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R.V. Paul Chan, MD, MSc, MBA, FACS | Department Chair
John H. Panton, MD Professor of Ophthalmology

Ahmad A. Aref, MD, MBA | Vice Chair for Clinical Affairs
Associate Professor of Ophthalmology

Deepak Edward, MD, FACS, FARVO | Vice Chair for Education
Professor of Ophthalmology

Jennifer I. Lim, MD | Vice Chair for Diversity, Equity, and Inclusion
Marion H. Schenk Esq., Chair in Ophthalmology for Research in the Aging Eye

Timothy McMahon, OD, FAAO | Vice Chair for Optometry
Professor of Ophthalmology

William F. Mieler, MD, FARVO | Vice Chair for Faculty Affairs
Cless Family Professor in Ophthalmology

Pete Setabutr, MD | Vice Chair for Global Ophthalmology
Professor of Ophthalmology

Deepak Shukla, PhD | Vice Chair for Research
Marion H. Schenk Esq. Professor in Ophthalmology for Research of the Aging Eye

Thasarat Sutabutr Vajaranant, MD, MHA | Vice Chair for Strategic Initiatives
Professor of Ophthalmology

Illinois Eye and Ear Infirmary Leadership 2021 (left to right): Drs. Aref, Setabutr, Lim, Chan, Shukla, and Vajaranant. (Not pictured: Drs. Edward, McMahon, and Mieler)
MESSAGE FROM THE CHAIR
R.V. Paul Chan, MD, MSc, MBA, FACS

As I reflect back on all that we have accomplished over these two years in the Department of Ophthalmology and Visual Sciences, I am particularly grateful for the incredible generosity and spirit of our community. In the face of the many challenges brought on by COVID-19, our Department and our community have emerged stronger, while demonstrating innovation and resilience during these difficult times. As a relatively new Department Chair, I’ve felt completely “at home” thanks to the teamwork, dedication, and welcoming environment here at UIC. I have been truly inspired by the people who have come together to care for the underserved in our community, to discover new advances in research, and to build a culture of innovation and entrepreneurship. Times of crisis have a way of bringing people together for the greater good. I couldn’t be more proud to be part of this tremendous Department and the staff, faculty, and trainees who continue to aspire to greatness, while serving their communities selflessly in the face of a global pandemic.

The Department of Ophthalmology and Visual Sciences at UIC continues to be a global leader in research, patient care, and in training the next generation of clinicians and scientists. We have made great strides in the diversity of our program and our Department remains committed to advancing diversity and inclusion initiatives, so that we may continue to foster a culture of unity, respect, and progress for all. Through the generous commitment of alumni we have created the first-of-its kind endowed chair, the Maurice Rabb Chair in Ophthalmology, for the recruitment of an underrepresented in medicine faculty member. By bringing people together with diverse experiences and perspectives, our program is made even stronger, and we are able to connect more effectively with our patients.

Our focus on innovation and entrepreneurship enabled the successful launch of a number of start-up companies over the last year, thanks to collaborations between our scientists and the newly formed Illinois Center for Ophthalmic Drug and Diagnostic Development (ICOD3). The ICOD3 offers expert advice, knowledge, and resources to guide investigators in the translation of their ideas to the real-world production of diagnostic tools and therapeutics. In addition, our faculty teams are developing some of the greatest advances of the 21st century in visual sciences, as they utilize regenerative medicine and artificial intelligence to create tools that automate, augment, and enhance solutions to some of the most pressing issues in patient care.

Moreover, our education of the next generation of clinicians and scientists remains second to none. Through an integrated internship experience, as well as the development of tracks in global health, medical education, research and innovation, and a clinical executive track, our trainees are receiving the best preparation for a future career in ophthalmology and visual sciences. With this curriculum, and with our current vision to expand the Lions of Illinois Eye Research Institute (LIERI) our program is advancing ahead, powering the future for the next generation of faculty and alumni, while continuing its mission to serve the underserved, provide the highest quality of patient care, and developing new discoveries.

Finally, we can’t contemplate the future without taking a moment to remember the remarkable, passionate, and dedicated members of our UIC family that we lost over the past year. They
left legacies of service, sacrifice, and caring that impacted thousands of patients, trainees, and colleagues, while also sharing their brilliance with generations of eye health professionals, and making a profound difference in the lives of patients around the world.

This has been a year that we will never forget, and I am filled with gratitude and appreciation for the amazing family of ophthalmology professionals with whom I have the privilege of working with, each and every day. As I look ahead, I am both optimistic and confident that we will continue to work tirelessly to pursue better treatments and to find new cures for eye disease, espousing the true mission of our Department and University. I offer my heartfelt thanks to all of our faculty, staff, trainees, and alumni who continue to pursue excellence in their work every day, and who embody the heart of our program. Because of your dedication, we remain a global leader in research and innovation, medical education, and patient care.

All my best,

[Signature]

R.V. Paul Chan, MD, MSc, MBA, FACS
Professor and Head, Department of Ophthalmology and Visual Sciences
The John H. Panton, MD Professor of Ophthalmology
VICE CHAIR FOR DIVERSITY, EQUITY, AND INCLUSION

"My personal goal as Vice-Chair for Diversity, Equity, and Inclusion is to champion diversity in the workplace, and to raise awareness for our faculty, trainees, and staff to be mindful about inclusivity. In my role as a facilitator of events and announcements, I plan to use these opportunities to elevate awareness of the need for more diversity and inclusivity in the workplace. I feel that it is my responsibility to champion diversity and push for more representation and opportunities for women, URMs, and marginalized segments of the community."

Jennifer I. Lim, MD, FARVO
Marion H. Schenk Esq. Chair in Ophthalmology for Research of the Aging Eye
Professor of Ophthalmology
Vice-Chair for Diversity, Equity, and Inclusion
Director, Retina Service

VICE CHAIR FOR STRATEGIC INITIATIVES

"My primary role as Vice-Chair for Strategic Initiatives is to translate the visions of our Infirmary into practice. I believe that a collaborative effort among leadership, faculty, trainees, staff, and all stakeholders is key to the success of new initiatives; hence, my main goal is to facilitate effective communications and collaborations. As an alum of the Infirmary, I take pride in its long history of clinical and research excellence. I am most excited to contribute to the continued success and future growth of the Infirmary. Going forward, I plan to focus my efforts on improving patient engagement, strategizing plans for clinical expansions, and strengthening our alumni network."

Thasarat Sutabutr Vajaranant, MD, MHA
Professor of Ophthalmology
Vice-Chair for Strategic Initiatives
Director, Glaucoma Service
RESIDENCY

“Diversity and inclusion are critical to the success of our residency program at UIC. Both our faculty and residents have formal training [in diversity and inclusion] through GME programs and modules, and we also host yearly diversity and inclusion faculty development Grand Rounds for our entire department. Through these initiatives, we keep at the forefront as we strive towards attracting diverse and strong talent to work and train with us.”

Peter MacIntosh, MD
Pooja Bhat, MD
Residency Leadership

UIC INSPIRING WOMEN’S CLUB

Faculty members of the Department of Ophthalmology and Visual Sciences aim to increase engagement and programming for female trainees and graduates through the UIC Inspiring Women’s Club. Professor and alumna Jennifer Lim, MD; Professor and alumna Thasarat Sutabutr Vajaranant, MD, MHA; Associate Professor Ann-Marie Lobo-Chan, MD, MS; and Assistant Clinical Professor and alumna Lisa Nijm, MD, JD have come together to spearhead this new project. The program, which organizers plan to launch in early 2022, will provide more alumnae-specific opportunities to network with current trainees, recent graduates, and faculty; learn new skills; and reconnect with former classmates.

THE RABB CHAIR

Page 74. Read more about the Department’s newly-created Rabb Chair, named after the late Dr. Maurice F. Rabb, Jr., a longtime Department faculty member, and the first black chief resident at the University of Illinois Hospital.
DETECTING RISK FACTORS FOR EYE DISEASE IN LATINO COMMUNITIES

UIC’s SOL Ojos Study

Despite the fact that Latinos comprise nearly one fifth of the United States population, the prevalence of various eye diseases among diverse Hispanic/Latino groups remains unknown. Charlotte Joslin, OD, PhD and a multi-institutional team are hoping to change this. Dr. Joslin is the Director of the Contact Lens Service in the Department of Ophthalmology and Visual Sciences at the Illinois Eye and Ear Infirmary, and a Department Affiliate in the Division of Epidemiology and Biostatistics at the UIC School of Public Health. She is the Co-Principal Investigator of the Study of Latinos “Ojos” Study, or the SOL Eye Study. Through this ambitious, multi-site investigation, the SOL Ojos team hopes to gain a better understanding of eye disease and associated risk factors in the diverse Hispanic/Latino community.

The Illinois Eye and Ear Infirmary at UIC and the University of Miami’s Bascom Palmer Eye Institute serve as the two exam sites for SOL Ojos. The study will conduct 3,000 eye exams for Latinos in Chicago and Miami who are enrolled in the Hispanic Community Health Study/Study of Latinos (HCHS/SOL), the largest-ever longitudinal, epidemiological study that includes more than 16,000 participants, including those with Cuban, Dominican, Central and South American, Mexican, and Puerto Rican backgrounds. HCHS/SOL receives its primary funding from the National Heart Lung and Blood, as well as from six additional Institutes within the National Institute of Health. UIC has already received $12 million in research funding from the National Eye Institute for SOL Ojos.

After multiple delays due to the COVID-19 pandemic, the SOL Ojos team was excited to formally begin recruiting participants on July 1, 2021. Participant recruitment coincides with Visit 3 of HCHS/SOL research. The first two HCHS/SOL visits, conducted between 2011-2018, collected data on the health issues, risk factors, and lifestyle habits of Latino participants. Using data from the second HCHS/SOL visit, Dr. Joslin and her colleagues compared results with the US Census Bureau’s American Community Survey, and found that the increase in severe vision loss in Latino adults age 40 and over was more than four times the national average.

Dr. Joslin and the SOL Ojos team will focus on the prevalence of specific common eye conditions and the risk factors associated with eye disease. “The SOL Ojos team will focus on the prevalence of specific common eye conditions and the risk factors associated with eye disease.” Dr. Joslin explains, “which is important as they are shared risk factors for chronic eye disease.” The SOL Ojos team will systematically assess associations between these cardiovascular and lifestyle risks and objectively-measured chronic eye disease in this diverse population.

Participants in the SOL Ojos study receive a free, dilated eye exam that includes imaging and peripheral vision tests. The medical team assesses common eye conditions like glaucoma, diabetic retinopathy, age-related macular degeneration, and cataracts, in addition to others. Some of these chronic eye conditions can cause blinding eye disease and may cause no symptoms until vision loss has become permanent. Leaders of the study hope for an increase in the early detection of eye disease in their Latino participants, a community that is statistically less likely to see an eye doctor regularly.

With the data gleaned from these exams, researchers will investigate the prevalence of these common eye conditions and determine whether certain Latinos may be more at risk for various eye diseases. They will also assess whether things like diabetes, heart disease, or lifestyle and cultural factors have an impact on the likelihood of chronic eye disease.

“SOL Ojos will leverage extensive, high-quality phenotypic and genotypic data from HCHS/SOL, a landmark study that constitutes a national resource, to identify an absolute excess in the prevalence of eye disease in various background groups, and to assess novel socio-cultural and biomedical hypotheses,” says Dr. Joslin. “Moreover, the intrinsic variability of risk factors and disease outcomes in a diverse Hispanic/Latino cohort will support investigation of novel etiologic eye disease pathways that are important in directing new lines of research and targeting disease prevention strategies.”

“We are thrilled with the opportunity to conduct this very important research, and extremely grateful to the National Eye Institute for SOL Ojos funding.”

David J. Lee, PhD of University of Miami’s Miller School of Medicine is SOL Ojos’ Co-Principal Investigator, along with Dr. Joslin. UIC SOL Ojos Co-Investigators are Lawrence Ulanski, MD; Thasarat Vajaranant, MD, MHA; and Martha Daviglus, MD, PhD.
Dr. Charlotte Joslin holds the Lens Opacity Grading System (LOCS), one of the standardized methods of grading cataracts for clinical research.

A study participant sits for ophthalmic imaging with Chunyu Guo, MD, PhD, MPH, a member of the SOL Ojos research team.

The Full Investigator Group - UIC team members, colleagues from Bascom Palmer Eye, and National Eye Institute Program Officers - gathered at UIC in September to discuss the large-scale study.
THE AI-O CENTER: A HOPEFUL MODEL FOR HUMAN-CENTERED AI

Making the Impossible Possible

In computer science, a “holy grail” problem is one that is considered unsolvable, and represents the greatest challenge for that subfield of science. In the 2010s, one of computer vision’s holy grails experienced a massive leap into the future with the introduction of ImageNet. ImageNet is a database of 15 million images, spanning 1,000 classes, from specific dog breeds such as the Pomeranian, to the most necessary of kitchen appliances, the waffle iron. Because of ImageNet’s large and diverse range of categories, the idea of teaching a computer to learn its predictions was considered impossible. However, since the development of deep learning in 2012, our ability to learn from large datasets has allowed us to achieve above 98% top-5 accuracy in predicting ImageNet categories for images. A trained human can achieve approximately 95% accuracy, while one who is new to the task may not even achieve 90%.

Soon thereafter, holy grail tasks were being knocked out on what seemed like a monthly basis. “Go,” an East Asian board game, was often thought of as one of the last frontiers of AI capabilities. Players of the game take turns placing stones on a 19x19-inch board, giving an opportunity for approximately 10170 unique board positions, which equates to more than the total number of atoms in the universe squared. This unfathomable number of positions was thought to be an intractable barrier that would forever bar the use of an effective AI algorithm to play Go. However, through deep learning’s ability to decipher massive amounts of data, it may soon surpass human performances in playing Go, even beating some of the game’s most famous professional players; but it doesn’t stop there. Deep learning has enabled a new frontier of language translation, facilitated self-driving cars, predicted protein folding structures, and has even created realistic videos of events that never happened.

Human-Centered AI for Ophthalmology

Medical imaging AI has harnessed the power of deep learning to advance several practices, from classifying chest X-Rays to providing tumor segmentation for surgical planning. Ophthalmology has seen its fair share of medical AI advancements, especially in the field of Diabetic Retinopathy classification, leading to many FDA-cleared products. As more data is amassed,
the greatest advances in healthcare solutions of the 21st century will be created by tools that are able to utilize and integrate diverse ophthalmic data into AI solutions. However, it is still unclear how these data-based AI tools should be developed for clinical use. More importantly, how should these algorithms for predicting disease be deployed so that they work best for our patients and clinicians? It is abundantly clear that these discussions must shift from accurate measurements and figurative holy grails to what really matters: patient care.

Al’s promise is through automation, augmentation, and explanation.

The UIC Artificial Intelligence in Ophthalmology (Ai-O) Center was established in 2020 to address this new priority. The underlying goal of the Ai-O Center is to develop human-centered AI for patient care in an interpretable, ethical, and reproducible manner. The Center is dedicated to building an AI methodology that analyzes data in order to address bias and create robust automated systems that represent diverse populations. AI addresses core problems through automation, augmentation, and explanation. Through collaboration and novel method development, UIC’s Ai-O Center offers projects that span all three of these vital areas.

AI for Automation

The Ai-O Center’s projects are first molded by clinicians and scientists who define a core problem that should be solved with AI. Working together with Dr. Pete Setabutr (Oculoplastics), our team developed Autoptosis, a deep learning approach to classifying ptosis, or the drooping of the eyelid. This model can be deployed to a web browser, allowing easy access to the user to upload images to get an AI prediction. Patients may even use their smartphone to capture and upload their own selfies to help determine whether they might need a referral to oculoplastics for ptosis.

Working with Thasarat Sutabutr Vajaranant, MD, MHA (Glaucoma), the Ai-O Center is also working to create new methods for glaucoma detection. As glaucoma can be more difficult to diagnose than diabetic retinopathy, its detection remains a challenge to current deep learning methodologies. Thus, the current approach resembles that of self-driving; the computer is first taught to identify anatomical understanding of fundus photographs. Much like an autonomous vehicle must understand what roads and stop signs are, our algorithms must be able to identify vessels and optic nerves. Using this anatomical map, the Ai-O team has created the Interpretable Glaucoma Detector (InterGD), which links the clinical understanding of anatomy to the computer’s understanding of the anatomy provided by patient

Continued on next page...
data. With this project, the Center hopes to not only properly detect glaucoma, but to do it in such a way that the clinician who uses the software will be able to understand why the resulting AI prediction was made.

Both projects listed above have several large datasets associated with them. However, to also develop predictive engines for more rare pathologies, a method must be constructed for datasets of smaller sizes. To that end, the Ai-O team has created Classification via Segmentation (CvS), an algorithm that utilizes image subsection labeling in addition to whole image-class labeling. By teaching a computer to not only categorize an image, but to also know where to look to make that decision, datasets as small as 10 images can be used to train a network.

It is a core belief of the Ai-O Center that AI can never replace a human clinician; however, clinicians may improve their practices with the use of AI.

AI for Augmentation

Though there is hope that AI can help automate many tedious tasks and broaden access to patient care, an equally important goal of the Ai-O Center is to create AI that works with, and empowers our clinicians to provide better, more effective care. It is a core belief of the Ai-O Center that AI can never replace a human clinician; however, clinicians may improve their practices with the use of AI. With projects such as Predicting Progression and Treatment Requirements for AMD, the Center aims to work with clinicians to help guide their practices. By allowing clinicians to identify high-risk patients as candidates for more frequent screenings, earlier treatments, and monitoring, this project will hopefully lead to an improvement of clinical outcomes.

Yannek Leiderman, MD, PhD (microsurgery), together with Biomedical Engineering graduate student Rogerio Nespolo, have created a surgical guidance tool for cataract surgeries. By tracking the regions of interest for cataract surgery in real-time, this guidance tool can also identify which stage of the surgery is happening, and then automatically turn on different behaviors to help guide the surgery. Depending on the current phase of surgery, the guidance tool can deploy contrast enhancements onto the pupil, overlay a template for a circular rhexis, or provide an estimate for turbulence during phacoemulsification. This tool can also be run in real-time on a commercial-grade laptop, serving as an invaluable resource for surgeons during cataract surgery.

AI for Explanation

As a final-use case, the goal is to utilize AI for large, existing databases to discover new insights into current pathologies. With this goal in mind, The Illinois Ophthalmic Database Atlas (I-ODA) was created. I-ODA is a databank that provides real-world longitudinal clinical ophthalmic images and patient metadata. Its primary purpose is to advance state-of-the-art computer vision applications and utilize advanced methods to extract biomarkers that explain progression and treatment requirements. For example, in a collaborative project, researchers at the Ai-O Center developed a new model to forecast a needed anti-vascular endothelial growth factor (anti-VEGF) treatment using spectral domain-optical coherence tomography (SD-OCT) biomarkers for neovascular age-related macular degeneration. This model generated estimates of predictive uncertainty that highlighted cases where human inspection and/or reversion to a fallback alternative was warranted. It also generated and explained the biomarkers attributed to this prediction.

I-ODA also helps integrate imaging data with clinical and socio-demographic information for the development of personalized medicine models. With these tools, physicians are able to tailor treatments and manage protocols based on the unique profiles of their patients.

The Ai-O team aims to be the bridge that can facilitate effective communication between computer scientists and clinicians.
Education

In addition to its research goals, another core mission of the Ai-O Center has been to educate the community about AI. Because a key belief of the Center is that state-of-the-art AI research must be done in an interdisciplinary setting, the Ai-O team aims to serve as a bridge to facilitate communication between computer scientists and clinicians. With this goal, the Ai-O Center has launched two classes in the Biomedical Engineering Department that cover computer vision for medical tasks. These courses have allowed both undergraduate and graduate students to connect with clinician partners in order to develop computer vision for medically-relevant tasks.

The Ai-O Center is currently focused on creating a clinician-focused AI boot camp. Designed by the Ai-O Center and presented jointly by the Departments of Ophthalmology and Neurosurgery, this boot camp will focus on educating early-career clinicians with the nuts and bolts of how AI works. The goal of this boot camp is to combine knowledge from AI and medical disciplines in order to empower both clinicians and clinician scientists to utilize AI tools to the fullest extent.
OUR COVID-19 RESPONSE

UIC College of Medicine issues first official COVID-19 guidelines.

Clinic Procedural Changes

- Department begins rescheduling all nonurgent / nonemergent visits and elective surgeries.
- Clinical productivity reduced to ~10% of normal.
- Tele-triage protocol created as a guideline for scheduling patients.

Virtual Grand Rounds Welcomes Alumni

- Grand Rounds attendance increases.
- Highlights include Retina Superbowl with Drs. Morton Goldberg, Kirk Packo, and Jennifer Lim on July 1, 2020 and Special Guest Moderator Dr. Dimitri Azar on January 20, 2021.

“I have really enjoyed having virtual grand rounds as this has allowed a larger participation, especially colleagues from other programs and also from different specialties. Virtual grand rounds have also allowed ophthalmologists from different countries to join us, making the educational experience richer and also making us closer as a global community. This definitely improves the educational experience for all residents.” - Andrea Artesa, MD, Co-Chief Resident

The Department’s first virtual course, the 13th Annual Retina Symposium, is held via Zoom.


“The COVID-19 pandemic forced us to change the way we provide eye care, and the tele-triage system our team created helped us to safely continue providing urgent eye care to our patients. As we continue to observe changes in the healthcare system due to the pandemic, we will continue to pivot our health services model.” - Angelica Scanzera, OD, MPH, FAOO, FSLS

Director, Tele-Ophthalmology Service

Ophthalmology Online, a virtual rotation for UIC and visiting medical students, launches. Created by Pooja Bhat, MD, Director of Medical Student Education, it features sub-specialty-based weekly lectures, and live ocular examination using slit-lamp camera systems.

“The COVID-19 pandemic forced us to change the way we provide eye care, and the tele-triage system our team created helped us to safely continue providing urgent eye care to our patients. As we continue to observe changes in the healthcare system due to the pandemic, we will continue to pivot our health services model.” - Angelica Scanzera, OD, MPH, FAOO, FSLS

Director, Tele-Ophthalmology Service

During these extraordinary circumstances, our team worked together to continue to provide care to our patients. Their dedication, collaborative spirit and positive attitude during these times has been nothing short of inspiring. It is humbling to work alongside such a dedicated group.” - Lisa Graben, COT, COE, OCS, Deputy Clinic Director

Resident Interviews

“Based on input from the ACGME and AUPD, we moved to fully virtual interviews and will remain that way for the foreseeable future. We created a virtual tour of our facility as well as a virtual open house, to try and give as much information and “feel” for our program as possible. We conducted interviews of many of our faculty and trainees so candidates could hear many different opinions. We were very happy with the response and ultimately our match!” - Peter MacIntosh, MD

Director, Residency Program

“Although our research portfolio underwent significant changes including reduced laboratory activities, there was a measurable increase in scientific manuscript and grant submission activities.” - Deepak Shukla, PhD

Vice-Chair for Research

Dysregulation of Cell Signaling by SARS-CoV-2, Published in Trends in Microbiology.

Teleophthalmology and the Digital Divide: Inequities Highlighted by the COVID-19 Pandemic, Published in Eye.

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2020

89% of Jan 2019

80% of Feb 2019

49% of Mar 2019

29% of Apr 2019

62% of May 2019

86% of June 2019

85% of July 2019

86% of Aug 2019

89% of Sept 2019

84% of Oct 2019

100% of Nov 2019

100% of Dec 2019

2020


2020

JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC

89% of Mar 2019

13% of Apr 2019

49% of May 2019

29% of June 2019

62% of July 2019

86% of Aug 2019

85% of Sept 2019

86% of Oct 2019

89% of Nov 2019

100% of Dec 2019

Data from 2019

Patient & Department Communication

- Slack is implemented for staff messaging.
- Department begins working with the UIC Institute for Healthcare Delivery Design (IHDD) on digital and in-person patient messaging.
- Department publishes first COVID protocols, which are shared with other UIC College of Medicine departments.

Patient Volume, 2020

Residents education goes virtual.

Nonessential research paused.

2020

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PatientVolume, 2020

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Data from 2019

Patient Volume, 2020

JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC
For 35 years, The Lions of Illinois Eye Research Institute (LIERI) at the University of Illinois-Chicago has stood apart from its peers and the medical community, welcoming many eager trainees, revered faculty members, and nationally recognized experts in vision science, while elevating the Department of Ophthalmology and Visual Sciences to the pinnacle of research, science, and patient care that it is today. Looking back on those who graced the hallowed halls of its current building, established in 1986, LIERI has much to celebrate from its past accomplishments. Chairman Emeritus and first full-time faculty member Morton Goldberg, MD, widely recognized as the “father of the department,” led the effort to build a modern facility dedicated to vision research by expanding the program to create a comprehensive research center.

“One of the greatest educational memories from my student experience was the weekly conference grand rounds,” states Peter Panton, MD, one of his own family’s multi-generational alumni and donors to the program. “Every Wednesday afternoon, trainees would examine patients between 4 to 5 p.m. in the clinic, with 3 to 4 patients lined up in the exam room, who would be examined by 40 young docs, plus attending physicians, getting the best minds in the country. We would all congregate in the auditorium at 5 p.m., and each case would be presented by the residents, followed by a discussion by senior faculty in the relevant subspecialty (cornea, retina, plastic surgery, etc.). Dr. Goldberg would call on the relevant professional in each field, and it was a feast to hear their discussion at the highest levels. Each conference was led by a great giant in the profession, and we would learn from the cutting edge of world expertise in terms of management of complex pathology. It was such a wonderful learning experience.”

Subsequent Department Chairs, Dimitri Azar, MD, MBA and Mark I. Rosenblatt, MD, PhD, MBA, MHA, continued to grow the department, developing innovative programs and adding more prestigious faculty who have obtained 45 patents, received over 262 grants, and produced over 1,900 publications. Throughout the history of the department, thousands of trainees have benefited from an unsurpassed learning experience that is second-to-none.

“Our Department is now positioned as one of the top visiting research departments in the country and the world,” says Dr. Rosenblatt, current Executive Dean of the University of Illinois College of Medicine. “Vision science research is done in one place – the Lions of Illinois Eye Research Institute (LIERI) – a hub to bring scientists together to work on common problems related to visually disabled or blinding diseases. This is a special opportunity, because at many other institutions, labs are scattered. LIERI allows for unique collaborations; researchers can talk in hallways, have easier access to joint research, and be in the same vicinity to boost the number of collaborative grants and publications.”

LIERI’s close proximity to clinical services provides an advantage in conducting translational research. While discovering the basic mechanisms of a disease, lab scientists can work in
close collaboration with physician-scientists and their patients, and clinical observations can be taken directly back to the lab for scientific discovery, and then back to the clinic for more personalized treatments. “The research we do in the Department of Ophthalmology and Visual Sciences serves a diverse community,” says Dr. Rosenblatt. “By focusing on bi-directional, translational research, we are impacting the lives of patients with very severe diseases, allowing us to focus on cures for all people.”

“LIERI’s faculty and scientists have benefitted tremendously from the current space,” says Dr. Dimitri Azar, “but anticipated faculty and student growth, the need for highly advanced instrumentation, and the ability to expand to new disciplines of scientific investigation require a larger, more modernized facility in order to remain competitive with our peer institutions.”

Looking to the future, the Department of Ophthalmology and Visual Sciences has the opportunity to expand once again on its esteemed foundation and the success of its programs for the next generation of vision scientists. Expansion of its current facilities will allow LIERI’s world-class faculty, residents, and fellows to provide the best-in-class clinical care while conducting cutting-edge research in an environment that supports its vision. Current Department Chair, R.V. Paul Chan, MD, MSc, MBA notes, “For years we talked about building a new clinical space. The stars finally aligned, and now there’s a new clinical and training home being built where we will continue to serve the underserved, train the next generation of ophthalmologists, and provide great patient care for all. Now we have to develop a new academic space for our Department as well – a place where new centers of excellence for ophthalmology can be built, and clinical trials, basic science research, training, and faculty space will all be in one collaborative home. We have an opportunity to build our future for the next generation of faculty, alumni, and new discoveries. That’s the goal.”

Continued on next page...
“The faculty of LIERI stands ready to continue and expand their crucial discoveries from research, as they have so clearly demonstrated in the past, but we find ourselves once again severely limited by space,” observes Dr. Goldberg. “When this is corrected, we can justifiably predict and expect that faculty recruitment and productivity will be enhanced, important new knowledge will be created, patient care and educational activities will be greatly improved, and the stellar reputation of the UIC Department of Ophthalmology and Visual Science will shine ever brighter throughout the world.”

“We have an opportunity to build our future for the next generation of faculty, alumni, and new discoveries.”

R.V. Paul Chan, MD, MSc, MBA
Chair, Department of Ophthalmology and Visual Sciences

“The Panton family has shown a strong commitment to our department for decades, which so many of our alumni share,” says Dr. Chan. “Thanks to the Panton family’s lead gift to this campaign, we’ll be able to ensure that the excellence and contributions of the LIERI continue through the years with programs that have the synergy to serve our urban Chicago community and underserved communities around the country, as well as at the international level.”

“My family benefitted tremendously from the education and experiences available when we were residents,” says Dr. Peter Panton. “My Dad trained in the very first building in the 1950s (no longer in existence), and my siblings and I were able to follow in his footsteps, working in a total of three different buildings within the department. Our training at UIC has allowed us to become the clinicians that we are today, and to do critical work providing vision care in our community. It’s important for those of us who are in a position to help out to create a proper environment to train the next generation of ophthalmologists. We have a responsibility to care for the current generation of patients, the next generation of doctors, and to create cures that don’t currently exist. We feel very privileged and honored to be a part of the history of this world-class department that is the crown jewel in the medical school, and we encourage our fellow alumni to be a part of this effort as well.”
Dr. Morton Goldberg speaks at the dedication of the Lions of Illinois Eye Research Institute in 1986.

Dr. Morton Goldberg (far left) at the LIERI dedication ceremony.

The Lions of Illinois Eye Research Institute today.
A LIGHT OF LEGACY THAT LIVES ON

In Memory of Dr. Marilyn T. Miller

A humble woman who often shied away from the spotlight, Dr. Marilyn T. Miller couldn’t conceal the light she shared with her many students, colleagues, and children in disadvantaged communities around the world. “She chose to stoop, a ladder she was, a position she remained at for the better part of her life, regardless of the sacrifice,” said Roseline E. Duke, one of Dr. Miller’s pediatric ophthalmology mentees in Nigeria. “She stooped for the climbers, like us… poured [herself] out like a drink offering to the very last drop, in sacrifice and service, she did it all with pleasure. She soared high above the storms of life like an eagle, and demanded you soar through yours at an even higher altitude, far higher than hers.”

In her tenure as a Professor of Ophthalmology and Visual Sciences at the University of Illinois at Chicago (UIC), Dr. Miller trained and mentored thousands of residents, was widely respected among her peers, and was honored with countless accolades. It was her work in pediatric ophthalmology in developing countries such as India and Nigeria, however, that she often talked about as her greatest legacy.

“I never had any aspirations to do international service until I was in a part-time private practice with Dr. James E. McDonald (Jay), president of a very small NGO, FOCUS, which initially worked in Haiti, but later dedicated its efforts in Abak, Nigeria,” Dr. Miller said. “I had three children, was widowed, and so was not able to leave Chicago. Still, I was intrigued with the challenges of being an ophthalmologic volunteer internationally, and when the nest cleared, I took the first opportunity to join Jay and the FOCUS volunteers to spend a few weeks in Nigeria. There we were, working very hard to see an enormous clinical volume.

“The memorable occasions from my global service [were] a mixture of rewarding and frustrating experiences—the appreciation by the residents from a medical school who had no access to an operating microscope or intraocular lenses, except when a FOCUS team arrived in Abak, the gratitude of restoring sight to the breadwinner of a family, the friendships with our Nigerian colleagues, the teaching of the students at the medical school… By the end of my stay, I was thoroughly ‘bitten by the international bug’ and returned to Abak almost every year, for a number of years. Later, I went more for educational reasons, teaching and...
supervising the residents from a small ophthalmology training
program a few hours away. It [was] a privilege to have [had]
these international opportunities, and I gained much more than
I [gave].”

Dr. Miller’s impact on those she touched, however, far exceeded
her expectations.

“Marilyn was a dear friend, an incredible mentor, and a trailblazer
in ophthalmology who made a fundamental impact on all of us,”
says R.V. Paul Chan, MD, MSc, MBA, FACS, Professor and Head,
Department of Ophthalmology and Visual Sciences. “She touched
the lives of generations of eye health providers and patients
around the world. She made the path of ophthalmologic medicine
possible for so many in a field, which is now 50% female. She
was strong, brilliant, passionate, and one of the most thoughtful
people you’ll ever meet, always thinking about who should be
involved, always promoting other people, wanting them to be
successful.”

Dr. Miller’s influence on her profession was immeasurable. She
visited Nigeria over 40 times over the course of her career, and
trained thousands of residents and fellows in the field under
the philosophy that the greatest way to change the world was
to “teach someone to fish.” She invested her time at children’s
health fairs in the local Chicago community, offering her practical
wisdom and caring touch to those without resources, and traveled
frequently to many countries in Africa, Asia, and South America
as a physician and teacher, especially for children’s eye programs.

“Dr. Miller worked for decades visiting us in Nigeria, meeting
visually impaired children and their families,” recalls Prof.
Adedayo O. Adio, Chairperson of the NIPOSS (Nigerian Pediatric
Ophthalmology and Strabismus Society). “She mentored us
young ophthalmologists, inspiring many of us to become pediatric
ophthalmologists. She worked tirelessly to ensure our great
NIPOSS was born. We now have 35 pediatric ophthalmologists in
Nigeria and counting. She set the ball rolling for the current wave
of fight against ROP (retinopathy of prematurity), encouraging
Pediatric Ophthalmologists and Neonatologists/Pediatricians
across Africa to work together closely. Many pediatric
ophthalmologists who were not previously screening for ROP are
now engaged actively in it as a direct result of this effort, with
pilot centers for collaboration, research, and training opening up
across Africa, and Nigeria housing one.”

“Marilyn was a role model, not just a mentor, to everyone she
interacted with – trainees, staff, faculty, and patients,” continues
Dr. Chan. “Personally, she had a profound influence in my
personal and professional life. She was one of the reasons I
moved to Chicago; to learn from her and be in her presence. I
knew I could always turn to her for advice, guidance, and support.
She was genuinely happy for others’ successes, and what really lit
her up was talking about the impact of her students. She changed
people’s lives in a way that was persistent and very kind. You
knew when Marilyn wanted something done, you should do it.
You didn’t say ‘no’ to her, for your own best interests as well as
hers.”

IN MEMORIAM: MARILYN MILLER continued on next page
“Dr. Miller was a wonderful human being and an inspirational academician who always encouraged me to follow my dreams ever since the beginning of my tenure at UIC,” says Cem Mocan, MD. “She would find me in the Peds clinic, share her resources on ocular teratology as well as her pearls of wisdom and experience. In return, I could only offer her a cup of coffee. I will always cherish her genuine smile, her passion for her work, and her positive attitude towards life.”

Vinay Aakalu, MD, MHP adds, “Dr. Miller was an amazing mentor, clinician, and colleague. I am grateful to have had the privilege to have spent some time with her during my training, and in practice. The example she set was truly aspirational, and she will be missed greatly.”

Former Resident (‘10) Quan (Donny) Hoang, MD, PhD credits Dr. Miller with his choice to train at UIC. “Dr. Miller’s pediatric ophthalmology clinic was one of my first exposures to clinical ophthalmology, and her kindness and infinite amount of patience [were some] of the main reasons I ended up in an ophthalmology residency at IEEI.”

Dr. Miller was the first woman president of both the American Ophthalmological Society (AOS) and the American Association of Pediatric Ophthalmology and Strabismus (AAPOS), and was one of only three women in the last 75 years to ever be awarded the Howe Medal by the AOS, denoting distinguished service to the field of ophthalmology. She had a longstanding interest in international ophthalmology, participating in educational activities in Nigeria, India, Asia, and South America, and also helping to develop orthoptic training in Nigeria.

Sadly, Dr. Miller left her family, colleagues, and students on September 28, 2021, but her brilliant light still blazes brightly through her legacy, and in the lives of those she touched:

“She was a mother and a mentor to all. She could go out of her way to reach the unreachable. Her passion for ophthalmology and paediatric ophthalmology in particular is worth emulating. She left so much for us to learn from.”

- Prof. Patricia D. Wade

“Her encouragement was second to none. She made us believe that we could, and supported us to start the NIPOSS Pediatric Ophthalmology Fellowship. She got us to think, and trained us in ROP so we could jointly stop ROP blindness in Africa. She had a gentle way of making us do whatever she wanted us to focus on. She was right there in Ilorin, Kwara State on the day the “Childhood Sight Protection Law” was passed by the legislature. The Speaker of the House announced it directly to her, and she was happy to have been there.”

- Prof. Dupe Ademola-Popoola

“Professor Marilyn Miller was a friend of the Ophthalmological Society of Nigeria (OSN), a mentor to so many, a teacher, a supporter, a kind and humble woman. We greatly appreciate her
extensive contributions to the Nigerian Paediatric Ophthalmology Society and to the entire Ophthalmology family in Nigeria. She lived a beautiful life and even in death we celebrate her for she has left her prints on the sands of time.”

- Dr. Abiola Oyeleye, President, OSN

“She was a great woman, mother, teacher, mentor, and encourager. Soft spoken and loving all without discrimination. Many have been impacted and benefited from her benevolence (I am one such). Her support to us in OSN, particularly NIPOSS, will never be forgotten.”

- Dr. Olubunmi Bodunde

“There was a tide in my friend Marilyn Miller’s life that brought hope, love, compassion, honour, skill and intelligence into many others’ lives. She gave part of her best to Africa, and the world. In her own case, and in the memory of many generations of ophthalmologists to come, the good that she did will not just be interred with her bones, but live as an enduring legacy.”

- Dr. Remi Olowude

“I feel privileged to have met Professor Miller, and to have exchanged hundreds of emails with her as she guided us in producing a curriculum for training of Paediatric Ophthalmologists in Nigeria under the umbrella of NIPOSS. The birth of the Paediatric Ophthalmology subspecialty and the great strides it has attained in terms of development today is due to her. We at NIPOSS remain grateful to her for her generosity, vision, and doggedness in seeing to it that we all leave our comfort zone to strive to be better trained and repositioned to attend to the eye care needs of our teeming millions of children in Nigeria.”

- Prof. Ose Dawodu

“I am honored to have worked closely with Dr. Miller for 30 years. As head of eye photography, she would bring me lots of coffee as incentive to help her with her numerous projects. She was so driven as an ophthalmologist. She was a mentor and a teacher, and she will be missed.”

- Mark Janowicz

“I honor Dr. Marilyn Miller for her wonderful devotion to educating and mentoring a generation of pediatric ophthalmologists who are forever grateful for her wisdom, erudition, and encouragement.”

- Naomi Ellenhorn Davis, MD, Res ’87

In a fitting tribute to the pillar she was in her profession, and to the thousands of trainees she mentored over the years, the Department of Ophthalmology at UIC established The Marilyn T. Miller, MD Endowed Professorship in Ophthalmology, the first endowed position named for a female faculty member in the department, and the third female-named professorship at the UIC College of Medicine. The professorship was fully funded this past summer from many generous donations.

“Dr. Miller was a great influence on so many people, both here at UIC and abroad, through her lifelong passion for expanding eye care in the developing world. I hope the professorship in her name will inspire the next generation of leaders to come.”

- Daniel Alter, MD, PhD
How exactly does a biomedical scientist take research findings and turn them into real-world diagnostics and therapeutics that improve the lives of ophthalmology patients? That question sparked a conversation in 2019 between R.V. Paul Chan, MD, MSc, MBA, Head of the Department of Ophthalmology, and Associate Professor Vinay Aakalu, MD, MPH, who began talking about how the department might bridge the gap between science and business. What specific resources and elements of support would be needed for this endeavor?

Once Dr. Chan and Dr. Aakalu brought their conversation to others in the Department, the College of Medicine and the university, the networking began. College of Medicine Executive Dean Mark I. Rosenblatt, MD, PhD, MBA, MHA, who has been committed to innovation and translational medicine since his arrival at UIC, agreed to support the department on this new initiative. Michael Flavin, PhD, Visiting Research Professor in the Department of Ophthalmology, has extensive experience in the development of biotechnology companies. Once he joined the group, the foundation of the steering committee for what is now the Illinois Center for Ophthalmic Drug and Diagnostic Development (ICOD3) was formed. Other members of the steering committee include faculty with expertise in all aspects of clinical ophthalmology, basic and translational sciences at UIC, as well as external advisors who have experience in intellectual property, entrepreneurship, and pre-clinical and clinical stage developments.

In 2020, the ICOD3 began providing resources to faculty investigators to help them obtain non-dilutive funding and receive guidance in start-up company formation, development of presentations, and grant proposals related to translational activities. The steering committee currently meets on a quarterly basis to consider proposals from investigators. If the committee decides to take on a project, they devise a plan to help investigators move to the next level, whether it be by further developing pre-clinical research or by providing investigators with the skills and support needed to make the leap toward the world of biomedical commercialization. Once the investigator is ready, a team of marketing, business, and design experts led by Michael Flavin and Charles Frisbie, MBA, from the UIC Innovation Center, work with the investigator to develop a “pitch deck” to present to businesses in various settings. This crucial element is timed so that the investigator can create a presentation for an opportunity with a program such as the Chicago Biomedical Consortium or the UIC Proof of Concept Award.

Once a successful contact has been made, the ICOD3 continues to offer resources, knowledge, and expert advice to guide the investigator through the translation of his or her ideas to the real-world production of diagnostic tools and therapeutics. This approach has already shown promising results, including the formation of several faculty companies, awarding of multiple grants, and advancement in the development of new therapies.

For more information and to view the projects in the pipeline, please find the ICOD3 website.
In 2020, the Department of Ophthalmology and Visual Sciences at the Illinois Eye and Ear Infirmary was proud to announce the creation of an Inherited Retinal Disease (IRD) Service. The IRD Service is directed by Robert Hyde, MD, PhD, a vitreoretinal surgeon and retina specialist, whose research focuses on the development of novel markers of visual function in patients with inherited retinal diseases. The Department has a long history of clinical care and research in the field of inherited retinal disease, including the work of Professor Emeritus Gerald Fishman, MD, who has directed ground-breaking research on hereditary retinal diseases over the past 36 years. Working in association with Dr. Fishman, the Department’s IRD Service is expanding its care for those suffering from rare retinal diseases.

The IRD Service offers both a state-of-the-art evaluation and consultation for patients with inherited retinal diseases such as Achromatopsia, Best Disease, Cone Dystrophy, Macular Dystrophy, Retinitis Pigmentosa, and Stargardt Disease, among others. In general, these diseases are very rare, and patients may have to travel long distances to find adequate care. In response to this, the IRD Service’s mission is to offer an expert, dedicated team that provides more accessible care. Along with examinations, patients have access to perimetry, genetic testing, counseling, and electrophysiology, all in a single visit. With extensive involvement in clinical research, the Department is dedicated to sharing the latest results of clinical trials in inherited retinal diseases with patients, and enrolling those who are interested and eligible for the latest in gene therapy and other treatment trials.

“We provide the most comprehensive care for patients who have these rare diseases. One of the biggest challenges they encounter is when an eye care professional tells them, ‘you have this rare disease and I don’t know what to do for you.’ What patients seek is somebody who can not only provide insight to the diagnosis, but also work with them to address their individual concerns.”
# Ophthalmologists in Training: 2020-21

## Residents

### Third Year (Class of 2022)

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<tr>
<th>Name</th>
<th>School</th>
<th>Future</th>
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<tbody>
<tr>
<td>Andrea Arteaga Useche</td>
<td>MD—Universidad Central de Venezuela – Escuela “Luis Razetti”</td>
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<tr>
<td>Ricky Cui</td>
<td>MD—Mayo Medical School</td>
<td>Future: Glaucoma Fellowship, Duke Eye Center</td>
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<tr>
<td>Shawn Gulati</td>
<td>MD/MPH—Oakland University William Beaumont School of Medicine</td>
<td>Future: Glaucoma Fellowship, Moran Eye Center</td>
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<tr>
<td>Kevin Heinze</td>
<td>MD—University of Michigan Medical School</td>
<td>Future: Oculoplastic and Reconstructive Surgery Fellowship, Illinois Eye and Ear Infirmary</td>
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<tr>
<td>Yekaterina Joltikov</td>
<td>MD—Sackler School of Medicine – New York</td>
<td>Future: Assistant Chief of Service, Illinois Eye and Ear Infirmary</td>
</tr>
<tr>
<td>Aaron Kaufman</td>
<td>MD—Boston University School of Medicine</td>
<td>Future: Cornea, External Disease and Refractive Surgery Fellowship, Massachusetts Eye and Ear Infirmary</td>
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### Second Year (Class of 2023)

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<tr>
<td>Katherine Chen</td>
<td>MD—University of California-Irvine College of Medicine</td>
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<tr>
<td>Charles Frank</td>
<td>MD—University of Michigan Medical School</td>
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<tr>
<td>Katherine Lucarelli</td>
<td>MD—University of Wisconsin-Madison School of Medicine</td>
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<tr>
<td>Mathew Margolis</td>
<td>MD—Washington University-St. Louis</td>
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<tr>
<td>Mohammad Sabbagh</td>
<td>MD—University of Michigan Medical School</td>
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<tr>
<td>Sudarshan Srivatsan</td>
<td>MD—University of Michigan Medical School</td>
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### First Year (Class of 2024)

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<tr>
<td>Luis Acaba-Berrocal</td>
<td>MD—Jefferson College</td>
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<tr>
<td>Tala Al-Khaleld</td>
<td>MD—University of Illinois at Chicago</td>
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<tr>
<td>Johnathan Jeffers</td>
<td>MD—University of Chicago</td>
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<tr>
<td>Michael Massengill</td>
<td>MD/PhD—University of South Florida</td>
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<tr>
<td>Paul Parker</td>
<td>MD—Rush University Medical Center</td>
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<tr>
<td>Stephanie Thermozier</td>
<td>MD—University of Pittsburgh</td>
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RESIDENT EXPERIENCE

Integrated First Year
by Paul Parker, MD, MS

“The integrated first year was a great experience, and allowed me the chance to not only become familiar with UIC and the hospital, but also to become comfortable with ophthalmology, as we spent 3 months with the Department in our first year. We also had a chance to work with, and get to know several of the departments we work with most often, including ENT, neurology, and rheumatology. It was a fantastic year observing ophthalmology’s overlap with various specialties of medicine. This experience truly set us up to be successful, and ready to hit the ground running as PGY-2s.”
CLINICAL FELLOWS

2019-20

CONTACT Lens
Marc Deely, OD
OD—NEW ENGLAND COLLEGE OF OPTOMETRY
Residency in Optometry—VA Maine Healthcare System
Post-Fellowship—Rochester Regional Health | Reed Eye Associates; Rochester, New York

CORNEA
Taylor Starnes, MD, PhD
MD/PhD—University of Wisconsin-Madison
Residency—Illinois Eye and Ear Infirmary at UIC
Post-Fellowship—Assistant Professor of Ophthalmology, Loyola University Medical Center

CORNEA
Sarah Sunshine, MD
MD—Johns Hopkins School of Medicine
Residency—Northwestern University-Feinberg School of Medicine
Post-Fellowship—Assistant Professor, University of Maryland School of Medicine

GLAUCOMA
Rebecca Sarran, MD
MD—Rush University
Residency—Rush University Medical Center
Post-Fellowship—University Ophthalmology Associates | Assistant Professor of Ophthalmology, Rush University Medical Center

NEURO-OPHTHALMOLOGY
Dmitry Balian, MD
MD—Vitebsk State Medical University, Vitebsk, Belarus
Internship—Vitebsk Regional Clinical Hospital, Vitebsk, Belarus
Post-Fellowship—Neurology Residency, University of Nebraska Medical Center

OCULOPLASTIC AND RECONSTRUCTIVE SURGERY
Chau Pham, MD
MD—Case Western Reserve University School of Medicine
Residency—Washington University in St Louis
Post-Fellowship—Clinical Assistant Professor, University of Iowa Hospitals & Clinics

PEDIATRIC OPHTHALMOLOGY
Daniel Maidana, MD
MD—University of Buenos Aires, Argentina
Residency—University of Barcelona, Spain
Post-Fellowship—Assistant Professor of Ophthalmology, Illinois Eye and Ear Infirmary at UIC

RETINA, 2ND YEAR
Matthew Byun, MD
MD—Wright State University
Residency—University of Cincinnati
Post-Fellowship—The Retina Group; Columbus, OH

RETINA, 1ST YEAR
Mike Heiferman, MD
MD—Northwestern University
Residency—Northwestern University

RETINA, 2ND YEAR
Nicole Scripsema, MD
MD—New York Medical School
Residency—New York Eye and Ear Infirmary of Mount Sinai
Medical Retina and Uveitis Fellowship—Moorfields Eye Hospital
Post-Fellowship—Wagner Macula & Retina Center; Norfolk, VA

RETINA, 1ST YEAR
John Wilgucki, MD
MD—Rutgers University Robert Wood Johnson Medical School
Residency—Emory University School of Medicine

UVEITIS
Monique Munro, MD
MD—University of Calgary
Ophthalmology Research Fellowship—University of Calgary
Residency—University of Calgary
Post-Fellowship—Retina Fellowship, Illinois Eye and Ear Infirmary at UIC

CONTACT LENS
Marc Deely, OD
OD—NEW ENGLAND COLLEGE OF OPTOMETRY
Residency in Optometry—VA Maine Healthcare System
Post-Fellowship—Rochester Regional Health | Reed Eye Associates; Rochester, New York

CORNEA
Taylor Starnes, MD, PhD
MD/PhD—University of Wisconsin-Madison
Residency—Illinois Eye and Ear Infirmary at UIC
Post-Fellowship—Assistant Professor of Ophthalmology, Loyola University Medical Center

CORNEA
Sarah Sunshine, MD
MD—Johns Hopkins School of Medicine
Residency—Northwestern University-Feinberg School of Medicine
Post-Fellowship—Assistant Professor, University of Maryland School of Medicine

GLAUCOMA
Rebecca Sarran, MD
MD—Rush University
Residency—Rush University Medical Center
Post-Fellowship—University Ophthalmology Associates | Assistant Professor of Ophthalmology, Rush University Medical Center

NEURO-OPHTHALMOLOGY
Dmitry Balian, MD
MD—Vitebsk State Medical University, Vitebsk, Belarus
Internship—Vitebsk Regional Clinical Hospital, Vitebsk, Belarus
Post-Fellowship—Neurology Residency, University of Nebraska Medical Center

OCULOPLASTIC AND RECONSTRUCTIVE SURGERY
Chau Pham, MD
MD—Case Western Reserve University School of Medicine
Residency—Washington University in St Louis
Post-Fellowship—Clinical Assistant Professor, University of Iowa Hospitals & Clinics

PEDIATRIC OPHTHALMOLOGY
Daniel Maidana, MD
MD—University of Buenos Aires, Argentina
Residency—University of Barcelona, Spain
Post-Fellowship—Assistant Professor of Ophthalmology, Illinois Eye and Ear Infirmary at UIC

RETINA, 2ND YEAR
Matthew Byun, MD
MD—Wright State University
Residency—University of Cincinnati
Post-Fellowship—The Retina Group; Columbus, OH

RETINA, 1ST YEAR
Mike Heiferman, MD
MD—Northwestern University
Residency—Northwestern University

RETINA, 2ND YEAR
Nicole Scripsema, MD
MD—New York Medical School
Residency—New York Eye and Ear Infirmary of Mount Sinai
Medical Retina and Uveitis Fellowship—Moorfields Eye Hospital
Post-Fellowship—Wagner Macula & Retina Center; Norfolk, VA

RETINA, 1ST YEAR
John Wilgucki, MD
MD—Rutgers University Robert Wood Johnson Medical School
Residency—Emory University School of Medicine

UVEITIS
Monique Munro, MD
MD—University of Calgary
Ophthalmology Research Fellowship—University of Calgary
Residency—University of Calgary
Post-Fellowship—Retina Fellowship, Illinois Eye and Ear Infirmary at UIC
2020-21

CONTACT LENS
Abigail Strauss, OD
OD—Illinois College of Optometry
Residency in Optometry—Jesse Brown VA Hospital
Post-Fellowship—Atrius Health; Medford, Massachusetts

CORNEA
Robert Bjorregaard, MD
MD—University of Wisconsin School of Medicine
Residency—Emory Eye Center
Post-Fellowship—Eye Physician Associates; Milwaukee, Wisconsin

CORNEA
Ahmar Sajjad, MD
MD—Baylor College of Medicine
Residency—John Peter Smith Hospital
Post-Fellowship—Eye Surgeons of Indiana; Indianapolis, Indiana

GLAUCOMA
Javaneh Abbasian, MD
MD—University of Illinois at Chicago
Residency—Illinois Eye and Ear Infirmary at UIC
Pediatric Fellowship—Children’s Hospital of Philadelphia
Post-Fellowship—Continuing as Clinical Assistant Professor of Ophthalmology at UIC and Chief of Ophthalmology at Jesse Brown VA

GLAUCOMA
Michael Henry, MD
MD—Stritch School of Medicine, Loyola University of Chicago
Residency—Loyola University Post-Fellowship—Fishkind, Bakewell, Maltizaman, Hunter and Associates Eye Care and Surgery Center; Tucson, Arizona

GLOBAL OPHTHALMOLOGY
Timothy Todd, MD
MD—University of Missouri School of Medicine
Residency—Naval Medical Center San Diego
Post-Fellowship—Comprehensive Ophthalmology, University of Missouri

NEURO-OPHTALMOLOGY
Can Kocasarac, MD
MD—Istanbul University Faculty of Medicine
Residency—Beyoglu Eye Training and Research Hospital, Istanbul, Turkey
Post-Fellowship—Assistant Professor in Neuro-Ophthalmology, University of Pittsburgh Medical Center (UPMC)

OCULOPLASTIC AND RECONSTRUCTIVE SURGERY
Sruti Akella, MD
MD—Stony Brook University School of Medicine
Residency—Montefiore Medical Center

PEDIATRIC OPHTHALMOLOGY
Abdelrahman Elhusseiny, MD
MD—Cairo University School of Medicine
Residency—Kasr Al-Ainy Hospitals, Cairo University
Post-Fellowship—Ophthalmology Residency, Harvey and Bernice Jones Eye Institute, University of Arkansas

RETINA, 2nd YEAR
Mike Heiferman, MD
MD—Northwestern University
Residency—Northwestern University
Post-Fellowship—Ocular Oncology Fellowship, Byers Eye Institute, Stanford University

UNIVERSITY RETINA, 1st YEAR
Aliya Jiwani, MD
MD—Yale Medical School
Residency—Massachusetts Eye and Ear Infirmary
Post-Fellowship—Private practice in Boston, MA

RETINA, 2nd YEAR
John Wilgucki, MD
MD—Rutgers University Robert Wood Johnson Medical School
Residency—Emory University School of Medicine
Post-Fellowship—Assistant Professor of Ophthalmology, Loyola University Medical Center

UVEITIS
Karl Becker, MD
MD—University of Illinois College of Medicine College of Osteopathic Medicine
Residency—John H. Stroger Hospital of Cook County
Post-Fellowship—Eye Center of the Rockies; Eagle and Glenwood Springs, Colorado
# Ophthalmologists in Training (continued)

## Clinical Fellows 2021-22

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<td><strong>Contact Lens</strong></td>
<td>Hannah Yoon, OD</td>
<td>New England College of Optometry</td>
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<td>Residency in Optometry Massachusetts Eye and Ear</td>
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<tr>
<td><strong>Cornea</strong></td>
<td>Karen Hu, MD</td>
<td>Icahn School of Medicine at Mount Sinai</td>
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<tr>
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<td>Residency—New York Eye and Ear Infirmary</td>
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<td><strong>Cornea</strong></td>
<td>Sherief Raouf, MD</td>
<td>Stony Brook University School of Medicine</td>
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<td>Residency—Northwell Health Eye Institute</td>
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<td><strong>Glaucoma</strong></td>
<td>Brian Krawitz, MD</td>
<td>Icahn School of Medicine at Mount Sinai</td>
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<td>Residency—Columbia University</td>
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<tr>
<td><strong>Global Ophthalmology</strong></td>
<td>Emily Cole, MD, MPH</td>
<td>Tufts University School of Medicine</td>
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<td>Residency—Illinois Eye and Ear Infirmary</td>
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<tr>
<td><strong>Neuro-ophthalmology</strong></td>
<td>Kimberly Blankshain, MD</td>
<td>Chicago Medical School</td>
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<td>Residency—University of Cincinnati</td>
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<tr>
<td><strong>Retina, 1st Year</strong></td>
<td>George Skopis, MD</td>
<td>Herbert Wertheim College of Medicine</td>
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<td>Residency—Georgetown University Hospital/Washington Hospital Center</td>
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<tr>
<td><strong>Retina, 2nd Year</strong></td>
<td>Monique Munro, MD</td>
<td>University of Calgary Ophthalmology Research Fellowship</td>
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<td>University of Calgary Residency—University of Calgary</td>
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<td>Uveitis Fellowship—University of Illinois at Chicago</td>
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<tr>
<td><strong>Retina, 1st Year</strong></td>
<td>Daniel Wang, MD</td>
<td>University of Illinois at Chicago</td>
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<td>Residency—New York Eye and Ear Infirmary</td>
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<tr>
<td><strong>Retina, 1st Year</strong></td>
<td>Alexis Warren, MD</td>
<td>University of Kansas</td>
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<td>Residency—University of Iowa</td>
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<tr>
<td><strong>Oculoplastic and Reconstructive Surgery</strong></td>
<td>Sruti Akella, MD</td>
<td>Stony Brook University School of Medicine</td>
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<td>Residency—Montefiore Medical Center</td>
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<tr>
<td><strong>Contact Lens</strong></td>
<td>Muanploy Niparugs, MD</td>
<td>International Fellowship in Cornea</td>
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<tr>
<td><strong>Contact Lens</strong></td>
<td>Manachai Nonpassopon, MD</td>
<td>International Fellowship in Cornea</td>
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<tr>
<td><strong>Global Ophthalmology</strong></td>
<td>Angela Padoan, MD</td>
<td>International Observational Vitreoretinal Clinical Fellowship</td>
</tr>
<tr>
<td><strong>OculoPlastic and Reconstructive Surgery</strong></td>
<td>Daniela Roca MD</td>
<td>International Fellowship in Cornea and Ocular Surface</td>
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## International Clinical Fellows

- Muanploy Niparugs, MD
  International Fellowship in Cornea

- Manachai Nonpassopon, MD
  International Fellowship in Cornea

- Angela Padoan, MD
  International Observational Vitreoretinal Clinical Fellowship

- Daniela Roca MD
  International Fellowship in Cornea and Ocular Surface
CLINICAL CARE

101,101 patients

3,540 surgeries

*Annual data from FY21

Comprehensive Ophthalmology Faculty Practice (COFP) • Contact Lens • Dry Eye & oGVHD Service • General Eye Clinic • Glaucoma • Illinois Center for Thyroid Eye Disease • Imaging & Ocular Ultrasound • Low Vision • Neuro-Ophthalmology • Ocular Oncology • Ocular Pathology • Oculoplastic & Reconstructive Surgery • Pediatric Ophthalmology & Adult Strabismus • Retina • Uveitis
**DIRECTOR**

*Elmer Y. Tu, MD*

Joel Sugar, MD Professor in Ophthalmology  
Director, Cornea Service  
Director of the Cornea Fellowship Program

**MEDICAL SCHOOL**  
University of Miami

**RESIDENCY IN OPHTHALMOLOGY**  
University of Wisconsin

**CLINICAL FELLOWSHIP**  
Bascom Palmer Eye Institute (Cornea)

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**CORNEA AND REFRACTIVE SURGERY**

The Cornea and External Disease Service manages patients with diseases of the front of the eye including corneal and conjunctival infections, keratoconus, cataracts, tumors of the iris and conjunctiva, blepharitis, dry eye, corneal scarring, complications of trauma and ocular surgery as well as hereditary corneal diseases like Fuchs’ Dystrophy. The widest array of non-surgical options are available through advanced drug research and compounding as well as access to advanced collagen crosslinking for keratoconus. The service has extensive expertise in all forms of minimally invasive, selective corneal transplantation including DMEK, DSAEK/ DSEK, and DALK as well as traditional penetrating keratoplasty that provides patients with the widest array of treatment options. Those failing or not eligible for human corneal transplantation may qualify for our Artificial Cornea Program, the largest program of its kind in the Midwest for implanting keratoprostheses. The service has also pioneered access to state-of-the-art imaging technology to quickly and non-invasively diagnose a wide spectrum of diseases. Cornea specialists work closely with the Contact Lens Service on advanced contact lens therapies including custom PROSE therapy and impression based EyePrint PRO devices and provide access to the latest clinical trials for dry eye diseases, corneal transplantation and corneal infections.

*IMAGE: Boston Keratoprosthesis (KPro) implant.*
**CO-DIRECTOR**

**Ali R. Djalilian, MD**
Searls-Schenk Professor of Ophthalmology
Director, Corneal Stem Cell and Tissue Engineering Laboratory
Co-Director of the Cornea and External Disease Service

**MEDICAL SCHOOL**
University of Minnesota

**RESIDENCY IN OPHTHALMOLOGY**
University of Minnesota

**CLINICAL FELLOWSHIP**
Cincinnati Eye Institute (Cornea)
National Eye Institute / NIH (Uveitis)

**RESEARCH FELLOWSHIP**
University of Minnesota (Cornea)
National Eye Institute (Ocular Immunology)
National Human Genome Research Institute (Epithelial Biology)

**Clinical Interests**
Ocular surface disease; Limbal stem cell deficiency; Corneal and limbal stem cell transplantation; Immunologic diseases of the cornea

**Research Interests**
Stem cell based therapy; Corneal wound healing; Tissue engineering

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**Dimitri T. Azar, MD, MBA, FARVO**
Distinguished Professor of Ophthalmology, Bioengineering and Pharmacology
E.A. Field Chair in Ophthalmologic Research

**MEDICAL SCHOOL**
American University of Beirut, Lebanon

**RESIDENCY IN OPHTHALMOLOGY**
Massachusetts Eye and Ear Infirmary

**CLINICAL FELLOWSHIP**
Massachusetts Eye and Ear Infirmary (Cornea)

**RESEARCH FELLOWSHIP**
Schepens Eye Research Institute (Cornea)

**GRADUATE SCHOOL**
University of Chicago (MBA)

**Clinical Interests**
Laser Vision Correction; Cornea and Cataract Surgery

**Research Interests**
Matrix metalloproteinases in corneal wound healing and angiogenesis; Refractive surgery; Optics; Accommodating intraocular lenses

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**M. Soledad Cortina, MD**
Associate Professor of Ophthalmology
Director, Comprehensive Ophthalmology Faculty Practice (COFP) and General Eye Clinic
Co-Director, Artificial Cornea Program
Co-Director, Cornea Fellowship Program

**MEDICAL SCHOOL**
University of Buenos Aires School of Medicine, Argentina

**RESIDENCY IN OPHTHALMOLOGY**
Louisiana State University

**CLINICAL FELLOWSHIP**
Illinois Eye and Ear Infirmary (Cornea)

**RESEARCH FELLOWSHIP**
Louisiana State University, Neuroscience Center

**Clinical Interests**
Ocular surface disease and high-risk corneal transplantation including Boston keratoprosthesis; Cataract surgery and endothelial keratoplasty

**Research Interests**
Retroprosthetic membrane formation in Boston keratoprosthesis patients; Optical properties of artificial corneas; Corneal nerves & their regeneration after injury
CORNEA AND REFRACTIVE SURGERY (CONTINUED)

Jose de la Cruz, MD
Associate Professor of Clinical Ophthalmology
Co-Director, Millennium Park Eye Center

MEDICAL SCHOOL
Ponce School of Medicine, Puerto Rico

RESIDENCY IN OPHTHALMOLOGY
New York Eye and Ear Infirmary

CLINICAL FELLOWSHIP
Massachusetts Eye and Ear Infirmary, Harvard Medical School (Cornea, Refractive)
Illinois Eye Ear Infirmary (Refractive)

GRADUATE SCHOOL
Indiana University at Bloomington (MS)

Clinical Interests
Advances in keratoprosthesis transplantation; Anterior segment imaging in corneal and refractive surgery; Femtosecond technology for corneal transplantation; Laser assisted cataract surgery; Keratoconus; Intracorneal ring segments; Corneal crosslinking

Research Interests
Development of surgical devices for conjunctival manipulation; New techniques in refractive surgery and femtosecond assisted keratoplasty; Advanced technology intraocular lenses for correction of presbyopia and astigmatism

Sandeep Jain, MD
B.A. Field Professor of Ophthalmology
Director, Translational Biology Laboratory
Director, Dry Eye & ocular GVHD Clinic

MEDICAL SCHOOL
University of Delhi, India

RESIDENCY IN OPHTHALMOLOGY
Harkness Eye Institute, Columbia University

CLINICAL FELLOWSHIP
Massachusetts Eye and Ear Infirmary, Harvard Medical School (Cornea)

RESEARCH FELLOWSHIP
Wilmer Eye Institute (Cornea), The Johns Hopkins Medical School

Clinical Interests
Dry Eye and ocular surface disease; Ocular graft-versus-host-disease; Neurotrophic keratitis

Research Interests
Molecular and cellular aspects of ocular surface disease; Translational research; Clinical Trials

Mark I. Rosenblatt, MD, PhD, MBA, MHA
Executive Dean of the College of Medicine
Professor of Ophthalmology
Illinois Lions/Charles I. Young Chair in Ocular Research Director, Corneal Regenerative Medicine Laboratory

MEDICAL SCHOOL
University of Miami (PhD, Biochemistry)

RESIDENCY IN OPHTHALMOLOGY
Massachusetts Eye and Ear Infirmary

CLINICAL FELLOWSHIP
Massachusetts Eye and Ear Infirmary (Cornea)

GRADUATE SCHOOL
New York University (MBA)

Clinical Interests
Corneal disease; Cataract; Refractive surgery; Ocular pain; Dry Eye disease; Keratoplasty

Research Interests
Ocular regenerative medicine; Corneal stem cells; Corneal nerve regeneration; Angiogenesis; Tissue engineering; Biomaterials; Nanomedicine

PART-TIME CLINICAL FACULTY

Joel Sugar, MD
Professor of Ophthalmology

MEDICAL SCHOOL
University of Michigan

RESIDENCY IN OPHTHALMOLOGY
Washington University, St. Louis

CLINICAL FELLOWSHIP
University of Florida, Gainesville (Cornea)

Clinical Interests
Corneal disorders; Herpes simplex; Herpes zoster; Congenital anomalies of the anterior eye

Research Interests
Keratoplasty outcomes; Herpes; Fuchs’ dystrophy
DRY EYE AND OCULAR GVHD CLINIC

The Dry Eye and ocular GVHD Clinic provides advanced diagnostics and customized treatments that are based on in-house translational research for various types of dry eye diseases such as ocular GVHD, Sjogren’s Syndrome, dry eye due to rheumatoid arthritis, Steven Johnson Syndrome, and ocular rosacea. We have established a unique translational research program that facilitates the discovery and development of novel treatments for Dry Eye Disease and ocular GVHD. This program comprises a highly specialized ocular GVHD clinic for patient care, an advanced translational molecular biology laboratory for uncovering disease mechanisms, a dedicated clinical trial center for developing new therapies, and a highly motivated team that seamlessly connects all of these components.
CONTACT LENS

The Contact Lens Service provides care to patients requiring medically necessary contact lenses and related services. Our doctors are nationally known for their clinical and research expertise and their ability to help patients with various complex corneal diseases including: Keratoconus, Post-corneal transplant management, Dry eye syndrome, Graft-versus-host disease (GVHD), Limbal stem cell deficiency, Sjögren’s syndrome, Neurotrophic keratitis, Corneal scarring, Stevens-Johnson syndrome, Post-LASIK, and Aphakia. We have extensive experience with all types of medically necessary contact lenses including scleral, hybrid and rigid contact lenses as well as customized soft contact lenses. The service also offers custom scleral lens options utilizing image guided and impression designs with Prosthetic Replacement of the Ocular Surface Ecosystem (PROSE) as well as EyePrint PRO devices for patients with severely compromised ocular function as a result of complex corneal disease.
Timothy T. McMahon, OD, FAAO  
Professor of Ophthalmology  
Vice-Chair for Optometry  
OPTOMETRY SCHOOL  
Illinois College of Optometry  
RESIDENCY IN OPTOMETRY  
Kansas City VA Medical Center  
Clinical Interests  
Medically necessary contact lenses; Corneal topography; Anterior segment diseases and injuries  
Research Interests  
Keratoconus and other corneal ectatic conditions and diseases; Dry eye; Blepharitis

Ellen Shorter, OD, FAAO, FSLS  
Associate Professor of Clinical Ophthalmology  
Director, Prosthetic Replacement of the Ocular Surface Ecosystem (PROSE) Clinic  
OPTOMETRY SCHOOL  
Illinois College of Optometry  
RESIDENCY IN OPTOMETRY  
Jesse Brown VA Medical Center and Hines VA Hospital  
CLINICAL FELLOWSHIP  
Boston Foundation for Sight (PROSE)  
Clinical Interests  
Ocular surface disease; Corneal ectasia; Keratoconus; Keratoprosthesis  
Research Interests  
Dry eye; Ocular Surface Disease; Chronic Graft-versus-host disease; Keratoconus; Therapeutic scleral lenses; Adenoviral conjunctivitis

Angelica Scanzera, OD, MPH, FAAO, FSLS  
Assistant Professor of Ophthalmology  
Director, Tele-Ophthalmology Service  
Director, Contact Lens Fellowship  
OPTOMETRY SCHOOL  
New England College of Optometry  
RESIDENCY IN OPTOMETRY  
Captain James A. Lovell Federal Health Care Center  
CLINICAL FELLOWSHIP  
University of Illinois at Chicago (Advanced Medically Necessary Contact Lenses)  
GRADUATE SCHOOL  
University of Illinois at Chicago (MPH, Epidemiology)  
Clinical Interests  
Medically necessary contact lenses for ocular surface disease (Dry Eye, Graft-versus-Host Disease, limbal stem cell deficiency, Sjögren’s, Stevens Johnson Syndrome) and corneal irregularity (keratoconus, post-corneal transplant, corneal scarring, post-LASIK, trauma)  
Research Interests  
Ocular surface disease; Scleral lenses; Access to eye care; Eye health equity
GLAUCOMA

Glaucoma is the leading cause of irreversible blindness in the world. Our Glaucoma Service is nationally recognized as a center for the diagnosis and treatment of glaucoma in adults and children. It is a site for testing investigational new drugs and has been a leader in the use of laser and surgery to treat all forms of the disease. Our service offers comprehensive care and management of all forms of glaucoma, including specialized diagnostic testing and the latest technologies for laser and surgical treatment. Faculty members are actively involved in glaucoma research and are nationally recognized as experts in their field.

DIRECTOR

Thasarat Sutabutr Vajaranant, MD, MHA
Professor of Ophthalmology
Vice-Chair for Strategic Initiatives
Director, Glaucoma Service

MEDICAL SCHOOL
Chulalongkorn University, Thailand

RESIDENCY IN OPHTHALMOLOGY
Illinois Eye and Ear Infirmary

CLINICAL FELLOWSHIP
Illinois Eye and Ear Infirmary (Glaucoma)

RESEARCH FELLOWSHIP
Illinois Eye and Ear Infirmary (Low Vision)

Clinical Interests
Diagnosis and management of glaucoma and cataract; Management of complex glaucoma and cataract; International ophthalmology

Research Interests
Glaucoma epidemiology; Women’s eye health; Aging of the optic nerve; Outcomes of glaucoma surgery; Management of glaucoma after corneal transplants
Ahmad A. Aref, MD, MBA
Associate Professor of Ophthalmology
Medical Director and Vice-Chair for Clinical Affairs
Director, Glaucoma Fellowship Program

MEDICAL SCHOOL
Northwestern University

RESIDENCY IN OPHTHALMOLOGY
Penn State Hershey Eye Center

CLINICAL FELLOWSHIP
Bascom Palmer Eye Institute (Glaucoma)

GRADUATE SCHOOL
University of Chicago (MBA, Economics and Strategic Management)

Clinical Interests
Complex cataract surgery; Trabeculectomy and glaucoma drainage implant surgery for advanced glaucomatous disease; Microinvasive glaucoma surgery for mild/moderate glaucomatous disease; Selective laser trabeculoplasty for open-angle glaucomas; Laser iridotomy for angle-closure glaucomas

Research Interests
Surgical techniques in complex glaucomas; Glaucoma associated with retinal disorders; Novel glaucoma medical therapies; Optic nerve imaging

Deepak P. Edward MD, FACS, FARVO
Professor of Ophthalmology
Vice-Chair for Education

MEDICAL SCHOOL
St Johns Medical College, Bangalore, India

RESIDENCY IN OPHTHALMOLOGY
Illinois Eye and Ear Infirmary

CLINICAL FELLOWSHIP
Washington University School of Medicine (Glaucma)

FELLOWSHIP
Illinois Eye and Ear Infirmary (Ophthalmic Pathology)

Clinical Interests
Medical and surgical management of all forms of glaucoma and cataracts associated with glaucoma; Complex cataract surgery; Ophthalmic pathology

Research Interests
Congenital glaucoma; Angle closure glaucoma; Pathophysioloogy of wound healing in glaucoma; Medical education; Pathopshiology of ocular disease; Ocular oncology

Jacob T. Wilensky, MD
Jacob T. Wilensky MD Professor in Ophthalmology

MEDICAL SCHOOL
Tulane University

RESIDENCY IN OPHTHALMOLOGY
Tulane University Affiliated Hospitals

CLINICAL FELLOWSHIP
Washington University, St. Louis (Glaucoma)

RESEARCH FELLOWSHIP
National Eye Institute (Glaucoma)

Clinical Interests
Diagnosis and treatment of glaucoma with special emphasis on laser therapy

Research Interests
Investigation of new drugs for glaucoma; Laser therapy treatment for glaucoma
NEURO-OPHTHALMOLOGY

The Neuro-Ophthalmology Service offers expert evaluations and treatment for neuro-ophthalmologic conditions, including: optic neuritis, idiopathic intracranial hypertension (pseudotumor cerebri), ischemic optic neuropathies, optic neuropathies of unknown etiology, ocular myasthenia gravis, cranial nerve palsies, thyroid eye disease and visual or oculomotor complications of stroke, brain tumors, multiple sclerosis and other neurological diseases. The service facilitates and interprets a wide range of diagnostic testing relevant to the diagnosis and management of neuro-ophthalmic diseases, including: Goldmann and Humphrey perimetry, infrared pupillometry, optical coherence tomography, electroretinography, lumbar punctures and magnetic resonance imaging. The service works closely with doctors in the University of Illinois Hospital and Health Sciences Systems’ Departments of Neurosurgery, Neurology, Radiation Oncology and Rheumatology to provide interdisciplinary, state-of-the-art treatments.

IMAGE: Ischemic optic neuropathy, atrophic phase

DIRECTOR

Peter W. MacIntosh, MD
Associate Professor of Ophthalmology
Director, Neuro-Ophthalmology Service and Fellowship
Director, Residency Program
Director, Global Ophthalmology Fellowship

MEDICAL SCHOOL
The Chicago Medical School

RESIDENCY IN OPHTHALMOLOGY
John H. Stroger, Jr. Hospital of Cook County

CLINICAL FELLOWSHIP
Illinois Eye and Ear Infirmary (Neuro-Ophthalmology)

CLINICAL FELLOWSHIP
Massachusetts Eye and Ear Infirmary (Oculoplastics)

Clinical Interests
Optic neuritis; Papilledema; Myasthenia gravis; Double vision

Research Interests
Thyroid eye disease; Nonarteritic anterior ischemic optic neuropathy (NAION); idiopathic intracranial hypertension and facial paralysis
Brooke Johnson, DO
Assistant Professor of Ophthalmology

MEDICAL SCHOOL
Michigan State University College of Osteopathic Medicine

RESIDENCY IN NEUROLOGY
Advocate BroMenn Medical Center

CLINICAL FELLOWSHIP
Illinois Eye and Ear Infirmary (Neuro-Ophthalmology)

Clinical Interests
Neuro-Ophthalmology, Headache

Research Interests
Thyroid eye disease; Idiopathic intracranial hypertension; Nonarteritic anterior ischemic optic neuropathy

Anil Gulati, MD
Clinical Assistant Professor of Ophthalmology

MEDICAL SCHOOL
Jawarlal Institute of Postgraduate Medical Education and Research, India

RESIDENCY IN NEUROLOGY
Illinois Eye and Ear Infirmary

CLINICAL FELLOWSHIP
Illinois Eye and Ear Infirmary (Neuro-Ophthalmology)
The Oculoplastic & Reconstructive Surgery Service provides assessment and treatment for conditions of the eyelids, orbit, face and lacrimal system. Systemic disease, trauma, birth defects and the aging process can alter the area around the eyes. Conditions such as blepharoptosis, ectropion, entropion, eyelid retraction, blepharospasm, epiphora, tumors of the ocular adnexa and orbit and fractures of the orbit are just a few of the conditions treated in this specialty. Patients can be seen at both the Illinois Eye and Ear Infirmary and the Millennium Park Eye Center.

DIRECTOR

Pete Setabutr, MD
Professor of Ophthalmology
Vice-Chair for Global Ophthalmology
Director, Oculoplastic & Reconstructive Surgery Service
Co-Director, Millennium Park Eye Center

MEDICAL SCHOOL
University of Texas-Houston

RESIDENCY IN OPHTHALMOLOGY
University of Texas-Houston

CLINICAL FELLOWSHIP
Illinois Eye and Ear Infirmary (Oculoplastics)

Clinical Interests
Cosmetic and reconstructive eyelid surgery; Orbital surgery; Diseases of the lacrimal system

Research Interests
Diseases of the eyelid; Diseases of the orbit; Epidemiological international vision research
Vinay K. Aakalu, MD, MPH
Associate Professor of Ophthalmology
Director, Lacrimal Cell Biology Laboratory
Director, Illinois Center for Thyroid Eye Disease
Director, The Illinois Center for Drug and Diagnostic Development (ICODD)

MEDICAL SCHOOL
Mount Sinai School of Medicine

RESIDENCY IN OPHTHALMOLOGY
Illinois Eye and Ear Infirmary

CLINICAL FELLOWSHIP
Illinois Eye and Ear Infirmary (Oculoplastics)

GRADUATE SCHOOL
Columbia University (MPH)

Clinical Interests
Thyroid eye disease; Orbital tumors; Facial and ocular trauma; Ocular surface disease and scarring; Inflammatory orbital disease; Congenital eyelid and orbital disorders; Eye socket reconstruction; Facial palsy; Eyelid malposition; Lacrimal disease; Aesthetic surgery and treatments

Research Interests
Drug development for ocular surface diseases; Regenerative medicine; Lacrimal cell biology; Dry Eye disease; Cell-based therapies; Orbital imaging; Orbital oncology; Novel and minimally invasive orbital and aesthetic surgery

Van Ann Tran, MD
Assistant Professor of Ophthalmology

MEDICAL SCHOOL
University of Wisconsin

RESIDENCY IN OPHTHALMOLOGY
Bascom Palmer Eye Institute
University of Miami

CLINICAL FELLOWSHIP
NYC Combined Oculoplastic Program - Bellevue, Cornell, Columbia, Manhattan Eye, Ear and Throat Hospital and New York University

Clinical Interests
Thyroid eye disease; Skull-base and orbital tumors, Endoscopic orbital surgery, Aesthetic surgery, Tear drainage problems, Facial reconstruction, Eyelid/eyebrow ptosis

Research Interests
Thyroid eye disease; Complex orbital diseases; Novel and minimally invasive skull base and orbital surgery; Eyelid lymphatic drainage

Allen M. Putterman, MD, FACS
Visiting Clinical Instructor

MEDICAL SCHOOL
University of Wisconsin

RESIDENCY IN OPHTHALMOLOGY
Michael Reese Hospital and Medical Center

CLINICAL FELLOWSHIP
Manhattan Eye, Ear and Throat Hospital (Oculoplastics)

Clinical Interests
Cosmetic Eyelid surgery; Upper eyelid ptosis
The Pediatric Ophthalmology & Adult Strabismus Service offers general pediatric eye care, including exams for newborns and children up to 18 years of age. This service also provides other specialty clinics treating rare and unusual children’s eye disorders, including glaucoma and genetic, neurocutaneous, and neuro-ophthalmologic disorders. The doctors in this service specialize in strabismus (eye alignment disorders) in adults as well as children. Additional care providers include certified orthoptists and an oculoplastic and reconstructive surgeon.

**DIRECTOR**

**Nathalie F. Azar, MD**
Professor of Clinical Ophthalmology
Director, Pediatric Ophthalmology & Adult Strabismus Service

**MEDICAL SCHOOL**
Boston University

**RESIDENCY IN OPHTHALMOLOGY**
George Washington University

**CLINICAL FELLOWSHIP**
Wilmer Eye Institute (Pediatric Ophthalmology)

**Clinical Interests**
Adult strabismus; Graves ophthalmopathy; Paralytic and restrictive strabismus; Pediatric strabismus and amblyopia

**Research Interests**
Eye movement disorders; Surgical treatment techniques for strabismus; Amblyopia
Daniel E. Maidana, MD, PhD
Assistant Professor of Ophthalmology

MEDICAL SCHOOL
University of Buenos Aires School of Medicine, Argentina

GRADUATE SCHOOL
University of Barcelona School of Medicine, Spain

POSTDOCTORAL FELLOWSHIP
Massachusetts Eye and Ear Infirmary, Harvard Medical School

RESIDENCY IN OPHTHALMOLOGY
Bellvitge Hospital, University of Barcelona School of Medicine, Spain

CLINICAL FELLOWSHIP
Illinois Eye and Ear Infirmary (Pediatric Ophthalmology and Adult Strabismus)

Clinical Interests
Pediatric ocular conditions including cataracts, strabismus, and retinopathy of prematurity (ROP)

Research Interests
Photoreceptor cell death; Photoreceptor neuroprotection; Retinal angiogenesis; Automated image processing

M. Cem Mocan, MD
Associate Professor of Ophthalmology

MEDICAL SCHOOL
Hacettepe University Faculty of Medicine, Turkey

RESIDENCY IN OPHTHALMOLOGY
Hacettepe University Faculty of Medicine, Turkey

CLINICAL FELLOWSHIP
Massachusetts Eye and Ear Infirmary (Pediatric Ophthalmology and Strabismus)
Cedars-Sinai Medical Center (Pediatric Ophthalmology and Strabismus)

Clinical Interests
Pediatric glaucoma; Pediatric cataracts; Strabismus

Research Interests
Pediatric glaucoma; Anterior segment dysgenesis; Strabismus

SPECIALTY FACULTY

R.V. Paul Chan, MD, MSc, MBA, FACS
John H. Panton, MD Professor in Ophthalmology
Pediatric Retina

Lawrence Kaufman, MD, PhD
Clinical Associate Professor of Ophthalmology
Pediatric Neuro-Oph

Felix Y. Chau, MD
Associate Professor of Ophthalmology
Pediatric Retina

Peter MacIntosh, MD
Assistant Professor of Ophthalmology
Neuro-Ophthalmology & Oculoplastics

M. Cem Mocan, MD
Associate Professor of Ophthalmology

MEDICAL SCHOOL
Hacettepe University Faculty of Medicine, Turkey

RESIDENCY IN OPHTHALMOLOGY
Hacettepe University Faculty of Medicine, Turkey

CLINICAL FELLOWSHIP
Massachusetts Eye and Ear Infirmary (Pediatric Ophthalmology and Strabismus)
Cedars-Sinai Medical Center (Pediatric Ophthalmology and Strabismus)

Clinical Interests
Pediatric glaucoma; Pediatric cataracts; Strabismus

Research Interests
Pediatric glaucoma; Anterior segment dysgenesis; Strabismus

Javaneh Abbasian, MD
Clinical Assistant Professor of Ophthalmology
Chief of Ophthalmology at Jesse Brown VA Medical Center

MEDICAL SCHOOL
University of Illinois College of Medicine

RESIDENCY IN OPHTHALMOLOGY
Illinois Eye and Ear Infirmary

CLINICAL FELLOWSHIP
Children’s Hospital of Philadelphia (Pediatric Ophthalmology)

Clinical Interests
Pediatric Glaucoma, Pediatric Cataract, Pediatric anterior segment

Kimberlee Curnyn, MD
Clinical Assistant Professor of Ophthalmology

MEDICAL SCHOOL
University of Illinois College of Medicine

RESIDENCY IN OPHTHALMOLOGY
Rush University Medical Center

CLINICAL FELLOWSHIP
Illinois Eye and Ear Infirmary (Pediatric Ophthalmology)

Benjamin Mathew, MD
Clinical Assistant Professor of Ophthalmology

MEDICAL SCHOOL
University of Manitoba

RESIDENCY IN OPHTHALMOLOGY
LSU Eye Center, New Orleans
University of Ottawa Eye Institute

CLINICAL FELLOWSHIP
University of Wisconsin - Madison (Pediatric Ophthalmology)
The Retina Service specializes in treating patients with both medical and surgical retinal vascular and vitreoretinal disorders, such as: age-related macular degeneration, vein occlusion, sickle cell eye disease, ocular complications of diabetes, retinal detachment, vitreomacular adhesion, retinopathy of prematurity, retinitis pigmentosa, intraocular tumors and severe eye trauma. The doctors in this service are skilled specialists in laser and other medical treatment of the retina, vitreoretinal surgery and complex retinal detachment repair.

DIRECTOR

Jennifer I. Lim, MD, FARVO
Marion H. Schenk Esq. Chair in Ophthalmology for Research of the Aging Eye
Professor of Ophthalmology
Vice-Chair for Diversity, Equity, and Inclusion
Director, Retina Service

MEDICAL SCHOOL
Northwestern University

RESIDENCY IN OPHTHALMOLOGY
Illinois Eye and Ear Infirmary

CLINICAL FELLOWSHIP
Wilmer Eye Institute (Retina)

Clinical Interests
Diabetic retinopathy; Age-related macular degeneration; Retinal vascular diseases; Macular diseases; Retinal detachments and vitreoretinal disorders; Ocular tumors; Retinal degenerations

Research Interests
Medical and surgical treatments; Clinical trials to evaluate new medical and surgical treatments of retinal diseases; Retinal imaging as applied to management of retinal diseases and determination of pathophysiology; Collaborative projects with basic scientists on pathogenesis of retinal diseases
R. V. Paul Chan, MD, MSc, MBA, FACS
John H. Panton, MD Professor in Ophthalmology
Chair, Department of Ophthalmology and Visual Sciences
Director, Pediatric Retina and ROP Service
Co-Director, Vitreoretinal Fellowship Program

MEDICAL SCHOOL
Temple University

RESIDENCY IN OPHTHALMOLOGY
New York-Presbyterian Hospital, Cornell University

CLINICAL FELLOWSHIP
Massachusetts Eye and Ear Infirmary (Retina)

GRADUATE SCHOOL
Weill Cornell Graduate School of Medical Sciences
(MSc in Clinical Investigation)

GRADUATE SCHOOL
The University of Chicago Booth School of Business (MBA)

Clinical Interests
Adult and pediatric retinal disease including retinopathy of prematurity (ROP); Retinal vascular diseases; Eye trauma; Eye infections/endophthalmitis; Diabetic retinopathy; Age-related macular degeneration

Research Interests
Global ophthalmology; Telemedicine and tele-education; New methods of diagnosing and managing pediatric retinal disease

Felix Y. Chau, MD
Associate Professor of Ophthalmology
Director, Retinal Bioengineering Laboratory

MEDICAL SCHOOL
University of Iowa

RESIDENCY IN OPHTHALMOLOGY
Duke University Eye Center

CLINICAL FELLOWSHIP
Illinois Eye and Ear Infirmary (Retina)

Clinical Interests
Pediatric and adult retinal diseases; Retinopathy of prematurity (ROP); Retinoblastoma; Rare congenital and inherited retinal diseases; Proliferative vitreoretinopathy (PVR); Diabetic retinopathy; Macular degeneration; Cystoid macular edema; Retinal detachment

Research Interests
Medical and surgical treatments; Experimental models and risk factors for retinal diseases; Engineering applications in ophthalmology

Michael J. Heiferman, MD
Assistant Professor of Ophthalmology

MEDICAL SCHOOL
Northwestern University Feinberg School of Medicine

RESIDENCY IN OPHTHALMOLOGY
Northwestern University McGaw Medical Center

CLINICAL FELLOWSHIPS
Illinois Eye and Ear Infirmary (Vitreoretinal Surgery)
Stanford University, Byers Eye Institute (Ocular Oncology)

Clinical Interests
Ocular oncology, including uveal melanoma and ocular manifestations of systemic malignancy; Vitreoretinal surgery, including complex retinal detachments, diabetic retinopathy, and eye trauma; Medical retina including macular degeneration, vascular occlusions, drug toxicity, and endophthalmitis

Research Interests
Translational cancer research including tumor immunology and tissue biorepositing; Retinal imaging to identify biomarkers for prognosis and treatment guidance; Medical education

Robert A. Hyde, MD, PhD
Assistant Professor of Ophthalmology
Director, Inherited Retinal Disease Service

MEDICAL SCHOOL
Case Western Reserve University School of Medicine

GRADUATE SCHOOL
Case Western Reserve University School of Medicine

RESIDENCY IN OPHTHALMOLOGY
Illinois Eye and Ear Infirmary

CLINICAL FELLOWSHIPS
Kellogg Eye Center, University of Michigan (Vitreoretinal Surgery)
Kellogg Eye Center, University of Michigan (Retinal Dystrophy)

Clinical Interests
Inherited retinal diseases; Vitreoretinal disorders; Gene therapy

Research Interests
Development of novel markers of visual function in patients with inherited retinal diseases; Preclinical studies and clinical trials
Yannek I. Leiderman, MD, PhD
Associate Professor of Ophthalmology
Co-Director, Vitreoretinal Fellowship Program
Director, Vitreoretinal Microsurgery Laboratory
Director, Ophthalmic Imaging Service

MEDICAL SCHOOL
George Washington University
National Institutes of Health Partnership (PhD, Molecular Pathobiology)

RESIDENCY IN OPHTHALMOLOGY
Massachusetts Eye and Ear Infirmary

CLINICAL FELLOWSHIP
Massachusetts Eye and Ear Infirmary (Vitreoretinal Surgery)

Clinical Interests
Vitreoretinal surgical diseases; Diabetic eye disease; Complex retinal detachment; Proliferative vitreoretinopathy (PVR); Macular surgery; Treatment of aphakia and placement of secondary intraocular lenses

Research Interests
Effectiveness of ophthalmic surgical interventions in diseases of the retina and vitreous; High-fidelity modeling of novel surgical devices and experimental techniques in microsurgery

William F. Mieler, MD, FARVO
Cless Family Professor in Ophthalmology
Vice-Chair for Faculty Affairs
Director, Ocular Oncology Clinic
Co-Director, Vitreoretinal Fellowship Program

MEDICAL SCHOOL
University of Wisconsin-Madison

RESIDENCY IN OPHTHALMOLOGY
Bascom Palmer Eye Institute

CLINICAL FELLOWSHIP
The Eye Institute, Medical College of Wisconsin
(Retina-Vitreous)

CLINICAL FELLOWSHIP
Wills Eye Hospital (Ocular Oncology)

Clinical Interests
Diseases of the macula, retina and vitreous; Age-related macular degeneration; Diabetic macular edema; Venous occlusive diseases; Vitreoretinal interface disorders; Ocular oncology

Research Interests
Ocular pharmacology; Intracocular tumors; Ocular imaging

Lawrence J. Ulanski, MD
Clinical Assistant Professor of Ophthalmology
Chief of Ophthalmology and Vitreoretinal Surgeon at Captain James Lovell Federal Health Care Center

MEDICAL SCHOOL
University of Michigan

RESIDENCY IN OPHTHALMOLOGY
William Beaumont Eye Institute

CLINICAL FELLOWSHIPS
University of Toronto, (Vitreo-Retina and Ocular Oncology)
Illinois Eye and Ear Infirmary (Uveitis)

Clinical Interests
Age-related macular degeneration; Uveitis; Ocular oncology and intraocular tumors; Surgical management of diabetic retinopathy, retinal detachment, proliferative vitreoretinopathy, and proliferative diabetic retinopathy; Surgical management of secondary intraocular lenses; Complex cataract surgery

Research Interests
Clinical trials in medical management of non-exudative & exudative macular degeneration; Novel treatments & clinical trials for diabetic retinopathy; Diabetic macular edema; Microvascular injury

PART-TIME CLINICAL FACULTY

Norman P. Blair, MD, FARVO
Professor of Ophthalmology

MEDICAL SCHOOL
Indiana University

RESIDENCY IN OPHTHALMOLOGY
Massachusetts Eye & Ear Infirmary

CLINICAL FELLOWSHIP
Retina Associates/Massachusetts Eye & Ear Infirmary (Retina)

CLINICAL FELLOWSHIP
Illinois Eye and Ear Infirmary (Ophthalmic Pathology)

RESEARCH FELLOWSHIP
Schepens Eye Research Institute
UVEITIS

Uveitis causes up to 20 percent of blindness in the United States. The Uveitis Service treats patients with inflammation of the uveal tract: the middle vascular layers of the eye critical to its normal function. Because of the rich circulation of blood throughout this area and its proximity to other important parts of the eye, the uvea is susceptible to immune disorders. Patients are referred to this service for the diagnosis and management of infectious and non-infectious ocular inflammatory conditions such as scleritis and anterior, intermediate, posterior and panuveitis. Treatment with steroid-sparing systemic immunomodulatory therapy is offered when appropriate. The service also performs procedures for its uveitis patients such as the insertion of steroid eluting implants as well as surgical management of complex uveitic cataracts. The service participates in clinical trials for novel therapeutics in uveitis and has established a uveitis research registry to conduct further clinical research studies in uveitis.

CO-DIRECTOR

Pooja Bhat, MD
Assistant Professor of Ophthalmology
Co-Director, Uveitis Service
Associate Residency Program Director
Director, Medical Student Education

MEDICAL SCHOOL
Lokmanya Tilak Municipal Medical College and Hospital, India

RESIDENCY IN OPHTHALMOLOGY
Northwestern University

CLINICAL FELLOWSHIPS
Northwestern University (Uveitis)
Massachusetts Eye and Ear Infirmary (Ophthalmic Pathology)

RESEARCH FELLOWSHIP
Massachusetts Eye Research and Surgery Institution (Uveitis)

Clinical Interests
Scleritis; Anterior, intermediate and posterior uveitis; Infectious retinopathies; White dot syndromes

Research Interests
Systemic and local immunosuppression for ocular inflammatory conditions; Herpetic eye disease; Anti-retinal antibodies in autoimmune retinopathy; Imaging modalities in anterior and posterior uveitis

CO-DIRECTOR

Ann-Marie Lobo-Chan, MD, MS
Associate Professor of Ophthalmology
Co-Director, Uveitis Service
Director, Uveitis/Medical Retina Fellowship

MEDICAL SCHOOL
Louisiana State University New Orleans

RESIDENCY IN OPHTHALMOLOGY
Massachusetts Eye and Ear Infirmary

CLINICAL FELLOWSHIP
Massachusetts Eye and Ear Infirmary (Ocular Immunology/Uveitis)

GRADUATE SCHOOL
University of Illinois at Chicago School of Public Health (MS in Epidemiology)

Clinical Interests
Diagnosis and management of ocular inflammatory disease, including infectious and non-infectious uveitis and scleritis

Research Interests
Diagnostic testing in infectious and non-infectious uveitis; Clinical trials for novel treatments of uveitis; Biomarkers in herpetic eye disease; Systemic infections and eye disease
LOW VISION

This specialized service introduces patients with low vision to technology and techniques to enhance their remaining sight and facilitate their independence. A low-vision optometrist and a certified low-vision therapist work as a team to provide clinical examination and visual skills assessment. Therapies include special optical and electronic devices, ergonomic equipment and new visual skills training to address routine daily tasks such as reading, writing, managing medication, cooking, locating and sign reading.

PATHOLOGY

The Ophthalmic Pathology Laboratory is a joint program of the Departments of Pathology and Ophthalmology that provides diagnostic services to patients and physicians within and outside Illinois. The laboratory is integrated with the other clinical laboratories in the University of Illinois Hospital and Health Sciences System, making it possible to utilize the latest cutting-edge diagnostic techniques in immunopathology and molecular pathology available in the diagnosis of ocular disorders.

DIRECTOR

Joan A. Stelmack, OD, MPH
Clinical Associate Professor of Ophthalmology
Director, Low Vision Service

GRADUATE SCHOOL
Illinois College of Optometry

DIRECTOR

Amy Y. Lin, MD
Associate Professor of Ophthalmology and Pathology
Assistant Dean for Curriculum
Director, Ophthalmic Pathology Laboratory

MEDICAL SCHOOL
Johns Hopkins University

RESIDENCY
Illinois Eye and Ear Infirmary (in Ophthalmology)
University of Illinois College of Medicine (in Pathology)

CLINICAL FELLOWSHIP
Illinois Eye and Ear Infirmary (Ophthalmic Pathology)

CLINICAL INTERESTS
Eye pathology; Pathologic basis of ophthalmic disease

RESEARCH INTERESTS
Ocular oncology; Pathology education; Virtual microscopy for learning pathology; Team-based learning
The Comprehensive Eye Clinic is a premiere ophthalmology practice run by recognized Board Certified ophthalmologists. The clinic provides: comprehensive eye exams, eyeglass prescriptions and contact lens fitting. The more extensive services include: state-of-the-art cataract surgery, femtosecond laser assisted cataract surgery, premium intraocular lenses and the management of common and complex eye diseases. Same-day or next-day appointments are available.

COMPREHENSIVE OPHTHALMOLOGY FACULTY PRACTICE

The General Eye Clinic (GEC) is the heart of our Department and serves as the first point of contact for many of the Infirmary’s neediest patients, as well as a primary location for ophthalmic graduate medical education. Our dedicated residents and world-class faculty provide a wide spectrum of collaborative ophthalmic care ranging from managing common eye diseases and delivering routine eye exams to performing complex medical and surgical cases including cataract, glaucoma and retinal procedures. Special emphasis is placed on providing strong continuity of patient care. The GEC sees emergent referrals from outside providers from throughout the region and accepts “walk-in” patients with acute eye disease.

GENERAL EYE CLINIC

The General Eye Clinic (GEC) is the heart of our Department and serves as the first point of contact for many of the Infirmary’s neediest patients, as well as a primary location for ophthalmic graduate medical education. Our dedicated residents and world-class faculty provide a wide spectrum of collaborative ophthalmic care ranging from managing common eye diseases and delivering routine eye exams to performing complex medical and surgical cases including cataract, glaucoma and retinal procedures. Special emphasis is placed on providing strong continuity of patient care. The GEC sees emergent referrals from outside providers from throughout the region and accepts “walk-in” patients with acute eye disease.
MILLENNIUM PARK EYE CENTER (MPEC)

The Millennium Park Eye Center (MPEC), conveniently located in the heart of downtown Chicago, is the city-center clinic of the Illinois Eye and Ear Infirmary. Ophthalmologists and Optometrists seeing patients at the MPEC are all members of the Department of Ophthalmology and Visual Sciences faculty. They diagnose and treat a wide range of eye conditions, from common eye problems to the most complex and rare ophthalmic issues. The Center offers the most advanced technology in vision and eye care available, utilizing state-of-the-art diagnostic imaging and surgical instrumentation.
MILES SQUARE FACULTY

Charles Kinnaird, OD
Clinical Assistant Professor of Ophthalmology
Chief, Optometry Section, Jesse Brown VA Medical Center

OPTOMETRY SCHOOL
Nova Southwestern University College of Optometry

RESIDENCY IN HOSPITAL BASED AND REHABILITATIVE OPTOMETRY
West Side Veterans Administration Medical Center, Chicago

CLINICAL VOLUNTEER FACULTY

Anil Gulati, MD
Anthony Finder, MD
Benjamin Mathew, MD
Bryan M. Kim, MD
Charles Kinnaird, OD
Joan Stelmack, OD, MPH
Julie Goldman, MD
Mark Dikopf, MD
Robert Garoon, MD
Lisa Nijm, MD, JD
Sachin Jain, MD
Sarwar Zahid, MD

AFFILIATED & JOINT COURTESY FACULTY

Daniel Alter, MD, PhD
Vandana Badlani, MD
Adrienne Berman, MD
Harit Bhatt, MD
Michael Blair, MD
Victoria Butcko, OD
Robert Fitzgerald, MD
Craig Foster, PhD
Ken-ichiro Fukuchi, MD, PhD
Richard A. Gemeinhart, PhD
Patricia Grant, PhD
Daniel Greenberg, MD
John R. Hetling, PhD
Jie Liang, PhD
Mike Maingrette, MD
Asrar B. Malik, PhD
Meena George, MD, PhD
Jeffrey Nichols, MD
Zeeshan Pasha, MD, MPH, MHA, PhD
Bellur S. Prabhakar, PhD
Satya Reddy, MD
Daniel K. Roberts, OD, PhD
Steven Roth, MD, FARVO
Michael Shapiro, MD
Veeral Sheth, MD
Janet Szlyk, PhD
Matthew Thompson, MD
Benjamin Ticho, MD
Lihteh Wu, MD
Kaori Yamada, PhD
Xiaojing Yang, PhD
Xincheng Yao, PhD
SIGHT-SAVING TREATMENT FOR AK
IEEI Specialists Restore Sight and Livelihood to Patient Suffering from *Acanthamoeba Keratitis*

Debbie Keller, age 56, is a healthy, energetic, married mother of two who enjoys volunteering. She was the mom who was always willing to help out at her children’s schools. Now that her son and daughter are in their twenties, Debbie devotes her time to helping those in need in her community.

Debbie has been a contact lens wearer for most of her life. About 1 ½ years ago, she began to experience pain in her right eye. Her optometrist believed her cornea had been scratched, but would heal in time. When the pain persisted, Debbie sought a second opinion from an optometrist who believed the scratch was significant enough to require a course of steroids. Unfortunately, the steroid drops did not reduce the pain. In fact, her symptoms got even worse. Debbie began to experience pain so excruciating that it felt like needles were being pushed through her eye. It was the worst pain she had ever felt in her life. At the same time, she was also experiencing extreme light sensitivity, redness, and physical exhaustion.

As the days went by and her symptoms continued to worsen, Debbie’s husband suggested it was time to go see another doctor. At this point, she needed to wear an eye patch and block out all the light that was coming into her home. Venturing outdoors was a serious challenge for Debbie, but she continued to seek the help of eye doctors. In all, she saw six doctors and three cornea specialists. Most of these doctors gave her a diagnosis of ocular herpes. One cornea specialist, with the aid of a confocal microscope, diagnosed Debbie with *Acanthamoeba Keratitis* (AK).

This specialist said that he had only seen only a few cases of AK in his career. About one week into her treatment with this doctor, Debbie completely lost vision in the infected eye, and the specialist decided she needed to see a doctor with extensive experience in AK. Debbie was referred to Elmer Tu, MD, a cornea specialist and Director of the Cornea Service at the Illinois Eye and Ear Infirmary (IEEI), and also one of the top doctors in the world for treatment of AK.

When Debbie’s husband drove her from their home in Barrington, Illinois to her first appointment with Dr. Tu, she was feeling desperate, in pain, and frightened of losing her eye. But, she says, Dr. Tu was calm and very knowledgeable. He confirmed the AK diagnosis and described it as “advanced.” He quickly created a treatment plan, which included a number of different eye drops, as well as strong oral medications. Debbie took one eye drop every 20 minutes throughout the day, and set an alarm at night in order to wake up every 2 hours for additional eye drops. She also began to see Dr. Tu every week.

AK had not only robbed Debbie of the ability to see out of her right eye, but also of her life, as her days had always been filled with activities and taking care of other people. Now she could not drive, her light sensitivity kept her indoors, and she had to rely on her family and friends for grocery shopping and meal preparation. Debbie says that her faith and her supportive group are what kept her going.

Debbie and her husband made weekly round trips to the IEEI, and she faithfully followed the treatment plan. As the AK responded to these treatments, Dr. Tu made changes to her regimen. Debbie later acquired a secondary infection in the affected eye, which Dr. Tu treated successfully.

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**ACANTHAMOEBA KERATITIS**

According to the Center for Disease Control (CDC), *Acanthamoeba keratitis* is a rare but serious infection of the eye that can result in permanent visual impairment or blindness. This infection is caused by a microscopic, free-living amoeba called Acanthamoeba, which can be found in most sources of water such as fresh water, tap water, bottled water, chlorinated pools, and hot tubs. The vast majority of AK infections are found in contact lens wearers. For guidelines on prevention of this disease, visit the [CDC website](https://www.cdc.gov) or speak with your eye care provider.
When Debbie was 5 months into the treatment plan, the intraocular pressure (IOP) in her right eye elevated to a very high level, and Dr. Tu called in Thasarat Sutabutr Vajaranant, MD, MHA, a glaucoma specialist and Director of the Glaucoma Service at the IEEI, to determine a treatment. Dr. Vajaranant believed that Debbie might benefit from surgery. After examining Debbie a few weeks later, Dr. Tu decided that her cornea had suffered so much damage that a corneal transplant was urgently needed. He and Dr. Vajaranant scheduled surgery for 2 days later. Dr. Tu designed and performed a unique transplant for both Debbie’s cornea and sclera, the white outer layer of the eye, along with an innovative modification to accommodate a drainage tube that had been implanted by Dr. Vajaranant to control Debbie’s glaucoma.

A couple of days after the surgery, Debbie’s pain and light sensitivity were gone, and full vision was restored to her right eye. She had prayed for a miracle, and she wept with gratitude. Her life slowly returned to normal. She continued seeing Dr. Tu every month, and in October 2020 when she began to develop a cataract in her right eye, Dr. Tu removed it.

Today, Debbie has good mid-range vision without glasses. She only needs glasses for distance, and she is spreading the word about AK and Dr. Tu’s exceptional expertise on her personal Facebook page, as well as the AK Facebook page that receives views from around the world. Debbie knows that additional care and maintenance will be needed for her corneal transplant, but she is confident that she is in the best hands with Dr. Tu and Dr. Vajaranant.

“Dr. Tu designed and performed a unique transplant for both Debbie’s cornea and sclera…along with an innovative modification to accommodate a drainage tube that had been implanted by Dr. Vajaranant to control Debbie’s glaucoma.”
Born with a corneal disorder, six-year-old David Balderas had been considered legally blind since birth. As a toddler, whenever his parents would spot an airplane in the sky, David would look up and cry because he couldn't see anything. Living outside the United States, the Balderas family didn’t have access to quality eye care; thus, he had never received treatment from an eye doctor for his cloudy corneas and low vision. His first doctor’s appointment at UIC was with Mehmet Cem Mocan, MD, Associate Professor of Ophthalmology, in July 2020. Speaking through an interpreter, Dr. Mocan quickly realized David would need multi-specialty care, so he reached out to M. Soledad Cortina, MD, Associate Professor of Ophthalmology and Director of the Artificial Cornea Program, COFP, and General Eye Clinic at UIC. Dr. Cortina confirmed that David had a congenital corneal dystrophy that was causing his corneas to accumulate fluid, and would need a corneal transplant in which only the back layer of the cornea is replaced. This would ensure that his vision could develop to its full potential while he was still young.

David received corneal transplants in both eyes at age five, and his vision drastically improved overnight. Unfortunately, in spite of wearing special glasses for protection and treating his eyes daily with steroid eye drops, the eye pressure in David’s eyes began to build up, affecting their ability to drain fluid out through regular pathways, which signaled a need for life-long care. Drs. Mocan and Cortina treated the pressure initially with medicine, but when it didn’t subside, they turned to Ahmad Aref, MD, MBA, Vice Chair for Clinical Affairs, and Associate Professor of Ophthalmology at UIC. Dr. Aref worked together with Javanah Abbasian, MD to perform an innovative eye surgery. The surgery involved using an endoscopic video camera to view the eye’s natural drainage network and then using an instrument to open the tissues with the goal of re-establishing normal fluid flow and drainage.

Today, all three physicians treat David collectively, working with his mom to develop an individualized care plan that will help him become independent, attend school, and live as normal a life as possible.

“As a mom it’s difficult to see him go through this problem,” says Maribel Balderas, “because he is too little to be going through so many surgeries and pain. I am very happy and thankful to have Drs. Cortina, Aref, and Mocan working to help David, because they always answer all my questions on time, and his vision has gotten so much better.”

“I am very happy and thankful to have Drs. Cortina, Aref, and Mocan working to help David...his vision has gotten so much better.”

Maribel Balderas
Mother of David Balderas

“After he had the initial transplant surgery, one day he looked up and said to me, ‘Look Mom, you see that plane? It’s white and red!’ For me, it was beautiful to know that all we are doing – all the doctors and [I] – with all the care that he requires, it’s worth it because we are improving his quality of life.”

“David will always require care for his eyes due to the corneal transplants, and we are going to have to continue to monitor him closely as he gets older,” states Dr. Cortina. “But now, his eye pressure is controlled and his corneas are clear for him to see through. I see him doing very well, and having a very good result. Trusting your child to our care is not easy – I know because I have four kids myself – and we deeply value the trust Mrs. Balderas has placed in our team at UIC.”
IMAGE, ABOVE: Dr. Cortina and David Balderas.
RESEARCH

#7 in US Ophthalmology Departments for NIH Funding*

#8, #14, and #20 in Individual NIH Funding Nationwide *

*2020 date according to The Blue Ridge Institute for Medical Research

$14,320,927 current funding

54 active grants
The Department of Ophthalmology and Visual Sciences has a history of dedicated commitment and record of prominent contributions to vision science research. The overarching goal for the research program is to address the significant challenges central to understanding, treating and preventing blinding eye disease. The program encompasses exemplary and pioneering research in the most critical areas of vision research, including investigations to understand the mechanisms of potentially blinding eye diseases, the development of innovative techniques and instruments for diagnosing and monitoring the progression of eye diseases, the development of new therapeutics to control blinding eye diseases, genome-wide association studies, visual psychophysics, retinal processing, and visual neurophysiology. The Department maintains a tradition of excellence in collaborative and interdisciplinary research that has advanced knowledge in basic vision science and facilitated translation of findings to improve clinical care of patients with eye diseases.

RESEARCH FACULTY

The Department of Ophthalmology and Visual Sciences has a history of dedicated commitment and record of prominent contributions to vision science research. The overarching goal for the research program is to address the significant challenges central to understanding, treating and preventing blinding eye disease. The program encompasses exemplary and pioneering research in the most critical areas of vision research, including investigations to understand the mechanisms of potentially blinding eye diseases, the development of innovative techniques and instruments for diagnosing and monitoring the progression of eye diseases, the development of new therapeutics to control blinding eye diseases, genome-wide association studies, visual psychophysics, retinal processing, and visual neurophysiology. The Department maintains a tradition of excellence in collaborative and interdisciplinary research that has advanced knowledge in basic vision science and facilitated translation of findings to improve clinical care of patients with eye diseases.

VICE CHAIR FOR RESEARCH

Deepak Shukla, PhD
Vice Chair for Research
Marion H. Schenk Esq., Professor in Ophthalmology for Research
of the Aging Eye
Professor of Ophthalmology, Microbiology and Immunology
Director, Ocular Virology Laboratory

GRADUATE SCHOOL
University of Illinois at Chicago (PhD, Microbiology and Immunology)

RESEARCH FELLOWSHIP
Northwestern University (Virology and Immunology)

Research Interests
Ocular herpes virus infection mechanisms; Development of new therapeutic strategies against viral diseases of the aging eye; Herpes virus vaccine development

RENEWAL: The Department's National Eye Institute Core Grant for Vision Research has been renewed. This is the second-longest, continually funded NEI core grant in the nation – first awarded in 1978.

RENEWAL: The Department's RPB Unrestricted Research Grant from Research to Prevent Blindness has been renewed.
Jin-Hong [Robert] Chang, PhD
Research Associate Professor of Ophthalmology
Director, Angiogenesis Research Laboratory

GRADUATE SCHOOL
University of Mississippi (PhD, Biochemistry)

RESEARCH FELLOWSHIP
University of Virginia (Microbiology) Schepens Eye Research Institute, Harvard Medical School (Ophthalmology)

Research Interests
The role of VEGFR1, R2 and R3 activity in vitro and in vivo with the broader goal of characterizing the intrinsic factors of lymphatic cells that regulate corneal angiogenesis and lymphangiogenesis; Development of targeted therapies for corneal injury and disease

Michael A. Grassi, MD
Associate Professor of Ophthalmology
Director, Retinal Chemical Genomics Laboratory

MEDICAL SCHOOL
Northwestern University

RESIDENCY IN OPHTHALMOLOGY
University of Iowa

CLINICAL FELLOWSHIP
University of Iowa (Medical Retina)

RESEARCH FELLOWSHIP
University of Iowa (Molecular Ophthalmology)

Research Interests
Improving the treatment of retinal disease; Using cell-based models of retinal disease in genomic and chemical high throughput studies to identify key pathways and novel therapeutic targets

Victor H. Guaiquil, PhD
Research Assistant Professor of Ophthalmology
Corneal Regenerative Medicine Laboratory

GRADUATE SCHOOL
University Austral, Chile (MS)
SUNY Downstate Medical Center, New York (PhD, Molecular and Cellular Biology)

RESEARCH FELLOWSHIPS
Memorial Sloan-Kettering Cancer Center and Hospital for Special Surgery, New York

Research Interests
Cellular and molecular mechanisms involved in angiogenesis and neurogenesis in the retina and cornea; Cornea nerve regeneration; Oxygen induced retinopathy; Axonal guidance proteins

Joelle A. Hallak, MS, PhD
Assistant Professor of Ophthalmology
Co-Executive Director, Artificial Intelligence in Ophthalmology (Ai-O) Center
Director, Ophthalmic Data Science Laboratory

GRADUATE SCHOOL
University of Illinois at Chicago (MS, PhD, Epidemiology)

Research Interests
Comparative effectiveness research; Statistical analysis of complex data; Computational models combining structured and unstructured data in order to develop personalized disease prediction scores

Kyu Yeon Han, PhD
Research Assistant Professor of Ophthalmology
Metalloproteinases Research Laboratory

GRADUATE SCHOOL
Suwon University, Korea (MS, Genetic Engineering)
Kyung Hee University, Korea (PhD, Oncology)

RESEARCH FELLOWSHIP
University of Illinois College of Medicine (Ophthalmology)

Research Interests
The mechanisms of membrane type I metalloproteinase in corneal neovascularization; Molecular and cellular aspects of extracellular vesicles in corneal angiogenesis and wound healing

Dingcai Cao, PhD
Professor of Ophthalmology
Director, Visual Perception Laboratory

GRADUATE SCHOOL
Beijing University (MS, Biopsychology)
University of Chicago (MS, Statistics)
University of Chicago (PhD, Biopsychology)

Research Interests
Melanopsin-based visual perception and circadian rhythm; Rod-cone Interaction; Color perception; Retinal physiology; Lighting and health; Acute and chronic alcohol effect on vision and circadian rhythm

Joelle A. Hallak, MS, PhD
Assistant Professor of Ophthalmology
Co-Executive Director, Artificial Intelligence in Ophthalmology (Ai-O) Center
Director, Ophthalmic Data Science Laboratory

GRADUATE SCHOOL
University of Illinois at Chicago (MS, PhD, Epidemiology)

Research Interests
Comparative effectiveness research; Statistical analysis of complex data; Computational models combining structured and unstructured data in order to develop personalized disease prediction scores

Elmira Jalilian, MSc, PhD  
Assistant Professor of Ophthalmology  

**GRADUATE SCHOOL**  
Newcastle University, UK (MSc in Medical Genetics)  
University College London (UCL), UK (PhD in Stem Cell and Developmental Biology)  

**VISITING SCHOLAR**  
Harvard Medical School (Stem Cell Bioengineering)  

**POSTDOCTORAL RESEARCH FELLOWSHIP**  
University of Michigan (Developmental Neurology)  

**Research Interests**  
Therapeutics for corneal nerve regeneration, including novel stem cell and tissue engineering approaches

Andrius Kazlauskas, PhD  
Professor of Ophthalmology and Physiology and Biophysics  

**GRADUATE SCHOOL**  
Cleveland State University (PhD, Chemistry)  
Fred Hutchinson Cancer Research Center, Seattle, WA (Postdoctoral Research Associate, Cancer Biology)  

**Research Interests**  
Improving current therapeutic options for patients with diabetic retinopathy; Developing new approaches to prevent diabetic retinopathy

J. Jason McAnany, PhD  
Associate Professor of Ophthalmology  
Director, Clinical Psychophysics and Electrophysiology Laboratory  

**GRADUATE SCHOOL**  
University of Illinois at Chicago (MA, PhD, Behavioral Neuroscience)  

**RESEARCH FELLOWSHIP**  
University of Illinois College of Medicine (Psychophysics and Electrophysiology)  

**Research Interests**  
Electroretinography; Psychophysics; Pupillometry; Retinal imaging; Acquired and inherited retinal disease

Kyung-No Son, MS, PhD  
Research Assistant Professor of Ophthalmology  
Lacrimal Cell Biology Laboratory  
Director of Preclinical Drug Development  

**GRADUATE SCHOOL**  
Kyung Hee University, South Korea (MS, PhD, Molecular Biology)  

**RESEARCH FELLOWSHIP**  
University of Illinois at Chicago (Microbiology and Immunology)  

**Research Interests**  
Dry eye disease; Understanding of functional role of histatin peptides in Dry Eye Disease (DED); Seeking to gain a better understanding of accessory lacrimal glands which are necessary for better understanding the basis of aqueous tear deficiency in DED and development new therapeutic approaches

Joy Sarkar, PhD  
Research Assistant Professor of Ophthalmology  
Corneal Neurobiology and Regenerative Medicine Laboratory  
Associate Director, Cell and Molecular Biology Core Module  

**GRADUATE SCHOOL**  
University of Mumbai (MS, Microbiology)  
H.N. Reliance Foundation Hospital Research Center (PhD, Biochemistry)  

**RESEARCH FELLOWSHIPS**  
Northwestern University (Cellular and Molecular Biology)  
Tata Institute of Fundamental Research TIFR (Cellular and Molecular Biology)  

**Research Interests**  
Cellular & molecular aspects of Dry Eye disease; Corneal nerve regeneration after injury; Angiogenesis, neurogenesis & regenerative medicine; Innate immune regulatory mechanisms in eye disease

Elmira Jalilian, MSc, PhD  
Assistant Professor of Ophthalmology  

**GRADUATE SCHOOL**  
Newcastle University, UK (MSc in Medical Genetics)  
University College London (UCL), UK (PhD in Stem Cell and Developmental Biology)  

**VISITING SCHOLAR**  
Harvard Medical School (Stem Cell Bioengineering)  

**POSTDOCTORAL RESEARCH FELLOWSHIP**  
University of Michigan (Developmental Neurology)  

**Research Interests**  
Therapeutics for corneal nerve regeneration, including novel stem cell and tissue engineering approaches

Andrius Kazlauskas, PhD  
Professor of Ophthalmology and Physiology and Biophysics  

**GRADUATE SCHOOL**  
Cleveland State University (PhD, Chemistry)  
Fred Hutchinson Cancer Research Center, Seattle, WA (Postdoctoral Research Associate, Cancer Biology)  

**Research Interests**  
Improving current therapeutic options for patients with diabetic retinopathy; Developing new approaches to prevent diabetic retinopathy

J. Jason McAnany, PhD  
Associate Professor of Ophthalmology  
Director, Clinical Psychophysics and Electrophysiology Laboratory  

**GRADUATE SCHOOL**  
University of Illinois at Chicago (MA, PhD, Behavioral Neuroscience)  

**RESEARCH FELLOWSHIP**  
University of Illinois College of Medicine (Psychophysics and Electrophysiology)  

**Research Interests**  
Electroretinography; Psychophysics; Pupillometry; Retinal imaging; Acquired and inherited retinal disease

Kyung-No Son, MS, PhD  
Research Assistant Professor of Ophthalmology  
Lacrimal Cell Biology Laboratory  
Director of Preclinical Drug Development  

**GRADUATE SCHOOL**  
Kyung Hee University, South Korea (MS, PhD, Molecular Biology)  

**RESEARCH FELLOWSHIP**  
University of Illinois at Chicago (Microbiology and Immunology)  

**Research Interests**  
Dry eye disease; Understanding of functional role of histatin peptides in Dry Eye Disease (DED); Seeking to gain a better understanding of accessory lacrimal glands which are necessary for better understanding the basis of aqueous tear deficiency in DED and development new therapeutic approaches

Joy Sarkar, PhD  
Research Assistant Professor of Ophthalmology  
Corneal Neurobiology and Regenerative Medicine Laboratory  
Associate Director, Cell and Molecular Biology Core Module  

**GRADUATE SCHOOL**  
University of Mumbai (MS, Microbiology)  
H.N. Reliance Foundation Hospital Research Center (PhD, Biochemistry)  

**RESEARCH FELLOWSHIPS**  
Northwestern University (Cellular and Molecular Biology)  
Tata Institute of Fundamental Research TIFR (Cellular and Molecular Biology)  

**Research Interests**  
Cellular & molecular aspects of Dry Eye disease; Corneal nerve regeneration after injury; Angiogenesis, neurogenesis & regenerative medicine; Innate immune regulatory mechanisms in eye disease

Elmira Jalilian, MSc, PhD  
Assistant Professor of Ophthalmology  

**GRADUATE SCHOOL**  
Newcastle University, UK (MSc in Medical Genetics)  
University College London (UCL), UK (PhD in Stem Cell and Developmental Biology)  

**VISITING SCHOLAR**  
Harvard Medical School (Stem Cell Bioengineering)  

**POSTDOCTORAL RESEARCH FELLOWSHIP**  
University of Michigan (Developmental Neurology)  

**Research Interests**  
Therapeutics for corneal nerve regeneration, including novel stem cell and tissue engineering approaches

Andrius Kazlauskas, PhD  
Professor of Ophthalmology and Physiology and Biophysics  

**GRADUATE SCHOOL**  
Cleveland State University (PhD, Chemistry)  
Fred Hutchinson Cancer Research Center, Seattle, WA (Postdoctoral Research Associate, Cancer Biology)  

**Research Interests**  
Improving current therapeutic options for patients with diabetic retinopathy; Developing new approaches to prevent diabetic retinopathy

J. Jason McAnany, PhD  
Associate Professor of Ophthalmology  
Director, Clinical Psychophysics and Electrophysiology Laboratory  

**GRADUATE SCHOOL**  
University of Illinois at Chicago (MA, PhD, Behavioral Neuroscience)  

**RESEARCH FELLOWSHIP**  
University of Illinois College of Medicine (Psychophysics and Electrophysiology)  

**Research Interests**  
Electroretinography; Psychophysics; Pupillometry; Retinal imaging; Acquired and inherited retinal disease

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VISITING RESEARCH FACULTY

Seungwon An, PhD
Visiting Research Assistant Professor

Michael T. Flavin, PhD
Visiting Research Professor

Paul Knepper, MD, PhD, FARVO
Visiting Professor

Jason Park, PhD
Visiting Research Assistant Professor

Darvin Yi, PhD
Assistant Professor of Ophthalmology and Bioengineering (by courtesy)
Technical Director, Artificial Intelligence in Ophthalmology (Ai-O) Center
Director, Medical Computer Vision (MCV) Group

Xincheng Yao, PhD
Richard & Loan Hill Professor of Biomedical Engineering and Ophthalmology
Director, Biomedical Optics and Functional Imaging Laboratory

Qiang (Jack) Zhou, MD, PhD
Assistant Professor of Ophthalmology

MEDICAL SCHOOL
Sun Yat-sen University, P.R. China

GRADUATE SCHOOL
Sun Yat-sen University, P.R. China (PhD, Ophthalmology)

RESEARCH FELLOWSHIP
Zhongshan Ophthalmic Center
Sun Yat-sen University, Guangzhou, P.R. China

RESEARCH FELLOWSHIP
Illinois Eye and Ear Infirmary (Cornea)

Research Interests
Tissue engineering; Corneal stem cells, nerve regeneration, and disease treatment
REGENERATIVE MEDICINE: REBUILDING CORNEAL TISSUES AND NERVES

Stem Cell-Derived Exosomes Promote Corneal Wound Healing

Multiple types of corneal diseases and conditions are commonly diagnosed in our general eye clinic. They range from acute injuries, like minor trauma or deep penetrating injuries, to chronic corneal diseases such as diabetic or dry eye syndrome. Regeneration of the affected corneal tissue requires the coordinated action of multiple agents such as proteins, lipids, and microRNAs that facilitate the repair and functional recovery of the cornea. These agents have generally been used as single entities, yielding variable results. Our team of researchers is now using several of these factors together simultaneously to determine their effect in cornea wound healing.

In order to move forward with this approach, a collaboration has been established between our Stem Cell Therapy and Tissue Engineering laboratory, directed by Ali Djalilian, MD and Elmira Jalilian, PhD and our Corneal Regenerative Medicine Laboratory, directed by Mark Rosenblatt, MD, PhD MBA, MHA and Victor Guaiquil, PhD.

This team of researchers has joined together to explore the use of exosomes, tiny vesicles that are vital to cell function, to engineer both the healing of the corneal epithelium, the outermost layer of the cornea, and the regeneration of corneal nerves. Exosomes have the ability to transfer DNA and RNA messengers and proteins to other cells, causing changes in cell function. For this study, the exosomes are obtained from cultured human corneal stem cells and bone marrow stem cells and are tested in mice, both in vitro and in vivo.

Exosomes are produced by most cells. They are extracellular vesicles that contain proteins, lipids, and nucleic acids. While the exosomes that are derived from stem cells may provide the needed elements for the recovery of progenitor cells, those from the cornea may provide factors that facilitate healing in more mature cells. Exosomes provide a multi-targeted approach to enhance tissue regeneration, and so far, the preliminary data shows that they can induce corneal epithelium wound healing and enhance the growth and regeneration of corneal nerves in an animal model. Further investigations are planned to help researchers understand and determine the effect of exosomes on different types of corneal disease.
The Department of Ophthalmology and Visual Sciences at the Illinois Eye and Ear Infirmary has been a leader in ophthalmic innovation and discovery since its inception. As part of its continuing dedication to advancing the field of ophthalmology, the Department works in partnership with the University of Illinois at Chicago Innovation Center. Labs at the Innovation Center provide interdisciplinary teams with a dedicated environment for project research and development. Along with the institutional support received through the Innovation Center, the Department’s projects are generously supported by philanthropic efforts and nonprofit organizations.

ORBIT Lab

The Ophthalmic Research in Bioengineering, Innovation, and Technology (ORBIT) Lab is an interdisciplinary cohort of faculty and students specializing in the research and development of ophthalmic devices.

The inaugural project of the ORBIT Lab began in 2018, with the submission of a product idea from Levi Kanu, MD, a first-year resident at that time. Under the expertise of ORBIT Lab Executive Director Peter Pfanner, MDM and Technical Director Yannek Leiderman, MD, PhD, the ORBIT team has since developed and secured IP rights for the Suprachoroidal Space (SCS) Catheter.

The SCS Catheter is a steerable, navigational catheter that is used to improve access to the back of the eye. Forty percent of all ophthalmic diseases affect the posterior area of the eye, but can be difficult to treat due to their location. Current methods to access the posterior area of the eye either require invasive vitrectomies, or can only be performed by select, highly skilled surgeons.

ORBIT Lab’s novel SCS Catheter is designed to overcome these barriers to targeted drug delivery to the eye’s suprachoroidal space (SCS). The catheter tip is designed to minimize stress to the tissues defining the SCS and, in combination with its novel design features for controlled steerability, the SCS Catheter has the potential to deliver large amounts of advanced therapies to targeted locations. A provisional patent has already been issued for this project, and is in the process of being converted to a utility patent. The ORBIT Lab’s work has also been published in the Journal of Medical Engineering and Technology, in an article titled “Design of a navigational catheter system for the targeted delivery of therapeutics within the suprachoroidal space.”
ORBIT Lab is currently in the research and development phase of its second project, and ophthalmology residents Luis Acaba-Berrocal, MD and Mathew Margolis, MD recently joined the team.

**Healthcare App Lab**

The Healthcare App Lab is the newest collaboration between the Department of Ophthalmology and Visual Sciences and the UIC Innovation Lab. Co-Directors of the Department’s Uveitis Service, Ann-Marie Lobo-Chan, MD, MS and Pooja Bhat, MD are project leads and content experts for the lab. They are collaborating with the Innovation Center to produce a patient app that addresses uveitis, or inflammation within the eye. The app will educate patients about the disease, how a diagnosis for it is made, and the variety of different treatments that are available.

Team members from the Innovation Center will interview patients to determine what information will enhance their understanding of uveitis, and improve their management of this disease. The team hopes the app will improve patient literacy, encourage compliance with their treatments and medications, and help them catch flare-ups at their onset.

*Image: Illustration of the SCS Catheter drug delivery mechanisms. LEFT: Targeted: Advancing a needle through the catheter allows for targeted delivery of therapeutics. RIGHT: Diffuse: Syringe used with catheter lumen to deliver diffuse therapeutics.*
For the past 2 years, the Department of Ophthalmology and Visual Sciences at the Illinois Eye and Ear Infirmary has worked closely with the Institute for Healthcare Delivery Design (IHDD) at UIC. Established in 2017, the IHDD employs the methods of human-centered design, public health, and delivery science in collaboration with stakeholders to improve the quality, safety, and value of care.

Former Department Head (and current Executive Dean of the College of Medicine) Mark I. Rosenblatt, MD, PhD, MBA, MHA and current Department Head R.V. Paul Chan, MD, MSc, MBA were attracted to the patient-centered approach to improving the delivery of care. IHDD Co-founder and Director Hugh Musick, MBA, describes his team’s work with the Department of Ophthalmology and Visual Sciences as innovation planning “born out by a vision of a well-articulated strategy for the delivery of healthcare that the Department’s leadership wants to realize. Dr. Chan is setting a direction for where the Department is headed. A very significant component of his vision includes defining an exemplary patient experience.”

“In Fall 2019, we started looking at clinic flow; looking for areas for opportunities in improvement,” explains Ann Kauth, Senior Designer in the IHDD Population Health Sciences Program. The IHDD team studied how the patient experiences a visit to the clinic. They shadowed patients, techs, physicians, and front desk staff throughout these visits. The team used this process to identify areas of opportunity and to develop a road map to a better care experience.

Outcomes from this assessment include formal efforts to cross-train techs across service lines, and a Slack implementation trial for better communication among the healthcare team. Another major pain point in communication that the IHDD team discovered was patient messaging. “The discovery work that we did around patient messages unearthed key issues around clarity; around roles and responsibilities, training, and needs for InBasket and call center changes,” says Ann Kauth, who conceived possible options for optimizing patient messaging. These solutions include the hiring of a nurse to help with messaging, and a pilot messaging pool system that launched in the General Eye Clinic (GEC) in September 2021.

Emily Cole, MD, MPH, Assistant Chief of Service in the Department, and GEC Clinic Manager Matt Launstein serve as clinic leads on the new messaging pool system, which will split patient messages and delineate roles for responding. Dr. Cole hopes that this new system will “make sure we’re really addressing the needs of our patients and the time of our residents and fellows.” She says that working with the IHDD has been a great experience for the residents, who are now thinking more about quality improvement processes. This new thinking was reinforced by a Human Centered Design course that residents completed through the IHDD in Fall 2020.

For the majority of 2020, the focus of the IHDD collaboration shifted to the COVID pandemic, implementation of Epic healthcare software, and preparation for a new ophthalmology clinical space that is set to open in 2022. Pete Setabutr, MD credits the IHDD team for being “instrumental” in helping the Department to navigate these three events that have impacted everyone’s daily work. In the early days of the pandemic, the IHDD team and the Department created patient messaging - including letters, phone scripts, and a web page - to address changes and new safety measures for visitors. Internally, the IHDD helped all Department staff transition to Slack in order to keep communications centralized during a challenging time.

Planning the transition to the UI Health Outpatient Surgery Center and Specialty Clinics building, the future home of the Department’s clinical operations, has also kept the IHDD team engaged over the past year. Early in the architectural design process, the IHDD built out a full-scale model exam room, allowing faculty to assess the space and provide feedback. The team also hosted a faculty workshop to discuss patient experiences, and how behind-the-scenes operations could best support the most desired outcomes. Ann Kauth explains that participants have generated ideas for how “staff, EPIC, and the built environment [will] come together to queue up and move patients through the process in a way that everyone agrees is a good patient and physician experience.”

Dr. Setabutr believes that this patient-centered approach will encourage physicians to think about their current practice with a broader lens and a mind towards the future. He explains, “Our team isn’t just asking, how does new growth happen in this new space, but also, how does it happen as healthcare changes?” Hugh Musick agrees, “Strategy lives in the future; it’s not where you are, but where you want to be.”
Ophthalmology faculty tour the IHDD full-scale model exam room and provide feedback for improvement.
The Ophthalmic Clinical Trials and Translational Center (OCTTC), under the direction of Joseph Baker, MPH, provides a model for dedicated clinical trial support services, including personalized clinical trial patient care, certified ophthalmic lanes with cutting-edge equipment, and a platform for clinicians to launch new trials and studies. The main objective of the OCTTC is to streamline research operations and enhance the implementation of clinical trials in order to provide promising new treatments to patients who have been diagnosed with the most difficult and complex ophthalmic diseases.

The OCTTC employs eight full-time clinical trial coordinators (CTC), with at least one CTC assigned to each trial or research study. The CTC is responsible for running day-to-day research services including budget and contract negotiations; Institutional Review Board (IRB) preparation and submission; coverage analysis; patient recruitment strategies, examinations, and data collection; intellectual property and commercialization consulting; and regulatory and oversight support to first in human studies.

From the start of a clinical trial to final closeout and data analysis, the OCTTC provides professional-level support to investigators. This is especially critical for investigator-initiated studies. New treatments and medical devices are first developed in the laboratory and in clinics before obtaining sponsorship. The OCTTC provides the framework and personnel to support these initial developments. Furthermore, with UI Hospital & Health Science’s transition to the Epic EMR platform, the CTCs provide daily support by implementing new research workflows and proposing enhancements to existing processes and Epic integration.

This enhanced research coordination model allows the OCTTC to provide patients with a higher quality experience, while maintaining attention to detail and compliance, which are critical to favorable study results. Since its inception in 2015, the OCTTC has been successful in providing support to hundreds of trials and investigator-initiated research studies. As of July 2021, the OCTTC has already provided support for over 30 active clinical trials and over 70 active investigator-initiated research studies.

With its high level of dedicated services, the OCTTC provides an innovative environment where clinical and translational scientists are fully supported in their quest to provide the very best treatments to patients who are suffering from the most serious ophthalmic diseases.
## SPONSORED RESEARCH

**July 1, 2018 - June 30, 2021**

### FEDERALLY SPONSORED GRANTS

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<td>The Effect of Alcohol on Retinal Photic Signaling to the Human Circadian System</td>
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<td>Dingcai Cao, PhD</td>
<td>Alcohol Stimulation and Sedation in Binge Drinkers</td>
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<td>R. V. Paul Chan, MD, MSc, MBA, FACS</td>
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<td>Elmira Jalilian, PhD</td>
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<td>Michael Grassi, MD</td>
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<td>Sandeep Jain, MD</td>
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<td>Tissue Engineering Cornea Replacements</td>
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<td>Anti VEGF therapy in Proliferative diabetic retinopathy: The role of anti VEGF effector Follistatin in regulating vascular barrier homeostasis</td>
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**UVIETIS**

**Ann-Marie Lobo, MD, MS** Zoster Eye Disease Study (ZEDS)

To learn more about any of these investigations and trials, including how to refer patients, please call (312) 996-6590.
STEPHEN MCLEOD, MD

Resident Class of 1993
Assistant Professor from 1995-1998

Theresa M. and Wayne M. Caygill, MD Distinguished Professor and Chair
Department of Ophthalmology
University of California San Francisco
Editor-in-Chief, Ophthalmology
Chief Executive Officer-Elect, American Academy of Ophthalmology

WHO WAS YOUR MENTOR AT THE IEEI WHILE YOU WERE IN TRAINING?
Amongst so many, my most influential mentors were Joel Sugar and Marilyn Miller, Joel because of my career pathway in cornea and Marilyn because of my engagement in global blindness. Joel was just a fantastic teacher—with the highest standards. And while a tough resident educator, as a senior partner he was absolutely the most supportive and considerate individual one could hope for. One event I remember with amusement: as a resident I had the misfortune of working up in his clinic one of the worst patient historians I’d encountered—a dreadfully complicated history, but the patient insisted in starting in the middle of the story of each component and between the two of us we were getting more and more tangled. Before I had a chance to unravel the story, Joel came in and wanted to get the history. So I started stumbling through this morass of a tale as Joel looked increasingly perplexed. At the end there was silence. He was deep in thought, going through his prodigious memory banks. And then finally he spoke. “Yes. That’s absolutely the worst history I’ve ever heard”. With some misplaced pride, all I could think was, “yep, he actually thought about it, and that one was a memorable, definitive WORST! My place in history is secure…”. And he still gave me a job!

WHAT IS YOUR CURRENT TITLE/JOB? WHERE ARE YOU WORKING NOW AND FOR HOW LONG?
I’m the Theresa M. and Wayne M. Caygill, MD Distinguished Professor and Chair in the Department of Ophthalmology at the University of California San Francisco. I’m also the Editor-in-Chief of Ophthalmology. In February 2022 I will be stepping down as Chair to assume the role of Chief Executive Officer for the American Academy of Ophthalmology.

DO YOU HAVE ANY WORDS OF WISDOM FOR OUR FUTURE TRAINEES?
Make the most of your relationships with colleagues as you grow in the field. It’s a wonderful profession with smart, dedicated people who enjoy what they do, and the vibrant community with our shared ideals adds so much to the joy of our profession.
WHO WAS YOUR MENTOR AT THE IEEI WHILE YOU WERE IN TRAINING?

Mentors make a world of difference, and we are fortunate to have so many great role models at IEEI. Drs. Dimitri Azar, Joel Sugar, Ali Djalilian, Sandeep Jain-- all of the Cornea faculty were inspiring mentors to me during residency, but Dr. Elmer Tu was my primary mentor. I’m privileged to have worked with him from the start of my ophthalmic career. I first met Dr. Tu when I rotated on the cornea service as a medical student and he is the one who personally called to deliver the happy news that I had matched at UIC. He taught me the fundamentals of cataract surgery and I conducted my primary research project -- Utilizing a Hydrophilic IOL as a Drug Delivery System -- under his direction. Together with Dr. Larry Ulanski and Dr. Mansi Parikh, we performed over 200 cataract surgeries on rabbits before I performed one on a patient! I continued drug delivery work in fellowship, and this formed the basis for the clinical trial work I conduct in my practice today.

WHAT IS YOUR CURRENT TITLE/JOB? WHERE ARE YOU WORKING NOW AND FOR HOW LONG?

I opened Warrenville EyeCare and LASIK in 2012, a solo, boutique cornea, cataract and refractive practice in the western Chicago suburbs. I am also an Assistant Clinical Professor at the IEEI.

I’m passionate about teaching and have been fortunate to be involved in numerous projects for the betterment of patient care and the profession of ophthalmology. Last fall, I created MDNegotiation.com to utilize my expertise as an MD/JD to help ophthalmologists improve their negotiation skills. I had been teaching contract negotiation workshops for the last several years at residency programs throughout the country and this was an opportunity to reach a broader audience. In doing so, I encountered many young ophthalmologists asking questions not only about negotiation, but also about entering practice. These questions led to the project I’m most proud of to date - the creation of Real World Ophthalmology (RWO). RWO is an educational resource that brings seasoned ophthalmologists together with young ophthalmologists to help increase their success in transitioning from training to practice. Experienced ophthalmologists share acquired knowledge to help young surgeons enhance their clinical skills, business acumen, and personal growth. With the help of UIC, our inaugural meeting, Top 10 Things I Wish I Knew Sooner, was a huge success. The next RWO meeting, Tell Me Your Secrets, is April 2, 2022 and we plan to expand educational content between meetings with a RWO podcast.

Dr. Nijm is also the first CEO of Women in Ophthalmology, leading growth of over 400% in membership, member benefits, sponsorship, and meeting attendance since her involvement. She is on the board of Directors of the American Academy of Ophthalmology Executives (AAOE), several ophthalmology editorial boards and is the Chief Medical Editor of OSDCME.

DO YOU HAVE ANY WORDS OF WISDOM FOR OUR FUTURE TRAINEES?

Strive to be the best version of yourself. Learn as much as possible during training, and get exposure to a wide variety of surgeries, techniques, and approaches. Clinically, be sure to keep your differential diagnoses broad, you will be less likely to miss that rare diagnosis. Nurture your mind, body, and soul – healthy doctors take better care of their patients. Above all, keep your kindness and compassion. Listen to what is really bothering your patients. Thank your staff. Be the kind of doctor you would want taking care of your parent, child, or yourself. Learning doesn’t stop when you finish training.
HONORING A PIONEER IN OPHTHALMOLOGY, UIC ESTABLISHES THE RABB CHAIR

Growing up in a time of segregation and the civil rights movement, Dr. Maurice Farnandis Rabb, Jr. experienced many firsts in his lifetime. His father, Dr. Maurice Rabb, Sr. was the only black physician in his small hometown of Shelbyville, Kentucky, where the younger Dr. Rabb spent his formative years. At an early age, Maurice, also known as “Little Doc,” accompanied his father to work, and witnessed many complicated surgeries and medical cases that medical students today could only hope to experience. While Maurice was a teenager, his father was the first African American anesthesiology resident at the University of Louisville, and later became the first black physician in the state of Kentucky to be appointed to the staff of an all-white Jewish Hospital. His mother, Jewel Rabb, served as a public school teacher for more than 30 years, and instilled in her son a life-long devotion to education and learning that set the stage for his later career prominence in the field of ophthalmology.

Graduating from high school at the age of 16, Maurice left Louisville to attend college at the University of Indiana in Bloomington, one of only a handful of universities that accepted black students at that time. While in college, he worked an entry-level job during the summer at a cigarette factory, and was soon recognized for his outstanding performance. Maurice was selected for a promotion at the factory, provided that he didn’t return to college. “This showed the inequality of opportunity for blacks. It didn’t make a difference to that company what the education of the black person was,” Dr. Rabb recalled emphatically. “This made me more determined to obtain the best education possible.”

Two years into Maurice’s college education, when segregation laws in Kentucky had ended, he transferred back to Louisville to finish his education. He became one of the first African Americans admitted to the College of Arts and Sciences at the University of Louisville, and earned a BA in Biology. Maurice then entered medical school at the university, still unsure of his future path, but aware that professional black men were typically accepted into careers as lawyers, doctors, or teachers. “When I was in high school, we had guidance teachers who asked ‘What do you want to do?’ and I said, ‘Well I either want to be an airline pilot or a doctor.’ And the guidance teacher looked at me and said, right away, ‘There’s no way you’re gonna be a pilot in an airplane because you’re black, and you’re never gonna get a job flying a plane.’ So, I eliminated everything else, and I knew my father wanted me to be a doctor. I finally decided it was a goal, and I [had] to prove something, so I [ended up] going to college pre-med.”

One of a few black students graduating from the newly-integrated medical school at the University of Louisville, Dr. Rabb still wasn’t sure of his intended career focus, but he knew that he wanted to take an internship at King’s County Hospital in Brooklyn, New York for his postgraduate training. He enrolled in the Basic Sciences program at New York University (NYU) as the only black student in his class. It was there that Dr. Rabb discovered his love for ophthalmology, as he took a course from Dr. Conrad Berens, the chairman of NYU’s Basic Course in Ophthalmology. Impressed with the young Dr. Rabb’s motivation and performance, Dr. Berens wrote a letter of recommendation to Dr. Peter Kronfeld, Chairman of the Department of Ophthalmology at the University of Illinois Eye and Ear Infirmary, where Dr. Rabb enrolled as the first African American resident in the program, and later became the first black Chief Resident.

1. Biography from “Breaking the Color Line in Medicine” by Lenworth N. Johnson, MD.
“The Chief Resident gets to choose what procedures they want to do,” says James L. Green, MD, who trained under Dr. Rabb at the University of Illinois Chicago (UIC) from 1977 to 1981, and later joined him in his private practice in downtown Chicago. “There was always competition for the best cases, and Maurice wanted the most difficult ones. At UIC, the Chairman sent you away to do a fellowship for a year, so Maurice trained under Dr. Fine in San Francisco, the most well-known cornea specialist in the country. Maurice was very interested in photography, and found a camera could do pictures of the retina. He became known for his retinal diagnostic skills, and was one of the first people in the country to do fluorescein angiograms.”

After completing his residency, Dr. Rabb set up his private practice, and became the first black doctor located in downtown Chicago, while also continuing his part-time teaching in retinal diseases, and subsequently, in corneal transplants at UIC. Dr. Rabb remained on faculty for more than 40 years, and became the first African American physician in the United States to serve as Medical Director of an eye bank during his tenure as Medical Director of the Illinois Eye Bank and Research Laboratory at the University of Illinois. Additionally, he served as Director of the Fluorescein Angiography Laboratory at Michael Reese Hospital, and became the Chief of Ophthalmology at Mercy Hospital. Dr. Rabb co founded the Comprehensive Sickle Cell Center at the University of Illinois Eye and Ear Infirmary, the only center in the country to diagnose and treat sickle cell disease.

“[I am proud to have had] the opportunity of being first in a lot of things,” Dr. Rabb shared during a series of interviews with The HistoryMakers. “And the reason why I was the first is because no one was ever allowed to do these things prior to my being there. At that time, there were no blacks on staff, particularly in ophthalmology. It took me 2 years to get on staff, and I was either the first or the second black to be on the staff at Michael Reese Hospital. At the same time, I applied to Mercy Hospital, and I was only the third black to be on with Mercy. You have to realize that back in the ’60s, there weren’t hardly any black physicians on the staffs of white hospitals. After that, other blacks started applying to these hospitals, and were admitted. So, it was a new area.

“[Now] UIC graduates more black medical students than any other [institution], except Howard and Meharry.”

“Dr. Rabb took a personal interest in teaching so many of us,” says Daniel Alter, MD, PhD, who trained as a resident under Dr. Rabb from 1993 to 1996, and was a retina fellow from 1997 to 1998. “He was always impeccably dressed, in a really fine-tailored suit, and he always knew everyone’s name—even though there were 10 new residents every year. He would pull a case out of his briefcase with the old fashioned photos and X-ray films, and he’d say, ‘Dr. Alter, come here, I’d like you to take a look at this.’ It was almost like a game show quiz on the spot in the hall; he loved showing off the unusual cases he had. He would present complex cases and challenge us to determine what the diagnosis was.”

“UIC sees a lot of patients in the surrounding communities with eye disease,” observes Dr. Green. “Diabetes is very common among minority communities, and if their A1C levels are not managed well, they have a good chance of developing retinal problems.”

“Given the large population of Chicago, we are exposed to a much higher number of unusual cases at UIC,” notes Dr. Alter. “So, it’s important that we do more for the underserved communities in our area.”

Thanks to several generous gifts from donors inspired by Dr. Rabb’s accomplishments at UIC, the Department of Ophthalmology and Visual Sciences recently established a first-of-its-kind endowed chair, the Rabb Chair, to honor the legacy of Dr. Rabb. The primary goal of the Rabb Chair is to recruit a rising star faculty member from an underrepresented community.

“There still are very few practicing black ophthalmologists in the country,” states Dr. Green, “very few faculty members. Only 14 black ophthalmologists graduated last year across the whole country, and the total number of practicing ophthalmologists in the United States is 127, only four of whom are in the whole Chicago area.” According to the September 2016 issue of JAMA Ophthalmology, women and minority groups traditionally underrepresented in medicine comprised 22.7% and 6%, respectively, of practicing ophthalmologists nationally, 35.1% and 5.7% of ophthalmology faculty, and 44.3% and 7.7% of ophthalmology residents.

“Our generation cares deeply about this,” says R.V. Paul Chan, MD, MSc, MBA, FACS, Professor and Head, Department of Ophthalmology and Visual Sciences. “It’s very relevant, and at the core of our department and university. The person we want to recruit for the Rabb Chair is the future—a talented faculty member with a mission and cause, a certain intentionality about what we’re doing for our local communities. We’d like to have something based in our department that highlights pioneering doctors who are underrepresented. We have to remember the people who came before us, like Maurice Rabb, who paved the way for so many others through what he contributed to the field and to the local community.”
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OneVision | 77
Marc F. Lieberman, MD  
IEEI Alumnus and Humanitarian

Marc F. Lieberman, MD, glaucoma specialist and founder of the Tibet Vision Project, died on August 2, 2021 in San Francisco, California.

Dr. Lieberman, Clinical Professor of Ophthalmology at University of California, San Francisco, provided care to patients at Glaucoma Consultants of the Bay Area, a practice he founded in 1998. After more than 25 years of ophthalmic specialization in the medical and surgical management of glaucoma and cataract/lens implant procedures, Lieberman was driven to integrate the transformative powers of interfaith healing with his work as a physician. For many years, he was a student of, and taught at Diamond Heart/Diamond Approach, an integrative spiritual and holistic center based primarily in San Francisco.

Beginning in 1995, Lieberman, accompanied by his colleague Dr. Melvyn Bert, made the arduous journey each year to Lhasa in Tibet, where they trained local medical practitioners in cataract surgery. The widespread prevalence of age-related cataract blindness among Tibetans is often attributed to ultraviolet light exposure at a high altitude. Dr. Lieberman established the Tibet Vision Project as an open-ended, independent educational program. The Project was designed to transfer ophthalmic training skills to the surgical staff at the First People’s Hospital in Lhasa (now the People’s Hospital of Tibetan Autonomous Region). This unique program provided a full spectrum of formal lectures and surgical training in general ophthalmology, with hands-on clinical supervision and long-term follow-ups for patients with chronic eye diseases.

The Tibet Vision Project allowed Tibetan doctors to establish and staff their own eye camps to address and treat cataract blindness, the predominant and preventable cause of vision loss found in Tibet and throughout China. As Medical Director, Dr. Lieberman and his associates provided needed medical supplies to over 15 eye camps throughout central Tibet. Except for rare cases, all eye surgeries were performed by local surgeons. Lieberman and his team successfully achieved their goals in the first 7 years in Lhasa, including introducing and transferring contemporary eye skills to the doctors and nurses of the First People’s Hospital Eye Department, facilitating surgical team training to the level of surgical self-sufficiency, and encouraging initiatives for Tibetan-run, no-cost eye camps for rural populations.

Over the next 20 years, thousands of Tibetans experienced improvements to their vision thanks to Dr. Lieberman and his team. Lieberman’s efforts to end cataract blindness in Tibet were recognized by the American Academy of Ophthalmology (AAO) in 2003, when Lieberman was awarded AAO’s Outstanding Humanitarian Service Award. His work was also chronicled in the documentary “Visioning Tibet.” The film, directed by Isaac Solotaroff, documented Lieberman’s accomplishments in a country where much of the population lives at an elevation averaging 15,000 feet.

Lieberman received his MD at Johns Hopkins University School of Medicine, and completed his ophthalmology residencies at Wilmer Eye Institute and Illinois Eye & Ear Infirmary, where he served as Chief Resident under Department Head Morton F. Goldberg, MD. He went on to complete a glaucoma fellowship at the University of California, San Francisco. Lieberman co-authored the text “Becker-Shaffer’s Diagnosis & Therapy of the Glaucomas,” and published several peer-related articles in various ophthalmic publications.

Dr. Lieberman is survived by his son and two step-children, and by his brothers Professor Victor B., and Rabbi Elias Lieberman.
Karl Ticho, MD, a renowned ophthalmologist who served Chicago’s South Side for over 6 decades, died on November 25, 2020 at the age of 94 in Glenview, Illinois. Born in 1926 in Brno, Czechoslovakia, Ticho witnessed several historical events of the 20th century, including the rise and fall of Nazism, the Soviet domination of Eastern Europe, the founding of the State of Israel, the post-war prosperity of the United States, and the modernization of medicine; in particular, ophthalmology.

Sponsored by his cousin and fellow Czech émigré Charles Ticho, Dr. Ticho migrated to the United States in 1954 and completed his internship at Cook County Hospital in 1955, followed by his ophthalmology residency at The University of Illinois Eye & Ear Infirmary (IEEI) in 1957. He continued to serve as a Clinical Instructor at the IEEI for 40 years.

Dr. Ticho married Dr. Sarah M. Swartenberg, another Holocaust survivor, in 1959. The couple had five sons over the following 6 years and lived in Chicago’s Marynook and Beverly neighborhoods before moving to Winnetka in 1973. Dr. Ticho was a founding ophthalmologist at Christ Hospital in Oak Lawn, and was among the first ophthalmologists in Illinois to perform cataract surgery with intraocular lens implantation. He was widely known as a particularly industrious and empathetic physician who served generations of families, seeing his very last patient at the age of 90. His ophthalmology practice, Ticho Eye Associates, is now under the direction of his son Dr. Benjamin Ticho, who joined his father’s practice in 1992.

Dr. Benjamin Ticho recalls that his father was an avid reader and made great efforts to stay up-to-date on the latest innovations in ophthalmology. For decades, he attended Wednesday Grand Rounds at the IEEI and never missed an American Academy of Ophthalmology Meeting. He also believed strongly in education, and assisted several generations of IEEI residents in some of their first cataract surgeries.

Dr. Ticho is survived by his wife Dr. Sarah M. Swartenberg; sons Dr. Baruch Ticho, Dr. Gabriel Ticho, Joshua Ticho, Dr. Benjamin Ticho, and Dr. Simon Ticho; and his extended family.

Like his father, Dr. Benjamin Ticho completed his residency at the IEEI. On IEEI’s 150th Anniversary in 2008, he and three other ophthalmologists with ties to the IEEI joined together to establish the Four Fathers Endowed Lectureship at University of Illinois Department of Ophthalmology and Visual Sciences, a lasting tribute to the memory of their fathers.
Dissociation of DNA damage sensing


Befekadu H, Sertage H, Altuntas H, Gencay D, Kucuksezgin L. OneVision


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In Fall 2022, the clinical operations for the Department of Ophthalmology & Visual Sciences will move to the new Outpatient Surgery Center and Specialty Clinics (OSC) building. The 200,000-square-foot advanced care center is the first new building for the university’s academic and clinical health enterprise, called UI Health, since 2014. It is also the first health care public-private partnership in the State of Illinois. Those who are doing groundbreaking and innovative work, such as minimally invasive robotic surgery, will have clinics that provide state-of-the-art, world-class environments to create health in our communities and opportunities for access.

FUTURE LOCATION
OPENING FALL 2022
Outpatient Care Center & Specialty Clinics
1009 S. Wood St.
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symposia & events 2022

**Friday, January 14 – Monday, January 17, 2022**
2022 Winter Oculoplastic Meeting

**Saturday, February 26 – Friday, March 4, 2022**
15th Annual Illinois Eye Review

**Friday, March 11, 2022**
15th Annual Retina Symposium

**Spring 2022**
Biennial Ocular GVHD Conference

**Spring 2022**
2022 UIC Cornea Symposium

**May 10, 2022**
Swing Fore Sight - Illinois

**May 2022**
2022 Spring Glaucoma Symposium

**Saturday, June 18 2022**
45th Annual Alumni Day

**Saturday, June 18 2022**
Illinois Eye Gala

**Sunday, October 2, 2022**
Alumni Reception at the AAO Meeting

**Fall 2022**
3rd Annual Artificial Intelligence in Ophthalmology Symposium