

ADEBAG

French Centre of Excellence in diagnosis towards Personalised & Targeted Therapies

In the fields of **diagnosis and tools for personalised medical care**, the players in the Grenoble area demonstrate real dynamism in innovation within three key therapeutic directions: **Infectiology / Neuroscience / Cancerology**.

With a strategy which is principally centred around the development of:

New diagnosis and clinical tools / Modelling of living systems and multi-parameter enhanced virtual reality.

Grenoble has recognised skills in the four major technologies of diagnosis and personalised medicine at its disposal – imaging, biomarkers, biochips and pharmacogenomics – provided by:

BENCHMARK TECHNOLOGICAL PLATFORMS AND MAJOR INDUSTRIAL PLAYERS

Imaging

- **Albert Bonniot Institute:** small animal optical imaging, cellular imaging, photonic microscopy.
- **CEA-LETI:** optical molecular imaging, 3D fluorescence tomography optical system, organic nanoparticles vectorised for fluorescent imaging.
- **ESRF Medical Beamline:** center for clinical experimentation to develop medical imaging applications.
- **Grenoble Institute of Neuroscience:** molecular, cellular and integrated neuroscience. In vitro / in vivo imaging, biomedical NMR.
- **Imalogic Project:** development of the digital imagers of the future. Supported by **Minalogic: global competitiveness cluster** in intelligent miniaturised products.
- **Molecular Chemistry Department (UJF):** molecular and functional imaging.
- **UVHCI (UJF, EMBL, CNRS):** Unit of Virus Host Cell Interactions, X-rays crystallography.
- **TRIXELL:** innovative digital detectors for X-Ray Imaging.
- **Cyberstar:** crystal growth equipments and 3D tomography.

Biomarkers

- **EDyP-Services:** absolute quantification of protein biomarkers.
- **Grenoble Metals in Biology Institute:** nutritional prevention and biomarkers.
- **Grenoble Neurosciences Institute:** ex vivo proteomic profiles of cerebral tumours by stereotaxy (proteomic fingerprinting).
- **bioMerieux:** biomarkers for early diagnosis.
- **ImmunID:** immunomonitoring platform services for diagnostic of the immune forecast, immunomonitoring kit.
- **Mellitech:** new therapeutic & diagnostic strategy to combat diabetes.

Biochips

- **CEA-LETI:** Labs-on-Chip, « sugar chip ».
- **INRIA Rhône-Alpes:** software and systems on microchips.
- **Molecular Chemistry Department (UJF):** biochips and immunosensors.
- **bioMerieux:** diagnostic solutions (reagents, instrumentation and software).
- **STMicroelectronics:** development of miniaturised systems designed for diagnosis.
- **Intuiskin:** microsystems for skin characterisation.
- **Phusis:** innovative bioabsorbable implants.
- **Siliflow:** microfluidic, liquid handling robots.

Pharmacogenomics

- **Centre for innovation in biology (CHU Grenoble):** clinical proteomics and transcriptomics clinic, in situ genomics, metabolomics, medical epigenetics, immunomonitoring.
- **Molecular Chemistry Department (UJF):** chemistry for health and nanosciences, active vectorisation, synthetic vaccines, biosensors, electrochemical biomimetics...
- **BD Biosciences:** products for clinical diagnostic and research.
- **Roche Diagnostic:** products and services for biological diagnostic (pharmacogenomic and glycemic self-observation).
- **Cogenics:** molecular biology and pharmacogenomics services.
- **HC Forum:** human genetics database for pharmacogenomics.



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● AND NETWORKS OF THEMATIC PUBLIC & PRIVATE COLLABORATIVE RESEARCH AND INNOVATIVE PROJECTS

⇒ Infectiology

- **LyonBiopole**: world centre of excellence in vaccines and diagnosis of which Grenoble forms a part.
Certified projects: Alpha-Vac, Bacvac, Deminap, E-Bioprobs, EBVinter, Flupol and Flu Interpol, Gap, Microvac, Parsynvac...
- **Finovi** : Innovation in Infectiology Foundation.
- **Rhône-Alpes Infectiology Research Cluster**.

⇒ Neuroscience

Neuropole Rhône-Alpes

- **Rhône-Alpes Handicap, Ageing and Neurosciences research Cluster**: associated projects surrounding early diagnosis of neuro-degenerative illnesses.
- **Neurodis** : Thematic Network for Research and Treatment for Neurological Disability.

⇒ Cancerology

- **Cancéropole CLARA** : fundamental, clinical and translational research in the field of cancer (diagnosis and therapeutics).
Project on new markers for cancer detection (Protocol)...
- **« Synergie Lyon Cancer »** : Thematic Centre for Research and Treatment focussing on the diagnosis and treatment of certain cancers (lymphomas, sarcomas, breast cancers, neuroblastomas and tumors of the digestive tract).

● A PROJECT WITH A BROAD SCOPE

ADNA - Advanced Diagnostics for new Therapeutic Approaches

Development of personalised medical solutions for cancer, infectious diseases and rare genetic diseases by providing healthcare professionals with innovative biodiagnostic tools and new therapeutic approaches.

Led by Mérieux Alliance with bioMérieux, GenoSafe, Généthron, Transgene and STMicroelectronics.

The Industrial Innovation Agency has approved a €103.5 million contribution to the ADNA programme.

● A DEFINING PROJECT

NANOBIO

Objective: to develop new miniaturized tools to improve analysis, diagnosis and therapies for many illnesses.

Resources: biphotonic microscopy, spectroscopic methods, optics and mechanics, chemistry, centre for innovation in biology.

Players: CEA - Joseph Fourier University - Grenoble University Hospital.

€40m of public funding is going into the project as well as the strong involvement of local authorities, principally that of the Grenoble community which is undertaking the project management.

FOR MORE DETAILS

www.adebag.org

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