

MAY 16-17

STD Days

LABORATORY OF IMMUNOLOGY
"MIA-LAB"

Department of Experimental and
Clinical Medicine //
University of Florence // Italy

TRAINING ON:
"EVALUATING THE
EFFECTS OF
MICRO/NANOPLASTICS
ON THE HUMAN
IMMUNE SYSTEM"

PROGRAM

Day 1: Thursday, 16th May

INTRODUCTION TO THE MIA-LAB AND PROGRAM OVERVIEW | 9:00 AM - 10:00 AM

- 1**
- Overview and objectives for the two-day program.

2 IMMUNE CELL CULTURES AND TREATMENT 10:00 AM - 11:00 AM

- Maintenance of PBMCs, Jurkat, and THP1 cell cultures.
- Types of MPLs used for cell treatment.
- Techniques and protocols for assessing MPL effects on immune cells (cell vitality and toxicity).

3 LUMINEX AND ELLA: PRINCIPLES AND PROCEDURES | 11:00 AM - 1:00 PM

- Explanation of Luminex and Ella technologies.
- Experimental procedures for assessing production of inflammatory mediators by MPL-treated cells.

LUNCH BREAK | 1:00 PM - 2:00 PM

4 GENE EXPRESSION ANALYSIS WITH THE NCOUNTER NANOSTRING SPRINT PROFILER (DAY ONE) | 2:00 PM - 5:00 PM

- Introduction to NanoString technology.
- RNA extraction and assessment of RNA quality (RIN).
- Initiation of gene expression analysis (first day).

Day 2: Friday, 17th May

1 GENE EXPRESSION ANALYSIS WITH THE NCOUNTER NANOSTRING SPRINT PROFILER (DAY TWO) | 9:30 AM - 11:30 AM

- Continuation of gene expression analysis (second day).
- Data analysis using nSolver software.

2 ANALYSIS OF INFLAMMATORY RESPONSE BY LUMINEX | 11:30 AM - 1:00 PM

- Continuation of Luminex assays with data analysis.

LUNCH BREAK | 1:00 PM - 2:00 PM

3 CYTOFLUORIMETRIC ANALYSIS OF MPL-TREATED CELLS | 2:00 PM - 4:30 PM

- Techniques and methods for studying MPL-treated cells using cytofluorimetry (apoptosis, mortality, cell cycle, proliferation).

TRAINERS

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