

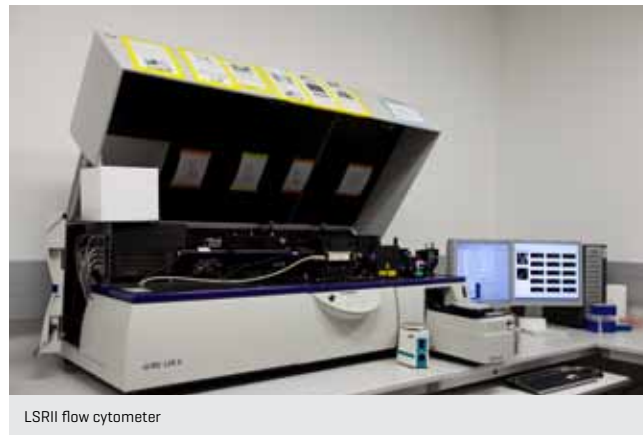


Flow Cytometry and Light Microscopy

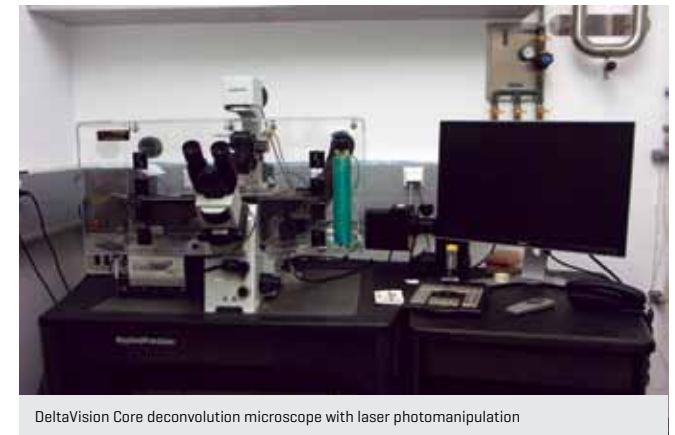
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The facility provides methodological and instrumentation background for flow cytometric and fluorescence microscopy techniques. At present, the facility is equipped with two cytometers – BD FACSCalibur and BD LSRII. The LSRII instrument is a four-laser [405, 488, 561 and 633-nm] instrument with 14 fluorescence detectors. A large set of dichroic mirrors and bandpass filters are available in the laboratory, making this instrument very flexible and capable to cover most of the flow cytometry applications. Both cytometers are equipped with the HTS loader for high-throughput analysis of samples directly from 96- or 384-well plates. The facility is also equipped with an AutoMACS Pro [Miltenyi Biotec] magnetic separator for automatic rapid sorting of cells, as well as cell culture facilities. The facility is running three microscopes: laser scanning confocal microscope with superfast scanner [Leica TCS SP5 AOBs TANDEM], Leica inverted fluorescent microscope with TIRF illumination [Leica], wide-field inverted fluorescence microscope with laser photomanipulation [DeltaVision Core]. This state-of-art instrumentation allows facility users to use a wide range of microscopy techniques including FRET, FRAP, time-lapse experiments, membrane studies, vesicle transport studies, etc. Several offline analysis workstations are also available in the facility, for analysis of flow cytometric [FlowJo] and image data [SoftWorx Suite, Imaris, LAS AF, Huygens, ImageJ]. In the near future the laboratory will be equipped with a high-speed cell sorter.



LSRII flow cytometer



DeltaVision Core deconvolution microscope with laser photomanipulation



SP5 TCS AOBs Tandem confocal microscope



Leica TIRF microscope



From left:
Ondrej Horváth, MD / Head
Zdeněk Cimburek