

Formulation of Topical Naltrexone for the Treatment of Dry Eye

ID# 2022-5369

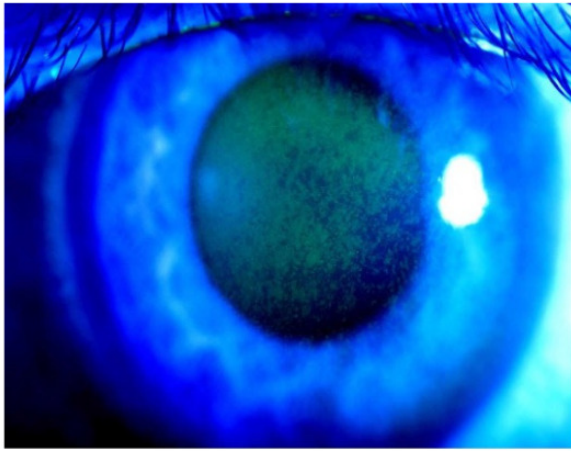


Figure 1. Photograph of eye shown with fluorescence

Technology Summary

Researchers have introduced a novel technology centered around the use of naltrexone along with a suitable carrier, as an effective treatment for dry eye. This innovation sets specific dosage limits for these compounds, refining the composition of the carrier and enhancing treatment regimens. Current therapies offer temporary relief and can be expensive, whereas this new therapy surpasses the drawbacks of over-the-counter lubricants, giving the possibility for improved dry eye management, providing patients with more effective and long-lasting solutions to alleviate dry eye discomfort.

Application & Market Utility

Dry eye is an extremely common condition that affects approximately 4.9 million Americans that are 50 and older. Currently on the market are the commonly used over-the-counter lubricants which offer ineffective treatments. The inventors in response have created an alternative compound that effectively combats the shortcomings of said lubricants. The current market for products treating dry eye is estimated to be approximately \$6.5 billion dollars as of 2022. It is projected that the market for dry eye will grow and reach approximately \$12.3 billion by 2032.

Next Steps

Naltrexone treatment for dry eye is a previously unexplored method. For that reason, the next step for this invention would be to license the technology to a company focusing on topical treatment of dry eye.

TECHNOLOGY READINESS LEVEL

4

Seeking

Investment | Licensing | Research

Keywords

- Dry eye
- Naltrexone
- Topical

Researchers

Patricia McLaughlin, MS, DEd

Distinguished Professor, Department of Neural and Behavioral Sciences

Joseph Sassani, MD

Professor of Ophthalmology and Pathology

Ian Zagon, PhD

Distinguished Professor, Department of Neural and Behavioral Sciences

Originating College

College of Medicine

Office of Technology Management Contact

Suzanne Kijewski
sdk5252@psu.edu
814-863-7070



Invent Penn State is a Commonwealth-wide initiative to spur economic development, job creation, and student career success. Invent Penn State blends entrepreneurship-focused academic programs, business startup training and incubation, funding for commercialization, and university-community collaborations to facilitate the challenging process of turning research discoveries into valuable products and services that can benefit Pennsylvanians and humankind. Learn more at invent.psu.edu.

Penn State is an equal opportunity, affirmative action employer, and is committed to providing employment opportunities to all qualified applicants without regard to race, color, religion, age, sex, sexual orientation, gender identity, national origin, disability or protected veteran status.