2026 J. William Kohl, M.D. Summer Scholarship for Medical Students
Department of Ophthalmology & Vision Science
University of California Davis

The Department of Ophthalmology & Vision Science at UC Davis is pleased to announce the J. William Kohl Summer Scholarship for medical students. This opportunity provides a stipend of $3,000 for at least nine medical students to undertake mentored research in the vision sciences at UC Davis.

Additionally, this scholarship also includes a $1,200 travel grant, which may be used to present your research at a national conference.

Eligibility Requirements

- Currently enrolled in an accredited U.S. medical school (MD or DO)
- Interested in pursuing a career in ophthalmology
- Students currently performing research with a UC Davis ophthalmology faculty member may apply for funding through the Kohl scholarship only if they are not already receiving funding through other sources during summer 2026
- Prior recipients of the Kohl Summer Research Scholarship are NOT eligible to receive the scholarship again

  Non-UC Davis medical students: *Medical students outside of UC Davis will coordinate with UC Davis staff to determine the manner in which scholarship funds may be received by you or your institution. It is the responsibility of the student to secure housing and all necessary transportation needed for the summer. Though some projects may be performed remotely as indicated, all non-UC Davis students are required to complete in-person on-boarding and credentialing requirements prior to the start of their research.*

Kohl Scholars Research Symposium

In Fall 2026, scholarship recipients will present their research at an evening research symposium at UC Davis Eye Center. Those students participating from other institutions may present virtually.

Scholarship Application Timeline

- Application deadline: March 15, 2026
  - Submit all application items (see page 2) to ucdkohlscholars@gmail.com
- Applicants will be notified of scholarship decision by April 15, 2026
- It is strongly recommended to submit your application as soon as possible.
- Students are expected to participate in research for at least 8 weeks. However, the starting date for research is flexible, depending on the student's academic calendar.
- For questions regarding projects, please contact research mentors directly.

2026 J. WILLIAM KOHL SUMMER RESEARCH SCHOLARSHIP APPLICATION

Name:

School/institution:

Current year in medical school:

Describe your interest in ophthalmology and/or vision science research. If you have prior research experience, include a brief description of a prior project and your involvement on the project. (limit 500 words)

For rising third- and fourth-year medical students (academic year 2026-2027), will you be in clinical clerkships during summer 2026? (Y/N) If so, how much time will you have to spend on research?

For non-UC Davis medical students, will you be available for in-person on-boarding and credentialing prior to the start of the summer 2026? (Y/N)

Will you be receiving a stipend from another funding source for conducting research in summer 2026? (Y/N)

Have you been previously awarded the J. William Kohl Summer Research Scholarship at UC Davis? (Y/N)
- *Note: Prior recipients of the Kohl Summer Research Scholarship are NOT eligible to receive the scholarship again*

Indicate up to 3 projects (title/mentor) from the list below, in order of your interest (1 = greatest interest).

1.

2.

3.

Please also include the following:
- Curriculum vitae
- A copy of your undergraduate transcript
- A copy of your current medical student transcript

RESEARCH PROJECTS FOR 2026 J. WILLIAM KOHL SUMMER RESEARCH SCHOLARSHIP

Project: Eye-Tracking in Early Detection of Huntington's Disease
Mentor(s): Allison Liu MD PhD (aycliu@health.ucdavis.edu); Ravi Jonnal PhD (rsjonnal@health.ucdavis.edu); Robert Zawadzki PhD (rjzawadzki@health.ucdavis.edu)
Description: This project investigates whether subtle abnormalities in eye movements can serve as early biomarkers for Huntington's disease. The student will assist with participant recruitment, operation of the eye-tracking system, analysis of eye-tracking recordings, literature review, and preparation of figures and tables for abstracts or manuscripts.
Remote option: No

Project: Community-Engaged Vision Screening for Neurodegenerative Diseases
Mentor(s): Allison Liu MD PhD (aycliu@health.ucdavis.edu)
Description: This project aims to develop and evaluate community-based visual screening methods to identify individuals at risk for neurodegenerative diseases. The student will help coordinate community outreach events, collect and organize screening data, and participate in data analysis and protocol development.
Remote option: No

Project: Immunoprofiling in Giant Cell Arteritis (GCA)
Mentor(s): Allison Liu MD PhD (aycliu@health.ucdavis.edu)
Description: This project focuses on characterizing immune cell signatures in patients with giant cell arteritis to better understand disease mechanisms and improve diagnostic workflows. The student will assist with chart review, patient sample collection, organization of clinical and laboratory data, literature review, and contributions to manuscript preparation.
Remote option: No

Project: Impact of suprachoroidal space anatomy on retinal diseases
Mentor(s): Glenn Yiu MD PhD (gyiu@health.ucdavis.edu)
Description: This study involves analyzing changes in the suprachoroidal space (SCS) anatomy in retinal diseases including uveitis, age-related macular degeneration, diabetic macular edema, and central serous chorioretinopathy. Student will (1) collect image data, (2) measure SCS visible and thickness, and (3) analyze association with clinical outcomes
Remote option: Yes

Project: AI and Tele-ophthalmology for diabetic eye screening
Mentor(s): Glenn Yiu MD PhD (gyiu@health.ucdavis.edu)
Description: This study will explore how automation and teleretinal services improves diabetic eye screening. Student will collect clinical and image data, and analyze (1) factors associated with in-person follow-up, (2) non-diabetic eye findings from AI or non-AI screenings, and (3) explore machine learning models for predicting other co-morbidities. Computational background preferred but not required.
Remote option: Yes

Project: Repeatability of functional and diagnostic testing in eyes with vision loss from Central Retinal Vein Occlusion: Post-hoc analysis of TRUST (Treatment of Retinal vein occlusion Using STem cells) Clinical Trial data
Mentor(s): Susanna Park, MD PhD (sscpark@health.ucdavis.edu)
Remote option: No

Project: Contact lens electronics to facilitate healing of corneal wounds using an ex vivo model
Mentor(s): Min Zhao MD PhD (minzhao@health.ucdavis.edu); Mark Mannis MD (mjmannis@health.ucdavis.edu)
Description: This project is on developing a simple prototype of an electronic contact lens to enhance corneal wound healing through electrical stimulation, tested in an ex vivo model. Corneal wounds, often from injury or surgery, can lead to vision impairment if healing is delayed. Electronic contact lenses can provide localized electric fields to promote epithelial cell migration and proliferation, potentially accelerating recovery.
Remote option: No

Project: Characterization of endothelium of donor corneas with AI assistance
Mentor(s): Min Zhao MD PhD (minzhao@health.ucdavis.edu); Mark Mannis MD (mjmannis@health.ucdavis.edu)
Description: This project is on imaging corneal endothelium and leveraging artificial intelligence (AI) to assist in the characterization of the corneal endothelium from donor tissues. The corneal endothelium is a single layer of cells critical for maintaining corneal transparency, and its health—particularly endothelial cell density (ECD), cell shape (pleomorphism), and size variability (polymegathism) is essential for assessing donor corneas suitability for transplantation. Traditional manual analysis via specular microscopy is time-consuming and subjective, making AI a promising tool for automation.
Remote option: No

Project: Evaluation of eye movement abnormalities in sleep deprivation using a retina-based eye tracker
Mentor(s): Allison Liu MD PhD (aycliu@health.ucdavis.edu); Ben Jastrzrembski MD (benjast@health.ucdavis.edu)
Remote option: No

Project: Tuning strabismus surgery dosing with AI assistance
Mentor(s): Ben Jastrzrembski MD (benjast@health.ucdavis.edu)
Description: Strabismus surgery relies on pre-operative, clinical measurements of eye position to guide surgical repositioning of extraocular muscles (EOMs) and improve eye alignment. Surgical "dosing" tables guide the amount to reposition EOMs based on pre-operative measurements. Based on their empiric experience, surgeons frequently refine and adjust dosing tables based on their own surgical results and the particular circumstances of a given patient. This study will explore where an AI platforms assists in "tuning" strabismus surgery dosing tables for a particular surgeon and patient. The student's responsibility will involve some data entry from the Epic EMR, developing a strategy for evaluating the utility of the AI platforms for this application, and writing an abstract/poster for presentation in the 2027 meeting cycle
Remote option: Yes

Project: Non-invasive imaging in uveitis
Mentor(s): Parisa Emami-Naeini MD MPH (pemamin@health.ucdavis.edu)
Description: This project focuses on developing and validating artificial intelligence–based methods to detect and grade retinal vascular leakage and inflammation using fundus photography and retinal OCT. Medical students will work with a large, curated dataset of retinal images, learn principles of image annotation and clinical phenotyping, and contribute to the development of machine learning models that aim to reduce reliance on invasive angiography.
Remote option: Yes

Project: Retinal aging and resilience
Mentor(s): Parisa Emami-Naeini MD MPH (pemamin@health.ucdavis.edu)
Description: This project studies retinal aging using the UK Biobank dataset, which includes ocular imaging and multi-omic data from approximately 500,000 individuals. Medical students will analyze retinal imaging features alongside biomarker data to identify signatures of healthy aging and age-related retinal disease risk. The work integrates population science, ophthalmic imaging, and precision medicine.
Remote option: Yes