Background: EBI-005 is a novel, genetically engineered, neutralizing anti-IL-1 receptor antagonist (anti-IL-1Ra) molecule designed to treat ocular surface diseases (OSDs) by targeting the IL-1 pathway, which is critical for the development of allergic conjunctivitis (AC). EBI-005 is efficacious in mouse and rabbit models of AC.

Methods: A chronic AC model was used to study the effects of EBI-005 in two dosing regimens: 0.1 and 1 mg/mL, with or without 1 mg/mL anakinra (anakinra). The primary endpoints were changes in ocular signs. EBI-005 was administered subconjunctivally (SC) to the limbal region of the right eye of each animal daily for 21 days.

Results: EBI-005 was administered to 10 animals per group, and anakinra was administered to 6 animals per group. EBI-005 significantly reduced clinical signs of AC compared to the vehicle control and anakinra-treated groups.

Conclusions: EBI-005 is well-tolerated and shows efficacy in mouse and rabbit models of AC, demonstrating its potential as a treatment for OSDs.

Keywords: EBI-005, anti-IL-1Ra, chronic allergic conjunctivitis, treatment, ocular surface diseases.