**Flow Cytometry
Applications**

14 – 15 August 2014

UNE
**Genomics
Analytics
Proteomics
Core**

Portland Campus

Flow-cytometry is a laser-based, biophysical technology employed in cell counting, cell sorting, biomarker detection and protein engineering, by suspending cells in a stream of fluid and passing them by an electronic detection apparatus. It allows simultaneous multi-parametric analysis of the physical and chemical characteristics of up to thousands of particles per second. It is routinely used in the diagnosis of health disorders, especially blood cancers, but has many other applications in basic research, clinical practice and clinical trials. The basic format of this workshop includes basic lectures on the theory and applications of flow cytometry followed by hands-on exercises.
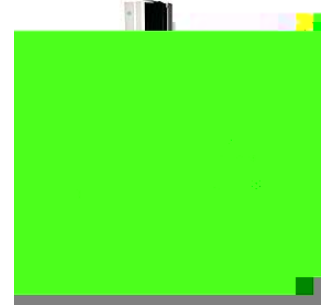
Learning Overview

- Foundations of flow-cytometry
- Types of samples suitable for flow cytometry
- Cellular and biophysical properties that flow cytometry can measure.
- Identify the subsystems of a flow cytometer

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Workshop Schedule

Thursday 14 August	
Time	**Schedule**
9:00 – 10:30	**Lecture** : Flow Cytometry Basics, EMD Millipore Flow Cytometry instruments, introduction to the Guava 8HT flow cytometer
10:45 – 12 noon	**Demo**: Guava Hardware and software. Overview of analysis using InCyte software
12:00 – 1:30	**Lunch**
1:30 - 2:00	**Lab**: Introduction to assays
2:00 – 5:00	**Lab** : Acquisition of cells stained with the Viacount reagent using the Viacount Module, Data analysis using the Viacount Module

Friday 15 August	
9:00 – 12 noon	**Lab**: Acquistion of demo surface stained samples on InCyte software
12:00 – 1:30	**Lunch**
1:00 – 4:30	**Lab** : Acquisition of cells stained with the propidium iodide (PI, Cell Cycle reagent) for cell cycle analysis using the Cell Cycle module

Course location: The course will be held at the University of New England, Hanaford Auditorium, 716 Stevens Ave, Portland, ME.

Registration: Please register ASAP in view of the limited course capacity of 10 participants. Confirmation of registration will be returned upon