



TELL US YOUR STORY

Generosity can come in many forms — philanthropic support of the programs of The Eye & Ear Institute, participation in medical research, or sharing experiences of care at UPMC Eye Center or University Ear, Nose & Throat Specialists. How has Eye & Ear made a difference in your life? We'd love to learn more about your patient story.

Help us educate those who may not understand the seriousness of diseases and disorders of the eye, ear, nose and throat. Encourage those struggling with similar medical conditions. Inspire those who would like to support research, education or care programs with a charitable gift.

Share your story today at our secure Website, www.eyeandear.org.

RAISING HER VOICE – LELIA TOTTEN'S PATIENT STORY

Dear Dr. Rosen,

We met at the beginning of June when you and your associates saw my mother, Lelia Totten, who was suffering from a paralyzed left vocal chord. I am not certain whether you are aware that she died on June 28, 2010, but I wanted to take this opportunity to thank you and your associates who worked with my mom.

Our experience at the UPMC Voice Center was extremely positive. Your staff was friendly and professional. It was very enlightening to hear the results of the tests that Dr. Gartner-Schmidt conducted. (My mom was very good at limiting her vocalizations in a typical situation to a deceptively effective minimum. The extent of the strain on her speech and respiration became evident even to my untrained ears when she read the passages.) When you came into the examining room, your rapport with your staff and my mom was relaxed, genuine and professional, which alleviated a lot of potential anxiety. Dr. Young also made a somewhat uncomfortable or at least awkward-feeling photo-scope as comfortable as possible.

After the operation when I had the opportunity to speak to Dr. Young, I told her that it was her rapport with my mom as well as your support of her qualifications that put me at ease regarding her talent as a surgeon. The operation, as you know, was a success. My mom stopped choking and coughing and her voice returned. It was a bit of a surprise that she needed to refrain from talking for 72 hours, although at the time it seemed like sage advice. I guess if I had known that she was going to die within a month I would have not discouraged her from talking as much as she wanted—maybe after 24 hours. Mostly, I think that she talked as much as she wanted anyway. (At least when she was with my niece at night or when I wasn't around imploring her to wait until Friday)

It must have been a wonderful feeling to be able to communicate again without constantly worrying about aspirating if she swallowed without tucking her chin! This is an excellent example of the significance of involuntary muscles. Thank you for giving her that gift! I wanted you to know that the operation to



“plump up” her vocal chords had an enormous, palliative effect. My mom's quality of life was most definitely enhanced. Thank you also for the speed and thoroughness which you used to enable all of the tests, scans, x-rays etc. to be accomplished so that my mom was able to have the operation only five days after she first was seen at the Voice Center. The scans which you ordered to investigate the causes of the paralysis also enabled us to better care for my mom during the last part of her life, which was so important to me.

My six siblings, my mom's numerous grandchildren and great-grandchildren, as well as I wanted to thank you and your co-workers for giving us the opportunity to hear my mom talking as she prepared to die. Many of us had opportunities to be with her during the last month of her life and enjoy her company and conversations, many of which were either looking back and remembering so many of the adventures and good times she had when she was younger, or those we each had with her as we were growing up. It would have been such a different experience if she had not had the operation. I think that it would have taken more of a toll on her to continue living with the limited use of her voice to communicate and the constant self-monitoring of her swallowing.

May you all continue to be blessed both in your work and your personal lives.

Sincerely,
Jetsy Totten Rickling

www.eyeandear.org

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Pittsburgh, PA 15213

Retina Service continued from page 1

textbook chapters, and more than 1,000 peer-reviewed articles in major journals. She has also received numerous professional awards, including the Netherlands Ophthalmological Society's Donders Medal, an illustrious award given just once every five years to an ophthalmologist of world fame and outstanding merit. She is the first and only woman to receive it.

The conference was attended by ophthalmologists, retina and glaucoma specialists, cornea specialists and neuro-ophthalmologists. In addition to providing an educational update, the Silver Anniversary Retina Conference allowed Drs. Friberg and Eller to reconnect with their former trainees and reflect on old times. The residency training program at the UPMC Eye Center is one of the most prestigious, as well as one of the largest programs (6 trainees per year) in the country. As they celebrated this twenty-five year milestone, they expressed a “parental pride” in having taught and nurtured over 150 young men and women, providing them with the necessary tools to launch their careers as competent and caring ophthalmolo-

gists. Through teaching their students, they have touched the lives and preserved the sight of literally thousands of patients—for a teacher, there can be no better reward. When Drs. Friberg and Eller came to the UPMC Eye Center in 1985, there were six physicians in the department. Today, there are twenty-two physicians serving eight subspecialties. While much has changed in that time period – from advances in medical devices and technology to advances in effective and efficient patient care – the department has consistently remained on the forefront of providing the excellence in ophthalmic care expected from the UPMC Eye Center. Both doctors truly appreciated this recognition and look forward to their next twenty-five years as well.

Dr. Thomas Friberg is a professor of Ophthalmology at the University of Pittsburgh and is the director of the Retina Service at UPMC Eye Center Mercy. Dr. Andrew Eller is also a professor of Ophthalmology and is director of the Ocular Trauma Service at the UPMC Eye Center.

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THE **Eye & Ear** Foundation of PITTSBURGH

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SIGHT + SOUND

NEWS FOR SUPPORTERS AND FRIENDS OF THE EYE & EAR FOUNDATION



CHANGES TO SIGHT + SOUND

At the Eye & Ear Foundation, we are dedicated to giving you the best information in an easily accessible way. You may have noticed recent changes to the font, color and layout of *Sight + Sound*—hopefully this has improved the news-letter experience for you. Let us know what you think!

If you have trouble reading this though, visit www.eyeandear.org for an online version.

RETINA SERVICE CELEBRATES 25 YEARS OF EXCELLENCE

BY LAUREN WALLY

On December 10, 2010, Dr. Thomas R. Friberg and Dr. Andrew W. Eller were recognized for their twenty-five years of service in the Department of Ophthalmology as the UPMC Eye Center hosted the Retina Service Silver Anniversary Celebration and the Eye & Ear Foundation Muse Prize Lecture at the Fairmont Hotel in downtown Pittsburgh. This one-day continuing medical education conference focused on providing ophthalmologists with an update on current state of the art practices in the diagnosis and treatment of a variety of vitreoretinal diseases. Former residents and fellows as well as current retina faculty were invited to participate as speakers. Topics included: treatment options for macular degeneration and diabetic retinopathy; postoperative complications of vitreoretinal surgery; and differential diagnosis of AMD. In a presentation entitled “Treatment Options for Age-Related Macular Degeneration,” honoree Thomas Friberg discussed the continued evolution of therapies for both dry and wet macular degeneration. One of his goals is to develop a practical, simple system that will drastically decrease the treatment burden for patients by allowing the slow release of drugs over many months. Additionally, honoree

Andrew Eller presented “Ocular Lymphoma”, which discussed the signs and symptoms, diagnostic evaluations, treatment options and prognosis for Primary CNS Lymphoma – Ophthalmic (PCNSL-O)

In conjunction with the conference, the Eye & Ear Foundation presented the 2010 Albert C. Muse Prize for Excellence to Carol Shields, MD, a graduate of the University of Pittsburgh Medical School and a nationally and internationally respected voice in the field of Ocular Oncology. The Foundation established the Muse Prize in 2001 to honor world leaders in ophthalmology and otolaryngology. The award was presented to Dr. Shields by Lawton Snyder, Executive Director of the Eye & Ear Foundation and George Fechter, Vice Chairman of the Board of Directors. Dr. Shields is widely recognized for her innovative ideas in clinical care. She has pioneered the use of newer orbital implants with patients who have undergone surgery to remove an eye in order to relieve pain or minimize the spread of a cancer. She has authored or co-authored seven textbooks, 200

Continued on page 6

Joel S. Schuman, MD; Andrew W. Eller, MD; Muse Prize recipient Carol L. Shields, MD; Thomas R. Friberg, MD.



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FROM THE CHAIRS

DEPARTMENT OF OTOLARYNGOLOGY



I am proud of the great strides made within our department in 2010. And I look to this new year to bring even more remarkable achievements. Our physicians will be increasingly able to perform major surgical procedures through minimally invasive approaches. This includes removing tumors high in the nose and brain by employing telescopes directed through the nose, using video assistance to perform major thyroid operations through tiny incisions in the neck, and utilizing a robot for throat surgeries. I am also excited about our scientists whose contributions will be vital to our understanding tinnitus, balance disorders, pediatric ear infections, and mouth and throat cancer.

Over 40 million Americans suffer from tinnitus, a phantom “ringing in the ears,” and patients rarely enjoy complete relief. But our scientists are working to properly identify the causes, knowledge which I expect will lead to new therapies.

Balance disorders often result in falls and injury, and greatly limit the activity level of millions of Americans. Our research teams continue to use a virtual reality lab to learn more about vertigo, dizziness, and the treatment of balance disorders.

Otitis media and fluid in the middle ear is a major source of morbidity and hearing loss, especially for children. Myringotomy (surgery to remove excess fluid) and ear tube insertion are two of the most prevalent procedures in the United States. Our investigations involve a barometric chamber to increase understanding of how pressure changes affect hearing and the ear.

Improved understanding of the biology of mouth and throat cancer has in turn improved the prospects for long term functional survival for many Americans. We will continually work to better understand cancers in an effort to advance treatment and preserve function.

We in the Department of Otolaryngology continually aspire to make landmark contributions to the understanding and treatment of these and many other ear, nose and throat diseases. As always, we remain committed to improving health care for us all.

Jonas T. Johnson, MD, FACS
The Dr. Eugene N. Myers Professor and
Chair in Otolaryngology
University of Pittsburgh School of Medicine
Director, University Ear, Nose & Throat Specialists of UPMC
The Eye & Ear Institute

DEPARTMENT OF OPHTHALMOLOGY



In the previous issue of Sight+Sound I mentioned that 2010 was an outstanding year – we have added new clinical faculty specializing in various areas of ophthalmology, as well as new scientists studying everything from how we understand what we see to others investigating the microstructure of the optic nerve. These new clinicians and researchers complement those already onboard, building a synergy where we can provide world-class patient care, scientific study and education. A multidisciplinary approach often generates innovation, and we have created an environment in which people with many different types of skills and expertise work and study together, enhancing the chances of breakthroughs for the future.

We are excited to look forward to new horizons in 2011. We continue to recruit the very highest level faculty to provide the excellence in ophthalmic care one would expect at UPMC Eye Center. The Louis J. Fox Center for Vision Restoration of UPMC and the University of Pittsburgh, a joint program of the UPMC Eye Center and the McGowan Institute for Regenerative Medicine, has received additional funding from both philanthropy and the federal government, primarily to investigate the use of stem cells for eye disease, and for new devices that allow people to “see” the visual world through non-visual pathways – for instance, experiencing the visual world through the tongue.

In the coming year we will expand research to include neuroscience with Matt Smith, PhD, a promising young investigator studying how the visual system works in single cells in the brain. We will also grow our focus on bioengineering with Ian Sigal, PhD, who joined us in October 2010. His research promises to unlock secrets of how the optic nerve behaves in the eye and may reveal new ways to protect it in eyes with diseases like glaucoma.

We are pushing ahead in our quest to find new treatments and cures for blinding eye diseases. We are grateful for your support.

Joel S. Schuman, MD, FACS
Eye & Ear Foundation Professor and
Chairman of Ophthalmology
University of Pittsburgh School of Medicine
Director, UPMC Eye Center
The Eye & Ear Institute

A GOOD NIGHT'S SLEEP

BY RYAN J. SOOSE, MD

We spend almost one third of our lives in sleep but often overlook its importance. Millions of Americans suffer from a very common but potentially dangerous condition called obstructive sleep apnea (OSA). OSA is characterized by stopping or slowing of breathing that can occur hundreds of times throughout the night. Patients may experience snoring, unrefreshing sleep, daytime sleepiness, morning headaches, irritability, and difficulty concentrating. They may also be seven times more likely to be in a car accident. Further, untreated sleep apnea is associated with an increased risk of high blood pressure, heart disease, acid reflux, and even stroke.



Treatment is generally aimed at improving symptoms and quality of life, or reducing cardiovascular risk. First-line therapy most commonly involves wearing a mask at night that is connected to a machine which keeps the airway open with continuous positive pressure (CPAP). CPAP can provide an excellent long-term solution, but effective therapy depends on regular nightly use.

For patients experiencing difficulty using continuous positive

airway pressure, other treatments are available. These include nose and throat surgeries to enlarge and stabilize the airway, dental appliances to hold the jaw forward during sleep, and weight loss strategies.

In addition to these medical and surgical therapy options, a new device (known as a hypoglossal nerve stimulator) was recently approved by the FDA for the treatment of OSA. During sleep, the muscles of the tongue and throat relax more than usual in many OSA patients, contributing to blockage of the airway. This new device uses an implantable nerve stimulator to increase the tongue's muscle tone during sleep and aims to restore normal breathing.

The UPMC Division of Sleep Surgery is one of only a handful of centers worldwide offering this new, potentially revolutionary treatment option for selected patients. To learn more, please call (412) 232-3687 or (412) 647-2100.

Ryan J. Soose, MD is the director of the UPMC Division of Sleep Surgery.

MAJOR GIFTS MAKING A DIFFERENCE

Physician-scientists at The Eye & Ear Institute are committed to finding new science for new solutions for eye, ear, nose and throat conditions. Unfortunately, cutbacks in government funding create gaps in the support needed for ground-breaking research that leads to medical advances. Private philanthropy has become increasingly necessary and oftentimes major gifts are the key to breakthroughs.

In our Department of Otolaryngology, two grants from PNC Foundation and Charitable Trusts are enabling Dr. Jennifer Grandis's lab to work toward preventing the growth of head and neck cancer cells. The drugs that are typically used to treat head and neck cancers currently degrade and do not stay active in cells to continually inhibit the growth and survival of cancer cells. The Grandis Lab has developed a potential breakthrough to be administered to cancer patients intravenously—the PNC grants (from the Myrtle Forsha Memorial Trust and Mendel & Sylvia Solomon Charitable Trust) are enabling the lab to test effectiveness.

On the Ophthalmology front, the cornea is one of the most successfully transplanted organs. Unfortunately, the need for cornea transplants will soon surpass available donor tissue and though synthetic corneas are currently in development, they do not yet integrate with the human eye well. But with the help of a generous gift from the Western Pennsylvania Medical Eye Bank Foundation, James Funderburgh, PhD is furthering leading-edge research at Eye & Ear. Dr. Funderburgh's lab is working to develop a biologic cornea from stem cells that can integrate into the eye's environment.

Other gifts at similar levels have had meaningful impact as well. Thoughtful contributions from Milton & Sheila Fine (Fine Foundation), Charles and Louella Snyder, and Steven and Marian Mosites are just a few gifts that are also making a difference.

You can help support the work of The Eye & Ear Institute too. Contact Executive Director Lawney Snyder at (412) 383-8756 for more on important giving opportunities. Or visit www.eyear.org to make a secure gift today.



Back Row: Lindsey Folio, BS; Scott Drexler, OD; Larry Kagemann, MS, BME; Gadi Wollstein, MD; Joel Schuman, MD, FACS; Hiroshi Ishikawa, MD; Michael DeRosa; Ian Sigal, PhD; Jonathan Grimm
Front Row: Jacek Kotowski, MD; Greg Owens; Melessa Salay; Juan Xu, PhD; Niveditha Pinnamaneni, BS; Chieh-Li Chen, MS
Missing: Carla Auborg; Rick Bilonik, PhD; Michelle Gabriel-Sandrini, PhD; Yun Lin, MS; Kristy Truman; Bo Wang, BS

PROFILE: The Glaucoma Imaging Group

BY LAUREN WALLY

The Glaucoma Imaging Group (GIG), part of the Ophthalmic Imaging Research Laboratory in the Department of Ophthalmology at The Eye & Ear Institute, has the distinct advantage of being one of the few groups in the world conducting imaging research primarily for glaucoma diagnosis. The group led by Gadi Wollstein, MD, Associate Professor of Ophthalmology at the University of Pittsburgh, was originally formed at Tufts University in Boston under the leadership of Dr. Joel Schuman, one of the inventors of the optical coherence tomography (OCT) technology. OCT provides 3-D, high resolution, cross-sectional images of different structures in the eye, such as the retina and cornea. This technology helps facilitate diagnosis of glaucoma and retinal diseases and is also helpful in anterior segment and neuro-ophthalmic disorders as well. While the OCT is not limited to ophthalmology alone – it also has applications in cardiology, dermatology, obstetrics and gynecology – one of its greatest strengths is its use for ophthalmic imaging.

When Dr. Schuman was recruited to the University of Pittsburgh, the GIG moved with him. Here, the group brings together an array of different backgrounds and expertise. From the clinician wanting to improve glaucoma diagnosis to the software developer creating a program to help with image analysis – all work together to take an idea from concept to reality. With the talents of this group working toward a common goal, research can be conducted on many different levels, all leading to anticipated tangible outcomes.

Some of the greatest challenges the group faces are the ability to identify disease at its earliest stages and the need to find better ways to identify patients at risk. Accordingly, the main focus of the Glaucoma Imaging Group is to improve disease

detection and better track its progression, particularly in glaucoma. At a more fundamental level, the GIG is working to improve understanding of how the eye works and the changes that occur in disease. The group is investigating these topics through a variety of research techniques and methodologies: 1) developing innovative software to analyze ocular images; 2) developing improved imaging devices; 3) using animal models, developing a contrast agent that can help increase the visibility of specific structures inside the eye; and 4) using imaging devices to visualize the drainage system of the eye. The Glaucoma Imaging Group has been fortunate to receive around \$1 million in grant funding from foundation and corporate support and the National Institutes of Health. However, even with continuous federal funding, costs for research of this type are staggering and still more support is needed.

The Glaucoma Imaging Group is a vital component of the Department of Ophthalmology. Dr. Schuman states, “I have been working in imaging for 23 years, and have never worked with a better team of people than those now in the GIG. It is a phenomenal multidisciplinary and visionary group that is extraordinarily effective and productive.” Additionally, Dr. Wollstein believes that if the group had not moved to Pittsburgh, the opportunities for collaborations would not be as great. According to Dr. Wollstein, “Having the GIG at the University of Pittsburgh allows for a fertile environment for research, as well as for collaborations within a leading medical school and surrounding world-class universities.”

Giving through the Eye & Ear Foundation greatly impacts such research. Give today at www.eyear.org, or call 412-383-8756.