

## Research Celebration

Celebrate with us!

Please join us in celebration of a fabulous year of research! We are inviting all faculty, staff and student members of School of Medicine research teams - it is your contributions that have made this success possible.

The event will open with Vice Chancellor for Research Prasant Mohapatra and School of Medicine Vice Dean for Research Kim E. Barrett. It will feature short presentations on trailblazing work by our School of Medicine researchers, including Alicia Agnoli, Susan Brown, Ching-Hsien Chen, Eamonn Dickson, Anna La

Torre Vila, Rebecca Schmidt and Rachel Whitmer. There will be ample time to socialize with colleagues and learn about the many ways our Office of Research supports investigators. Wine and hors d'oeuvres will be served.

We hope you celebrate with us this year. The event will be held at Betty Irene Moore Hall (BIMH) School of Nursing in Sacramento on Wednesday, November 16, from 3 - 5 p.m. As an RSVP is required, please register through [Eventbrite](#).

Show us your work! We would like to see and share images of research teams as part of the celebration. If you have any pictures of yourself or your team, please send to [somor@ucdavis.edu](mailto:somor@ucdavis.edu) for inclusion in our research celebration presentation. We look forward to seeing you!

## School of Medicine Finalist for AAMC Award

The UC Davis School of Medicine earned a top three placement in the 2022 American Association of Medical Colleges (AAMC) Spencer Foreman award for Outstanding Community Engagement. This award is presented annually to an AAMC-member medical school or teaching hospital with a long-standing, major institutional commitment to partnering with the community it serves to identify and address community needs.

The nomination was submitted by the School of Medicine Office of Research on behalf of the school. It highlighted the school's strong tradition of community-focused initiatives, such as the Student-Run Clinics and Healthy Davis Together. As a top finalist, our school received a site visit by the AAMC in July.



## November 2022

### School of Medicine Office of Research

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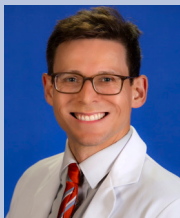


## November is Diabetic Eye Disease Awareness Month

Diabetic eye disease, a leading cause of blindness, often has no early warning signs. Early detection, timely treatment, and appropriate follow-up care are the only ways to prevent vision loss. See more on UC Davis ophthalmology and diabetes research inside!

# Recognition

## Award



UC Davis Health neuroscientist Sergey Stavisky [has been selected by the National Institutes of Health \(NIH\) to receive the 2022 NIH Director's New Innovator Award](#). Stavisky joins the ranks of other exceptional New Innovators and their groundbreaking research as part of the NIH Common Fund's High-Risk, High-Reward Research program.

"We are absolutely delighted that one of our bright new faculty was selected for this award," said Kim Barrett, vice dean for research at UC Davis School of Medicine. "Early career faculty sometimes feel they have to play it safe to convince reviewers their research is worthy of support. The New Innovator Award will allow Dr. Stavisky to chart wholly new directions that have the potential to transform the lives of patients."

The NIH awards this grant to exceptionally creative early career investigators who propose innovative, high-impact projects in the biomedical, behavioral or social sciences. Besides the recognition, the award provides \$2.3 million over five years for selected early career researchers.

## Impactful Publication



Faculty from the Division of Rheumatology, Allergy and Clinical Immunology, Patrick Leung, Weici Zhang, William Ridgway (division chief), Aftab Ansari and M. Eric Gershwin (corresponding author, pictured), are co-authors of a study published in the October 2022 edition of [Cellular and Molecular Immunology](#). This study tested the hypothesis that the downregulation of interferon (IFN) signaling pathways with a JAK1/2 inhibitor (ruxonlitnib) would inhibit the development and progression of cholangitis, an inflammation of

the bile duct system. The results were a significant reduction in portal inflammation and bile duct damage, associated with a significant reduction in splenic and hepatic CD4+ T cells and CD8+ T cells.

## Postdoc Appreciation Week



Postdoc Appreciation Week was October 17-21. A national event since 2009, this celebration recognizes the contributions that postdoctoral scholars make to research.

The School of Medicine got into the action by hosting two events for School of Medicine postdocs. Coffee and bagels were served on October 17 on the Sacramento Campus, and ice cream on the afternoon of October 18 outside Tupper Hall in Davis.

School of Medicine Office of Research leadership, including Kim E. Barrett, Angela Haczku and Anuurad Erdembileg met with the postdocs for fun and conversation.



## NorCal Symposium on Climate, Health and Equity



On September 23, 2022, over 300 healthcare professionals and students gathered over Zoom for the 3rd annual NorCal Symposium on Climate, Health and Equity to learn and discuss about climate change as a social justice issue. Hosted this year by UC Davis School of Medicine, and chaired by Associate Dean Angela Haczku, the CME-credited symposium was organized as a collaboration between Stanford, UCSF and UC Davis medical and graduate students, expert practitioners and faculty.

The keynote speaker, Heather McMullen, participated from London, UK, and presented on the intersection of climate change and other environmental crises with sexual and reproductive rights, injustice and politics. The symposium included sessions on sustainable health care, air pollution and wildfires and research on climate change, transportation and health implications. There was a roundtable session featuring healthcare leaders, including Vice Chancellor and CEO of UC Davis Health, David Lubarsky. The symposium ended with informal parallel "happy hour" sessions hosted by each of the institutions and community and student environmental activist groups.

To enhance the learning experience, a comprehensive toolkit has been developed by the organizers to help participants translate the symposium presentations and discussions into real-world climate justice. The toolkit includes resources, action plans and speaker information and is available [at this link](#) and at the [symposium website](#), along with the recordings of all the sessions.

A mini symposium will follow in February 2023.

# Feature

## Featured Center: UC Davis Health Eye Center



UC Davis Health Eye Center Team

[The Eye Center at UC Davis Health](#) is a hub of collaborative vision research and in the development of cures for blinding eye disease from cornea to cortex. The Eye Center investigators participate in interdisciplinary vision research with the School of Medicine, Veterinary School and the Primate Center, and campus vision scientists in 15 different departments and the Center for Neuroscience. This level of collaboration distinguishes it from

virtually every university eye center in the United States.

The Eye Center also encompasses a growing research program that is designed to focus efforts on new treatments and cures for disabling eye disease. Faculty participate in numerous clinical trials, affording patients access to the newest medical and surgical therapies. In addition, the faculty at the UC Davis Health collaborates with advanced scientists on the UC Davis Campus in many disciplines brought together by the [Center for Vision Science](#).

The Center's support of ophthalmologic research is broad based and growing, focusing on new treatments and cures for eye disease. Research includes novel therapies for corneal wound healing, studies on understanding and treating glaucoma, investigations on curing color blindness, and retina imaging studies. See the sidebar for examples of the cutting-edge research being conducted by our ophthalmologists.

In Fall 2022, the Eye Center is scheduled to move to the new [Ernest E. Tschannen Eye Institute building](#), which will be an enhanced hub for research and patient care. It was funded in 2016 by a historically large donation from Ernest E. Tschannen, a glaucoma patient whose condition was arrested, likely preventing blindness, but the ophthalmology care he received at UC Davis.

In addition to supporting the construction of the new institute, donations from Tschannen included \$1.5 million to advance research on the optic nerve and to help find a cure for glaucoma and other eye diseases.



Future home of the Eye Center, the Ernest E. Tschannen Eye Institute

## Vision Research at UC Davis

### Professor and Vice Chair for Research Paul Sieving

Sieving's current studies focus on human X-linked juvenile retinoschisis (XLRS). XLRS is an inherited disease and is a leading cause of juvenile macular degeneration in human males. His team is working to understand the disease mechanisms that bring about retinal structural changes and neuronal synaptic signaling deficiency in a mouse model.

### Professor Nicholas Marsh-Armstrong

The Marsh-Armstrong laboratory has made recent discoveries that indicate that the optic nerve head is the likely site of injury in glaucoma, and a possible site of injury in other optic atrophies. They are working on several studies with implications for the diagnosis and treatment of glaucoma and other blindness-causing diseases.

### Professor Susanna Park

Retinal vein occlusion (RVO) occurs when a blood clot blocks the vein. It is more likely to occur in people with diabetes, and possibly high blood pressure, high cholesterol levels, or other health problems that affect blood flow. Park is the PI on a clinical trial to determine whether intravitreal autologous CD34+ cell therapy is safe, feasible and potentially beneficial in eyes with vision loss from RVO.

### Professor Glenn Yiu

Age-related macular degeneration (AMD) is a leading cause of blindness in the elderly, but current therapies rely on intraocular injections which are costly and invasive. Yiu's research seeks to develop and test a nanoparticle delivery system that can be given intravenously, targeted to specific cell types in the eye, and triggered to release the therapeutic using a non-invasive external light source.

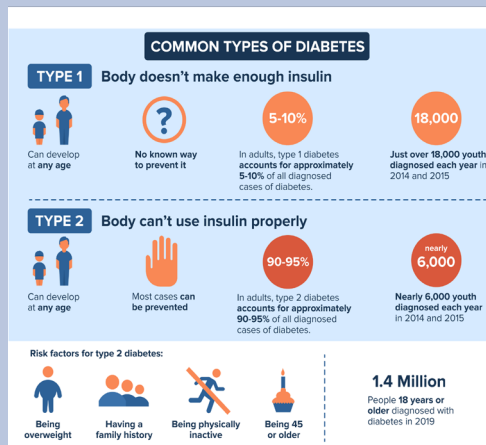
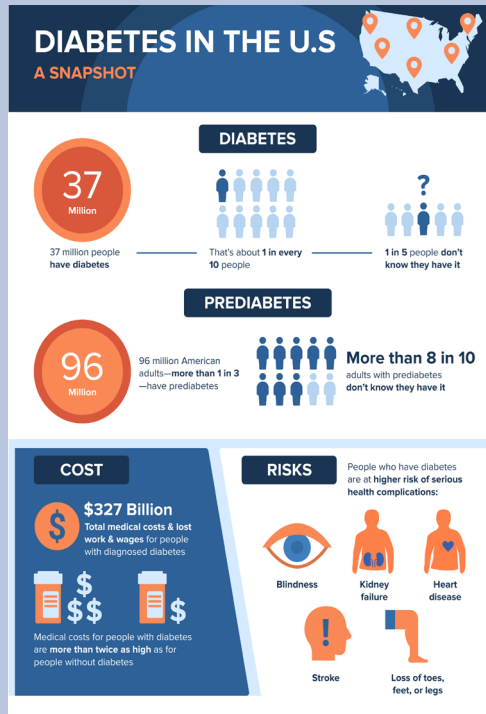


# Feature

## Diabetes and Diabetes Eye Disease Awareness Month

November is Diabetes and Diabetes Eye Disease Awareness Month. The impact of diabetes on American health is widespread and severe. It is the seventh leading cause of death and number one cause of kidney failure, lower-limb amputation and adult blindness. Diabetes prevention and treatment are major areas of concern for a variety of specialists, including neurologists, nutritionists and ophthalmologists. UC Davis has several active studies on diabetes, such as:

- **Bethany Cummings**, associate professor in the surgery department, is using state-of-the-art mouse modeling to generate new insights into the regulation of pancreatic islet function that will serve as the basis for developing therapeutics for type 2 diabetes.
- Pediatrician **Craig Warden** has been conducting a study to identify the genes that influence the development and severity of type 2 diabetes in obese Zucker rats.
- **Thomas Jue**, professor of biochemistry and molecular medicine, has a project, funded by the California Department of Public Health, on the link between type 2 diabetes and Alzheimer's Disease.
- The Diabetes and Dementia Prevention Program (DDPP) is a research study that is looking at the potential of lifestyle changes to protect memory and thinking as we age. The study consists of control, diet and exercise intervention cohorts. The PI is **David K. Johnson**, associate clinical professor in the department of neurology.
- Ophthalmology professor **Glenn Yiu** is conducting a study on an early treatment for diabetic macular edema (DME) using a subthreshold micropulse diode laser (SML). This is a laser treatment that delivers laser energy in a "chopped" fashion allowing the tissue being treated to cool between pulses.



### Diabetes in the United States

(Centers for Disease Control)

- More than 37 million adults have diabetes, and 1 in 5 of them don't know they have it.
- Diabetes is the seventh leading cause of death.
- Diabetes is the No. 1 cause of kidney failure, lower-limb amputations, and adult blindness.
- In the last 20 years, the number of adults diagnosed with diabetes has more than doubled.

### Diabetes Eye Disease

(National Eye Institute)

People with diabetes may face several eye problems, including cataract, glaucoma, and diabetic retinopathy, which is the leading cause of blindness in American adults aged 20–74.

Diabetic Eye Disease treatment is 95% effective in preventing blindness when the condition is detected early.

### UC Davis Diabetes Programs

#### [Assess your risk for Type 2 Diabetes](#)

The sooner you know you have prediabetes, the sooner you can take action to reverse it and prevent type 2 diabetes.

#### [UC Davis Diabetes Prevention Program](#)

The group-based Type 2 Diabetes Prevention Program (T2DPP) at UC Davis includes 22 sessions during a 1-year period.

This program is open and offered at no-cost to UC Davis staff and faculty.

### UC Davis Health Online Classes

- [UC Davis Health Online Class: Preventing Diabetes – Living Healthy](#)
- [UC Davis Health Self-Management Classes \(includes diabetes management\)](#)



## Save the Date: Inaugural School of Medicine/School of Veterinary Medicine Research Day

### “Reaching Across the Causeway”

Wednesday, January 11, 2023 from 9 a.m. - 7 p.m. at UC Davis Conference and Events Center

Come listen to researchers from the Schools of Medicine and Veterinary Medicine present their current research and identify areas for cross-causeway collaboration. Breakout sessions will include presentations on:

- Aging and metabolic health
- Complex disorders spanning the gut-brain
- Stem cell, gene therapies and regenerative medicine
- Applications and implications of AI
- Advancing cardiovascular and lung health
- Neuroscience

Following the symposium, plan to join us for a poster session, wine and hors d'oeuvres.

For more information, please contact the School of Veterinary Medicine Office of Research and Graduate Education at [svmresearch@ucdavis.edu](mailto:svmresearch@ucdavis.edu) or School of Medicine Office of Research at [somor@ucdavis.edu](mailto:somor@ucdavis.edu).

## Follow UC Davis Health Research News

Get the latest UC Davis research news at this link:  
[health.ucdavis.edu/news/topic/research](https://health.ucdavis.edu/news/topic/research)

### Research in the News

- [UC Davis gets 15-million to develop and assess AI for breast cancer detection risk model](#)
- [Study finds earlier mammograms for women with family history of breast cancer may not be needed](#)
- [World's first stem cell treatment for spina bifida delivered during fetal surgery](#)
- [CDC grant to study risks of combined use of opioids and 'benzos'](#)
- [Studies show how skin forms differently across the body](#)
- [Breaking the loop leading to muscular fibrosis](#)



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