Targeting Trypsin-Like Proteases: A Mechanism to Restore Mucociliary Function in Cystic Fibrosis Airways

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Impact on ENaCγ processing

Internalisation of ENaCγ

Impairment of ENaC-mediated Na⁺ transport

QUB-TL1
Broad-spectrum trypsin-like activity-based probe

Dehydrated ASL

Visualisation and identification of TL-proteases in primary epithelial cell preparations

Restoration of airways surface liquid (ASL) height

In CF, constitutive activation of normally “near-silent” ENaC

Visualisation and identification of TL-proteases in primary epithelial cell preparations

Comparison of ASL heights between normal and CF conditions

In CF, constitutive activation of normally “near-silent” ENaC