

Silurian Pharmaceuticals, Inc. to present at the European Cystic Fibrosis Symposium, Seville, Spain

Silurian will present recent results of its drug Brevenal for the treatment of defective mucociliary clearance and the prevention of exacerbations in European Cystic Fibrosis Symposium, Seville, Spain

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.

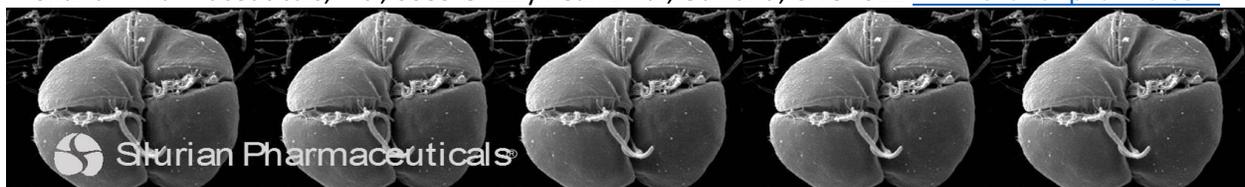
More so, it appears that brevenal's effect on mucociliary function is superior to currently used therapies in CF patients and can be used in combination with CFTR modulators.

The title of the current study is "THE ANTI-INFLAMMATORY ACTIONS OF BREVENAL ENHANCE THE EFFICACY OF CLINICAL THERAPIES DIRECTED AT TREATING CYSTIC FIBROSIS."

A key pathophysiological endpoint in cystic fibrosis (CF) is airway mucus stasis. This slowed mucus clearance becomes more problematic in CF exacerbations because of the additive effect of an increased airway load of free neutrophil elastase. We validated this hypothesis in a sheep model by demonstrating that the time course of slowing of tracheal mucus velocity (TMV), a surrogate marker of whole lung mucociliary clearance (MCC), was prolonged when the sheep were challenged with aerosols of CFTRinh-172 (CFTRinh) in combination with aerosol human neutrophil elastase (HNE) compared to the response with CFTRinh alone. Thus, failing to consider inflammation when testing potential CF therapies, may underestimate their actual effectiveness. Here, we test this theory by showing that concentrations of drugs that fail to correct the slowed TMV in sheep produced by aerosol challenge with aerosols of CFTRinh+HNE become effective when combined with brevenal, which in addition to its ability to increase airway surface liquid, reduce mucus solids, stimulate MCC and reverse the effects of CFTRinh+HNE, has anti-inflammatory properties. The doses of individual drugs were ineffective in correcting the slowed TMV produced by CFTRinh+HNE. Combining brevenal with ivacaftor or UTP reversed the slowed TMV to 75% and 74%, respectively. Combining UTP+ivacaftor only increased TMV to 63%.

Since inflammation can impede CFTR restoring therapies, the increased activity therapeutic drugs when combined with brevenal as compared to other treatment combinations may be a function of brevenal's anti-inflammatory properties. These results suggest that brevenal as an adjunct to current therapies, may be beneficial for the treatment of airway diseases characterized by CFTR dysfunction.

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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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