

Grateful Alumnus Gives Back

The faculty and staff of the Institute of Ophthalmology and Visual Science (IOVS) are pleased to acknowledge the extraordinary generosity of Dr. Christopher M. Seery. Dr. Seery's donation to the IOVS established the William L. Seery Endowment in honor of his father. This extraordinary gift will have a tremendous positive impact on the research, teaching and clinical care programs at the Institute.

In an interview, Dr. Seery mentioned the strong commitment he feels to UMDNJ: "The University gave me an opportunity to become a physician and obtain the subsequent training that has led to a fulfilling career in



ophthalmology." Dr. Seery recognizes the IOVS as playing a vital role in subspecialty eye care and as a resource for patients and ophthalmologists in the state.

A New Jersey native, Dr. Seery obtained his MD at New Jersey Medical School and completed a surgical fellowship in retinal and vitreous diseases at the Massachusetts Eye and Ear Infirmary. He is a member of the Associated Retinal Consultants of New Jersey and is one of the most sought-after retina surgeons in the state. A Clinical Assistant Professor of Ophthalmology, Dr. Seery also serves as a member of IOVS's volunteer faculty. He has performed many sight-saving surgeries, participated in nearly 40 clinical trials and published many scientific papers related to treatments for age-related macular degeneration, diabetic retinopathy, and other retinal disorders.

"I recognize and wish to support Dr. Zarbin's work," said Dr. Seery. "He has worked tirelessly for years in pursuit of his research efforts. He is a nationally and internationally recognized expert in retinal disorders and has built a department offering outstanding clinical training for ophthalmology residents."

Dr. Zarbin commented, "The continued development of cures for the major causes of blindness will occur only if extremely talented and ambitious young physicians continue to choose ophthalmology as a career in medicine. By establishing this endowment, Dr. Seery has insured that we will continue to have the margin needed to maintain excellence in our teaching, research, and clinical care | *Continued on page 3*

The Institute of Ophthalmology and Visual Science: Faculty List

Faculty

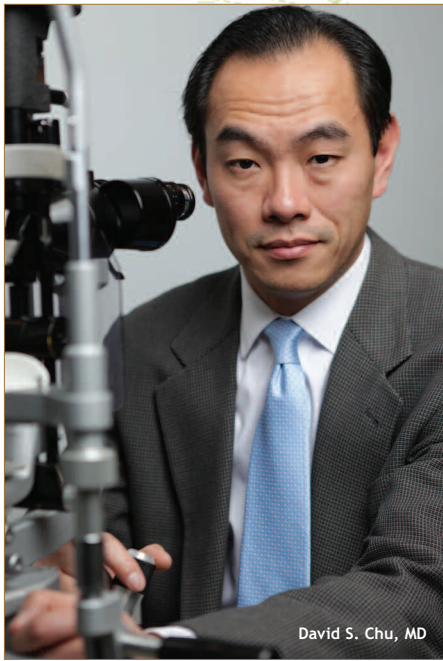
N Bhagat, MD, MPH	RM Chopin, MD	JT Liegner, MD
DS Chu, MD	AA Cinotti, MD	MA Lister, MD
A Cohen, MD	DJ Cinotti, MD	BC Liva, MD
RD Fechtner, MD	WH Constad, MD	SA Madreperla, MD,
LP Frohman, MD	GE Cox, MD	PhD
S Guo, MD	CJ Crane, MD	BA Maltzman, MD*
PS Hersh, MD	AP D'Amato, MD	AU Meyer, PhD
AS Khouri, MD	RG Del Negro, DO	ML Mund, MD
PD Langer, MD	JA DeLuca, MD	JM Neigel, MD
T Milman, MD	PA DeRespinis, MD	DM Newman, MD
N Mirani, MD	JD Eichler, MD	SW Noorily, MD
KS Pokorny, PhD	PM Fiore, MD	RA Norden, MD
RJ Rescigno, MD	DA Firestone, MD	P Nussbaum, MD
MS Roy, MD	B Frieman, DO*	B Pagan-Duran, MD
E Townes-Anderson,	L Frieman, MD	CR Samson, MD
PhD	K Fry, OD	S Scannapiego, MD
RE Turbin, MD	M Gewirtz, MD	JD Schiller, MD
BJ Wagner, PhD	OL Giliberti, MD	WJ Scott, MD
RS Wagner, MD	VJ Giuseffi, MD	CM Seery, MD
MA Zarbin, MD, PhD,	HL Glatt, MD	FF Shafik, MD
FACS	EI Gordon, PhD	RK Sharma, PhD
	DA Greenfield, MD	G Shulman, MD
	RF Guba, MD	C Silverman, MD
	MJ Harris, MD	B Spier, MD
	D Hersh, OD	MS Steinberg, MD
	PM Higgins, MD	IK Sugino
	IH Jacobs, MD	JH White, MD
	R Josephberg, MD	J White, OD, PhD
	IH Kaden, MD	N Williams-Bush, MD
	RM Klein, MD	A Wu, MD
	S Klein, MD	A Yamani, MD
	WM Klein, MD	CL Zolli, MD
	MF Kraushar, MD	
	PJ Lama, MD	
	M Landolfi, DO	
	JS Lee, MD*	

*Chief of Ophthalmology at
IOVS affiliate institution.

Improving Vision with Artificial Corneas

It didn't take ophthalmologist David S. Chu, MD, long to recognize the cause of 58-year-old Marie Soenarie's loss of vision. And the problem didn't originate in her eyes. "She has atopic keratoconjunctivitis (AKC), a rare autoimmune disease affecting the skin," explains Dr. Chu. "It causes chronic inflammation and thickening of the eyelids. The cornea becomes cloudy and can result in blindness."

Such was the case for Soenarie. Her corneas were so damaged that she could only see bright lights. She had corneal transplants several years ago, but the grafts did not survive.



David S. Chu, MD

"Patients with AKC who undergo corneal transplantation have a high failure rate because of the inflammation," observes Dr. Chu, who is Associate Professor of Ophthalmology at NJMS.

Because of her chronic inflammation, Soenarie was a prime candidate for an artificial cornea transplant in her

left eye. Unfortunately, the right eye was too damaged to repair. She also has glaucoma, further impairing her vision and complicating her treatment options. "Artificial corneas are not for everybody, but they can help patients after standard corneal transplantation has failed," says Dr. Chu.

He devised a four-step plan to improve Soenarie's vision. Her treatment began with methotrexate, a powerful drug used to treat autoimmune disorders, cancer, and other illnesses. "First we eliminate the inflammation," explains Dr. Chu. "Methotrexate does that, and it will control her atopic disease. She'll probably have to take it for the rest of her life."


The next step in Soenarie's treatment was a glaucoma implant, also known as an aqueous shunt, which decreases pressure in the eye by increasing the outflow of fluid. It was performed by NJMS Assistant Professor of Ophthalmology Amir Cohen, MD. "We're not able to check intraocular pressure in patients with artificial corneas, so we do this procedure before the transplant," says Dr. Chu.

In February 2011 an artificial cornea was implanted in

Soenarie's left eye. The type used was a Boston keratoprosthesis. Made of clear plastic with excellent vision-enhancing properties, it is sutured onto a donor cornea, which is then sutured onto the patient's eye. This procedure is designed to help patients whose conditions are most difficult to treat.

The final phase of her treatment will involve surgically correcting the abnormally scarred eyelids, caused by years of inflammation and swelling. This procedure will be performed in the next few months by NJMS Associate Professor of Ophthalmology Roger E. Turbin, MD.

Dr. Chu is cautiously optimistic about Soenarie's prognosis. She will require close monitoring and daily antibiotic drops for the rest of her life to ward off infection. "My vision is improving," she says. "I'm able to see shapes and colors. I can move around my home and prepare simple meals. And best of all, I can finally see my grandson." Special glasses will further improve her vision.

"Mrs. Soenarie's treatment required the input of many specialists and is an excellent example of our teamwork approach to complex eye disorders," says Dr. Chu. 

Clinical Trials at IOVS

- Age-Related Eye Disease Study in Age-Related Macular Degeneration (Bhagat)
- Ranibizumab in Patients with Dense Cataract and Rubeosis due to Proliferative Diabetic Retinopathy (Bhagat)
- Effect of Diabetes Education during Retinal Ophthalmology Visits on Diabetes Control (Bhagat)
- Topical NSAIDs on Eyes with Non Central Involved DME (Bhagat)
- New Technology Development to Save Vision in Glaucoma: Self Tonometry (Fechtner)
- Trabeculectomy Versus Tube Shunt Surgery: Comparing Surgical Outcomes (Fechtner)
- Dose Response for Selective Laser Trabeculoplasty (Fechtner)
- The NIH funded Idiopathic Intracranial Hypertension Therapy Trial (Frohman and Turbin)
- Topical Treatment of Capillary Hemangioma of Eyelids and Face in Children (Guo)
- Long Term Course of Surgically Induced Astigmatism in Children Following Cataract Extraction via Clear Corneal Incision (Guo)
- Genetic Factors Associated with Type 1 Diabetes and Diabetic Retinopathy in African-Americans (Roy)
- Inflammatory Biomarkers and Progression of Diabetic Retinopathy (Roy)
- A Non-Treatment Study of Risk Factors for Nonarteritic Anterior Ischemic Optic Neuropathy (Turbin)

For more information on clinical trials, contact Kathryn Boschert at 973-972-8308 or boscheka@umdnj.edu.



An Eye On Your Health

The Impact of Diabetes on Vision

Are you aware that diabetes is the leading cause of blindness among working age Americans in the U.S., and that diabetic retinopathy affects an estimated 4.1 million Americans? Diabetes mellitus is a group of diseases marked by high levels of blood glucose resulting from defects in insulin production, insulin action, or both. Diabetic retinopathy is a complication of diabetes mellitus characterized by damage to the blood vessels of the retina. Diabetic retinopathy represents a major public health problem in the U.S., particularly for African-American diabetic persons, among whom the frequency of diabetes is exceedingly high and increasing.

Here at the IOVS, Dr. Monique S. Roy is making strides to understand diabetes and diabetic retinopathy. In 1993, she initiated a study of diabetic African Americans, enrolling over 725 people. This study, known as *The New Jersey 725*, quickly became the largest longitudinal study of Type 1 diabetic African Americans. As a result of this study and continued research, Dr. Roy has identified predictors and risk factors associated with the development of diabetic retinopathy in African Americans. Dr. Roy continues her research by exploring interactions between genetics and the environment that may account for severity of diabetic retinopathy.

Early diagnosis of diabetic retinopathy and timely treatment reduce the risk of vision loss. Risks of diabetic retinopathy are reduced through diabetes management that includes good control of blood sugar, blood pressure, and lipid abnormalities. If you or someone you know has diabetes, make sure to follow up with your ophthalmologist for regular eye exams. 👁

FACULTY PROFILE

Monique S. Roy, MD

Monique S. Roy, MD, is a Professor of Ophthalmology and Director of the Medical Retina Division and the Electrophysiology Diagnostic Laboratory at the IOVS. She earned her medical degree from the University of Bordeaux and has completed fellowships in ophthalmology at the Johns Hopkins Hospital, the Institute of Ophthalmology in London, and the University of Toronto, Canada. Dr. Roy also served as Visiting Scientist at the Clinical Branch of the National Eye Institute of the National Institutes of Health.

Dr. Roy is one of the world's leading authorities on the relationship between diabetes and diabetic retinopathy among African Americans. She has identified risk factors and physical findings (e.g., retinal venular dilation) that predict the development of diabetic retinopathy. Her work will serve as the basis for screening strategies that foster more aggressive and successful treatment of the visual complications of diabetes.

Dr. Roy's research has received continuous funding for nearly 20 years from the National Eye Institute, the Juvenile Diabetes Research Foundation, and Research to Prevent Blindness. Dr. Roy, whose research has been supported by over \$5 million in grants from the National Eye Institute, has been honored with a Lew Wasserman Merit Award from Research to Prevent Blindness, Inc., and with the Moorfield's Prize in Ophthalmology. 👁



Monique S. Roy, MD

Grateful Alumnus

Continued from page 1

programs. Dr. Seery's contribution will have a long-lasting, positive impact on the citizens of New Jersey."

Dr. Seery lives in New Jersey with his wife Joan and their three children. We are deeply grateful for Dr. Seery's generous contribution through the Foundation of UMDNJ. For information on tax-deductible donations, please contact Dr. Marco A. Zarbin (zarbin@umdnj.edu). 👁

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The Institute of Ophthalmology and Visual Science
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90 Bergen Street, Suite 6100
PO Box 1709
Newark, NJ 07101-1709

Chair: Marco A. Zarbin, MD, PhD, FACS
Editor and Writer: Kathryn S. Pokorny, PhD
Production: Kathryn A. Boschert, MS and the UMDNJ Department of
Advancement and Communication

For additional information about this publication or the IOVS faculty,
residency program, ophthalmic technician training program, or research
programs, log onto our website at www.umdj.edu/eyeweb.

If you prefer to receive FOCUS via email or have any comments,
please contact: Marco A. Zarbin, MD, PhD, FACS Chair: 973-972-2038 or
zarbin@umdj.edu.

To learn how you can financially support vision research, contact: Elizabeth
Ketterlinus at The Foundation of UMDNJ, 120 Albany Street, Tower II, Suite
850, New Brunswick, NJ 08901; email, eketterlinus@njhf.org; telephone,
973-679-4684; fax, 732-247-0016. To have your name removed from our
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As I see it...

The Institute of Ophthalmology and Visual Science (IOVS) at New Jersey Medical School (NJMS) is a division of the University of Medicine and Dentistry of New Jersey, the state's health sciences university.

Physician-professors involved in clinical care, teaching, and research staff the Institute. In addition to being highly experienced surgeons, our doctors are engaged in finding cures for the leading causes of blindness. The Institute's staff members work closely with other state organizations to improve the quality of life for those with impaired or total loss of vision.

The IOVS has three important missions: teaching, discovery, and clinical care.

Teaching. Our physician-professors work closely with our ophthalmology residents and medical students. In addition, highly respected ophthalmologists practicing in the community volun-



Message from the Chair
Marco A. Zarbin, MD, PhD, FACS

teer their time to teach our residents and medical students. As a result of this concentrated attention and supervision, the IOVS has one of the finest ophthalmology training programs in the New York metropolitan area. Approximately forty percent of the ophthalmic surgeons trained in the IOVS remain in New Jersey and provide eye care to its citizens. Thus, we have a great impact on the quality of ophthalmic care delivered throughout the state.

Discovery. Members of the IOVS undertake nationally recognized research in age-related macular degeneration, diabetic retinopathy, glaucoma, pediatric eye disease, and refractive surgery. The fact that many of our investigators' research programs have been supported by the National Institutes of Health attests to their excellence.

Clinical Care. We have an abiding commitment to citizens of New Jersey. Our work spans an exceptionally broad spectrum with respect to the complexity of care we provide, ranging from basic to highly complex ophthalmic surgical procedures.

The purpose of this newsletter is to enable our patients, and their families and friends to read about the latest developments in blinding disease treatment and vision research at IOVS. We hope you will share it with your friends and colleagues. 