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Antiviral drug screening by assessing epithelial functions and innate immune responses in human 3D airway epithelium model

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1. Abstract

Respiratory viral infections cause mild to severe diseases, such as common cold, bronchiolitis and pneumonia and are associated with substantial burden for society. To test new molecules for shortening, alleviating the diseases or to develop new therapies, relevant human *in vitro* models are mandatory. MucilAir™, a human standardized air-liquid interface 3D airway epithelial culture holds *in vitro* specific mechanisms to counter invaders comparable to the *in vivo* situation, such as mucus production, mucociliary clearance, and secretion of defensive molecules. The objective of this study was to test the relevance of such a model for the discovery and validation of antiviral drugs. Fully differentiated 3D nasal epithelium cultures

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