

**Docket #:** S22-508

# **Methods and composition to treat inflammatory eye disease**

Uveitis is an intraocular inflammation in the eye and represents a major cause of visual impairment and blindness worldwide. The current standard of care for non-infectious uveitis is corticosteroids, which has frequent side effects, including steroid-induced glaucoma or cataract. To address this unmet need for alternative immunosuppressive therapies in the eye, Stanford researchers have identified a novel peptide, SEMA7A using an aptamer-based proteomics assay. This peptide comprises a binding domain for binding to its receptor Plexin C1 (PLXNC1), which in turn has a broad immunosuppressive effect in vivo, reducing the number of infiltrating neutrophils, macrophages, lymphocytes, and dendritic cells in several compartments of the eye, and affecting a wide range of inflammatory signaling pathways. The novel SEMA7A peptide has immense potential as an alternative immunosuppressive agent for ocular inflammatory diseases.

## **Stage of Development**

In vivo testing and testing optimized versions of the peptide therapeutic.

## **Applications**

- non-infectious uveitis

## **Advantages**

- Broad immunosuppressive effect in vivo
- improved benefit-risk ratio compared to the current standard of care (corticosteroids)
- No negative side-effects

## Patents

- Published Application: [WO2024168287](#)

## Innovators

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## Licensing Contact

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