Alpes University Hospital will enable the joint development of discoveries for their application in health, particularly in the field of gene expression and mechanisms related to the development of cancers and infectious diseases.

"EMBL and IAB are natural partners" explain Stephen Cusack, Head of EMBL Grenoble, and Saadi Khochbin, Head of the Epigenetics Department at IAB, coordinators of the activities between IAB and EMBL Grenoble, along with Marco Marcia, Group Leader at EMBL. *"This MOU links the entire spectrum of research within the two organizations, from the atomic study of molecules to human medicine. It is another step that makes Grenoble an important research location in the life sciences."*

IAB and EMBL (Grenoble) have a long history of collaboration in exploring fundamental mechanisms of biology. *"More than 15 years of close and intense scientific collaboration between the IAB and EMBL Grenoble have led to remarkable scientific breakthroughs in the regulation of gene expression. These successes have been built on a generation of world-class leaders, who are now being replaced by a talented, creative and highly motivated younger generation"* explains Pierre Hainaut, Director of IAB.

Research jointly conducted by the teams of the two institutes will have an impact on the entire chain of knowledge. It will provide a better understanding of the mechanisms by which the environment and social vulnerabilities impact the expression of our genes and cells, and how our biological systems adapt to environmental constraints, particularly during the development of diseases. This research may lead to the identification of new biomarkers of disease, new targets of therapeutic interest for personalized medicine and open the door to new concepts for prevention and healthy living in a rapidly changing world.

"The current pandemic, generated by an RNA virus, makes one realize how important it is to understand both the behavior of RNA in the cell and the zoonotic processes that allowed this virus to infect the world. This collaboration will develop an integrated understanding from the molecular basis to people with infectious diseases and cancers. This union will create tremendous opportunities for both institutes," said Edith Heard, Director General of EMBL.

To go further :

Vidéo: Edith Heard (EMBL) and Pierre Hainaut (IAB) about the memorandum of understanding between EMBL and IAB: <https://www.youtube.com/watch?v=Fja-96DR5e8>

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EMBL is the reference laboratory for life sciences in Europe. Founded in 1974, EMBL is an intergovernmental organization supported by 27 member states, 2 future member states and 2 associate member states.

The basic research in molecular biology carried out at EMBL aims to better understand the history of life. The organization also provides services to the scientific community, trains the next generation of scientists, and works towards greater integration of the life sciences in Europe.

EMBL is international, innovative, and interdisciplinary. More than 1,800 people from over 80 countries work at our 6 sites in Grenoble (France), Hamburg (Germany), Heidelberg (Germany), Hinxton (UK), Rome (Italy) and Barcelona (Spain). Scientists work in independent groups, leading research projects and providing services in all areas of molecular biology.

EMBL's research leads to the development of new technologies and methods in the life sciences. The organization ensures that the knowledge developed in the laboratory benefits society as a whole.

www.embl.org

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With 18 teams, the Institute for Advanced Biosciences (UGA, Inserm and CNRS joint research center) is an internationally renowned institute in fundamental and translational biomedical research, recognized for its very high level publications (more than 1,000 over the last 5 years) and its impact on the development of start-ups in the field of biotechnologies. The scientific strategy is based on four axes: Epigenetics, Environment, Cellular Plasticity and Cancer. IAB scope of action covers a range of scientific expertise from the biological continuum of molecules to populations.

En savoir plus : iab.univ-grenoble-alpes.fr

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