Anti-Microbial Contact Lens With Ocular Drug Delivery

Tech ID: 28678 / UC Case 2017-421-0

BRIEF DESCRIPTION

Anti-microbial, anti-fungal drug eluting contact lens for the controlled release of ophthalmic therapeutics.

FULL DESCRIPTION

Contacts lenses are ubiquitous medical devices with more than 30 million contact lens users in the U.S. Shockingly, one million users every year contract an infection from either bacteria or fungi infections that originates on the surfaces of contact lenses. The current standard of care to treat infections are antibiotic eye drop solution; however, such treatments are limited in effectiveness as eye drops are quickly washed away by natural tears before they can take full therapeutic effect. There is a clinical unmet need for a robust and controllable method to deliver antibiotic ocular therapeutics.

Researchers at the University of California, Irvine, have invented a transparent, anti-microbial, anti-fungal, drug eluting ocular device/contact lens to precisely deliver ocular therapeutics to treat and prevent infection. Also, the surfaces of the contact lens itself prevents bacterial growth. Such contact lenses can be used towards the prevention of ocular infection and as a post-operative pain and infection management medical device.

SUGGESTED USES

-Slow continuous ocular therapeutic delivery to treat bacterial infections.

-Eye post-operative medication administration

-Preventing microbial infections in the eye

ADVANTAGES

Controlled and effective ocular therapeutic drug release profiles

Anti-microbial surface aiding in prolonged device use without acquiring an infection

Affordable therapeutic

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	11,086,049	08/10/2021	2017-421

STATE OF DEVELOPMENT

CONTACT

Alvin Viray
aviray@uci.edu
tel: 949-824-3104.

OTHER INFORMATION

CATEGORIZED AS

- **Biotechnology**
  - Health
- **Materials & Chemicals**
  - Biological
  - Nanomaterials
  - Polymers
- **Medical**
  - Disease: Infectious Diseases
  - Disease: Ophthalmology and Optometry
  - Therapeutics
- **Nanotechnology**
  - NanoBio

The inventor has completed the concept phase of the invention and is now experimenting with the anti-bacterial, anti-fungal, and ocular drug delivery properties.

RELATED CASES

2017-421-0

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5270 California Avenue / Irvine,CA
92697-7700 / Tel: 949.824.2683