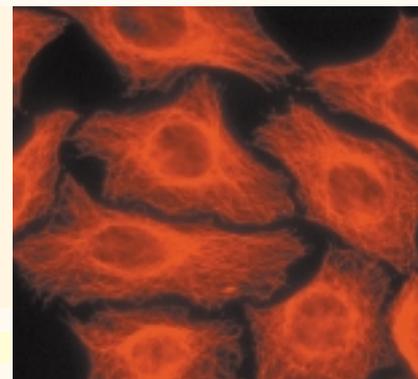


# Center of Bio-Active Molecules Screening

**Objectives:** to isolate molecules in thousands, acting on cell function.

The CMBA is settled in the Grenoble CEA since the beginning of 2002 and constitutes the first French academic high-throughput screening platform dedicated to cellular systems. The objectives of our complete program are the discovery and early characterization of new compounds from chemical libraries, bearing a biological activity on original cell phenotypes. The characterized compounds are expected to be innovative research tools for Biology and/or drug candidates. Located in the heart of a state research organism, the center of Bio-Active Molecules Screening (CMBA) benefits from all the necessary expertise to realize screening on fundamental and original targets. The isolated molecules are then submitted to elaborate tests using for instance videomicroscopy and aiming at validating their efficiency.



## ■ CMBA expertise: screening using assays performed on living cells

The benefits derived from using intact, living cells for compound screening include

- The isolation of functionally selective molecules, i.e. compounds which are active within the context of the subcellular "working environment";
- The isolation of compounds active on a cell function without any knowledge on the molecular and/or regulatory processes involved;

Additionally:

- The active compounds can be utilized as hooks to isolate their unknown protein targets;
- The drug effects on selective cell types can be distinguished



## ■ Chemical library screened at the CMBA

The National Patrimonial Chemical Library (a CNRS initiative), and particularly one of its core-libraries from the Curie Institute (UMR 176 CNRS-IC), which represents ~7000 diverse and complex compounds, formatted and replicated in microplates.

## ■ Ressources

### Staff:

- 4 members

### Equipement:

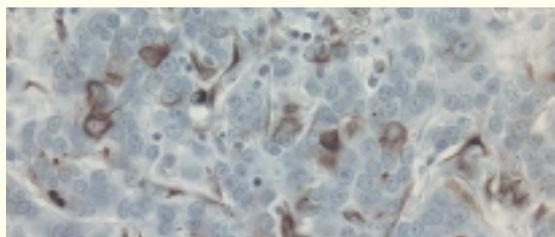
- An automated screening station, settled under a laminar flow, including a liquid handling system, with disposable tips, an articulated arm to transport plates, a microplate washing device, a shaker, a CO2 incubator, a storage carousel, readers (fluorescence, luminescence, absorbance);
- Softwares for serial devices driving and scheduling assays;
- Secured storage of the library, at -20°C et à 4°C;
- A laboratory dedicated to cell assays miniaturization.



## ■ Applications Fields

- Cytoskeleton and Cancer
- Signal transduction pathways
- Plant development
- Parasites and infectious diseases

**10 targets in development for screening 2003-2004. And 2 screenings are presently running**



## Partnership:

INSERM, CNRS, Grenoble University and CEA. The CMBA belongs to the ARECA network (Alliance des recherches sur le cancer) sponsored by the ARC foundation.

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