

Advanced Flow Cytometry Workshop

Faculty of Medicine, Fayoum University in Collaboration with
Coimbra University, Portugal

Introduction: A wet workshop to improve skills of the use of flow cytometry in identification of the new different subpopulations of B, T and NK cells, Monocytes and Cytokines produced in infectious diseases.

Intended Learning Objectives: At the end of this course;

1. You will understand the principle of using 3 colour flow Cytometry for research purposes.
2. You will be able to set up protocols and do surface staining of B cells, T cells, NK cells and monocytes from peripheral blood cells.
3. You will be able to use Cytometric Bead Arrays to do determination of pro-inflammatory serum cytokine titres and intracellular cytokine production.
4. You will be able to analyze and integrate data, for patients with infectious diseases with T.B., leprometous leprosy and hepatitis as the studied examples.

Venue: Fayoum University Hospital

Time: 6th -9th December, 2010.

Fees: 400 L.E. to be deposited at the National Bank of Egypt, Fayoum University Educational Services, Account #: 9/450/87/955/2.

Agenda:

Day 1 (6 Dec): Determining subsets of immune cells by surface staining

9:00 - 10:00: Registration.

10:00-11:00: General introduction to flow cytometry. Discussion of the experimental protocol.

11:00 - 12:00: Coffee Break

12:00-15:00: surface staining of B cell, T cell, NK cell and Monocyte subsets in the peripheral blood of healthy controls and patients with infectious diseases.

Day 2 (7 Dec): Determining intracellular cytokine production and cellular activation state

9:00 - 11:00: In vitro stimulation of peripheral blood cells of healthy controls and patients with infectious diseases.
During the incubation time: analysis of the results from the previous day. Discussion of the cytokine staining protocol.

11:00 - 12:00: Coffee Break.

12:00-15:00: surface and intracellular staining of the stimulated cells.

Day 3 (8 Dec): Determining serum cytokine titers by cytometric beads array (CBA)

9:00 - 11:00: Analysis of the results from the previous day. Discussion of the CBA protocol.

11:00 - 12:00: Coffee Break

12:00-15:00: CBA determination of pro-inflammatory cytokines in the serum of healthy controls and patients with infectious diseases.

Day 4 (9 Dec): Analysis of CBA data. Integration of all the data collected in the 3 experiments, and discuss the possible scientific conclusions.

10:00-11:00: Analysis of CBA data.

11:00-12:00: Discussion.