

Natamycin loaded peptide conjugated nanomicelles (PeNatcel)

Domain: Therapeutics

About Technology: This innovation encapsulates natamycin, a poorly water-soluble antifungal, into peptide-transporter-targeted nanomicelles. The design significantly enhances the solubility, corneal permeation, and bioavailability, thus delivering superior therapeutic outcomes

Intended Use: Topical eye drop for treating fungal keratitis that achieves bioavailability with lower drug doses and fewer instillations, leading to higher patient compliance and faster recovery

Advantages:

- Reduces dose (0.6%) and dosing frequency (4×/day)
- Achieves 13× higher transcorneal permeation and 2× longer pre-corneal residence, enhancing patient compliance

Development Status: Preclinical studies complete



Institute(s): Department of Pharmacy, Birla Institute of Technology and Sciences (BITS), Hyderabad Campus; Shantilal Shanghvi Cornea Institute, KAR Campus, LV Prasad Eye Institute, Hyderabad

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