UPCOMING EVENTS

CME OPPORTUNITIES
DECEMBER 2014  Retina
FEBRUARY 2015  Neuro-Ophthalmology & Oculoplastics
APRIL 2015  Glaucoma

EVENTS
JANUARY 2015  Resident Case Presentations
APRIL 2015  USC Eye Institute Conference Days

Look for more details in our next issue of USC EYE INSTITUTE UP CLOSE. To learn more now or sign up, contact Jonathan Song, MD, at jonathan.song@med.usc.edu.
Stem Cell Research and Bioengineering Converge to Overcome AMD

Researchers at USC Eye Institute are working to restore vision to patients with advanced age-related macular degeneration (AMD). By growing thin sheets of stem-cell derived cells and surgically implanting them into the eye, they plan to replace diseased sheets in hope of restoring the retina’s critical light-sensitive cells.
The world's first retinal prosthesis reached another milestone on June 2, 2014.

Lisa Kulik, blinded by retinitis pigmentosa, became the first person on the West Coast to be implanted with the recently FDA-approved Argus II.

Surgery was performed at Keck Medical Center of USC, where development of the Argus began — and continues — with co-developer Mark Humayun, MD, PhD.

For USC Eye Institute, it was one more step toward eliminating blindness.

For Lisa Kulik, it was a miracle — celebrated by her ability to see Fourth of July fireworks.

“I’m confident there will be a cure for blindness down the road and it starts here.”
— Lisa Kulik

Argus II is comprised of an eyeglass-mounted camera that sends signals to an implanted 60-electrode receiver, which transmits them to the retina. Signals travel the optic nerve to the brain where they can be interpreted as a visual picture.
New Studies Expand Epidemiology of Eye Disease

Knowledge about the U.S. prevalence of eye disease among minority and vulnerable populations took another leap forward through studies recently published by investigator Rohit Varma, MD, MPH, director, USC Eye Institute.

African-Americans bear a heavier burden of diabetic macular edema, one of the leading causes of blindness in diabetic patients in the United States, according to a study led by Varma that was published online in JAMA Ophthalmology, August 14, 2014.

Latinos with Type II diabetes who have Native American ancestry are at significantly greater risk for developing diabetic retinopathy, according to a second study published in Investigative Ophthalmology & Visual Science on August 21, 2014.

By gathering data from defined patient groups, Rohit Varma and his colleagues identify risk factors, undetected disease and barriers to eye care to help the government set goals for preventive eye care and treatment.

VISION AT RISK: Diabetic Retinopathy (DR)

- Major Cause of Preventable Blindness Among American Adults
- 12.4 Million Americans have DR
- Significantly Greater Risk: Latinos with Native American Ancestry with Type II Diabetes
- More than 90% of DR patients avoid blindness with proper management
- Fewer than 35% of Latinos have annual eye exams and risk blindness

Metabolic Camera

USC Eye Institute clinician-scientists have developed technology that measures the molecular properties of eye tissue, allowing early detection of pathologic changes, without invasive procedures. In the image shown, concentrations of oxygenated blood around the optic nerve head are indicated by color-coding.

Neural and Brain Imaging

USC researchers and ophthalmology faculty Arthur Toga, PhD, and Paul Thompson, PhD, combine brain imaging and super computing to better understand how the brain functions. Their work on neural connections helps advance the development of new types of visual prostheses.

OCT

Carmen A. Puliafito, dean of the Keck School of Medicine of USC, received the Tónio Champalimaud Vision Award for his role in the discovery of optical coherence tomography (OCT), a breakthrough in eye imaging that has improved research, diagnosis and treatment worldwide.

INNOVATORS IN IMAGING

Jonathan Song, MD
Director, Cornea and External Disease
Medical School: UC Irvine School of Medicine; Internship: Harbor/UCLA Medical Center; Residency: LAC-USC Medical Center, USC Eye Institute; Fellowship: Children’s Hospital Los Angeles, USC Eye Institute

Vivek R. Patel, MD
Director, Neuro-ophthalmology and Adult Strabismus
Medical School: University of Saskatchewan; Internship: MUSC University; Residency: MUSC University; Fellowship: USC Eye Institute

NEW PROFESSORS

Jessie L. Berry, MD
Assistant Professor of Clinical Ophthalmology specializing in corneal and refractive surgery
Medical School: Harvard Medical School; Internship: Memorial Sloan-Kettering Cancer Center; Residency: LAC-USC Medical Center, USC Eye Institute; Fellowship: Children’s Hospital Los Angeles, USC

Alena Reznik, MD
Assistant Professor of Ophthalmology specializing in glaucoma, cataract and refractive surgery
Medical School: Johns Hopkins University; Internship: Johns Hopkins Hospital; Residency: Internal Medicine, UC Davis Medical Center; Fellowship: Ophthalmology, UC Davis Medical Center; Fellowship: USC Eye Institute

Sandy X. Zhang-Nunes, MD
Assistant Professor of Ophthalmology specializing in ophthalmic plastic and reconstructive surgery; cataract and retinal
Medical School: John Hopkins University School of Medicine; Internship: Transitional Year Resident; Wilmer Eye Institute; Residency: UCLA/Jules Stein Eye Institute; Fellowship: Ophthalmic Plastic and Reconstructive Surgery, UCLA/Jules Stein Eye Institute

FIVE NEW RECRUITS
JOIN USC EYE INSTITUTE

USC Eye Institute’s depth, breadth and expertise throughout the spectrum of eye care continues to expand with our newest recruits. Our faculty physicians serve patients in multiple locations in the Los Angeles area, including The Vision Center at Children’s Hospital Los Angeles.

NEW DIRECTORS

- Jesse L. Berry, MD
- Mark S. Borchert, MD
- Angela N. Buffenm, MD, MPH
- Gloria Chiu, OD
- J. Martin Heur, MD, PhD
- Mark E. Humayun, MD, PhD
- Amir Kasliwal, MD
- Jonathan W. Kim, MD
- Linda Lam, MD
- Thomas C. Lee, MD
- A. Lina Murphy, MD
- Sudha Nallasamy, MD
- Lisa C. Olmos de Koo, MD, MBA
- Vivek R. Patel, MD
- Carmen A. Puliafito, MD, MBA
- Narsing A. Rao, MD
- Bibiana J. Reiser, MD
- Alania Reznik, MD
- Neda Shamekh, MD
- Jonathan C. Song, MD
- Rohit Varma, MD, MPH
- Sandy X. Zhang-Nunes, MD

NEW PROFESSORS

- Neda Shamie, MD
- Mark S. Borchert, MD
- Jesse L. Berry, MD
- Gloria Chiu, OD
- Alena Reznik, MD
- Sandy X. Zhang-Nunes, MD
- Bibiana J. Reiser, MD
- Alania Reznik, MD
- Neda Shamekh, MD
- Jonathan C. Song, MD
- Rohit Varma, MD, MPH

USC Eye Institute is comprised of physician scientists in the USC Department of Ophthalmology of Keck School of Medicine of USC, The Vision Center at Children’s Hospital Los Angeles, and Los Angeles County + USC Medical Center.

Learn more about our physicians at Eye.KeckMedicine.org.