Title:	Characterizing Aerosolization and Deposition of Nanoparticles for Air-Liquid Interface Exposed 16HBE Cells
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Keywords:	Human respiratory Health and disease Cell Lines
Issue Date:	Apr-2024
Publisher:	IISER Mohali
Abstract:	The Air-Liquid Interface (ALI) culture technique offers a physiologically relevant in vitro recapitulation of healthy and diseased human respiratory environment. Combined with commercially available aerosol generation systems, this technique can be leveraged to develop a cell exposure system capable of directly depositing engineered aerosols, allowing for rapid drug delivery applications. Here, we attempted to establish methodologies for developing such a cell exposure system, utilizing the 16HBE cell line for an ALI model and a commercially available aerosol chamber to devise QCM-based detection methods and a fluorescence-based assay to quantify deposited aerosols. The results from this study may assist future investigations in assessing the accurate cell-delivered dose of inhalable therapeutics, particularly for influenza infections and cystic fibrosis.
Description:	Under Embargo Period
URI:	http://hdl.handle.net/123456789/5666
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