

# HANDS-ON WORKSHOP EPITHELIAL SYSTEMS: PHYSIOLOGY AND PATHOPHYSIOLOGY

An initiative of the ECFS Basic Science Working Group

**FCUL, Lisboa (Portugal) 18 – 22 July 2016**

Includes lectures, tutorials and hands-on practicals.

Open to 12 participants

- ✓ Learn about the latest developments in the field
- ✓ Acquire practical skills on:
  - production, cultivation and characterization of epithelial cells
  - collection of nasal cells
  - cultivation of intestinal organoids
  - functional approaches to assess CFTR
- ✓ Discuss your project with the experts

## Topics

- Cell Culture of Epithelial Cells, Tissues and Organoids
- Polarized Cells: Characteristics & Pathways
- Cystic Fibrosis: a Disease of Multiple Epithelial Tissues
- Physiology of Airway Surface Liquid
- Organoids as Model Systems to Epithelia
- Physiology of the Airway Epithelial Cells
- Physiology of the Intestinal Epithelial Cells
- Physiology of the Pancreas and Sweat Gland Electrophysiology techniques

## Lab work and tutorials

- Culture of Primary Human Nasal Cells
- Airway Surface Liquid Microscopy Measurements
- Culture of Intestinal Organoids
- Immunofluorescence of Epithelial Cells & Tissues
- Differentiation & Regeneration Assays
- Organoids Swelling Assay
- Ussing Chamber Analysis of Native Tissues and Polarized Epithelial Cells

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**To apply send a CV, letter of motivation and recommendation letter to  
Simão Luz (sfluz@fc.ul.pt) until 20 May 2016  
More info at: [www.ciencias.ulisboa.pt/ES\\_PP2016](http://www.ciencias.ulisboa.pt/ES_PP2016)**