



PROJECTS APPROVED

18

TOTAL BUDGET (€M)

32

Perfumes - Aromas - Cosmetics (PASS)

PERFUMES, FOOD AROMAS, COSMETICS, AROMATIC INGREDIENTS (AROMATIC PLANTS)

MAIN INTERESTS

- Farming activities in the production of aromatic and medicinal plants
- Industrial activities in aromas, cosmetics, coloring agents, biocides, agribusiness and natural aromatic industry

107 MEMBERS

85 companies:

including French groups: Air Liquide, L'Occitane en Provence, Malongo, Groupe Nactis, Véolia, Arkopharma, Groupe Robertet, V. Mane & Fils, etc.

4 foreign companies: Bayer CropScience (Germany), Cargill (USA), David Michael&Co (USA), Firmenich (Switzerland) International Flavor and Fragrance (IFF) - Laboratoire Monique Rémy

and many SMEs

28 centers of excellence: Laboratoire Chimie et Environnement, Laboratoire de Chimie des Molécules Bioactives of Nice-Sophia Antipolis, University of Avignon, University of Provence, European University of Flavors and Scents - (UESS) in Forcalquier, IPAG Business School, etc.

7 local authorities

N/A RESEARCHERS

12 PROJECTS FINANCED

€8M STATE AID

€3M FROM THE IF ⁽¹⁾

€0.73M FROM THE NRA ⁽²⁾

NUMBER OF PATENTS FILED IN
2009 BY APPROVED PROJECTS: 2

(1) IF: INTERMINISTERIAL FUND
(2) NRA: NATIONAL RESEARCH AGENCY

EXAMPLE PROJECT

IMMUNOSEARCH

Granted €1.4 million in aid from the IF, over a 3-year period.

Participants: the start-up Immunosearch, 2 major companies, Mane and Robertet, the company Iris Pharma, SkinEthic SA, *Institut de pharmacologie moléculaire et cellulaire*, I3S, French National Institute for Research in Computer Science and Control (INRIA).

Working on alternatives to animal testing in the perfumes/cosmetics industry, a significant issue in the face of new European regulations banning testing on animals as of 2009. The objective is to define biomarkers for testing the safety of compounds used in the perfumes, aromas and cosmetics industry. This research seeks to develop comparative studies between in vivo and in vitro test models on skin problems (irritation, allergy).

CLUSTER STRENGTHS

→ **Number of employees at cluster members: 12,000**

→ **Key figures for the sector in Provence-Alpes-Côte-d'Azur**

- The country's most densely populated group of perfume and cosmetic formulation companies
 - 4 to 8% of the global aromas industry
 - Leading region in France for producing cosmetics and perfumes, with over 55% of national output
 - The world's leading perfume plant production area (the world's leading lavender grower)
 - South-eastern France is the leading region in France for producing plants for perfumes, aromas and medicines (PPAM), accounting for over 2/3 of the country's farmland, with approximately 23,000 hectares
 - The world's leading region for lavender production
 - 400 companies in perfumes, cosmetics and food aromas and 2,250 growers, 120 of the 130 essential oil distilleries in France, 25% of the global industry's companies have their headquarters in France
 - Leading cluster for new perfume formulations
- **Research: critical skills mass**
- France's 4th-largest research cluster
 - Particular focus on R&D capacity in chemicals, biotechnologies and life sciences
 - 13 public-sector research centers, bringing together 32 laboratories
 - Many companies have chosen to place R&D teams in the region
 - Two major preservation centers for aromatic and medicinal plants: the National Alpine Botanical Conservatory in Charance and the Lautaret Alpine Botanical Garden

→ **Comprehensive training facilities**

- 4 schools of science and 1 school of pharmaceuticals in the Provence-Alpes-Côte-d'Azur (Paca) region
- European university of flavors and scents (UESS) in Forcalquier, offering vocational training
- *Association de formation continue des entreprises Grassoises (ASFO)*: continuing training for perfume businesses employees in the Grasse area
- Grasse Institute of perfumery: programs for perfume-makers in training
- And a number of training programs for technicians (CAP, BEP, BTS Cosmétique)

INTERNATIONAL OUTLOOK

Weak

→ **Cooperation with foreign clusters**

- None

→ **Participation in European programs**

- Participation in European Union framework program for research and technological development (FP7) to raise the profile of SMEs internationally

→ **Involvement in international projects**

- The objective is to develop technological partnerships with a number of countries, including Brazil, Russia, India, China, Israel and North African countries
- Business agreement in Morocco, from September 24 to 26, 2009

PASS

PROJECTS

PROJECT	PARTICIPANTS	DESCRIPTION
VALOPLASMA	Mane Fils SA, Europlasma, Armines CEP	The aim is to recycle and convert a large percentage of the waste generated by perfume manufacturers.
NOVOAROMES	Robertet, Laboratoires Monique Rémy/IFF, Charabot, Albert Vieille, CNRS, Wageningen NMR Center, etc.	Developing new protocols to characterize essences in order to remain competitive in the face of new regulatory constraints.
AMBISAFE	Albhades, L'occitane, Terre D'oc, Esteban, Laboratoire chimie et environnement-Cosmed, etc.	Working toward a greater understanding of combustion products and dissemination of air fresheners: developing a method for routine benchmarking used to assess and improve the safety of scented candles and incense.
CLARYSSIME	Clos d'Aguzon, SCA3P, PPV, University of BVPAM, LCMB, Crieppam, ITEIPMAI	Optimizing the competitiveness of French sclareol, from the plant source to the purified molecule: increasing the amount of sclareol produced and minimizing the non-productive volume of base resource; identifying the genes involved in sclareol synthesis and secretion; improving familiarity with by-products.
PEPTIDE BINDING		Alternative models for assessing the capacity of production process outcomes to provoke sensitivities or allergies.
GREEN EXTRACTION		This project will focus on the industrialization of new clean and innovative extraction processes, by experimenting with a combination of main extraction techniques in order to optimize results and offer new development prospects, in line with industry criteria.
ENZYPRO		This project aims to develop a new method for synthesizing natural aroma substances using enzyme-immobilized membranes which will be in keeping with the concepts underlying sustainable development.
NCS BIO DEGRADABILITY		This project seeks to develop and validate a method for assessing biodegradability of complex natural substances and, in particular, essential oils, for which today's methods fail to take into account physical and chemical specificities.
REPOSE BIOLOGIQUE DE LA PEAU HUMAINE		This project's objective is to define the genomic profiles of the cutaneous reactions triggered in healthy volunteers by the ingredients of key perfumes, comparing the perfumes with one another as well as the various cutaneous reactions described above. This project will make it possible to create a single database enabling high-speed comparison of past results with new substances produced by the perfume industry. This database will be an outstanding tool for high-precision characterization of the biological activity and/or safety of new substances and, possibly, for identifying the yet-unknown activities of the same compounds.

Contact

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