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Activity

The flow cytometry core facility of the Institut Curie in Orsay is available for Institut Curie research teams, external academic and to industry.

Flow cytometry is generally used for a multiparametric analysis of individual cells in suspension, with the possibility of subsequently sorting subpopulations of interest.

The cells in suspension may be simultaneously marked with many fluorochromes, each identifying a molecule of interest. The marked cells flow pass through a laser and, for each cell, the fluorescence intensity is quantified for each fluorochrome. Fluorescent probes can be used to detect different parameters such as: cell cycle, proliferation, apoptosis, pH changes and calcium flux.

The purpose of the flow cytometry core facility is to sort cells for users, and to train facility users on the self-service cytometers and related software for data acquisition and analysis.

Networking

Since 2014, collaboration was established with the research and development department of IPSEN Company (Les Ulis) to access to the Cell sorter.

Services

The Flow Cytometry Core Facility aims at providing to its users different types of expertise:

- Cell Sorting
- Personalized training on the self-serve cytometer
- Advice on cell preparation and choice of fluorochromes
- Support for data acquisition and analysis
- Software training (Cell Quest and Flowjo)

Equipment

- Cell sorter – BD FACSAria III

In 2010, the Facility gets equipped with a cell sorter. This FACSAria III has 4 lasers (488nm, 561nm, 633nm and 355nm), which can acquire 14 fluorescence and 2 scatter parameters. The Aria can sort at low, medium or high speed; it can sort 4 populations simultaneously as well as clone into multiwell plates and slides. Sample tubes and sorted fractions can be maintained at 4 or 37 ° C.

- Flow cytometer – BD FACSCalibur

This 1997 analyzer is used on everyday basis for analyzing of multi-labelled samples. It is equipped with 2 lasers (488nm and 633 nm), which can acquire 4 fluorescence and 2 scatter parameters.

This analyzer is self-serve. Training is required to use the self-serve equipment without supervision.

- Flow cytometer – BD FACSCalibur (Backup)

In December 2014, a team from Curie Paris gave to the platform a 1999 FACSCalibur. It's exactly the same machine that the one we already have and I use it in backup.

Training

- Personalized training on the self-serve cytometer
- Software training (Cell Quest and Flowjo)