

# Montpellier Languedoc-Roussillon Genopole



<http://www.genopole-montp-lr.org>

A joint project including more than 40 public laboratories, localised in all the region. These laboratories are run by organisms such as CNRS, CIRAD, IRD, INRA, INSERM, CEA, by universities or qualified engineering schools. The Genopole is organised to guide biology and medicine on one the hand and plant biology on the other.



## Three main objectives

- Fundamental research (from sequencing to functional genomics).
- Student training in genomics (<http://univ-montp2.fr>, <http://univ-montp1.fr>, <http://ecole-doctorale-cbs2.igh.cnrs.fr>).
- Stimulate the implantation and development of biotech and pharmaceutical companies.

## New investments for new dynamics: development of technological platforms

- Sequencing, genotyping and robotics.
- Bioinformatics.
- Gene profiling: DNA chips, SAGE, DEP.
- Functional studies of mice (specialised in endocrinology, synaptic transmission, cell and tissue imaging).
- Proteomics: specialised in protein chemistry.
- Structural biology.
- Plant transformation technology.

## Open access to public and private laboratories: for example



MALDI-TOF/TOF MS

### PROTEOMICS

- Expertise in high-tech.
- Mass spectrometry technologies for proteomic research.
- Fonctionnal proteomics.
- Expression profiling.

### MICROARRAY CORE FACILITY

Available prespotted chips include mouse 16 K oligo arrays, human 21 K oligo arrays and drosophila 14 K oligo array (coming soon).

Custom microarraying, hybridizing and scanning services are available. The facility also develops CGH arrays.



### STRUCTURAL GENOMICS PLATFORM

- Bio-informatics platform based on our metasever called bioserv for 3D structural modeling of proteins.
- Biochemistry platform for the expression and purification of proteins for structural studies.
- NMR, Crystallography and Biophysics.



E. Guiderdoni

### SEQUENCING, GENOTYPING, ROBOTICS PLATFORM

- Picking, replicating, gridding, sequencing, genotyping and plasmid DNA, BAC DNA extraction.
- Development of BAC and EST libraries of tropical species.
- Creation of T-DNA tagged populations (rice), high throughput genetic mapping and proteomics.
- Development of molecular markers (SSR, AFLP) for 20 tropical crops (fine scale mapping, evaluation of genetic diversity).
- Comparative genomics of the cell cycle, Marine genomics, *Ostreococcus tauri*: a new model in the green lineage.

## Education, development, industrial partners

### Collaborations and technology transfert

- CIS-BIO, BIOGEMMA, BAYER CROPS SCIENCE, MICHELIN...

### Formations

- 3 Master courses in Bioinformatics, structural biology and genomics.
- 2 University teaching modules (DEA).
- 1 monthly seminar in Bioinformatics.
- School of DNA technology.
- E-learning project.
- Seminars, summer training courses, professional training.



Creation of Industrial firms	Activity
AEGIS	Biomedical Bio-library
APO-H Technologies	Diagnostics for health and hygiene
CELLGEN	Cellular Biotherapy and Immuno-therapy Products
INNODIA	Anti-diabetes molecules
NMRTEC	NMR technology
SELECTBIOTICS	New generation antibiotic molecules
SKULDTECH	Genomic analyses
UPGEN	Laser chromosome micro-dissection

