# BioISI Research Seminar

## miRNA-145 and Canonical TGF-β1 Signaling Mediate Post-transcriptional Repression of CFTR and Resistance of ΔF508-CFTR to Corrector Rescue in Human Bronchial Epithelial Cells


**Professor Agnieszka Swiatecka-Urban**
**Children's Hospital of Pittsburgh of UPMC**



The predominant cystic fibrosis (CF)-associated mutation, deletion of Phe508 (ΔF508) causes defects at the level of CFTR mRNA, protein translation, and channel function. Small molecules partially rescue the distal ΔF508-associated defects in vitro. Specifically, correctors rescue the biosynthetic processing of CFTR protein while potentiators improve the function of rescued CFTR channels; however, their efficacy is marginal in vivo. Most CF patients have increased levels of TGF-β1, compared to non-CF controls. TGF-β1 inhibits CFTR mRNA and may represent a prevalent key antagonist limiting responses to the corrector/potentiator therapy in the majority of CF patients. Mechanisms of CFTR repression by TGF-β1 will be discussed.


**Host: Carlos Farinha (FunGP-BioISI)**

**When: November 28 🕑 14h30**
**Where: Building C8, room 8.2.38**
**Faculdade de Ciências da Universidade de Lisboa -Campo Grande, Lisboa (Portugal)**

**BioISI http://bioisi.ciencias.ulisboa.pt/**
Contact: bioisinfo@fc.ul.pt

FCT Fundação para a Ciência e a Tecnologia
MINISTÉRIO DA EDUCAÇÃO E CIÊNCIA
U LISBOA | UNIVERSIDADE DE LISBOA
Ciências ULisboa