Docket #: S23-426

Therapeutic Verteporfin-Hyaluronic Acid Conjugates

Researchers at Stanford have developed innovative Verteporfin conjugates that considerably enhance the solubility and therapeutic potential of Verteporfin.
The low aqueous solubility of certain therapeutic drugs, including Verteporfin, presents a significant limitation to their modes of administration. This challenge is prevalent across many pharmaceuticals and restricts their potential usage in various treatment regimes, particularly those related to ocular conditions.

Stanford's researchers have overcome this hurdle by combining Verteporfin with a natural biomolecule, thus creating an aqueous soluble compound suitable for topical administration. This conjugation significantly improves Verteporfin's bioavailability, retention time, and therapeutic efficacy. Preliminary studies indicate the conjugate's effectiveness in providing anti-scarring effects on the corneal surface post-injury. This discovery has promising implications for photodynamic therapy for retinal disorders, and the treatment of infections, wound sealing, and additional corneal ectasias.

Stagr of Development

In vivo

Applications

- Treatment and prevention of ocular surface and corneal scarring
- Treatment of corneal ectasia and infections
- Sealing of corneal and dermatological wounds
- ealing

Advantages

- Solubilized, highly efficacious Verteporfin
- Enhanced bioavailability and therapeutic potency compared to existing Verteporfin treatments

Patents

- Published Application: WO2025136968

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