

UMASS INSIGHT



UMASS MEMORIAL
EYE CENTER

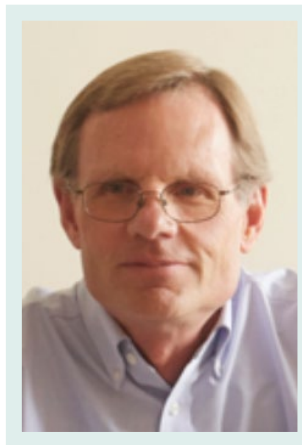
News from the Department of Ophthalmology & Visual Sciences

Summer 2020

INSIGHT FROM THE CHAIR, BOARD OF TRUSTEES

The UMass Memorial Board of Trustees and I commend you on the dedication and empathy you've shown to your patients and colleagues during this crisis. We know the daily sacrifices you've been making and couldn't be prouder. The Eye Team rocks!

You may not realize that both Dr. Schaal and Dr. Dickson were my students in the Master in Health-care Management program at the Harvard T.H. Chan School of Public Health. I know you want to know who the best student was. Unsurprisingly, both were at the top of their respective cohorts. You may also be wondering what course I taught them — Cost Accounting and Control Systems. Probably not the most exciting subject in the program!



When Eric asked me seven years ago to join the Board of Trustees, I agreed but with one condition: he would not be satisfied with the status quo at UMass Memorial, and we would strive to be the best health system, not just in Massachusetts, but in New England and beyond. He has taken up that challenge, and we have made significant progress, as highlighted by our performance in this pandemic and commitment to an Anchor Mission in Central Massachusetts.

With your tremendous help, Shlomit has likewise challenged the status quo in the Department of Ophthalmology and Visual Sciences and transformed the department in delivering outstanding and compassionate patient care. You're a model for the rest of the health system.

Congratulations to the Eye Team! I can't wait to see where you innovate next and look forward to connecting with you in person at your next retreat.

With admiration and thanks,

Rick

Rick Siegrist

Chair, Board of Trustees, UMass Memorial Health Care

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INNOVATORS

Eye Center Team Wins the
Innovators of the Year Award
for "Follow the Blue Line"
Idea

Find us online for the latest, research, publications, faculty updates & more at www.umassmed.edu/ophthalmology.

 **UMassMemorial
Medical Center**

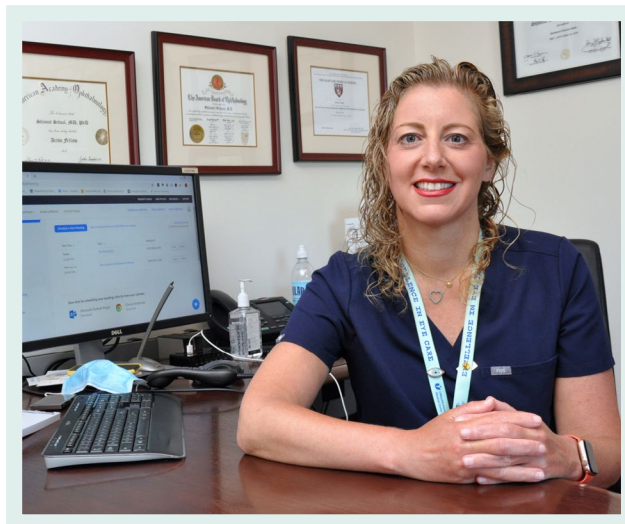
 **University of
Massachusetts
Medical School**

FROM THE CHAIR

Dear Colleagues and Friends,

The year 2020 was supposed to be a big year of celebration of our profession: “The Year of the Eye,” “The Year of Vision.” The year 2020 started wonderfully for our team, as we were named Innovators of the Year of 2019, thanks our team’s idea to “Follow the Blue Line”.

In early March, our entire clinical and research operations were brought to a halt as the United States was hit by the new coronavirus. We suffered an unprecedented global public health crisis. As in every crisis, it was an opportunity for us to come together as a team, innovate and embark on an uncharted path to do things differently. Several highlights of this stressful period include: 1. Our COVID-19 Virtual Huddles — These weekly meetings brought us all together to discuss challenges and decide on how we would pave the way forward. In these unforgettable sessions our residents and faculty taught us about the incredible scientific progress that was made worldwide regarding the understanding of the COVID-19 disease and the development of treatment, testing, and vaccines.



2. Our Emergency Clinic — We never closed our doors to our patients. During this entire crisis, the Eye Team remained at the front line and provided exceptional eye care to the Worcester community. Eye Team members showed bravery and resilience as we took care of the most vulnerable population in our area. 3. Our Deployed Team Members — These caregivers served the health care system in various positions. I got

numerous praising emails about the fantastic job that they did while deployed. I’m very grateful to all the people who stepped up and volunteered to serve.

As we rise up from the crisis and embrace the beautiful summer in Massachusetts, we celebrated our residents’ work in our inaugural Residents Day, that was held virtually and successfully. I send my sincere thanks to all faculty members who are committed to our residents’ education, with special thanks to Dr. Francis D’Ambrosio’s group and to the Boston Children’s Hospital group, who serve as inspiring teachers to our young ophthalmologists.

Shlomit Schaal, MD, PhD, MHCM
Professor and Department Chair

Shlomit Schaal, MD, PhD, MHCM, Chair of Ophthalmology and Visual Sciences receives her Master in Health Care Management from Harvard T.H. Chan School of Public Health, May 2020.



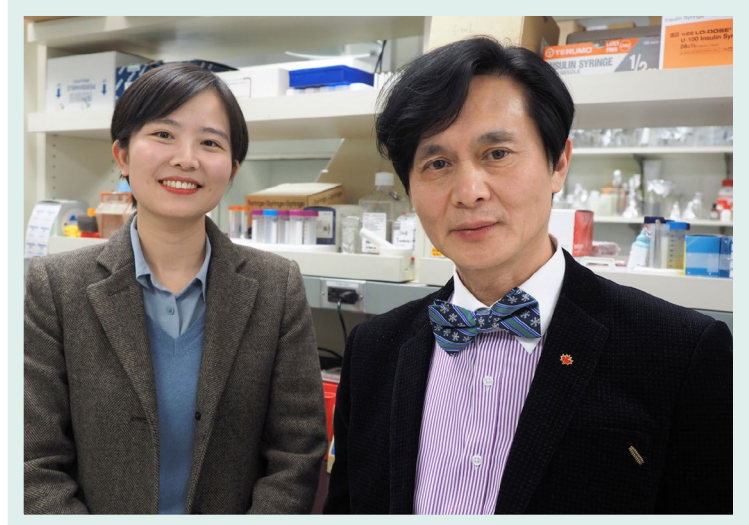
Dr. Schaal delivering her graduation speech in a pandemic-appropriate outfit and barefoot.

Congratulations Dr. Schaal!

RESEARCH INSIGHT

COMMITTED TO ADVANCING VISION RESEARCH

As Director of our Translation Research Center, **Haijiang Lin, MD, PhD**, is a board-certified ophthalmologist with a subspecialty in medical retina. He has first-rate scientific achievements. In his early research career, he identified and characterized three novel gene-coding enzymes involved in ubiquitination and deubiquitination; identified that Bik1 is an essential molecule for kinetochore-microtubule attachment in polyploids cells, which has significant impact on cancer research. Mitochondrial DNA (mtDNA) damage increased and repair capacity decreased with aging in macular retinal pigment epithelium cells (RPE). **Bo Tian, PhD**, and Dr. Lin joined the University of Massachusetts Medical School and set up their laboratory in 2018. They have the vision of applying what is new in science for advancing our knowledge in retina disease pathophysiology research. They've contributed significantly to understanding the molecular mechanism of the development of age-related macular degeneration (AMD). A. They found that cytosolic accumulation of damaged mtDNA and nuclear DNA fragments trigger RPE cellular senescence, secretion of inflammatory cytokine, and vascular endothelium cell growth factor (VEGF), which are the critical pathologies of AMD. B. Dr. Lin is the first person to have reported the relation of miRNA and the development of age-related macular degeneration (AMD). C. Together, they demonstrated that atorvastatin preserve the phagocytic function of the RPE cells while also exhibiting anti-inflammatory properties. Dr. Lin and Dr. Tian got several grants in such a short time. Currently, their team continues to investigate the function of endogenous damage nuclear DNA fragment, mitochondrial DNA damaged and dysfunctional mitochondria in the development of AMD. These studies not only contribute to investigating the molecular mechanisms of the



Left to right: Dr. Bo Tian and Dr. Haijiang Lin

progression of AMD, but also to explore novel gene therapy strategies for AMD.

Gene replacement and gene editing are promising strategies to treat hereditary and nonhereditary retinal diseases. Currently, Dr. Lin and Dr. Tian's team are screening recombinant adeno-associated viruses (rAAVs) and nanoparticles to deliver genes into specific retinal cells with high efficiency but no significant immune responses. Meanwhile, they also are exploring gene therapy of hereditary and nonhereditary retina and cornea diseases by genomic and mRNA editing. In addition, has successfully set up intraocular injection and fundus imaging for large animals.

Dr. Lin is currently participating in several national multisite clinical trials to investigate AMD and diabetic macular degeneration. One trial is studying the association of certain high-risk genetic variants and their relation to AMD progression. The other trial is a Phase 3 trial testing the efficacy of a new therapeutic for patients suffering from geographic atrophy due to AMD. Dr. Lin is also participating in a third national multisite clinical trial studying diabetes. It's aimed toward helping patients who suffer from diabetic eye disease and receive regular injections to treat macular edema.

STAFF INSIGHT

EYE TEAM LEADS WORK TOGETHER TO ENSURE QUALITY CARE DURING PANDEMIC

Following the departure of the UMass Memorial Eye Center's practice manager earlier this year, **Sherri Granger**, Certified Ophthalmic Assistant and Lead Technician, and **Diamond Parrilla**, Lead Ambulatory Service Representative, were tapped to take on some additional responsibilities to assist in leading the clinic's team and operations. However, as the onset of the COVID-19 pandemic took root in Central Massachusetts, it wasn't long before Eye Center practices as they knew them, would change significantly and rapidly.

Despite the quickly changing landscape of the Eye Center – from team member deployments to limited inpatient visits to the implementation of virtual visits – Sherri and Diamond worked together to ensure the practice continued to



Left to right: Sherri Granger, Certified Ophthalmic Assistant and Lead Technician, and Diamond Parrilla, Lead Ambulatory Service Representative

cater to the needs of its patients and operate seamlessly, all while continuing to manage the buildout of three new exam rooms. “The staff has really stepped it up and helped one another,” said Sherri. “We’ve had a lot of opportunity for training, learning, teaching, and cross-training, and we’re constantly trying new things.”

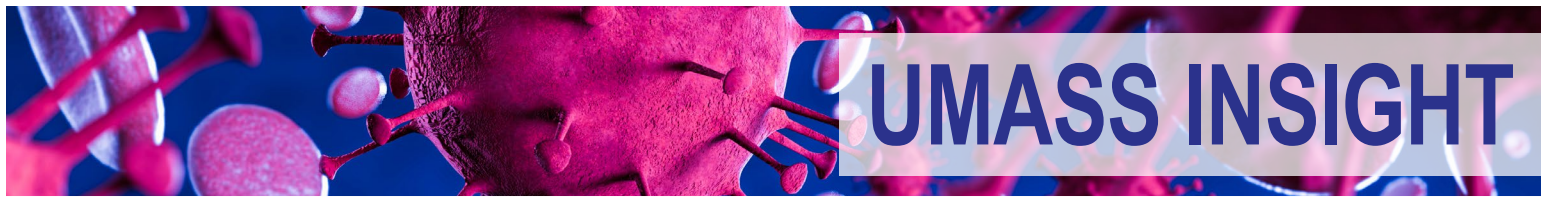
As restrictions start to lift and more patients begin returning to the Eye Center for in-person visits in the coming months, the team is working hard to make adjustments to their processes and physical space to ensure patient safety and promote social distancing. “We’re starting to ramp up,” said Diamond. “The waiting room chairs are set up to assure distance between patients. We have foot marks (on the floor) so patients know where to stand.” In addition, the clinic is operating with only three physicians at one time, so each provider has a dedicated area for their patients and technicians.

As the team eagerly anticipates returning to a level of normalcy and welcoming patients back on site, Sherri reflected, “Our team has been very adaptive to the changes. We continue to work well as a team.”

EYE TEAM HEROES SERVE PATIENTS DURING TIMES OF GLOBAL CRISIS

The Eye Team continues to diligently see and take care of emergency patients in the Eye Center on the UMass Memorial Medical Center – Hahnemann Campus. Elective patients are seen remotely using telehealth resources. Even during times of crisis, team spirit remains high. The Eye team created a video to share tips for self-care with the community, which became popular on social media and was mentioned on Spectrum News 1.





Left to right: Yvelina Feliciano, Shayina (Shy) Calixto, Sarah Hill, , Krasi Tolev, and Manisha Anand (Brittany Hynes and Nichole Lusk not pictured), bravely raised their hands and joined more than 500 of their UMass Memorial colleagues across the system to assist in other areas.

THANK YOU!

STAFF INSIGHT

THERE'S NO PLACE LIKE HOME: TEAM MEMBERS RETURN TO THE EYE CENTER FOLLOWING COVID-19 REDEPLOYMENT

Stepping forward to lend a hand where they were needed most during the COVID-19 pandemic, seven team members from the UMass Memorial Eye Center were redeployed throughout UMass Memorial Medical Center. While the Eye Center made a shift to seeing most patients via telehealth visits, Ophthalmic Technicians **Manisha Anand, Shayina (Shy) Calixto, Sarah Hill, Brittany Hynes, Nichole Lusk, Krasi Tolev, and Yvi Feliciano**, bravely raised their hands and joined more than 500 of their UMass Memorial colleagues across the system to assist in other areas. No matter where they were deployed, Eye Center team members made us proud as they brought their positive attitudes and exceptional skills to ensure the tasks they were assigned

were done with the same level of detail and care they deliver to each and every patient at the Eye Center.

Sarah, who worked in the COVID ICU said her deployment was a very positive experience, noting, "I saw compassion and gentleness and a real drive to care for these people." Yvi, who also worked in the ICU agreed, saying, "I've always believed that every position, no matter how small, is important to help an office/department run efficiently, and working in the ICU I saw this first hand." Shy, spent six weeks working in Food Services. She said she enjoyed the opportunity to meet new people and experience something completely outside of her typical duties. Similarly, Brittany shared that she felt good knowing she

was able to help during this trying time. And like her colleagues, Nichole said she was inspired by the pride of work displayed by the dedicated employees as she worked at the Hahnemann Campus screening table.

And while the deployed team members were happy to do their part during the busiest times of this health crisis, they're so happy to be back at the Eye Center, "I indeed missed my eye team family," said Manisha, who had been redeployed to the COVID ICU. "I mostly missed the family-like atmosphere at the Eye Center." Sharing her sentiments, Krasi finished, "Coming back to the Eye Center is to come back home."

UMASS INSIGHT

News from the Department of Ophthalmology & Visual Sciences

RESIDENCY INSIGHT

A RESIDENTS' VIEW OF COVID-19

During the COVID-19 pandemic, Ophthalmology residents helped with daily operations at the UMass Memorial Eye Center on the Medical Center's Hahnemann Campus. Clinic visits were reserved for urgent visits and patients whose eye care could not wait the six or more weeks for future scheduling, due to guidelines put in place during the pandemic. The residents triaged patients who called the clinic for appointments, working with the attendings to decide if a patient visit could be done through telehealth, or needed to be done in person in the clinic that same day or same week. They also assisted the providers in clinic by seeing patients and performing necessary procedures, such as intravitreal injections for diabetic retinopathy and macular degeneration, performing laser procedures, removing foreign bodies at the slit lamp, and more. Throughout the past several weeks, residents educated the Eye Center faculty and staff about Ophthalmology and COVID-19, as well as various other topics, such as retinal detachments and acute angle closure glaucoma protocol for the clinic. One resident was on consult duty during the day to help with the flow of hospital consults while providers were performing telehealth, and they continued to stay on call to see inpatients and Emergency Department patients with eye complaints.



Top to bottom: Residents, Soraiya Thura, MD, and Saad Al-Kadhi, MD

VIRTUAL INAUGURAL RESIDENTS' DAY

Virtual Residents' Day for our Ophthalmology Residency Program was a historic event for the newly created program. Initially, the event was going to be an opportunity where faculty, staff, and community members, could gather and highlight the past year of educational activities of our inaugural residents **Saad Al-Kadhi, MD**, and **Soraiya Thura, MD**. However, the event was transitioned to a virtual experience due to the current pandemic protocols.

Terence R. Flotte, MD, led an introduction to the day that was very inspiring. "I applaud all of you for being a shining example of what academic medicine is, with high-quality clinical care alongside with superb research. The Ophthalmology Department is now the number one in research funding among surgical departments at UMass. You excel in all of our missions, which is very rare for young academic departments. I congratulate Dr. Schaal, all the faculty, and the residents for the fantastic work you are all doing. I am very proud of all of you."

Johanna Seddon, MD, ScM, and **Claudio Punzo, PhD**,

from our own Ophthalmology and Visual Sciences Department spoke on how age-related macular degeneration (AMD) affects vision. Watch Dr. Seddon's lecture: <https://vimeo.com/427719428/5c130e4368>.

Invited guest speaker **Lana Rifkin, MD**, of New England Eye Center and Tufts School of Medicine, discussed how to provide the best-quality care to uveitis patients while not allowing the bill to skyrocket.

Joann Chang, MD, of D'Ambrosio Eye Care gave a greeting from the community ophthalmologists who also teach our residents.

Dr. Thura and Dr. Al-Kadhi gave an overview of the scholarly activities they've been working on throughout the year.

Priya Janardhana, MD, was recognized as Educator of the Year. The residents selected her due to her enthusiastic approach and her personal commitment to their education.

FACULTY INSIGHT

DESIGN THINKING: IMAGINING THE FUTURE OF THE EYE CLINIC,

Ana Bonaldi, OD, joined UMass Memorial Medical Center last summer and started a project to expand the Northborough Eye Center. The goal of Dr. Bonaldi's project is to increase access to care, improve patient experience and decrease provider burnout by using Design Thinking during the expansion of the Northborough location. She recently completed the Junior Faculty Program Development (JFDP) with this as her project.

Design Thinking is a process for creative problem solving, this method has been used in many different business settings over the last several years. It attempts to identify alternative strategies that might not be immediately apparent and tackle problems from new directions. Design Thinking is divided in phases or stages, the most popular model, which was introduced by Nobel Prize laureate Herbert Simon, has five stages (that do not have to happen sequentially). The stages include: empathize: learn more about the audience and gain insight without assumptions; Define: construct views based on the needs and information learned during the Empathize phase; Ideate: brainstorm creative solutions; Prototype: build representations on how to fix the problem at hand; test: Test ideas for feedback and finally



Ana Bonaldi, OD, Instructor
Ophthalmology & Visual Sciences

implement the ones that work.

The Rotterdam Eye Hospital in Europe has been an inspiration for this project. They became known worldwide and won several awards for using Design Thinking to innovate their facilities and significantly increase patient satisfaction and surgical outcomes. Dr. Bonaldi plans on doing the same, starting with the Northborough location, but eventually expanding to the Worcester locations as well. Dr. Bonaldi's project will start with faculty, staff and patient surveys to be able to identify problems or points that could be improved. Once those are identified, a team will then go over the ideas and process each one through the five stages of Design Thinking, until there's a solution to each problem.

Every eye care professional was very excited about the year 2020, and the inauguration of the new Northborough Eye Center was set to happen at the end of this year, which would have been perfect. However, given the pandemic, plans have been halted temporarily. In the meantime, Dr. Bonaldi continues to work on the surveys to have ideas ready for when we are back on track. She is looking forward to launching the new and improved Northborough location and can't wait to see patients there!

UMASS MEMORIAL HEALTH CARE HAIKU CHALLENGE

Over 70 haikus were submitted by caregivers who used their poetry skills to reflect on life as a caregiver during the COVID-19 pandemic. UMass Memorial's HR Team published an e-book to compile these reflections. Check it out: <https://umass.pagetiger.com/nexsyj>. The Eye Team was represented by Shlomit Schaal, MD, PhD, MHCM, a novice Haiku composer. Enjoy one of Dr. Schaal's haikus (right), which was included in the book and was inspired by the brave work of the committed Eye Team during the pandemic.

*Hero be brave now
Trusted to take care of frail
Dream, hope for fine days*

EYE CENTER TEAM WINS THE INNOVATORS OF THE YEAR AWARD (AGAIN!)

On December 18, 2019, the UMass Memorial senior leadership team announced the 2019 Innovators of the Year Award recipients. This award recognizes teams from across the health care system for their outstanding contributions in achieving True North goals by successfully implementing caregiver ideas.

Eric W. Dickson MD, MHCM, CEO of UMass Memorial said: "I would like to congratulate all the teams nominated for the Innovators of the Year Award. It's your fantastic work that inspires all of us at UMass Memorial Health Care to "think outside of the box" and continually innovate on behalf of our patients and community of caregivers".

This year, more than 50 teams were nominated for this award, and 16 teams reached the stage of finalists, also known as: "The Sweet 16." The Eye Center has been continuously recognized as leader in health care delivery innovation by being named as "Sweet 16" finalists three years in a row (2017, 2018, 2019). The Eye Team won the Innovators of the Year Award in 2017 and this year they won it again.

Shlomit Schaal, MD, PhD, MHCM, Chair of the Department of Ophthalmology and Visual Sciences said: "It's truly amazing and heartwarming to realize the power of collaborative team work. Eighty-eight ideas were implemented this year at the Eye Center, which resulted in substantial improvements in the services that we provide to our patients." Dr. Schaal credits the Eye Team members for their

many creative, original ideas that were successfully implemented this year. The idea that brought the team their winning prize was the "[Blue Line](#)." A line on the clinic's floor that leads to a separate check-in desk at the Retina Clinic. As a result of following the blue line, patients' wait times were shortened and patients' satisfaction increased.

"The Eye Team consists of doctors, administrative assistants, ambulatory service representatives (ASRs) and technicians, who all work together in concert as a team to achieve goals. I credit our incredible people for everything we've achieved this year. I'm truly honored and feel incredibly lucky to be able to be part of this amazing journey. I love the Eye Team. We're like family, and we're FUN," said Dr. Schaal. "I'd also like to thank the senior leadership of UMass Memorial Health Care, UMass Memorial Medical Group and UMass Medical School for their continuous support of the mission of the Eye Center. None of this progress would have been possible without their active sponsorship and enthusiastic encouragement."



Ophthalmology Virtual Team Huddles:

We stayed connected and
remained innovative during
COVID-19.

