Alumni Meeting to Offer Exceptional Program

This year’s alumni meeting is not to be missed! Three alumni who are now established in ophthalmic pediatrics and public health, retina, and cornea will present keynote lectures that are certain to be informative and thought-provoking across subspecialties.

The meeting will be held on June 23, 2012. The program will feature

Jean Ramsey, M.D., M.P.H., R’94, F’96 “The Boomers are Coming! The Future Eye Health Workforce—Bigger and Better?”

Joseph Tauber, M.D., R’87 “Twenty-Three Years After Fellowship and I Still Struggle With…”

Robert Hutchins, M.D., R’86 “Sub-retinal Pigmentary Patterns: Presentation of Cases as Unknowns”  Continued on p. 2

Lloyd Aiello to be Grant Lecturer at New England Eye Center Graduation

The New England Eye Center Graduation will be held on Friday, June 22, 2012. Resident and fellow presentations will begin at 12:30 PM. This year the W. Morton Grant Lecturer will be Lloyd M. Aiello, M.D. Dr. Aiello’s lecture will be “1500BCE-2012CE: The Road Travelled Beyond Blindness to Preservation of Vision and the Future of Diabetes Eye Care.”

Dr. Aiello is Clinical Professor of Ophthalmology at Harvard Medical School, Founding Director of the Beetham Eye Institute of Joslin Diabetes Center, and co-founder of the Joslin Vision Network (JVN). He founded the LMA Center for the Humanities in Diabetes Eye Care. His clinical practice, starting with Continued on p. 2

Age-Related Macular Degeneration and Retinal Vascular Diseases – Update 2012

Saturday, May 19, 2012 7:00AM – 2:00PM

Courtyard Marriott
275 Tremont Street
Boston, MA 02116

sdunn@tuftsmedialcenter.org

2011 Tufts eye retreat complete report / page 5
Alumni to speak at TEAA meeting continued from page 1

Jean Ramsey, M.D., M.P.H., is Associate Professor of Ophthalmology and Pediatrics and Assistant Dean for Alumni Affairs at Boston University School of Medicine, and Vice Chair/Education Program Director in the Department of Ophthalmology at Boston Medical Center.

Dr. Ramsey received her Doctor of Medicine degree from Boston University School of Medicine in 1990 and her Masters of Public Health in Maternal and Child Health from Boston University School of Public Health in 2008.


In addition to wide clinical responsibilities, Dr. Ramsey is active in ophthalmic and pediatric societies. She is presently serving a term as Council Chair of the American Academy of Ophthalmology. She has published largely in the field of preschooler vision.

Joseph Tauber, M.D., is Clinical Professor of Ophthalmology at the Kansas University School of Medicine and Medical Director of the Heartland Lions Eye Bank, in addition to maintaining a busy practice at Tauber Eye Center in Kansas City, MO.

Dr. Tauber received his Doctor of Medicine degree from Harvard Medical School in 1982. He was a Resident in Ophthalmology at Tufts-New England Medical Center Hospitals, Tufts University School of Medicine, 1983-86, and was elected by the faculty to serve as Chief Resident 1985-86. He then completed a Clinical Fellowship in Retinal Surgery at Massachusetts Eye & Ear Infirmary, Harvard Medical School.

Dr. Hutchins is widely published in the field of retina, is active in resident and medical student education, and maintains a busy clinical practice.

Lloyd M. Aiello, MD, to be the Morton Grant Lecturer at Resident & Fellow Graduation continued from page 1

Dr. Beetham in 1963, has been almost exclusively dedicated to the care of Joslin's diabetes patients. He pioneered laser photocoagulation for the treatment of diabetic retinopathy and has participated in leadership roles in multiple national clinical trials including serving as Co-Chairman for the Early Treatment Diabetic Retinopathy Study, a 10-year, multicenter national trial on laser treatment for diabetic retinopathy. Dr. Aiello’s clinical research activities are presently directed at early diabetic retinopathy imaging lesion detection and developing remote site diabetes eye health care models using telemedicine (JVN) in order to improve access to and delivery of remote site quality diabetes eye and medical care. He and his colleagues invented a stereoscopic imaging system for retinal examination with a remote examination unit. Research efforts also focus on the prevention
In the ophthalmology news

Joel Reisman, M.D., Director of the NEEC surgical teaching lab, imparted his perspective and advice on teaching cataract surgery in a recent issue of Eye World.

Reisman, along with A. Tim Johnson, M.D., Ph.D., Professor of Clinical Ophthalmology and Service Director, Comprehensive Ophthalmology Clinic, University of Iowa, Iowa City, and Cynthia Chiu, M.D., Associate Professor and Director, Comprehensive Ophthalmology & Optometry, University of California, San Francisco, contributed to a column Cataract tips from the teachers—Practice makes perfect: But how in the wet lab?

Reisman wrote, “My goals for residents in the wet lab are 1) Learn the basic steps in phacoemulsification, 2) Learn how to use an operating microscope, 3) Know the parameters and settings of the phaco machine and 4) Become familiar with the names and uses of instruments.” He then elaborated on his specific approaches in surgical teaching.

Each of the three experts presented a unique focus based on his and her experience teaching and administering ophthalmology wet labs. The complete article is available at http://www.eyeworld.org/article-practice-makes-perfect—but-how-in-the-wet-lab-

Tufts eye faculty: VOLUNTEER. Share and expand your educational experience

Teach in the wet lab

*Boston Dispensary*

Your help is needed in the NEEC surgical teaching laboratory, located in the Boston Dispensary at Tufts Medical Center. To inquire or to sign on, please contact education coordinator Elizabeth Cook at ecook@tuftsmedicalcenter.org, or Joel Reisman, M.D., directly, at jreismanmd@hotmail.com.

Supervise at Sharewood

*Malden Free Clinic*

Sharewood, in Malden, MA, is a free community health service operated by Tufts medical students. Attendings are needed in our eye clinic. Your participation in one or more clinic session makes it possible. Alternate Tuesday evenings. Contact theedges@tuftsmedicalcenter.org.
Samuel Sokol, Ph.D.

Samuel Sokol, Ph.D., has been an integral part of the eye department at Tufts Medical Center since Bernard Schwartz became the first full-time chairman of ophthalmology at Tufts University Medical School and the New England Medical Center in 1969. Dr. Sokol graduated from Washington and Jefferson College in 1963, received a Masters from Bryn Mawr, followed by a PhD in psychology at Lehigh University. He pursued a research fellowship at Sussex University in England followed by additional post-doctoral studies in the Department of Psychology at Brown University. As Dr. Schwartz was constructing the new Department of Ophthalmology at Tufts and the New England Medical Center based on scientific research, he contacted Sam at Brown. Dr. Sokol said, “This seemed like a good place to start professionally,” to develop an electrophysiology service. Dr. Schwartz sent Dr. Sokol to Chicago to work with Jerry Fishman as well as to New York to work with Ron Carr. Then “I took it from there,” beginning his research evaluating normal children using visual-evoked potentials and evaluating retinal function with electroretinography. During his continued relationship with Dr. Fishman, he wrote a definitive manual for the American Academy of Ophthalmology on electrophysiology which continues to be useful to those starting out in the field.

In addition to perfecting electroretinography and publishing in this area, one of Dr. Sokol’s main research contributions has been directed towards infant vision. He was the first to determine that infants develop visual acuity much earlier than previously understood, and he showed how visual-evoked potentials can significantly improve the management of patients with amblyopia. He has been awarded many grants including an NIH career development award. He has published a wide variety of clinical scientific papers on amblyopia, macular degeneration and diabetic retinopathy as well as papers on the basic science of electrophysiology. He has been involved in the training of many students, residents and fellows.

In 1992, Sam went back to his roots in psychology and became certified for neuro-psychological testing. While still a professor of ophthalmology, he became an assistant professor in neurology and pediatrics, performing neuro-psychological testing for children as well as adults starting in 1994. At the same time he continued providing electrophysiologic studies for the eye department.

Dr. Sokol could be considered a scientist-clinician. As a PhD he has contributed significantly to the basic sciences, but he is well respected throughout the Boston community for his expert and practical interpretations of visual-evoked potentials as well as electroretinograms. Sam’s approach is very straightforward and he rarely quibbles over the results of his tests. His excellence in working with children also made him successful as a pediatric neuro-psychologist.

In addition to his scientific career, Sam perfected his ability as a jazz pianist and on many occasions has entertained us in the Eye Center.
Tufts Vision Science Retreat

The 2011 Tufts Vision Science Retreat was held on Friday, November 18, 2011, in Sackler 114, Tufts University School of Medicine. Vision researchers of the Department of Ophthalmology—Tufts University School of Medicine, New England Eye Center, the TUSM basic science departments, Tufts Dental School, the Tufts Cummings School of Veterinary Medicine, the Medford campus as well as the HNRCA and Tufts Medical Center convened for the informational, intellectual, and collegial exchange.

Not surprisingly, many viewed the retreat as a compact, local version of the annual Association for Research in Vision and Ophthalmology (ARVO) meetings. The biennial Tufts eye retreat, however, is unique in its university focus and specific goal to promote collaboration among vision researchers and clinicians in the Tufts ophthalmology community.

The scientific program was organized by Noorjahan Panjwani, Ph.D., Professor of Ophthalmology and Biochemistry and Director of Vision Research, Tufts University School of Medicine, with the comprehensive support of Jay Duker, M.D., Professor and Chair, Department of Ophthalmology, Tufts University School of Medicine and Director of New England Eye Center. Judy Gallego, research administrator for NEEC and the TUSM Dept. of Ophthalmology, served in the indispensable role of administrative coordinator.

In opening the meeting with Dr. Duker, Dr. Panjwani stated the goal of the retreat, “to encourage collaborations between ophthalmology and the basic science departments.” She had organized the scientific program with the imperative of maximizing the discussion and promotion of interplay between basic research and clinical implications. In order to meet this goal, she arranged for every basic science presentation to have a clinical commentator who would facilitate discussion about each talk. This, too, with its obvious benefit, set our Tufts convocation apart from typical scientific meetings. Drs. Duker, Reichel, Goldstein and Hedges served as the clinical commentators for the retreat.

First speaker Elias Reichel, M.D., furthered the goal and theme of the meeting by presenting “Research topics that are likely to have a high impact in Retina clinic.” He discussed the topics toward which scientists might best direct their inquiry, including those already within the purview of Tufts investigators as well as others that are farther down the road, including gene therapy for retinal disorders, possible stem cell treatments, novel drugs that act like corticosteroids but do not have the side effect profile of corticosteroids, and photoreceptor rescue in retinal degenerations.

The penultimate presentation of the morning session was a review of the “State of Vision Research at Tufts” by Dr. Panjwani. The department of ophthalmology at Tufts has a robust research program, well supported by the National Eye Institute, Research to Prevent Blindness, Lions International and other funding, in three major areas: basic science and clinical research, translation research, and clinical trials. The basic science research is focused on characterization of the pathogenic mechanisms of retinal degeneration, corneal neovascularization, and infection. The translational research is centered on developing OCT-based methods for early diagnosis of diseases of retina, and gene therapy methods for treatment of retinal diseases.

Rounding out the morning session was a faculty discussion of NEI P30 and Training Grants. The prospect for recognition of Tufts as a Vision Research Center and a core facility grant by the National Eye Institute was discussed as a goal. The NEI P30 grant supports core facilities for a minimum group of 8 NEI-funded investigators to enhance their research, consolidate resources, avoid duplication of efforts and thereby contribute to cost effectiveness. With 10 funded and 2 pending R01s, Tufts is eligible to compete and plans development to enhance its position. It is believed that a new application should be supported by 14 R01 awards to successfully compete; above this, the institution must demonstrate that its Vision
Research Program is thriving, on the upswing and exhibits leadership and cohesiveness. The 2011 Retreat is evidence supportive of this claim.

To begin the afternoon, David Kaplan, Ph.D., presented the keynote lecture, on “Tissue engineering cornea replacements.” Development of a human cornea replacement that overcomes the shortcomings of synthetic or allergenic materials is urgently needed and is the goal of Dr. Kaplan’s research. This RO1-supported investigation is a unique approach to reaching the goal of meeting the ever-growing demands for corneal replacements, while offering an integration strategy that would allow the engineered transplant to be replaced by the patient’s native tissue. The elegant investigation described impressed the audience as an example of intricate collaboration among physical and biological scientists, engineers and technicians.

Dr. Claes Dohlman, Boston’s senior cornea specialist and preeminent clinician and researcher in transplantation, expressed enthusiastic optimism regarding the work of Dr. Kaplan and his collaborators. Dr. Dohlman’s associate, Irmgard Behlau, described their recent work on the Boston keratoprosthesis.

Michael Goldstein, M.D., reviewed “Research topics that are likely to have a high impact in Cornea clinic.” He spoke about a “large number of unmet clinical needs in the cornea clinic” for such problems as dry eye disease, corneal wound healing, and viral conjunctivitis. He discussed the need to develop better animal models, better tools for dry eye assessment, corneal haze assessment and diagnostic tests for infection, inflammation, and allergy, and improved therapies, including drug delivery.

It merits noting that Dr. Cook’s findings on reading and pigeons intrigued the audience.

Following the afternoon session of talks, Allen Taylor, Ph.D., announced the Poster Prize winners. Posters were highlighted during viewing and discussion at coffee break and lunch as well as the afternoon tea break. The posters were adjudicated by Drs. Elias Reichel and Allen Taylor.

Dr. Kevin Jeffries’ poster (Jeffries, Markowska and Panjwani: “Galectin-3 Modulates Cell Surface Expression and Activation of VEGF Receptor 2”) was judged to be the outstanding of the meeting and was awarded the prize.

Distinguished guests at the retreat included Harris A. Berman, M.D., Dean of the Tufts University School of Medicine, Dr. Naomi Rosenberg, Ph.D., Dean of Tufts Sackler School of Graduate Biomedical Sciences, and Richard Karas, M.D., Ph.D., Chief Scientific Officer, Tufts Medical Center.

Eye and vision researchers from the various campuses and laboratories affiliated with Tufts University presented their latest findings for the edification and discussion of colleagues. As a result, collaborations were initiated and invigorated, and the identity and goals of Tufts eye research were clarified and strengthened. Generally attendees were made acutely aware and educated in depth regarding their colleagues’ work and left with a sense of unity about their research efforts.

Those in attendance were impressed and energized by the dynamic interchange at the meeting—vibrant demonstration of the solid and growing vision research efforts at Tufts.

**ALUMNI, PLEASE SHARE YOUR NEWS**
Submit items and articles to **aball@tuftsmedicalcenter.org**
*The next newsletter will be published in September 2012*
Elias Reichel, M.D., Professor of Ophthalmology, Tufts University School of Medicine, “Research topics that are likely to have a high impact in Retina clinic.”

Janis Lem, Ph.D., Associate Professor at TUSM, “Rhodopsin regulation of adherens junctions in the retina.”

Fu Shang, Ph.D., HNRC, “Proteolysis meets inflammation in the eye: implications in the pathogenesis of AMD.”

Chung-Jung Chiu, D.D.S., Ph.D., HNRC, “Development of a prediction model of AMD.”

Ira Herman, Ph.D., Professor of Cellular Molecular Physiology, Anatomy and Cell Biology and Ophthalmology at TUSM, “Pericyte–endothelial interactions and microvascular dysfunction”

Mark Rivard, Ph.D., Professor of Radiation Oncology, Tufts Medical Center, “Radiation dosimetry and radiobiology for eye plaque brachytherapy.”

Rajendra Kumar-Singh, Ph.D., Associate Professor of Ophthalmology, TUSM, “Gene therapy for retinal degeneration.”


Syed Noorwez, Ph.D., Research Assistant Professor of Ophthalmology at University of Massachusetts Medical School, “Small-molecule mediated mediation of rhodopsin misfolding and retinal degeneration.”

David Kaplan, Ph.D., Professor and Chair of Tufts University Dept. of Biomedical Engineering, “Tissue engineering cornea replacements.”

Michael Goldstein, M.D., Assistant Professor of Ophthalmology at TUSM and co-director of the NEEC cornea service, “Research topics that are likely to have a high impact in Cornea clinic.”

Noorjahan Panjwani, Ph.D., “Update in the regulation of Integrins and VEGF Receptors by galectins.”

Thomas Hedges, M.D., Professor of Ophthalmology and Neurology at TUSM; Director of the Neuroophthalmology Service of NEEC at Tufts Medical Center, “Selective retinal ganglion cell loss in familial dysautonomia.”

Robert Cook, Ph.D., Professor and Chair of the Department of Psychology, Tufts University, “Avian models of visual perception and cognition.”

Allen Taylor, Ph.D., Professor and Senior Scientist, Director, Laboratory for Nutrition and Vision Research, Tufts University HNRCA, “Mechanistic studies regarding glycemic index models prove value of simple dietary modification.”

Daniel Cox, Ph.D., Associate Professor of Neuroscience, Tufts University School of Medicine, “Calcium-activated K+ Channel – Structure and Function.”

Victor Hatini, Ph.D., Assistant Professor, Anatomy and Cell Biology, “Role of Rho signaling cascades in photoreceptor renewal.”

Anne Kane, M.D., Assistant Professor of Geographic Medicine and Infectious Disease and CTSI Faculty at Tufts Medical Center, “Opportunities provided by the Tufts Clinical and Translational Science Institute (CTSI).”

POSTERS


Z. Cao and N. Panjwani, “Comparison of Pathogenic Potential of Acanthamoeba Trophozoites, Immature Cysts and Mature Cysts”

K. Jeffries, A. Markowska and N. Panjwani, “Galectin-3 Modulates Cell Surface Expression and Activation of VEGF Receptor 2.”

A. Alarino and C. Pirie, “Anterior Segment Fluorescein Angiography in the Dog and Cat Using a dSLR Adapter.”

Nolan Gagne, “Evaluating Biologically Effective Dose for Eye Plaque Brachytherapy”

Elizabeth A.S. Whitcomb, “The Ubiquitin Conjugating Enzyme, UbcH7, affects progression through the cell cycle and migration of lens cells: A possible therapeutic target for secondary cataract?”
**Join the Honor Roll**

The following donors have generously contributed to the Bernard Schwartz Teaching Fund

*Support resident, fellow and medical student teaching at New England Eye Center*

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