

## **APPLICATION NOTE / VITROCELL**

# Using EpiAirway and EpiAlveolar with the VITROCELL® VC1 Smoking Machine and 12/6 CF Exposure Module

#### **OBJECTIVE**

To evaluate the effects of whole tobacco smoke or electronic cigarette vapor using the EpiAirway and EpiAlveolar in vitro human airway models and the VITROCELL® exposure system.

### ENDPOINTS

- Toxicity
- TEER
- Gene Expression
- Oxidative Stress Beating Cilia
- Mucus Secretion



EpiAirway in vitro human tissue model. Stained histology 40X magnification



EpiAlveolar in vitro human tissue model. Stained histology 40X magnification





Typical setup of VITROCELL® exposure system utilized to expose EpiAirway or EpiAlveolar cultures to T-cig smoke or E-cig vapor. Inset shows E-blu E-cig in smoking chamber.



**Quantitative PCR of CYP1A1 shows significant increases** in expression after exposure of EpiAirway to TCIG smoke (48 puffs) and ECIG vapor (400 puffs).



8-Isoprostane in EpiAirway culture medium is significantly increased after both TCIG and ECIG exposure. 8-Isoprostane significantly increased after TCIG smoke exposure (48 puffs), or exposure to ECIG vapor (400, 200, 100 and 50 puffs).



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