

Vision *for the* Future

UNIVERSITY OF ROCHESTER

FLAUM EYE INSTITUTE

SPRING 2014 NEWSLETTER

A Remarkable Headache Cure

“On a scale of 10, my headaches were a 12,” Lynn Nulton-Lehning said. “As far as I’m concerned Dr. Feldon is a miracle worker.” Nulton-Lehning is a miracle herself. Approximately seven years ago she visited her doctor for treatment of depression. A routine CT scan revealed why she had been feeling ‘out of it’. A fist-sized brain tumor was threatening her life. She was immediately sent to emergency and admitted to Strong Memorial Hospital. During her stay she even slipped into brief coma. Her neurosurgeons scheduled a frontal craniotomy when she became strong enough to endure the operation.

The surgery to remove the tumor was successful but left Nulton-Lehning with a droopy forehead and numbness around her eyes. The drooping was likely caused by the original procedure and additional surgery needed to install a protective plate in her skull where bone was removed. During the recovery and rehabilitation process, her headaches began to occur.

“After the third surgery, the headaches became more frequent and painful,” Nulton-Lehning said. “I had to have babysitters take me to and from appointments; it was a big change. I used to manage five funeral homes and now I couldn’t do simple tasks. The headaches seemed to be triggered by stress or they occurred later in the day.

As part of her care, Nulton-Lehning had been seeing FEI well eye care specialist **Jill Schafer, O.D.** Schafer had been following Nulton-Lehning since 2009, making sure that there were no more



visual problems related to the tumor that had once been pressing on her optic nerve. Because of the headaches and a description of numbness around her eye, Schafer recommended that Nulton-Lehning see FEI neuro-ophthalmologist and orbital surgeon **Steven Feldon, M.D.**

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Investing on the Ground Floor

Starting an institution like the Flaum Eye Institute can be a risky proposition. Not every academic enterprise can be successful, even with the support of a major University and help from local industries. In many cases it takes philanthropy to achieve growth and maintain momentum. Although philanthropy is always very important to achieving an institution’s mission, perhaps no one is more crucial than the pioneer supporter who invests in an idea. During FEI’s formation and early growth, such was the case with the **Glover-Crask Charitable Foundation**.

Recently, Glover-Crask surpassed the million dollar mark in its support of FEI through consistent and generous funding. The foundation originally became interested in the Eye Institute in 2002. Ophthalmology Department Chair **Steven Feldon, M.D.** had recently arrived and begun his ambitious plan to make Rochester a national center for ophthalmology research, education and patient care. At that time, Glover-Crask had been underwriting ongoing projects at the Medical Center. Trustee **George F. Harris** saw a need for world class vision care and research in Rochester and decided to get involved.

Since the initial \$150,000 gift, the trust has supported ongoing projects at FEI through

We are so impressed with the growth of the Flaum Eye Institute . . .

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The Flaum Eye Institute is highly dependent upon growing its endowment as a means of pursuing its mission to prevent blindness and restore vision. The interest generated from these funds provides a measure of fiscal stability and predictability in the ever-changing environment of academic medicine. In our last issue, I was proud to announce the first ever endowed Professorship in Ophthalmology at the University of Rochester School of Medicine & Dentistry, the Adeline Lutz Professorship awarded to **Steven S.T. Ching, M.D.** Grateful patients, alumni, and colleagues have pushed the endowment past the \$2 million mark, elevating the status to that of "Distinguished Professorship." I offer my personal, heartfelt thanks for your support in this endeavor.

Giving credence to the adage that everything happens in "threes", I'm delighted to announce the formation of two additional Endowed Professorships of Ophthalmology, both to be funded through the generosity of our esteemed fellow faculty member, **James V. Aquavella, M.D.** These professorships are also supported by a \$250,000 estate gift from grateful patient **Christopher Battaglia** (page 5) who was a lifelong dry eye sufferer and Aquavella's patient. Dr. "A" himself now holds the **Catherine E. Aquavella Distinguished Professorship**, given in memory of his late wife, and the **James V. Aquavella Professorship** will be bestowed later in the academic year. As one of the largest gifts to the Flaum Eye Institute, these two Professorships will facilitate the recruitment and retention of the best and brightest ophthalmology faculty in perpetuity. In our next issue, you will learn more about this incredible demonstration of generosity and of Jim's and his late wife Kay's many contributions to ophthalmology and the Rochester community. I would also like to recognize the philanthropy of the **Glover-Crask Charitable Trust** (cover).

This long-time supporter of FEI recently surpassed the million dollar mark in giving to the Flaum Eye Institute. The Trust was one of the earliest investors in our vision to create a world-class facility dedicated to eye research, education, and patient care in Rochester.

Our research has recently received an additional boost as two of our outstanding basic scientists have received National Eye Institute funding for their important endeavors (page 8), **Lin Gan, Ph.D.**, is working to better understand how certain retinal cells form during development, and **Richard Libby, Ph.D.** is unlocking genetic transcription pathways that result in blindness from glaucoma. Each of these investigations lays a scientific foundation for future improvements in our ability to diagnose and treat blinding diseases.

Translational eye research is an area of emphasis for the Flaum Eye Institute. We are thrilled that **Geunyoung Yoon, Ph.D.**, received a patent for his ongoing efforts to move research from idea into reality and from the lab into clinical practice. He has developed a new optical coherence tomography device (OCT) that provides excellent simultaneous resolution of the ocular surface and deeper areas of the eye. Not only will this OCT technology be useful in his efforts to create better optics for the aging population, it may prove useful to companies that manufacture diagnostic imaging equipment.

Success in our mission is a tribute to our faculty and staff who have embraced FEI's aspirations as a learning organization. As part of the learning organization efforts, a very important role has been assigned to the new Patient Family Centered Care Committee (back cover). Its goal is to provide visitors to FEI with the best possible experience. And we continue to provide education and training for staff through daily activities and events

like our annual ophthalmology conference (page 10) which provides skills updates for our technicians, nurses, staff and clinicians.

The dedication and trust of our faculty and staff, donors and patients enables us to be proactive and vigorous in our pursuit of excellence in all that we do to create our Vision for the Future.

Sincerely,



Steven E. Feldon, M.D., M.B.A.

Director, David and Ilene Flaum Eye Institute

Chair, Department of Ophthalmology
University of Rochester
School of Medicine & Dentistry



VISION

The Flaum Eye Institute is a world leader in preserving and restoring vision, providing the most advanced research, education, and technology development, coupled with compassionate, expert, patient care.

Ching Becomes Distinguished Professor of Ophthalmology

Steven S.T. Ching, M.D., was recently installed as the inaugural Adeline Lutz Distinguished Professor of Ophthalmology. In attendance at the celebration were his family, friends and colleagues as well as University of Rochester President Joel Seligman, Medical Center CEO Bradford C. Berk, M.D., and School of Medicine Dean Mark Taubman, M.D.

Thanks to an estate gift from the late Adeline Lutz, University support and a groundswell of generosity from Ching's former patients,

colleagues and students, the campaign raised more than \$2 million. This is the first endowed professorship for the Eye Institute and recognizes Ching's lifelong commitment to patient care and student training.

Eventually, the professorship will bear the Ching-Lutz name. Future holders of the distinguished professorship will be selected for their outstanding contributions to FEI's missions.



LEFT TO RIGHT: MARY CHING, STEVEN CHING, NAOMI AND SANDY KENNEDY.



BRADFORD C. BERK AND STEVEN CHING.



LEFT TO RIGHT: MARK TAUBMAN, BRADFORD C. BERK, STEVEN CHING, STEVEN FELDON AND JOEL SELIGMAN.

FEI in the Community

FEI continues extending a friendly hand into the region, bringing eye healthcare and education to the community with lectures and screenings. FEI would like to thank all the faculty, staff, students and volunteers who helped out at the following events:

SEPT. 7: First-year resident Amit Sangave, M.D., and six medical students were at the Rochester Public Market to provide glaucoma screenings at the Annual Rochester Women's Health Fair. Nearly 50 people were screened for glaucoma and other diseases affecting the eye. Each screening took 10 minutes. Patients were given test results and advice about next steps to take. Not only do vision screenings help some of Rochester's most vulnerable citizens, they help introduce medical students to careers in ophthalmology.

OCT. 19: Rajeev Ramchandran, M.D., M.B.A., and Vanessa Desmore manned a table at the annual Step Out Walk to Stop Diabetes. They answered questions and handed out literature telling people about the risks for developing eye disease associated with diabetes. Ramchandran, a retinal specialist, is an advocate for diabetic eye care and the principal investigator for a Greater Rochester Health Foundation grant to use telemedicine for the diagnosis and treatment of the disease in our community.

NOV. 26: Nearly 30 members of the FEI Graves' Disease Support Group attended and shared their experiences in coping with thyroid eye disease. FEI Chair Steven Feldon, M.D., provided an update on thyroid eye disease research including a new clinical study beginning at the Eye Institute. This group is led by FEI patient Patricia Marino, Ph.D., who wanted to provide a forum for people suffering from Graves'.



RAJEEV RAMCHANDRAN, M.D., M.B.A.

IF YOU ARE INTERESTED IN...

inviting one of our faculty members to speak about eye health topics, starting a support group related to eye disease or scheduling a glaucoma (or other type of) screening, please contact Steve Kofron at 585-275-3977.

We'll do our very best to accommodate your request.

ADVANCING THE VISION

A MOST GRATEFUL THANK YOU TO OUR DONORS FOR THEIR GENEROUS GIFTS AND ONGOING SUPPORT.

The David and Ilene Flaum Eye Institute is most grateful to its donors for their generous gifts and ongoing support. We are especially appreciative to the friends, patients, alumni and faculty who contributed to our Annual Fund. The Annual Fund is an essential source of funding that will help us to continue our groundbreaking work in vision care and research. This year, your donations had a direct impact on our mission, helping us recruit new faculty and purchase new equipment for our clinic and research laboratories.

The following donors have contributed in various ways to FEI between May 1, 2013 and November 30, 2013. Gifts can be designated to the Annual Fund and mailed to: **Jennifer Richardson**, Director of Advancement, FEI, 210 Crittenden Blvd., Box 659, Rochester, NY 14642.

Or make a gift online by going to eyeinstitute.urmc.edu and clicking on **"Ways to Help"**.

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Dr. Andrew M. Norris '86 (Res)
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Diane H. Ogawa
Dr. Robert L. Olsen '81 (MD), '85 (Res)
Eleanor Palmitesso and Carl Pamlitesso
Pamela J. Paris and Andrew L. Paris III
Mark R. Pignagrande

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(Res) and Dr. Barry B. Platt '86 (PDC)
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and Diana C. Soures '68, '71 (MA)
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Lindsey M. Yu
Joan Zummo

NOT-FOR-PROFITS

Catholic Charities of Onondaga County
United Way of Greater Rochester

* deceased

We offer special thanks to Bausch + Lomb, Research to Prevent Blindness, Glover-Crask Charitable Trust, David & Ilene Flaum, and the late Lynn & Walter Lutz for their sustaining support.

A Generous Appetite for Giving

"Chris had a great laugh and a beautiful smile," his aunt, Lucille Marcera, said. "Plus, he had an enormous appetite for such a slim man."

He also had a big appetite for generosity. It wasn't something many knew about him. Sadly, **Christopher Battaglia** died of cancer in early 2012. The Flaum Eye Institute was the recipient of a quarter-million-dollar gift from his estate, supporting the clinical and research efforts of his long-time ophthalmologist and FEI cornea specialist **James V. Aquavella, M.D.**



CHRISTOPHER BATTAGLIA AND HIS MOTHER FRANCES MARCERA.

"Not a lot of people know this, but Chris was one of the first Americans to use daily wear soft contact lenses," Aquavella said. "When he first came to me he was suffering from debilitating dry eye. It was the mid-70s and I was in private practice while doing cornea research at the University of Rochester. We fit him with therapeutic hydrophylic lenses to protect the surface of his eyes. Using a prophylactic antibiotic, he would wear the lenses continuously for the next 35 years. They allowed him to function."

Early on in his therapy, the Eastman Kodak Co. manufacturing programmer did extremely well. A very conscientious person, Aquavella

called him the ideal patient because he followed his treatment instructions to the letter. This allowed him to continue to do the things he liked.

"Chris loved to play golf," Marcera said. "He played in leagues and would get out on the course at every opportunity. He also enjoyed playing cards with his uncles. Over the years, his dry eye got worse and he had to give up golf because of all the irritants in the air, but he found other things to do. For instance, he became an expert in making 3-D puzzles. If you go to the Strong Museum of Play in Rochester, you can find four of his creations on display."

"Over the years, Chris became interested in Dr. Aquavella's work with blind infants," Marcera continued. "It didn't surprise me or my husband when we heard about the estate gift to the Flaum Eye Institute. We kind of knew it was something he wanted to do and how much he admired Dr. Aquavella and the way he kept on the leading edge of medicine."

Marcera said that her nephew wasn't widely known for public philanthropy, but was always very generous with family in need. He amassed a substantial estate during his career, half of which went to the Eye Institute.

"This gift came out of the blue," Aquavella said. "He was a quiet person and I remember he used to come in with his mother before she passed. This is an incredible gift and it means the world to me and FEI. The investment Chris made in ophthalmology will honor his memory."

CONTINUED FROM THE COVER

Investing on the Ground Floor

annual fund donations and an additional gift to the ophthalmology research equipment fund to provide support for FEI's basic scientists. Currently Glover-Crask is managed by **John Harris**, who plays an active role in guiding the Eye Institute's progress as a member of its advisory board.

"We are so impressed with the growth of the Flaum Eye Institute and what it means to Rochester," said Harris. "The investment we made has generated a great return through services provided and research conducted at FEI and we hope to provide future support. One of our current goals is to work on getting children out from underneath. There are so many kids today with incredible potential, but they are limited by their circumstances. We're looking for ways to make a difference in the lives of these children and help them become productive members of our community."

As part of FEI's community outreach committee, Harris is helping to marshal resources to start a program that provides high-quality eyeglasses to disadvantaged youth at a nominal cost. The idea is that children

who have simple refractive error are hampered in their academic and social development because they can't see well. Providing quality eyewear is one of a number of steps in giving these children the confidence and the tools that they need to succeed in life.

FEI is grateful to **Glover-Crask** for its support. Without visionaries like **George and John Harris**, FEI's current mission may be left unfulfilled. Thanks to the foundation's generosity and the kindness of others, we are able to provide outstanding care while working on new ways to diagnose and treat blinding diseases.

The Glover-Crask Trust was founded by Ethel and Fred Glover in the 1990s. The couple maintained a modest suburban life together and invested wisely. With no children or close relatives, they decided to create a trust that would keep their generous spirits alive by investing in non-profit organizations within Monroe County and the surrounding region.

A LEGACY OF REMEMBRANCE:

FEI Professor's Gift to Ophthalmology:

Professor of Ophthalmology **James V. Aquavella, M.D.** recently pledged more than \$4 million to the Flaum Eye Institute.

The gift will support two endowed professorships at the School of Medicine and Dentistry:

The Catherine E. Aquavella Distinguished Professorship in Ophthalmology



The James V. Aquavella, M.D., Professorship in Ophthalmology.

Our next issue of *Vision for the Future* will feature photos from the installation ceremony and an in-depth interview with Dr. Aquavella.



A Remarkable Headache Cure

“When Lynn came to me she was suffering from severe headaches,” Feldon said. “Her neuro-ophthalmic exam was unremarkable except for brow ptosis. The condition is characterized by a sagging brow line and happens because the attachments of the muscles that connect skin to the facial bones weaken. This can occur with aging or, as in Lynn’s case, multiple surgeries related to her brain tumor.”

According to Feldon, brow ptosis can cause painful headaches. “With Lynn, the upper muscles of her upper face and scalp were constantly contracting just to keep her eyes open,” Feldon said. “This led to painful spasms that manifested as muscle contraction headaches. As the day wore on, those muscles would become more fatigued and the frequency and severity of the headaches increased.”

Feldon and Nulton-Lehning discussed surgery to correct her brow ptosis and that the condition was a likely cause for her headaches. After a follow up visit to do some more testing and confirm that the neurosurgeons had no further procedures planned, Lynn was cleared for surgery. However, for personal reasons, she decided to delay the procedure.

“After all I had been through, I just wasn’t ready to go to the operating room again,” she said. “Instead I decided to go with pain management therapy to treat the headaches.”

During the next 16 months, Nulton-Lehning underwent a variety of medical treatments to manage her pain including receiving botox injections to block migraines. Although therapy provided some relief, the headaches eventually won out.

“At one time I had 15 doctors working on me” (including Feldon and Schafer), Nulton-Lehning said. “During this past summer it just got so bad. Nearly everything would trigger a headache: bending over, looking down, you name it. I threw a birthday party at my house for a good friend after my first tumor surgery and I missed half of it because I had to go to bed. This past summer I spent most of July in bed. I didn’t get up because it was too painful. I just had to do something, so I ended up back in Dr. Feldon’s office. He said ‘let’s put your eyebrows back on your eye bones.’ After a year of therapy and pain medications, I had almost lost hope. I was finally ready for surgery.”

Feldon performed what he described as a routine operation. But for Nulton-Lehning the results were remarkable.

“It was almost immediate,” she said. “It really was a miracle. So far my headaches are gone; I think the surgery must’ve done the trick. I can’t thank Flaum Eye Institute enough. Dr. Feldon and everyone there — right down to the technicians — have been so nice and caring. When I was first referred to Dr. Schafer and Dr. Feldon I was so happy,” Nulton-Lehning continued. “My father was a lifelong patient of Dr. Aquavella, so I had a lot of trust going in. I’m looking forward to moving on without these excruciating headaches.”

Feldon said that surgical correction is currently the only therapy for muscle contraction headaches caused by brow ptosis. He also said that the results of the procedure are likely permanent. However, should Nulton-Lehning’s condition recur, it can be repeated. For Nulton-Lehning it opens a new chapter in her life.

“I’m so grateful for all the thoughtful care that I’ve received — from the treatment of the tumor that saved my life to the joy of living without this pain,” Nulton-Lehning said. “I’m looking forward to tapering off some of the medications that I’ve been taking. I can’t wait to play a round of golf (a sport she’s played since childhood) and get into my gardens. I love to garden, but I couldn’t do it because of the pain. It’s something I’ve really missed.”

About Brow Ptosis

Brow ptosis is the medical term for a drooping brow. Minor differences between the two eyes and area around the eyes can be obvious and can affect facial expression significantly. Sometimes brow ptosis is present along with other problems, such as eyelid ptosis (a droopy eyelid) or dermatochalasis (excess skin) making the problem more noticeable.

Brow ptosis is usually a result of the aging changes that affect the forehead muscles and soft tissue. It may also occur as a result of other conditions such as facial palsy, trauma or surgery that can affect the muscles of the face. A person with brow ptosis may have diminished field of vision. In instances like Lynn Nulton-Lehning’s, debilitating headaches may occur as other muscles of the face try to compensate to keep the eye fully open.

In most cases, an oculoplastic surgeon will conduct an evaluation to determine the amount of vision loss the patient is experiencing and determine if there are other conditions/disease that need to be addressed. When visual field loss or facial asymmetry is severe enough, surgery is the most effective treatment.

There are several approaches to brow lift surgery. Depending on medical necessity, insurance may cover the costs of the operation. Surgery is usually performed on an out-patient basis using local anesthesia and sedation. Recovery time is generally 2 to 3 weeks, and the patient should avoid strenuous activity. Usually, no additional surgeries are needed, but the procedure can be repeated.

To learn more about eye disease, please visit eyeinstitute.urmc.edu and click on our library of animations describing many diseases and conditions and their treatment.

Finger Lakes Branch Opens Doors to Community

In July, the ribbon was officially cut at an open house at the Flaum Eye Institute Finger Lakes Center in Geneva. More than 150 people from as far as Penn Yan and Newark came to welcome FEI clinicians who now provide comprehensive ophthalmology and sub-specialty retina and pediatric care there. The picnic-style event provided an opportunity for new patients and existing patients from the practice to enjoy an afternoon that was highlighted by an optical shop sidewalk sale and a wine tasting under a tent.

David and Ilene Flaum were joined by New York State Senator Michael Nozzolio, Geneva Town Supervisor Luckern and James Smith from U.S. Representative Tom Reed's office who each



RIBBON-CUTTING AT THE OPEN HOUSE AT 738 PRE-EMPTION ROAD IN GENEVA.

offered expressions of welcome and gratitude. FEI faculty represented at the ribbon cutting included Steven Feldon, M.D., Harold Ross, M.D., Christian Klein, M.D., Benjamin Hammond, M.D., and David DiLoreto, M.D., Ph.D. Very special thanks go out to Ravines Wine Cellars, Goose Watch Winery and Swedish Hill Vineyards for providing the wine tastings.

FEI extends its appreciation to the staff who volunteered to make the event a success. Since the open house, FEI has added another provider, Chester Scerra, O.D., to the team. Scerra provides routine eye exams and performs contact lens fittings. Coming soon will be details about a clinical space expansion this location.

www.EyeInstitute.urmc.edu
(585) 273-EYES

Additions at FEI Finger Lakes Center

Kimberly Schulwitz recently joined FEI Finger Lakes Center as administrator. She brings years of experience in healthcare and finance to the Flaum Eye Institute. Most recently Schulwitz was branch manager of a national home health company where she oversaw the day-to-day operations of its 200 plus field and business staff. Schulwitz looks forward to helping FEI Finger Lakes team provide outstanding routine and specialty eye care as it continues to grow its presence in the region.

The Geneva staff also welcomes licensed optician Gordon Lambiase. He will rotate between FEI Finger Lakes and the main campus at the University of Rochester, fitting and dispensing glasses. Lambiase recently worked as an optician at Lifetime Health and America's Best.

Vision Dinner Turns Four

FEI board member Ronald Billitier hosted the 4th annual vision dinner in September to raise funds for FEI and bring awareness about its vision research and patient care. This year's event raised more than \$39,000 to fund the purchase of a new Zeiss Visulas laser at FEI's Finger Lakes Center. The laser will be used to provide treatment to people suffering from retinal disease, secondary cataracts and glaucoma.

FEI extends its sincere thanks to Ronald and Jessica Billitier and to all those who attended and bid on silent auction items. Thanks also go to the Inn on Broadway for hosting the event and providing auction items. Plans for a fifth dinner are being made and an announcement will be forthcoming.

National Eye Institute Renews Grant to Study Glaucoma

Vision loss in glaucoma is caused by the death of nerve cells in the retina called retinal ganglion cells (RGCs). The National Institutes for Health recently awarded FEI's **Richard Libby, Ph.D.**, more than \$1.7 million to better identify critical molecules that lead to RGC cell death in glaucoma: (EY018606-064). Libby's research shows that some of the

RICHARD LIBBY, PH.D.



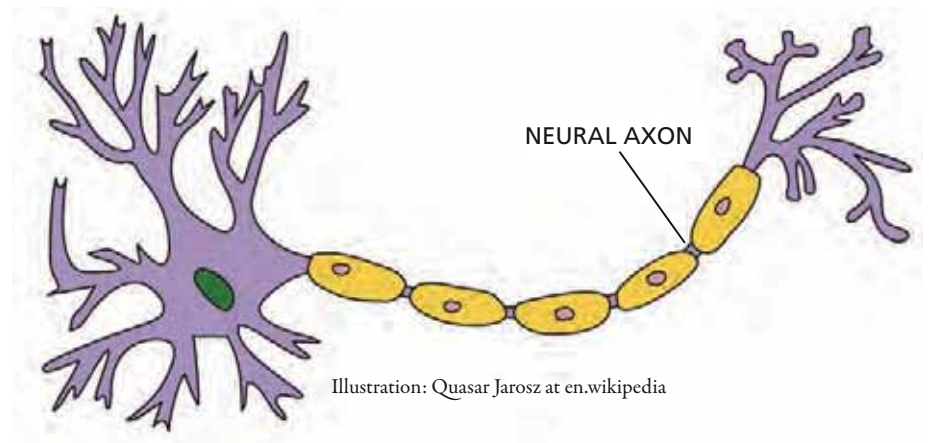
earliest changes in glaucoma occur to the axons of RGCs. Axons are long slender fibers that transmit information between nerve cells and other types of cells. Identifying the signaling pathways that initiate these changes is an important step in understanding glaucoma and other disorders disrupting the normal function of axons.

Following axonal injury, certain molecular relay events begin to occur and are among the first changes in glaucoma. These signals likely initiate a series of fate-determining events in the RGCs' axons

and cell bodies. Libby has demonstrated that these upstream events trigger a certain family of enzymes called c-Jun N-terminal kinases, (JNKs) that are activated in RGC axons soon after injury. JNKs are important mediators of axonal injury-induced RGC death, and RGC death is dependent on activation of JNK and a related transcription factor JUN. Libby's research proposes to determine the following:

- The JNK dependent events that control RGC death after a glaucomatous injury
- If the activation of the transcription factor JUN is required for glaucomatous RGC death
- The identity of the axonal injury-induced molecules, called kinases, that control JNK activation and axon degeneration in glaucoma

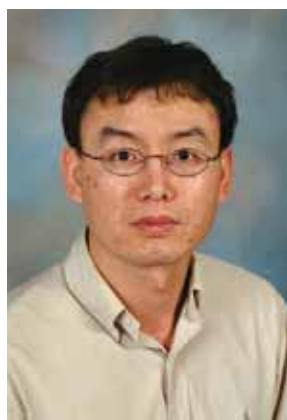
This research may define new molecules fundamental in the axonal injury and degeneration cascade and identify molecular events that are early in the glaucomatous injury signaling cascade. This could help determine targets for therapeutic intervention leading to new methods to stop RGC cell death before vision loss occurs.



Grant to Fund Basic Understanding of Retinal Cell Formation

FEI laboratory scientists frequently do leading-edge research targeted at understanding how our vision works at the most basic cellular, genetic and molecular levels. These investigations lay the foundation for future discoveries that may have clinical applications as new therapies or diagnostic technology.

Lin Gan, Ph.D. was recently awarded more than \$400,000 by the National Institutes of Health to study the effects of a genetic transcription factor BARL2 in the development of retinal amacrine cells: (EY023104-02). Accurate vision depends on the proper distribution of cell types as the eye develops. This process is called mosaic patterning and tiling. Gan hypothesizes that BARL2 may help identify the genetic pathways responsible for regulating mosaic patterning and tiling in the developing eye and show the role that BARL2 plays in this process. Discovering the mechanism of this process could pave the way for future studies to understand the genes and genetic pathways that govern the formation of functional neural circuitry. This could eventually play a role in developing better screening methods and treatments for genetic diseases of the retina.



LIN GAN, PH.D.

New Technology to Study Age Related Changes to Eye Patented

FEI's **Geunyoung Yoon, Ph. D.**, was recently awarded U.S. patent 8,608,314 for "Scanning Optical System for a Large Axial Scan Depth Anterior Segment Optical Coherence tomography (OCT)." This type of system is important to understanding the eye's ability to accommodate (change focus between near and far). The ability to accommodate decreases with age, which is why nearly everyone over the age of 50 needs glasses for reading.

This new invention will help scientists and doctors measure the ability of the eye's natural lens, to change shape with accommodation, measure age-related changes in the lens, and understand the efficacy of artificial accommodative lenses associated with premium cataract surgery. The device overcomes the limitations of current commercial grade OCT systems, which do not provide simultaneous resolution of the cornea and the deeper areas of the eye's anterior segment. Yoon's system solves this problem by splitting the light needed to image the eye into separate beams, allowing for greater depth of field.

NEWS BYTES

Shakeel Shareef, M.D., in June, contributed the cover story to *Glaucoma Today*.



SHAKEEL SHAREEF,
M.D.

“Glaucoma Associated with Granulomatous Diseases,” reviewed the diagnosis and treatment of sarcoidosis and associated secondary glaucoma. Shareef also recently collaborated with **Ike Ahmed, M.D.**, and **Hady Saheb, M.D.**, presenting an overview of microinvasive glaucoma surgery in *Expert Reviews in Ophthalmology*. Shareef followed this up with a book chapter on *The Hydrus Microstent* in the recently published *Surgical Innovations in Glaucoma* (*Ike Ahmed, M.D.; John Samples, M.D., editors; 2014*).

Shareef also recently served as a certified wet lab course instructor for the “iStent” at the **Robert Oscher’s “Cataract Surgery: Telling It Like It is”** annual course providing attendees tips and surgical pearls on successfully performing angle surgery. In collaboration with **New World Medical Inc**, Dr. Shareef has also produced an instructional video on a step-by-step successful surgical implantation of the M4 Drainage implant. It will be available as a DVD to attendees at the upcoming ASCRS 2014 meeting, posted on the web, and to be distributed to all ophthalmology residency programs involved in wet lab training of tube shunts.

FEI’s John Meade was recently elected President of the University Administrators of Ophthalmology (UAO).

The group’s mission is to improve the performance of ophthalmology departments in academic medical centers and other accredited training centers. UAO members



JOHN MEADE

must be key administrators in departments or divisions of ophthalmology in ACGME accredited medical schools, hospitals or other like institutions throughout the United States and Canada. Meade currently serves as Secretary on UAO’s board of directors. UAO is an affiliate of the Association of University Professors of Ophthalmology where FEI’s **Steven Feldon, M.D., M.B.A.**, is the current President.

Holly Hindman, M.D., was welcomed to the Board of Directors for the Rochester Association for the Blind and Visually Impaired (ABVI) and Goodwill of the Finger Lakes.

ABVI prepares people who are blind or visually impaired to be self-sufficient and contribute to their families and communities. Hindman was also selected to deliver a presentation at the annual Association of University Professors of Ophthalmology meeting about medical student education and outreach that is occurring as part of a student run clinic held at St. Joe’s Community Center. She was also recently identified as a Reynolds Foundation Challenge Grant recipient to improve Ophthalmology subspecialty knowledge and understanding of health concerns of older adults.



HOLLY HINDMAN,
M.D.

Yousuf Khalifa, M.D., F.A.C.S., has been promoted to Associate Professor of Ophthalmology by the University of Rochester Medical Center.

This advancement recognizes Khalifa’s outstanding record of clinical care, publication and contributions to resident education. A member of FEI’s cornea/anterior segment service, he completed his medical degree and residency at the Medical College of Georgia. Khalifa also completed a fellowship in

uveitis at the University of California at San Francisco and a fellowship in cornea and refractive surgery at the University of Utah.



YOUSUF KHALIFA,
M.D., F.A.C.S.

Dr. MacRae Lends a Hand

FEI’s **Scott MacRae, M.D.**, recently participated in a medical mission to Villahermosa, Mexico. He was the guest of local ophthalmologist **Feliciano Wong Ortiz, M.D.** MacRae, his daughter Morgan, and a small team traveled to the modest, childhood neighborhood of Ortiz where they set up a surgical clinic. Throughout a long day, the team evaluated scores of grateful people with limited access to healthcare. When it was over, the team had performed 50 cataract surgeries. Thanks go to all who participated and provided donations of equipment and medical supplies.



SCOTT MACRAE, M.D.

59th Annual Rochester Ophthalmology Conference Draws Stellar Speakers

The Rochester Ophthalmology Conference took place March 21 - 22, and featured an outstanding slate of speakers. Highlighting the two-day physician program were the Albert Snell Memorial Lecture and the FEI Distinguished Visiting Professor lecture. This year's Snell speaker was American Academy of Ophthalmology Chief Executive Officer **David W. Parke, II, M.D.**, who

shared his keen insights about the future of Ophthalmology in the era of the Affordable Care Act.

University of Southern California's Flora J. Thorton Chair in Vision Research, **Alfredo Sadun, M.D., Ph.D.**, presented the latest findings on the diagnosis and treatment of hereditary optic neuropathies.

Other lectures by guest speakers and FEI's own faculty highlighted advances in cataract and refractive surgery, retinal disease, glaucoma management, dry eye disease and more.

A separate program for ophthalmic technicians, ophthalmic nurses and other allied health professionals on March 21 drew more than 100 attendees. It featured two separate course tracks, allowing participants to mix and match topics best related to their interests.



RESIDENT / ALUMNI UPDATES

■ Congratulations to third-year resident **William Gensheimer, M.D.**, who has matched to the University of Colorado School of Medicine where he will begin his cornea fellowship this July. Former residents, **Benjamin Hammond, M.D.**, **Amy Zhang, M.D.**, and **Kalliopi Stasi, M.D., Ph.D.**, all passed their oral examinations and are now certified by the American Board of Ophthalmology.

■ FEI is also proud to announce that third-year resident **Juan Ayala Haedo, M.D., Ph.D., M.P.H.**, received a "best poster" award at the American Academy of Ophthalmology annual meeting. His, *Retinopathy of Prematurity Screening Outcomes and Treatment for 23 Weeks Gestational Age Infants: Seven Years' Experience*, took the prize in the Pediatric Ophthalmology, Strabismus section. Haedo was one of 50 researchers of 1,500 to be recognized for his submission. Haedo is bound to Bascom Palmer Eye Institute at the University of Miami for an oculoplastics fellowship following completion of his residency.

■ Congratulations also go out to second-year resident **Angela Pugliese, M.D.** She was recently married and is now **Angela Bessette, M.D.**

Match Results

FEI interviewed a record number of resident applicants this year and is pleased to announce four impressive medical students who will begin training here in July 2015:

Brandon DeCaluwe,
Wayne State University School of Medicine

Joon-Bom Kim,
Emory University School of Medicine

Kevin Kirk,
University of Utah School of Medicine

Brittany Simmons-Shaheen,
University of Illinois School of Medicine

We wish them well as they complete their medical degrees and embark on their first-year internships in internal medicine before coming to FEI.

2014 FEI's Visiting Professor Series... continues

Each month the Flaum Eye Institute presents its Distinguished Visiting Professor Series. These Saturday morning lectures feature some of the leading minds in ophthalmology who present the latest research data and new insights about surgical and/or medical procedures. The highly interactive format also includes case presentations by FEI's residents. Community ophthalmologists and optometrists are always invited to contribute to the lively discussion that enhances learning for all. The sessions are free to attend and each carry 4.0 hours of AMA PRA category 1 credits.™ This year's schedule includes:

APRIL 12

GLAUCOMA

George Cioffi, M.D.

Ophthalmologist - in - Chief,
New York - Presbyterian / Columbia

MAY 17

UVEITIS

Nisha Acharaya, M.D.

Assistant Professor of Ophthalmology,
University of California
San Francisco

Grand Rounds begin at 8 a.m. in the FEI clinic area, located on the third floor. Free event parking in the Eye Institute lot at 210 Crittenden Blvd. is available.

Publications: Sharing Discoveries

FEI faculty and residents share their findings with colleagues across ophthalmology and vision science. Scholarly publication is at the heart of making new discoveries and education. A recent sampling of FEI publications include:

Post-DSAEK optical changes: a comprehensive prospective analysis on the role of ocular wavefront aberrations, haze, and corneal thickness.

Hindman, H.B., Huxlin, K.R., Pantanelli, S.M., Callan, C.L., Sabesan R., Ching, S.S., Miller, B.E., Martin, T., Yoon, G.
Cornea. December 2013

Orbital fibroblasts from thyroid eye disease patients differ in proliferative and adipogenic responses depending on disease subtype.

Kuriyan, A.E., Woeller, C.F., O'Loughlin, C.W., Phipps, R.P., Feldon, S.E.
Investigative Ophthalmology Visual Science; November 2013

In vivo imaging of retinal pigment epithelium cells in age related macular degeneration.

Rossi, E.A., Rangel-Fonseca, P., Parkins, K., Fischer, W., Latchney, L.R., Folwell, M.A., Williams, D.R., Dubra, A., Chung, M.M.
Biomed Optical Express; October 2013

Phlyctenular Keratoconjunctivitis Associated with Dolosigranulum pigrum.

Venkateswaran, N., Kalsow, C.M., Hindman, H.B.
Ocular Immunology and Inflammation; October 2013

Ectopic expression of activated notch or SOX2 reveals similar and unique roles in the development of the sensory cell progenitors in the mammalian inner ear.

Pan, W., Jin, Y., Chen, J., Rottier, R.J., Steel, K.P., Kiernan, A.E.
Journal of Neuroscience; October 2013

October consultation #6.

Khalifa, Y.M.
Journal of Cataract and Refractive Surgery; October 2013

Deep vein thrombosis following descemet stripping automated endothelial keratoplasty.

Zhang, A., Moshirfar, M., Khalifa, Y.M.
JAMA Ophthalmology; September 2013

Topical rosiglitazone is an effective anti-scarring agent in the cornea.

Huxlin, K.R., Hindman, H.B., Jeon, K.I., Bühren, J., MacRae, S., DeMagistris, M., Ciufu, D., Sime, P.J., Phipps, R.P.
PLoS One; August 2013

Maximum-likelihood estimation in Optical Coherence Tomography in the context of the tear film dynamics.

Huang, J., Clarkson, E., Kupinski, M., Lee, K.S., Maki, K.L., Ross, D.S., Aquavella, J.V., Rolland, J.P.
Biomed Opt Express; August 2013

JUN regulates early transcriptional responses to axonal injury in retinal ganglion cells.

Fernandes, K.A., Harder, J.M., Kim, J., Libby, R.T.
Experimental Eye Research; July 2013

Volunteering for a clinical research study is one of the greatest things a person can do to advance medicine.

Each is rigorously conducted, following the highest patient safety protocols. FEI offers participation in the following studies:

- ⊙ A multicenter, double-masked, placebo-controlled, efficacy and safety study of RV 001, an insulin-like growth factor-1 receptor (IGF-1R) antagonist antibody (fully human), administered every 3 weeks (q3W) by intravenous (iv) infusion in patients suffering from active thyroid eye disease. (*S. Feldon, M.D., M. Gonzalez, M.D.*)
- ⊙ A Randomized, Multicenter, Double Masked, Parallel-Group Study Assessing the Safety and Efficacy of Loteprednol Etabonate Ophthalmic Gel, 0.5% versus Prednisolone Acetate Ophthalmic Suspension, 1% for the Treatment of Intraocular Inflammation Following Surgery for Childhood Cataract. (*M. Gearinger, M.D.*)
- ⊙ A Study to Define the Occurrence and Risk Factors of Complications Following Pediatric Cataract Surgery After a Minimum of 5 Years, and to Provide Visual Acuity Outcome Data for Unilateral and Bilateral Cataract Surgery, with and without IOL Implantation. (*B. Hammond, M.D.*)
- ⊙ A Study Comparing Visual Acuity Outcomes and Development of Strabismus After a 3-year Follow-up Period in Children Age 12 to <72 Months with Moderate Hyperopia Who Are Prescribed Glasses Either Immediately or Only After Confirmation of Pre-specified Deterioration Criteria. (*B. Hammond, M.D.*)
- ⊙ Long-Term Follow-up of the Cohort from a Multicenter, Double-Masked, Randomized, Placebo-Controlled Study of Weight-Reduction and/or Low-Sodium Diet plus Acetazolamide vs. Diet plus Placebo in Subjects with Idiopathic Intracranial Hypertension with Mild Visual Loss. (*Z. Williams, M.D.*)
- ⊙ Tele-I-Care Pilot Study to Improve Detection of Diabetic Retinopathy in Underserved Populations. (*R. Ramchandran, M.D., M.B.A.*)
- ⊙ A Comparative Effectiveness Study of Intravitreal Aflibercept, Bevacizumab and Ranibizumab for Diabetic Macular Edema. (*D. DiLoreto, M.D., Ph.D.*)
- ⊙ Short-term Evaluation of Combination Corticosteroid+ Anti-VEGF Treatment for Central-Involved Diabetic Macular Edema in Pseudophakic Eyes with Incomplete Response to Anti-VEGF Therapy Alone. (*D. DiLoreto, M.D., Ph.D.*)
- ⊙ A Study to Evaluate the Safety and Efficacy of AGN-195263 (0.01%, 0.03%, and 0.1%) Ophthalmic Emulsion Twice Daily Ocular Topical Administration Compared to Vehicle in Patients with Meibomian Gland Dysfunction. (*H. Hindman, M.D. & J. Aquavella, M.D.*)
- ⊙ A Study to Compare the Safety and Efficacy of Prompt Focal/grid Photocoagulation plus Deferred Intravitreal anti-VEGF; Observation plus Deferred Intravitreal anti-VEGF; and Prompt Intravitreal anti-VEGF in Eyes with Central-involved Diabetic Macular Edema and Good Visual Acuity. (*D. DiLoreto, M.D., Ph.D.*)
- ⊙ Non-Invasive Ocular Surface Measurements before and after intervention (such as dry eye treatment, environmental change, artificial tear use, or contact lens wear) using a controlled-environmental chamber. (*J. Aquavella, M.D.*)

For more information please contact us at:

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NEWS BYTES CONTINUED FROM PAGE 11

Putting Patients First

As the need for specialized eye care grows, so does the sheer volume of patients that FEI sees on a daily basis. Add the complexity of adopting an electronic medical record and complying with new health care laws, and it can seem like all of medicine is losing focus on the doctor-patient relationship. To improve the quality of the time patients spend at FEI, we have a new organization called the Patient Family Centered Care Committee. It has one goal: to make your visit to the Flaum Eye Institute the best it can be. The committee consists of team members from across FEI's clinical and business operations and is headed by clinical trials director **Peter MacDowell**.

"During our strategic planning process, it became apparent that we needed to find out how we could give patients more time with their doctors while improving comfort for them and their families," MacDowell said. "It's a balancing act because so many of the people we see require highly specialized care. This takes time and resources and we don't want to short change anyone on either of these. We also want to ensure that patients coming in for routine and preventative care are seen efficiently so that they can get on with their days."

The team has been collecting information from patients, observing clinic flow and benchmarking other specialties. It and has come up with a list of items to guide us as we make changes at FEI:

- Respect the time of patients and their families
- Provide up-to-the-minute visit information
- Enhance communication with patients from the time they make their appointment to the time they are home
- Create the most welcoming environment possible

Signs of this effort can already be seen, such as our parking attendants. More upgrades are on the way including better access to eye health information and making waiting areas more comfortable. FEI realizes that caring for patients is as much of an art as it is science. If you have any suggestions on how to make your experience better, don't hesitate to ask us or note it on one of our comment cards — we're listening!

Goodbye to a Friend of Ophthalmology

It is with sadness that we report the recent death of **Primverto "Prim" Roca** (Res '59). Dr. Roca had a rich and vibrant career in ophthalmology including 35 years in private practice. During his life, he also served as Chief of Ophthalmology at Rochester General Hospital and was a staff Ophthalmologist at Eastman Kodak Company. He is remembered by friends and colleagues as a humble and generous advocate for his patients. Faculty and former ophthalmology students of the University of Rochester remember him as a great teacher of residents, an active member of the Eye Institute Alumni Council and a frequent contributor to the Ophthalmology Resident Alumni Endowment Fund. He enjoyed entertaining friends and was a devoted runner into his eighties.

FACULTY PRACTICE

Comprehensive Eye Care

Shobha Boghani, M.D.
Christian Klein, M.D.
Sarah Klein, O.D.
Rebecca Nally, O.D.
Harold Ross, M.D.
Chet Scerra, O.D.
Jill Schafer, O.D.

Contact Lens Services

Sarah Klein, O.D.
Rebecca Nally, O.D.
Jill Schafer, O.D.

Cornea and External Disease

James Aquavella, M.D.
Steven Ching, M.D.
Holly Hindman, M.D.
Yousuf Khalifa, M.D., F.A.C.S.
Ronald Plotnik, M.D., M.B.A.

Glaucoma/Anterior Segment

Shakeel Shareef, M.D.
Regina Smolyak, M.D.

Neuro-Ophthalmology and Orbit

Steven Feldon, M.D., M.B.A.
Zoë Williams, M.D.

Oculofacial Plastics

Mithra Gonzalez, M.D.
Steven Feldon, M.D., M.B.A.

Pediatric Ophthalmology

Matthew Gearing, M.D.
Benjamin Hammond, M.D.

Refractive Surgery

Kenneth Dickerson, O.D.
Holly Hindman, M.D.
Scott MacRae, M.D.
Yousuf Khalifa, M.D., F.A.C.S.

Retina and Vitreous

Mina Chung, M.D.
David DiLoreto, M.D., Ph.D.
David Kleinman, M.D., M.B.A.
Rajeev Ramchandran, M.D., M.B.A.

Uveitis

Yousuf Khalifa, M.D., F.A.C.S.

Veterans Services

Shobha Boghani, M.D.
Sarah Klein, O.D.
Chet Scerra, O.D.
Fred Schamu, O.D.
Shakeel Shareef, M.D.

RESEARCH FACULTY

William Fischer, M.S.
Lin Gan, Ph.D.
Jennifer Hunter, Ph.D.
Krystal Huxlin, Ph.D.
Amy Kiernan, Ph.D.
Richard Libby, Ph.D.
William Merigan, Ph.D.
Gary Paige, M.D., Ph.D.
Richard Phipps, Ph.D.
Duje Tadin, Ph.D.
David Williams, Ph.D.
Gabrielle Yeaney, M.D.
Geunyoung Yoon, Ph.D.
Jim Zavislan, Ph.D.