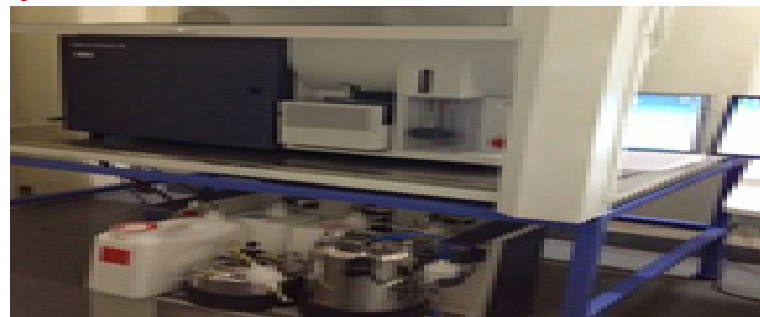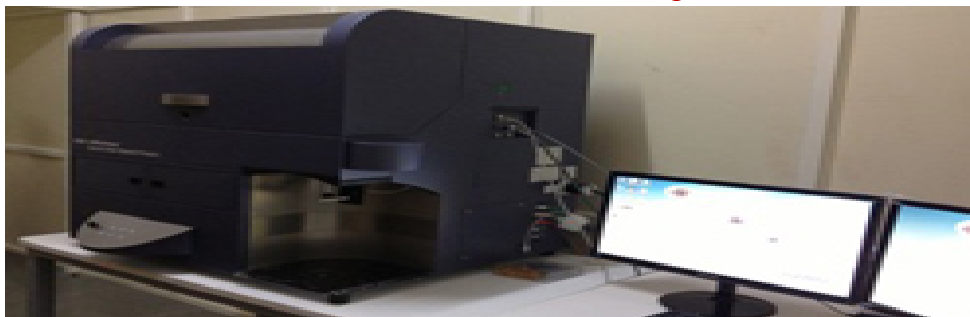# IAC 2017: State of the Art Facility

Flow Cytometry Facility

IIT Indore Flow Cytometry Facility is located at Simrol campus, IIT Indore. The facility has the state of the art Flow Cytometry Sorter (4 laser system) and Analyser (5 laser system).

· BD FACSARIA III - 4 laser bench top fixed aligned sorter system with pre-aligned fixed solid state lasers 488 nm, 640 nm, 405 nm, and 561 nm. The system can analyse 13 parameters: - forward scatter, side scatter and 11 colors / fluorescence detectors. It allows two & four way sorting into 12 x 75-mm, and 15 mL tubes. The system contains an automated cell deposition unit (ACDU) module that provides automated sorting into 6, 24, 48, 96, and 384-well plates and slides. Sample injection chamber allows various sample input tubes, including microtubes, 12 x 75-mm, and 15 ml tubes. Nozzle sizes available are 70, 85, 100, and 130-micron. The system is placed in a ClassII A2 bio-safety cabinet with a kill unit, which enables sample and user safety.

· BD LSRFortessa - 5 laser multi-color high speed analyser with fixed optical bench with pre-aligned FIVE fixed lasers (Blue Laser: 488nm, red laser: 640nm, violet laser: 405nm, yellow green: 561nm, near infra red laser: 785 nm). The system can analyse 20 parameters: - forward scatter, side scatter and 18 colors / fluorescence detectors. All the five lasers can be used simultaneously. System is capable to acquire up to 40,000 events/Sec and fluorescence sensitivity is as follows FITC-80, PE-30, PE-Cy™5: 10, APC: 70 MESF.

Services Offered

The facility currently offers cell sorting services 5 days a week (Monday through Friday) during the hours of 9 AM to 5 PM.

· Cell sorting: High speed cell sorters have the capability to not just analyze the fluorescence and light scattering characteristics of cells, but also to physically fractionate the heterogeneous cell sample into as many as 4 highly purified populations, one cell at a time.

· Multi-color high speed analyser: Bench-top analyser will analyze cells without sorting them. The cells make one pass through the instrument and then are sent to the waste container.

· Post-acquisition data interpretation and analysis.