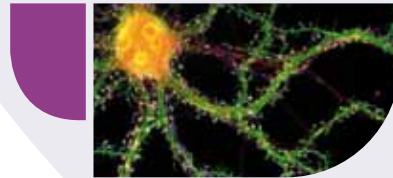


### Boosting public-private partnerships

Academic research teams still profit too little from the increasing possibilities for outsourcing to pharmaceutical industries and have too few ties with biotechnology companies. In order to create new partnerships, ITMO *Neurosciences* has taken several initiatives:

► **Researchers** from the largest pharmaceutical laboratories worldwide met with researchers from Inserm, CNRS and CEA, in June, 2009, at the Elysée Palace. On this occasion, four high-level scientific and technological platforms were presented: Neurospin, MIRCen, Clinatéc and ICM (Institute of the brain and spinal cord). One year later, the progress made was palpable during a round table at the Hôtel de Marigny: trust between industrial and academic laboratories was re-established, increasing the attraction of French research; several industrial laboratories made commitments to double their investment in research partnerships. Negotiations are in progress.

► **ITMO Neurosciences**, building maps of academic research groups in the neurosciences by major themes, has provided industrial laboratories with an overview of public research in the neurosciences. Closer interactions between pharmaceutical laboratories (via LEEM Research and LIR or directly with the laboratories) and



ITMO *Neurosciences* have further allowed to better meet the needs of industrial partners and to facilitate the organisation of “custom” site visits and meetings (Eli Lilly, Pfizer, etc.).

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## ITMO Neurosciences in action (s)

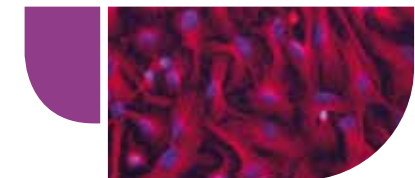


Since it was created in 2009, the multi-organisation subject-specific institute (Institut thématique multiorganisme - ITMO) for the *Neurosciences* has initiated a series of decisive actions in four domains considered to be priorities for scientific and medical research: a multiscale approach to the nervous system, translational research, Alzheimer’s disease and psychiatry. These priorities apply to both, public research and public-private partnerships.

### Developing a multiscale approach to the nervous system

With modern technologies, scientists can make measurements at the level of a single molecule, individual cells, networks and neural assemblies. The challenge, now, is to develop methods for the simultaneous analysis of these parameters and for processing the data obtained, in order to identify and understand the neurological properties that emerge at the different levels of analysis. It is also necessary to be able to store and handle a substantial mass of data for modeling and experimental validation. ITMO *Neurosciences* is working to make neurobiologists aware of the multiscale approach and:

- **encourage** interdisciplinarity (biology, mathematics, physics, chemistry, information technologies, etc.) within research structures;
- **multiply** partnerships, especially with the Institute of Complex Systems (ISC), IN2P3 (CNRS) and other ITMOs;
- **encourage** the French National Research Agency to support programs in this area;
- **foster** multidisciplinary training in universities.



Taking the opportunity of the 10<sup>th</sup> Ladislav Tauc conference, in February 2010, ITMO Neurosciences held a symposium on the multiscale approach to the nervous system. It has also spurred French participation in the International Neuroinformatics Coordinating Facility (INCF), which is an infrastructure aimed at making data and computerized tools in the area of neurosciences available to the international community. Consequently, ITMO Neurosciences set up the French node of INCF.

### Accelerating translational research

The objective is to shorten the time-lag between the identification of a physiological/pathological mechanism or therapeutic target and the development of a drug or biomarker. This process, from discovery to clinical application, draws on competencies that are rarely, if ever, found together in the same place. In this context, ITMO Neurosciences:

► **has participated** in the creation of the French infrastructure Neurtris, the objective of which is to organize a network of expert centers offering specific know-how and personnel dedicated to translational research;

► **participates**, within Eattris-Esfri (*European Advanced Translational Research*

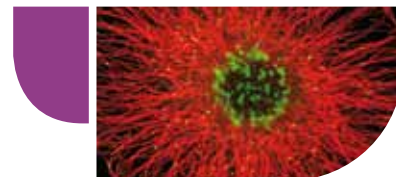
*Infrastructure*), in negotiations to finalize the preparatory phase of the European project on translational research.

### Programming the «research» section of the national Alzheimer Plan

Launched in February 2008, the plan for Alzheimer's disease and related diseases has three axes: health, research and solidarity. To accelerate implementation of the research measures, the Ministry of Higher Education and Research has created the Foundation for Scientific Cooperation "Alzheimer Plan", the programming strategy of which is incorporated into that of ITMO Neurosciences. After two years of activity:

► **61 research projects** have been financed by the Alzheimer Plan Foundation, the French National Research Agency and the Hospital Program for Clinical Research;

► **more than 50 positions** have been funded for doctoral students, post-doctoral fellows, professors, and scientific and clinical researchers;



► **an automated image** processing center and a research group to develop methodologies for clinical and social science research have been created;

► **a national cohort** of 2,000 patients, financed by the Alzheimer Plan Foundation, is currently being recruited.

### A fresh start for psychiatry

Mental disorders are a major public health problem and represent a substantial cost for society. However, research in psychiatry suffers from the geographical dispersion of the research teams and a lack of contact between researchers and clinicians. To remedy this situation, ITMO Neurosciences is striving to:

► **establish** a map of research teams in activity: thirty-some psychiatrists, directly involved in the project, have organized nine work groups on the major diseases to make an inventory of present research, which will facilitate implementation of joint projects;

► **promote** research on the European level, by facilitating access to European Union

funding and technological platforms. ITMO Neurosciences helped direct the European call for tender "EraNet Neuron 2010" on the theme of mental health; it also organized a European workshop on psychiatry, March 29, 2010, in Paris, and contributes to the European "Roadmap" on this theme;

► **reinforce** the links between all of the stakeholders in psychiatric research including pharmaceutical industries, foundations such as "FondaMental" and patient associations. Furthermore, in March 2010, ITMO Neurosciences took part in the *Tous autour des Neurosciences* (Neurosciences Field Day) operation, that brought together researchers, patient associations and the general public on the theme "The brain in all its states" centered on mental health.

