



PROJECTS APPROVED
42

TOTAL BUDGET (€M)
81.7

Alsace BioValley

TRANSLATIONAL RESEARCH, IMAGING/MEDICAL AND SURGICAL SYSTEMS

MAIN INTERESTS

- Genes and drug chemistry
- Medical technologies and medical devices
- Imaging and medical/surgical robotics
- Translational research
- Pharmaceutical chemistry
- Pre-clinical technologies
- Bioproduction and biosimilars
- Galenic formulation, finishing and conditioning
- Mini-invasive surgery
- E-health, remote medicine

MEMBERS

Major companies of international renown: Sanofi Aventis, Roche, Novartis, Transgene, Menicon, Ventana, Prestwick Chemical, Lilly, Brucker, Millipore, NéoMPS, etc.

A network of innovative SMEs: Domain Therapeutics, NovaliX, Poly+Transfection, Firalis, Protip, Kallycell

Academic research and quality training: University of Strasbourg, CNRS and INSERM, *Ecole Supérieure des Biotechnologies de Strasbourg* (ESBS), *Ecole Nationale Supérieure de Physique de Strasbourg* (ENSPS), Research Institute on Digestive Tract Cancers (IRCAD), CEIPI, etc.

Quality technological platforms

A centralized technology transfer agency

R&D WITHIN THE CLUSTER

N/A RESEARCHERS

15 PROJECTS FINANCED

€29M STATE AID

€3.5M FROM THE IF*

N/A FROM THE NRA*

NUMBER OF PATENTS FILED IN 2007
BY APPROVED PROJECTS: N/A

*IF: Interministerial Fund

*NRA: National Research Agency

EXAMPLE PROJECT

D SCREEN

Partners: Isis Laboratory, University of Strasbourg (France), the French subsidiary of American company RainDance Technologies (Strasbourg), Sanofi-Aventis Strasbourg (France)

Total budget €1.4 million

Objectives: high-speed digital microfluidic screening to discover new drugs

Description: the purpose of "D Screen" is to develop an innovative high-speed cell screening system for new drugs, based on digital microfluidics. In practical terms, each drop of liquid dispersed in an oil matrix is run through a microfluidic system, acting as an independent micro-reactor. Compared to current screening techniques, volumes should be lowered by a factor of 103 to 106 and the pace increased by a factor of 104.

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CLUSTER STRENGTHS

→ **Number of employees at cluster members: 15,000**

→ **A tri-national environment at the heart of the BioValley: a unique concentration of resources dedicated to life sciences and therapeutic innovation**

- 50,000 internationally focused employees in the sector, 15,000 scientists and 100,000 university students
- 600 life sciences enterprises: 350 “pharma/biotech” and 250 “medical technologies”
- 10 universities and academic institutes dedicated to life sciences
- 30 technological platforms serving the scientific community
- 11 technology parks dedicated to life sciences

→ **World-class research in Alsace**

- The University of Strasbourg: France’s 2nd largest university, *Ecole Supérieure de Biotechnologie de Strasbourg*, *Ecole Nationale Supérieure de Chimie de Mulhouse*
- RTRA, France’s leading public research network in chemistry
- Prof. Jean-Marie Lehn, Nobel Prize in Chemistry, Prof. Pierre Chambon, Lasker Award winner, Prof. Jacques Marescaux, President of IRCAD (Research Institute on Digestive Tract Cancers)
- European Pharmacopoeia, European foundation for Science

→ **Services and free support for international companies and laboratories**

- A team of experts with sophisticated skills (business and scientific) providing free support to foreign companies in the life sciences sector wishing to expand in Alsace, in the heart of Europe
- A range of services dedicated to life sciences companies and laboratories, thanks to a united network that offers “one-stop” access to 11 regional socio-economic partners offering help in: designing R&D projects, creating and setting up subsidiaries, identifying partners and technologies, etc.

INTERNATIONAL OUTLOOK

Strong

→ **Cooperation with foreign clusters**

- **Life Science Corridor France:** strategic alliance between 3 French innovation bio-clusters, Cancer-Bio-Santé, Lyonbiopôle, Alsace BioValley

→ **As part of the Life Science Corridor France:**

- Agreement with **Kansai Bio Promotion Council** in Japan
- Agreement with **CQVB** (*Centre Québécois de valorisation des biosciences*) in Quebec
- Agreement with **MOITI** (Massachusetts Office for International Trade & Investment) and **MTTC** (Massachusetts Technology Transfer Center) in the United States

→ **Participation in European programs**

- Member of the **European consortium ABCEurope** as part of the European program Europe Innova
- Competitive innovation platform (CIP) with Medicon Valley, BioTop Berlin, Heidelberg Technology Park, Innova Hungary, Barcelona Science Park, BioM Munich, Matimop Israel, Medicen Paris, ERBI Cambridge and Stockholm Science City
- **BioValley Interreg IV (aka Biovalley) project coordinator**, life sciences and medical technologies coordinator for the economic development of the Upper Rhine Metropolitan Region (Alsace, Bade-Württemberg in Germany and north-west Switzerland)

→ **Involvement in international projects**

- None

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PROJECTS

PROJECT	PARTICIPANTS	DESCRIPTION
ALIX-SOSHO	Alix and Sosho	Sharing technologies so as to expand each partner's capacity in the field of protein crystallography.
DIAG EBV	BioSynex Anda Biologicals, Unit of Virus Host Cell Interactions, Grenoble University Hospital	Developing new tests to diagnose Epstein Barr virus infection. Designing a predictive tumor development test (breast cancer).
OLIGOPLUS	Polyplus transfection	Developing new diagnosis and analysis tools.
STETAU	Alcatel-Lucent	Recording and processing system and technologies for stethoscope-based examination.
V2IP	Eurorad	Developing a new clinical imaging technique to assist in surgical procedures during the resection of cancerous tumors.
Dentimplant	Protip	Developing new dental implants.
CellProthera	CellProthera, Bertin Technologies, INSERM, <i>Institut de Recherche en Hématologie et Transplantation</i>	Cardiac therapy: myocardial regeneration via CD34 and autologous stem cells, after expansion and immune selection.
Oligoplus	Polyplus-transfection, ChemTox, <i>Laboratoire de chimie génétique</i>	Developing new diagnosis and analysis tools.
Orail	<i>Centre européen d'étude du diabète</i> , Photon and Polymers, Institut Charles Sadron, Capsuge	Oral insulin administration for the treatment of diabetes. The objective is to achieve safe, test-proven and reproducible insulin absorption over time.
Carmen	Bruker Biospin (Germany), <i>Laboratoire RMN de la matière condensée, service de biophysique et médecine nucléaire, Cancéropôle</i>	Creating a database of metabolic tumor profiles, established by analyses using an HRMAS-type RMN technique.

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