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Development of STING1 Signal Regulating Lipid Nanoparticle Treatment for Sjogren Syndrome Using Conjunctive Organoid Model

Yonsei University

OPHTHALMOLOGY | **Hit**

Product Type	Gene & Nucleic acids
Indication	Severe ocular surface inflammation and dry eye disease associated with Sjögren syndrome
Target	STING(Stimulator of Interferon Genes)
MoA(Mechanism of Action)	Conjunctiva-optimized lipid nanoparticles(LNPs) deliver chemically stabilized STING-targeting siRNA into conjunctival epithelial cells, suppressing aberrant cGAS-STING signaling and downstream inflammatory cytokines including IFN-β, IL-6, and TNF-α.
Competitiveness	• First-in class local STING-targeting RNA therapeutic for ocular inflammation • Proprietary conjunctiva-penetrating LNP optimized from > 100 lipid formulations • Patient-derived conjunctival organoid and ALI platform for translational validation • Steroid-sparing therapy with reduced systemic immunosuppressive toxicity • Expandable platform for multiple ocular surface inflammatory diseases
Development Stage	Hit
Route of Administration	Topical ophthalmic eye drops and/or subconjunctival injection