Meaningful vision science comes in many forms and ranges from very basic discoveries in the laboratory to applications of new knowledge in translation to the bedside, and from novel medical and surgical treatments by clinical trials to the study and report of disease trends in the population. The kaleidoscope of disciplines that make up the visual sciences demands far ranging expertise and calls for both basic scientists and clinicians working together. Fortunately, here at UC Davis, the Eye Center (http://ophthalmology.ucdmc.ucdavis.edu) has partnered with a remarkable collection of experts in vision over a number of departments both at the Health System campus as well as the University campus in Davis.

We take pride in the vision science community at UC Davis and its record of innovation and contribution. The vision team at UCD is now recognized as one of the most dynamic in the country. A sample of our scientific work is included in this brochure, and we look forward to the continued growth and productivity of our programs in the coming years.

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UC Davis now ranks as one of the largest centers for Vision Research in the United States. In 2012, 45 UC Davis faculty, with nearly $22M in grant support, studied all aspects of visual function, from molecular biology of the cornea, to visual cognition in the brain, from nano-engineering of the trabecular meshwork, to stem cell treatment for retinal disease, using tools from mathematics to molecular genetics, from biomedical engineering to psychology. This research support includes a National Eye Institute Training Grant, which supports the training of PhD students and postdoctoral fellows, as well as a National Eye Institute Core facilities grant, which provides support for core facilities dedicated to vision research. UC Davis is one of a very small number of institutions in the United States to have competed successfully for both of these prestigious awards.

The UC Davis Center for Vision Science (http://cvs.ucdavis.edu) brings together the top flight clinical care and clinical trials offered by the Department of Ophthalmology & Vision Science at UC Davis Medical School, the unmatched clinical strength of the Ophthalmology faculty in the UC Davis Veterinary School, and the extraordinary research base of the UC Davis campus, to make UC Davis one of the top 10 Vision Science centers in the nation.

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Ogata G, Stradleigh TW, Partida GJ, Ishida AT. Dopamine and full-field illumination activate D1 and D2-D5-type receptors in adult rat retinal ganglion cells. 2012. Journal of Comparative Neurology; 1 Dec; 520(10):4032-49.


GOshe JM, LI JY, MANNIS MJ. Author reply: Longer term vision outcomes and complications with the Boston type 1 keratoprosthesis at the University of California Davis. 2012. Ophthalmology; Jan; 119(1):203.


GOshe JM, LI JY, MANNIS MJ. Author reply: Longer term vision outcomes and complications with the Boston type 1 keratoprosthesis at the University of California Davis. 2012. Ophthalmology; Jan; 119(1):203.


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CENTER FOR MIND & BRAIN


Leonard CJ, Kaiser ST, Robinson BM, Kappenman ES, Hahn B, Gold JM, Luck SJ. Toward the neural mechanisms of reduced working memory capacity in schizophrenia. 2012. Cerebral Cortex; 1: June.


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Stern G. Chronic conjunctivitis Focus Series. Schwab I, Comment as consultant.


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Iwai L, Ohashi Y, van der List D, Usrey WM, Miyashita Y, Kawasaki H. FoxP2 is a parvocellular-specific transcription factor in the visual thalamus of monkeys and ferrets. 2012. Cerebral Cortex; 12 July.


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Pilli S, Zawadzki RJ, Werner JS, Park SS. Visual Outcome Correlates With Inner Macular Volume in Eyes With Surgically Closed Macular Hole; 2012; Retina; 32(10):2085-2095.


Zawadzki RJ, Ishida AT, Werner JS. Interpretation Of The Outer Retina Bands Seen On OCT and AO-OCT B scans. 2012. ISIE/ARVO Meeting Abstracts; Fort Lauderdale FL, USA. 5 May.

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