

Silurian Pharmaceuticals, Inc. to present at the American Thoracic Society, Washington, DC

Silurian will present recent results of its drug Brevenal for the treatment of defective mucociliary clearance and the prevention of exacerbations in Cystic Fibrosis, at the ATS, Washington, DC.

Brevenal is a promising new therapy for patients with cystic fibrosis. Low doses reverse the inhibition of airway mucociliary function caused by CFTR inhibitor 172 and human neutrophil elastase (HNE) in sheep. It also alleviates bronchoconstriction caused by HNE. This demonstrates that brevenal's activity is independent of CFTR, as well as it addresses the downstream pulmonary complications cause by HNE.

More so, it appears that brevenal's effect on mucociliary function is superior to currently used therapies in CF patients and can be used in combination with CFTR modulators.

The title of the current study is "Brevenal Effect Alone and with Orkambi on Airway Surface Liquid and Mucociliary Transport in Cystic Fibrosis Primary Human Bronchial Epithelial Cells"

In cystic fibrosis (CF), airway surface liquid (ASL) volume is depleted. This leads to an unfavorable environment that impairs mucociliary clearance, a key innate defense mechanism in the lung. We have shown in CF human bronchial epithelial (HBE) cells that brevenal increases ASL secretion and abrogates increased TGF β 1-induced ASL absorption (Abraham W, Salathe M, NACFC 2016, 80, p.223). We have also reported that aerosol brevenal restores mucociliary transport (MCT) dose-dependently when nebulized in sheep with slowed mucus clearance due to aerosol challenge with an inhibitor of cystic fibrosis transmembrane conductance regulator (CFTR_{Inh}-172) or CFTR_{Inh}-172 with human neutrophil elastase. Furthermore, when used in combination with the CFTR potentiator, ivacaftor, these agents demonstrate an additive effect. Brevenal does not affect the epithelial sodium channel (ENaC) or CFTR, suggesting it may alter the function of other ion transporters to change ASL and MCT, and has the potential for synergistic effects when combined with known CFTR or ENaC modulators.

Results indicate that brevenal augments ASL depth and MCT rate without altering ciliary beating in F508del primary HBE monolayers.

About Silurian Pharmaceuticals, Inc.

Silurian Pharmaceuticals, Inc. is dedicated to the development of new approaches for the treatment of pulmonary disorders in CF and COPD. Silurian harnesses the discovery of the novel polyketides from Marine organisms.

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