

# Fluorescence Activated Cell Sorter

[www.london-research-institute.org.uk/facs](http://www.london-research-institute.org.uk/facs)



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The FACS laboratory at the London Research Institute is a dedicated service offering a comprehensive flow cytometry analysis and sorting facility. Flow cytometry is a sophisticated form of quantitative fluorescence microscopy where cells in suspension are passed through a laser excitation source and emitted fluorescence can be detected and measured. Any part or function of a cell that can be identified with a fluorochrome may be measured by flow cytometry.

### Analytical cytometers

We have 6 analytical cytometers including one plate-based bead reader and one static cytometer. These are all able to be user-operated and we offer a one to one training for all new users of the facility on any of these.

Two FACS Caliburs – 4 colours, dual laser (Blue and red)  
LSRII-A – 13 colours 4 lasers (UV, violet, blue and red)  
LSRII-B – 16 colours, 4 lasers (Violet, blue, yellow and red)  
FACS Array – 4 colours, 2 lasers (Green and red)  
Laser Scanning Cytometer – 6 colours, 2 lasers (Blue and red)

### Cell sorters

We also have three cell sorters that are all able to retrieve up to 4 specifically defined populations so that cells may be recovered for further study including re-culture, RNA or DNA extraction or use in functional cell assays. These are all operated by the staff of the Laboratory but we do this in close consultation with our users.

MoFlo 1: 9 colours, 3 lasers (UV, blue and yellow or red)

MoFlo 2: 9 colours, 3 lasers (UV, blue and red)  
FACS Aria – 12 colours, 3 lasers (Violet, blue and red)

### Other services

We are available to advise on a wide variety of cytometry related subjects including design of experiments, sourcing and supplying reagents, data analysis and interpretation as well as data presentation. The latter is particularly important as journal requirements for flow cytometric data are becoming more specific and demanding.

### Technical developments

To move the service forward we introduce methods that would be useful to our users – either new techniques not currently available or by improving current techniques. In the past year for example, we have introduced dyes that are used to identify dead cells after fixation and have improved detection of cell proliferation in fluorescent protein expressing cells by means of an EdU proliferation method.

We encourage close interaction with users of the facility and will collaborate on specific projects that need cytometric input and expertise.

### Publications listed on page 135

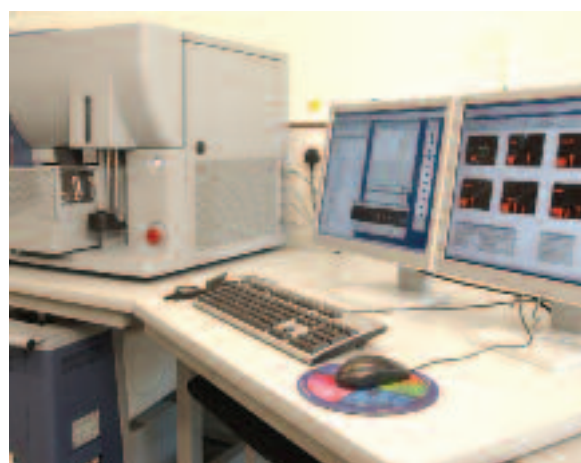


Figure 1: FACS Aria high speed cell sorter