A first-of-its-kind stem cell-based treatment developed by UC Irvine researchers has received consent from the U.S. Food & Drug Administration and promises to ultimately provide therapies to address incurable diseases of the retina.

The treatment for retinitis pigmentosa was developed by UC Irvine’s Dr. Henry Klassen, Dr. Jing Yang and colleagues over the past decade. The trial will have up to 16 patients enrolled by year-end. It is the first to be held at UC Irvine to test a remedy created by the university’s stem cell researchers.

“This is a major milestone and the culmination of my long-term interest in harnessing stem cell technology to address the huge unmet medical need in the retina,” Klassen said. “Early on I identified retinitis pigmentosa as an ideal clinical target for neural stem cell transplantation.”

The team’s investigational treatment is intended to preserve vision in patients with retinitis pigmentosa (RP), an inherited disease that destroys light-sensing cells in the retina and eventually leads to blindness. The treatment intervenes at a time when degenerating photoreceptors (rods and cones) can be protected and potentially reactivated. The trial’s primary purpose is to determine the safety of a single injection of retinal progenitor cells into the eyes of patients with advanced RP, but the effect on ocular function will also be assessed.

Klassen is a UC Irvine associate professor and director of the Stem Cell & Retinal Regeneration Program in Ophthalmology at the Sue & Bill Gross Stem Cell Research Center. He said the eye is an important proving ground for stem cell-based therapies. “The retina is linked to the nervous system through the optic nerve,

continued on page 2
Research opens the door to our future

I’ve spent the last year as interim dean of the UC Irvine School of Medicine, during which time I had the opportunity to work closely with our dedicated teaching staff and motivated students. As inspiring as my work there has been, I’m delighted to return to my position as chair of the Ophthalmology Department and my work here at the Gavin Herbert Eye Institute.

My sincere thanks to Dr. Sumit (Sam) Garg and Dr. Baruch Kuppermann for their work as co-chairs in the past year. I’m happy that they will remain as vice chairs, furthering the important work of the department and institute.

I’m pleased to recognize the rewarding efforts of Dr. Henry Klassen, associate professor and director, Stem Cell & Retinal Regeneration Program, Ophthalmology, for the Sue & Bill Gross Stem Cell Research Center. Dr. Klassen’s decades-long research, which has led to a first-of-its-kind stem cell-based treatment for retinitis pigmentosa, prompted the U.S. Food & Drug Administration to approve it for use in a current clinical trial.

Dr. Klassen’s work also opens the door to new treatments for other degenerative eye diseases, such as macular degeneration and glaucoma. And the retina’s accessibility and close relationship to the nervous system make it an attractive proving ground for novel approaches to otherwise incurable diseases of the brain and spinal cord.

Dr. Klassen’s efforts are a perfect example of the next phase for the Gavin Herbert Eye Institute, as advancements in basic and translational research lead our team members to become world leaders in eye care.

I welcome you to discover more about the institute’s efforts in the study and treatment of the eyes.

Sincerely,

Roger Steinert, MD
Director, Gavin Herbert Eye Institute
Irving H. Leopold Professor of Ophthalmology

MESSAGE FROM THE CHAIR

Event Calendar
2015 Monthly Community Lecture Series
Gavin Herbert Eye Institute will offer free lectures about eye health. No registration is required, but seating is limited. Join us!

Third Thursday of each month | 5:30 to 6:30 p.m.
Gavin Herbert Eye Institute
3rd floor Conference Room
850 Health Sciences Road
Irvine, CA 92697
Parking is complimentary.

Aug. 20, 2015
Parkinson’s Disease and Vision
Dr. Chantal Boisvert

Sept. 17, 2015
Glucoma
Dr. Anand Bhatt

Oct. 15, 2015
Cataracts
Dr. Sumit (Sam) Garg

Nov. 19, 2015
Diabetic Eye
Dr. Mitul Mehta

Dec. 17, 2015
Dr. Jeremiah Tao

For more information about the Gavin Herbert Eye Institute Lecture Series, please contact marketing director Archana Kaushal at akaushal@uci.edu.

Faculty Members

Comprehensive Ophthalmology
M. Cristina Kenney, MD, PhD
Linda Lippa, MD

Cataracts, Cornea, External Disease and Refractive
Marjan Farid, MD
Vice Chair, Ophthalmal Faculty
Sumit (Sam) Garg, MD
Vice Chair, Clinical Ophthalmology
Roger Steinert, MD
Chair, Department of Ophthalmology
Irvine H. Leopold Professor of Ophthalmology
Director, Gavin Herbert Eye Institute
Matthew Wade, MD

Cataracts and Glaucoma
Sameh Morsad, MD
Anand Bhatt, MD

Neuro-Ophthalmology
Chantal Boisvert, MD
R. Wade Crow, MD

Oculoplastics
Jeremiah Tao, MD

Ophthalmic Pathology
Donald S. Minckler, MD

Pediatric Ophthalmology
Chantal Boisvert, MD
Robert W. Lingua, MD

Retina and Vitreous
Baruch Kuppermann, MD
Vice Chair, Academic Affairs

Research
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Make a donation to support the work of the Gavin Herbert Eye Institute.

North America: 855-559-6303
International: 714-856-1000

For more information, please visit www.gavinherbert.org.
but Mosaed was able to stop the glaucoma that had started to affect the other eye. Hannah's vision was spared. Mosaed placed tubes in each of Hannah's eyes to help drain any excess fluid, and prescribed daily eye drops to keep the glaucoma at bay.

"The prognosis for Hannah is excellent," Mosaed said. "There is no reason why she shouldn't maintain her vision for her lifetime."

Hannah wears glasses when she needs to read or focus, but has good enough vision to do all her favorite activities, such as acting, singing and playing on her school volleyball team.

"I totally trust Dr. Mosaed," Lisa Lindsay said. "She's been phenomenal, and the treatment Hannah's received has taken care of her issues. It's hard seeing your child go through an operation, but the benefits far outweigh the risks. Hannah's progress is good because of Dr. Mosaed."

Mosaed still checks in with Hannah every few months to make sure her condition is stable.

"She gives me a big hug every time I see her," Mosaed said.

**Patients give thanks on National Doctor’s Day**

Gavin Herbert Eye Institute invited patients to send messages to their doctors in recognition of National Doctor’s Day on March 30. Their messages were sincere reflections of the care our doctors provide every day.

Baruch Kuppermann, MD
"Thank you so much for your great care given to my mother."

Stephanie Lu, MD
"Happy to be your patient; I much appreciate your knowledge, your devotion to your work, and your friendly and ever-energetic engagement with your patients. My heart felt thanks to you."

Jeremiah Tao, MD
"Your kindness and care are something that I will always remember. You are a remarkable doctor and person -- thank you sincerely."

Roger Steinert, MD
"Your kindness and care are something that I will always remember. You are a remarkable doctor and person -- thank you sincerely."

Mitul Mehta, MD
"You are kind and know how to make me comfortable. Thank you."

Matthew Wade, MD
"Thank you for restoring my perfect vision. I had no idea that a rogue cell would return, but after your hard work, I'm back! Thank you."

Marjan Farid, MD
"Thank you for all you are doing for my eyes. Very positive!"

Sumit (Sam) Garg, MD
"Thank you for my 'new eyes!' You have always been so patient and kind. I appreciate all you have done and I am glad that I am in your care."

If you missed Doctor’s Day, you can still make a gift in honor of your doctor. For more information, call Karen Kirkbride, Health Advancement assistant director of development, at 949-824-1677.

Ten-year-old Hannah Lindsay was born with oculodentodigital dysplasia, a rare disease typically marked by webbing between the fingers, a slender nose and small eyes.

Her mother Lisa regularly took Hannah to see an eye specialist, but got worried when her daughter, then 5 years old, started inexplicably tripping over things. She thought it was just "typical kid stuff"—never suspecting it would be something more serious.

Hannah was referred to UC Irvine Health pediatric ophthalmologist Dr. Robert W. Lingua, who immediately diagnosed her with glaucoma and optic nerve issues. Lingua consulted with glaucoma specialist Dr. Sameh Mosaed, who determined Hannah would need surgery right away.

"Glaucoma causes intense pressure to the eye, and can irreversibly damage the optic nerve," Mosaed said. "Timing is crucial to relieving that pressure before the patient loses her vision entirely."

The optic nerve was already damaged in Hannah’s left eye, but Mosaed was able to stop the glaucoma that had started to affect the other eye. Hannah’s vision was spared. Mosaed placed tubes in each of Hannah’s eyes to help drain any excess fluid, and prescribed daily eye drops to keep the glaucoma at bay.

"The prognosis for Hannah is excellent," Mosaed said.

"There is no reason why she shouldn’t maintain her vision for her lifetime."

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Q&A: Dr. Chantal Boisvert

Our new pediatric neuro-ophthalmologist addresses kids’ eye issues, tricks of the trade and when to call a specialist.

Dr. Chantal Boisvert recently joined the Gavin Herbert Eye Institute staff. She specializes in neuro-ophthalmology and pediatric ophthalmology. In addition to providing care to the institute’s patients, Dr. Boisvert teaches ophthalmology to UC Irvine medical students. Here she answers questions regarding eye care, disease diagnosis and care for our youngest patients.

What is neuro-ophthalmology?
This is a specialized field that merges neurology and ophthalmology, looking at vision problems that are related to the nervous system and brain function. Examples of neuro-ophthalmologic conditions include optic nerve problems, double vision, unequal pupil size and unexplained vision loss.

What are the most common problems you see in young children?
There are many eye conditions and diseases that can affect a child’s vision. We estimate that between 2 and 4 percent of children have strabismus—a condition in which the eyes are not properly aligned. Early diagnosis and treatment are critical in order to avoid amblyopia. Amblyopia is decreased vision in one or both eyes that occurs when the nerve pathways between the brain and the eye are not properly stimulated. Amblyopia is the leading cause of vision loss among children. One of the most important treatments of amblyopia is having the child rely more on the weaker eye, via patching or eye drops, to blur the better-seeing eye.

What are some of the other vision issues parents should be aware of?
Refractive errors are the most common cause of vision problems among school-age children. If a child has trouble reading or holds objects close to the eyes to see, it could be a sign that glasses are needed.

Many times parents are the first to notice a white pupil in photos. That can indicate a refractive error, eye misalignment, cataract or even a tumor. This sign should be taken seriously. The parents need to call us immediately if they see a white pupil.

When should parents have children screened by eye specialists?
Pediatricians and family practitioners perform vision screening at regular well-care office visits. If a child fails a vision screening at any age, the child should be referred for a comprehensive eye examination. If the parents see one of their child’s eyes looking inward or notice any other things that concern them, they should consult with a physician rather than wait. A child is never too young to be seen by an eye doctor.

How is the eye examination for children different from an exam for adult patients?
Babies and young patients are not able to remain still or respond to directions from a physician, as adult patients do. The physician needs to have some “tricks” to deal with the youngest patients and needs to be super quick in order to assess the vision and see into a child’s eye. We don’t use the same instruments or the same diagnostic tools as we do with adults. We often use toys or flashing lights to grab the child’s attention. Stickers on our nose are also very helpful when looking at eye movement problems.

What’s the prognosis for children who are diagnosed with vision problems?
It depends, of course, on what the issue is. As a general rule, the earlier a problem is detected, the better the chance to obtain maximal vision through appropriate treatment.
Coming to a neighborhood near you!

One in three preschoolers experiences some form of vision difficulty. Eighty percent of these issues are treatable, but early identification is the key.

The Gavin Herbert Eye Institute Mobile Vision Unit, nicknamed “Seymour,” provides on-site vision screenings for children 0 to 5.

To learn more, call 949-824-1811

Please visit www.eye.uci.edu or call 949-824-2020 for more information or to unsubscribe from this newsletter.

Make an appointment
Gavin Herbert Eye Institute
850 Health Sciences Road
Irvine, CA 92697
Appointments: 949-824-2020
Optical Shop: 949-824-3260

UC Irvine Medical Center
101 The City Drive South, Pavilion II
Orange, CA 92868
Appointments: 714-456-7183

Make a donation
To learn more about how you can support us, contact Janice Briggs, executive director of development, at 949-824-0091 or jbriggs@uci.edu.

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- ucirvinehealth.org/eye
- www.eye.uci.edu
- facebook.com/gavinherberteyeinstitute