

B i o c h i p s a t t h e C E A

What do we do?

The CEA has been developing BioChip technologies since the early 90's.

We offer integrated R&D projects based on:

- . Collective manufacturing solutions based on robust microtechnology,
- . Biological and chemical compatibilities,
- . Detection solutions,
- . Data processing & Bioinformatics,
- . Interfaced systems for the end user.

End users:

- . Fundamental research
- . Pharmaceutical research
- . Diagnostics & Therapeutics
- . Biotechnology
- . Environment and Food control

The R&D carried out in these fields is strongly motivated by industrial and economic considerations (patents, industrial transfer, Start Up companies)

Where can you find us?

The BioChip activities are present on 2 sites:

Near Paris, the CEA has equipped a state-of-the-art microarray facility in the midst of the Evry genopole. Microarrays are provided to over 30 academic and industrial partners in Europe.

Significant numbers:

- 35 persons, 6 in bioinformatics
- Equipment: 6 PCR thermocyclers (1728 amplifications per day), 4 spotters (including to 48pin robots), 3 scanners
- Gene DataBases:
 - . 12 000 Human genes
 - . 6 300 Yeast genes (the complete set of *S. cerevisiae* and 6 300 intergenic areas)
 - . 15 000 Mouse genes
 - . 9 500 Arabidopsis genes
- Annual production: 10 000 microarrays,
- 50 partners/collaborations.

In **Grenoble**, over 60 engineers and scientists from Biology, Chemistry, MicroTechnology, Plastic and Polymer Materials, Optics, Electronics, Microfluidics are developing together innovative biochips (DNA chips, LabOnChips, CellOnChips).

Significant numbers:

- More than 100 engineers, scientists and technicians
- 600m2 of brand new labs, 100m2 clean rooms
- Number of R&D projects: 14 projects underway (8 with an industrial partner) 4 in the pipeline.
- More than 80 patents.

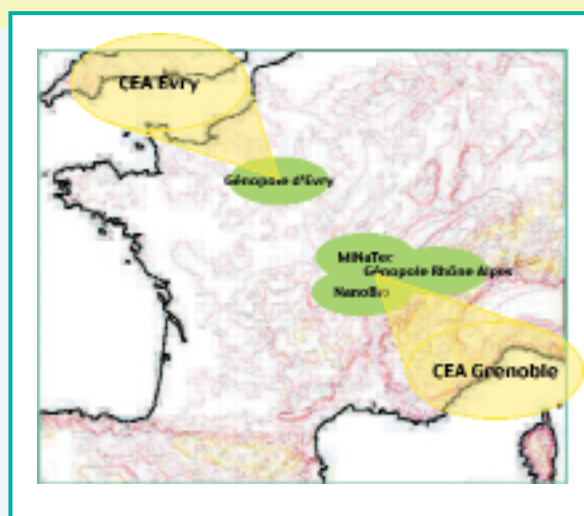
The French and European environment

In France:

- . The GenoPole network
- . Minatec
- . Nanobio

En Europe:

- . European projects and collaborations with Italy (Silicon Biosystems & University of Bologna for the European-funded "Medics" project, ST Microelectronics in Casteletto for a industrial R&D contract), and with Belgium (University Libre de Bruxelles)
- . Coordinator of the Network of excellence "NanoToLife".



Contacts :

Life Sciences Division : C Vincent (christian.vincent@cea.fr),

leti : P Puget (pierre.puget@cea.fr).