

Department of Anesthesiology

University of Pittsburgh | UPMC

Volume 1, Number 2
Winter 2011

Alumni Connection



John P. Williams MD

*Peter and Eva Safar Professor and Chair, Department of Anesthesiology
Associate Medical and Scientific Director, UPMC International Division*

Welcome once again to the departmental newsletter. As you can see, we have been quite busy since the last issue came out in Spring 2011. These are exciting times!

Our clinical reach continues to expand. UPMC Northwest will join our family in March 2012. This beautiful facility is located strategically between Oil City, Franklin, Elmenton and Clarion, Pennsylvania just off of Route 8 and north of I-80. The department will provide OB, OR, and off-site coverage; our current staff roster is composed of four full-time physicians and six CRNAs. UPMC Northwest will be the 10th facility to join the family and our furthest northern extension within the U.S. to date. We welcome all of the members of the Northwest group to our family. Their names can be found at the end of this section.

We continue to develop and expand (in partnership with the ASA), our courses in simulation for Maintenance of Certification in Anesthesiology (MOCA). Dr. William (Bill) McIvor directs and develops these courses. Bill has been deeply involved with simulation since its inception at our institution and is the guiding light for our medical student simulation exercises, as well as MOCA. If you have an interest or need in simulation education, we welcome you to visit us and acquire new skills at WISER!

This issue's research update comes from Dr. Gold. The article may seem a little esoteric at first, but once you get past the background, you will quickly learn just how important these basic science findings are to your current practice. Our trusty old anesthetics may actually be making our patients' pain more difficult to treat. Only time and more research will tell, but Dr. Gold's exciting findings put the department at the cutting edge of what is known about the ancillary effects of anesthetic agents.

In this issue, we also highlight our role in providing non-remunerative care in distant locations, specifically in Haiti. As many of you are aware (and many of you have participated on your own), there remains a desperate need for quality health care in this country that is still being ravaged from the after effects of an earthquake almost two years ago. Our resident rotation provides experience in areas such as Thailand, Vietnam, Bhutan, and Mongolia.

A Message From the Chair



Finally, in this issue you will certainly see some old departmental colleagues and friends who have achieved various goals in their academic careers. Please drop them an email (or even, heaven forbid) a snail mail congratulating them on these achievements. It takes years of concerted effort and patience to achieve these milestones and I am sure that all of you join me in offering our sincere congratulations to each and every one of them!

One of the most important aspects of this newsletter is to allow each of you to participate in our success by allowing you to donate to your favorite departmental effort. We keep separate accounts that sponsor our missionary, research, academic, and educational missions, and you can direct a contribution to any of these different areas. If you need assistance in making a donation, please do not hesitate to write or call me.

Once again, we thank all of our alumni for staying connected with us and for representing us in the world. We are as proud of each of your accomplishments. Please continue to share your successes with us for future issues of the newsletter by sending any information that you would like for us to distribute to [Christine Heiner](#) here in the department. We hope that each and every one of you had a happy holiday season. Here's to a great start to the new year!

-John P. Williams MD

Welcome to the new UPMC Northwest Staff

*Sandra Clark, CRNA
Dianna Kelley, CRNA
Darren T. Loughran, DO
Karen Macanulty, CRNA
Michelle Morgan, CRNA*

*Joseph A. Novak, DO
Paula Schall, CRNA
Mary Suzanne Williams, CRNA
Gary L. Switzer, MD
Walter G. Morris, DO*

MOCA® Course at WISER

William R. McIvor MD, *Associate Professor*
Associate Director of WISER for Medical Student Education

The Peter M. Winter Institute for Simulation Education and Research (WISER) has offered human-patient simulation (HPS) courses for anesthesiologists seeking Maintenance of Certification in Anesthesiology® (MOCA®) since November 2010. This simulation course satisfies one requirement of the American Board of Anesthesiology's (ABA) MOCA program. Information regarding MOCA can be accessed at http://www.theaba.org/Home/anesthesiology_maintenance.

In 2000, the American Board of Medical Specialties (ABMS) adopted the philosophy that board certifications should be time limited, and that the recertification process should be based on continuous professional development. One element of the four-part process is a "Practice Performance Assessment," which is intended to help physicians compare their performance to existing gold standards or benchmarks. The ABA, our member board of ABMS, saw human patient simulation as a unique and important tool for anesthesiologists to assess skills in managing critical events; thus human-patient simulation was included in the Practice Performance Assessment component of anesthesiologists' Maintenance of Certification®. Of note, state licensure boards are considering using HPS for MOL (Maintenance of Licensure), and some insurance companies provide malpractice premium discounts for physicians who have completed HPS training.

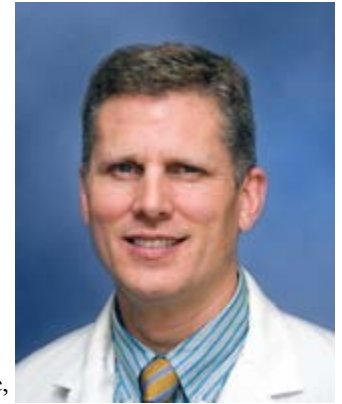
MOCA® simulation courses focus on two primary skills: management of hemodynamic instability and/or hypoxia, and teamwork skills required for managing anesthetic crises. During WISER's six to seven hour course, participants perform four or five simulations. They are in the "hot seat" (the anesthesiologist

in-charge and primarily responsible for the simulated patient), and the "first responder" (the anesthesiologist who answers the hot seat's call for help), in at least one scenario. In other scenarios, participants join in as a confederate, playing the role of a surgeon, a patient's family member, or other roles in the scenario, or they can watch the simulation from our control room. The scenarios are video and audio-recorded, which facilitates personal reflection on performance, instructor, and peer feedback during the scenario's debriefing.

After the course, participants complete a post-course evaluation and identify three "Practice Improvement Plans" that they intend to implement in their daily practice. Some examples of these improvement plans have been to examine their difficult airway cart for available devices, to implement a massive transfusion protocol at their institution, or to develop and use checklists in managing emergencies. About 30 days after the simulation course, the American Society of Anesthesiology (ASA), which oversees the administration of simulation courses for the ABA, contacts the course participants regarding their planned improvements. Once the response to that inquiry has been received, the ASA notifies the ABA that the participant has completed the simulation course.

It is important to note that this simulation course is not a pass-fail, high stakes exam.

Assessing competency, proficiency, or ability are not the goals of





MOCA®

Maintenance of Certification in
Anesthesiology Program

This simulation course fulfills
one requirement of the American
Board of Anesthesiology's (ABA)
Maintenance of Certification in
Anesthesiology Program (MOCA)
Part IV.

WISER
Simulation Improving Healthcare

www.wiser.pitt.edu/moca

the course. Rather, the simulation component of MOCA® was added to help anesthesiologists reflect on their own performance, under the guidance of simulation instructors and fellow course participants, to determine if performance gaps exist, and to provide an impetus for remediating any deficiencies the physician identifies. After a simulation course, the results of a participant's performance are never shared with anyone, including but not limited to employers, potential employers, or state licensing boards. Also notable is that the course is not intended as a remediation tool or to be used as evidence that an anesthesiologist is prepared to return to work after an absence.

In the future, sub-specialties within anesthesiology will have their own MOCA® courses. Critical care anesthesiologists and pain specialists have expressed a desire for their own domain-specific simulation course. Those courses will focus on scenarios relevant to those sub-specialties, and will also satisfy the ABA's MOCA® requirement. WISER, in accord with its mission of innovation in physician training with the goal of improving patient safety, will develop "MOCA®-Subs" courses.

Aside from expanding into anesthesiology subspecialties, HPS's future in anesthesiology is less obvious. Could this become a high-stakes exam that one must pass to be recertified? While that is conceivable, it does not seem likely. Currently, HPS is very labor and resource intensive, and to require that every anesthesiologist perform a battery of precisely conducted scenarios seems immensely impractical and unlikely. The simulation experience is wonderful for training and fostering formative assessment, but it is not a perfect surrogate for the real world. In the many years that I have taught with HPS, I have seen actions performed that I have never seen in the real world. This "simulation-induced artifact" in performance fosters discussion and learning, but it precludes

simulation, in its current incarnation, from being a platform for high stakes, summative assessment. I reserve the right to comment again, however, once the holodeck of Star Trek comes into mass production.

However, I can foresee the simulation requirement expanding in the near future. Clearly, one experience every 10 years (as the current requirement dictates) is not enough to significantly impact upon an anesthesiologist's performance. Resident trainees uniformly respond positively to simulation education. They see it as an opportunity to learn, practice, and improve their care skills. As simulation becomes more commonplace and accepted by anesthesiologists, as the technology improves and becomes more realistic, and as today's residents become tomorrow's professional colleagues, I believe simulation will become the cornerstone of mid-career physician training and continuing medical education.

A total of 33 anesthesiologists have taken WISER's eight courses offered to date. Their responses to post-course evaluations have lauded our course as very professionally conducted and learner-supportive. Some participants have commented that they were very anxious to perform a video-recorded simulation, but that their anxieties quickly dissipated with participation. They commented that the video review during debriefing was very helpful to their self-reflection.

Details about our simulation course, including the schedule and pricing, are advertised on the [WISER web site](http://www.wiser.pitt.edu). Note that you do not have to need MOCA® credit to take our simulation course; we welcome anyone with an interest in improving their patient care! All University of Pittsburgh alumni (former residents, department faculty or graduates of the Pitt School of Medicine) receive a 30% tuition discount at WISER. Feel free to [contact me](#) with questions.



When a Good Inhibitory Neurotransmitter System Goes Bad: Injury-Induced Changes in Spinal GABA_A Signaling

Michael S. Gold PhD, *Professor*

γ -aminobutyric acid (GABA) is the primary inhibitory neurotransmitter in the central nervous system acting through ionotropic GABA_A and metabotropic GABA_B receptors. While GABA_B receptors have been implicated in a number of disease states and are the primary target for

drugs used to treat a variety of disorders (1-3), GABA_A receptors play the dominant role in mediating the inhibitory actions of GABA. Not surprisingly, dysregulation of GABA_A signaling has been implicated in a number of disease states and these receptors are the targets for some of the most commonly used therapeutics, as well as a primary target for the most commonly used general anesthetics.

Over the last fifteen years, or so, it has become increasingly clear that changes in GABA_A signaling play a prominent role in a variety of pain states. Interestingly, the nature and site of the changes in GABA_A signaling are “pain” specific. For example, the neuropathic pain associated with peripheral nerve injury results from what appears to be an impossibly complex cascade of events in the spinal cord dorsal horn, while the pain and hypersensitivity associated with persistent inflammation involves a different cascade of events in the central terminals of primary afferents.

In the case of neuropathic pain, mediators released from the damaged nerve and other cells in the dorsal horn drive the activation of microglia, the resident immune cell in the central nervous system. Activated microglia up-regulate an ionotropic ATP receptor, P2X₄, enabling them to respond to ATP released from afferents and other cell types in the dorsal horn. P2X₄ receptor activation results in the release of brain derived neurotrophic factor (BDNF), which then acts on dorsal horn neurons critical for nociceptive processing (4). So how does this all relate to GABA_A signaling you ask? The answer is subtle, yet profound. BDNF drives a decrease in the activity of a chloride co-transporter, KCC2, in dorsal horn neurons, resulting in an increase in intracellular Cl⁻ in these neurons (5). Since GABA_A receptors are essentially Cl⁻ channels gated by GABA, the impact of GABA_A receptor activation on neuronal excitability depends on the relative distribution of Cl⁻ inside and outside the neuron. Since the concentration of Cl⁻ in the extracellular space is generally high (~130 mM), Cl⁻ normally wants to flow into the dorsal horn neuron when GABA_A receptors are activated. The increase in negative charge in the neuron results in membrane hyperpolarization and the inhibition of neural activity. However, when the concentration of intracellular Cl⁻ increases, Cl⁻ no longer flows into the neuron as easily and the result is a decrease in GABA_A mediated inhibition. This loss of inhibition plays a critical role in neuropathic pain, particularly some of the unique aspects of this pain, such as a dynamic mechanical allodynia, where light tactile stimuli are perceived as painful.

Peripheral inflammation results in a change in GABA_A signaling in the central terminals of the primary afferents that involves a

different cast of characters. These neurons are distinct from CNS neurons in a number of ways, which include the maintenance of a relatively elevated intracellular Cl⁻ concentration even in the absence of tissue injury. This is due, at least in part, to little if any KCC2 expression on the one hand, and the persistent expression of another Cl⁻ co-transporter, NKCC1, on the other. In contrast to KCC2 which pumps Cl⁻ out of the cell, NKCC1 serves to bring Cl⁻ into the cell. A shift in GABA_A signaling in afferent terminals occurs rapidly, but the underlying mechanisms of these changes appear to change over time. Intense activation of nociceptive afferents is sufficient to drive the release of inflammatory mediators in the dorsal horn that are able to act on the afferent terminals to drive a phosphorylation-dependent increase in NKCC1 activity (6). This results in an increase in the concentration of intracellular Cl⁻ to the point that GABA_A receptor activation can begin to initiate action potentials in the central terminals of nociceptive afferents. This process is referred to as the dorsal root reflex and contributes significantly both the inflammatory response in the periphery and the pain associated with inflammation (7). With time, the increase in NKCC1 activity is maintained by a translocation of NKCC1 to the plasma membrane and by 24 hrs, an increase in NKCC1 protein levels (8). However, our own data suggests that by 72 hours after the initiation of inflammation, the relative contribution of NKCC1 to the excitatory actions of GABA decreases. In its place other changes appear to take over which include a dramatic increase in GABA_A current density and a decrease in K⁺ current density. The result is that GABA_A receptor activation is still able to drive an excitatory response in inflamed afferents

While all of this makes for interesting neurobiology with time and injury-dependent changes in underlying mechanisms, we next asked the question as to whether any of these changes have implications for anesthesiologists. Our prediction was that if spinal GABA_A receptor activation contributes to pain in the presence of inflammation, than post-operative pain should be even worse in patients undergoing general anesthesia to address a problem associated with ongoing inflammation. We tested this prediction in a pre-clinical study with rats anesthetized with the GABA_A preferring general anesthetic, pentobarbital, or a non-GABA_A preferring general anesthetic, Ketamine/xylazine. A group anesthetized with a mixed agonist, isoflurane, was used as a control. In naïve animals, undergoing a minor surgical procedure, there was no impact of the anesthetic type on the post-operative pain or the time course of recovery. In contrast, in rats undergoing the same procedure anesthetized with the GABA_A preferring general anesthetic in the presence of ongoing inflammation recovered significantly more slowly, than those anesthetized with non-GABA_A preferring general anesthetics: the duration of hypersensitivity in the pentobarbital anesthetized animals was almost double that in the non-GABA_A preferring anesthetic groups (9). We are currently working up a protocol to determine whether similar changes are observed in a clinical setting.

It is clear that there is still a lot of work to be done to understand how and why changes in GABA_A signaling occur in the presence

of injury as well as identify ways to mitigate the potential for deleterious consequences associated with changes in GABA_A signaling. We have identified several targets that may be exploited for the development of novel analgesics. One of the most promising lines of investigation has been spear-headed by a group in Switzerland that has followed up on the perplexing observation that despite the injury-induced changes in endogenous GABA_A signaling, benzodiazepine receptor agonists retain their analgesic efficacy (10). The observation that there may be subtype specific targets for benzodiazepines in the spinal cord (11, 12), suggests it may be possible to treat pain while minimizing the CNS side effects that have previously limited the use of benzodiazepines for the treatment of pain.

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Department Anesthesiologists in Haiti

Arun L. Jayaraman MD, PhD, *Resident Physician*

In January 2011, University of Pittsburgh/UPMC Department of Anesthesiology Resident Arun L. Jayaraman MD, PhD and Regional Anesthesia Fellow Jean D Eloy MD volunteered at Hôpital Albert Schweitzer Haiti (HAS) in Haiti, part of the Mellon Foundation in Pittsburgh.



I looked forward to volunteering at Hôpital Albert Schweitzer Haiti (HAS) in Deschapelles, Haiti with eager trepidation. I relished the opportunity and challenge of safely providing high quality anesthesia using antiquated and limited supplies and testing my clinical knowledge and skills to help others. However, I had a nagging fear that I wouldn't be up to the task of providing "bush" anesthesia.

The week I spent at HAS was all that I hoped for and more. My colleague Dr. Dan Eloy and I provided anesthesia for a variety of surgical procedures, ranging from emergent caesarian sections and laparotomies to scheduled orthopedic surgeries. Our ability and creativity were stretched not so much due to limited supplies or older medications, but more because of the infrastructure, particularly in regard to limited post-anesthesia care. Perhaps our most challenging case best exemplifies this: a six year old boy with an approximately two week history of typhoid fever required an emergent exploratory laparotomy due to a suspected small bowel perforation. In the U.S., this child would have had invasive monitoring lines inserted and would have remained intubated in an intensive care unit post-operatively. At HAS, that simply wasn't an option. Fortunately, despite having several bowel perforations and peritonitis, the boy did well during and after surgery; he began eating the day I left HAS, on the fourth post-operative day.

One of the most pleasant aspects of volunteering at HAS was being immersed in an atmosphere where people collaborate to help others. During our stay at Alumni House, we encountered a motley but fascinating group of internists, pediatricians, and geologists. Additionally, we met a host of others, including members of the Mellon family, all of whom were very committed to not just the health but the overall well-being of their neighbors.

I wholeheartedly encourage those who are so inclined, particularly my resident colleagues, to contact HAS about volunteer opportunities. This was a most rewarding experience on many levels that I intend to repeat.

Learning About IsMeTT

Salvatore Vitale MD, *NAPA Chairman of Cardiac Anesthesia at Westchester Medical Center, Valhalla, New York*
President Elect, New York State Society of Anesthesiologists

A summer trip to Sicily to visit family took an exciting turn this year when I had the opportunity to explore IsMeTT, the Mediterranean Institute for Transplantation and Advanced Specialized Therapies. IsMeTT is a joint public/private partnership between the Region of Sicily and the University of Pittsburgh Medical Center.

My trip to IsMeTT was arranged by Dr. John P. Williams, Peter and Eva Safar Professor and Chair of the Department of Anesthesiology at the University of Pittsburgh School of Medicine. I spent a morning at IsMeTT with Dr. Antonio F. Arcadipane, IsMeTT chief anesthesiologist and medical director of operating room services, who served as my host. I had heard from my family in Italy that the residents of Sicily held the American doctors at IsMeTT in very high regard and I could see why. I was very impressed with how efficiently the institution delivered medical care.

IsMeTT, located in Palermo, Sicily, has become one of the leading organ transplant centers in Europe and a major referral center for other Mediterranean countries. IsMeTT has drawn patients from such countries as Argentina, Ecuador, Ukraine, Saudi Arabia, and Israel.

According to IsMeTT's Press Office, more than 1,000 transplant procedures have been performed at the institution, on both adult and pediatric patients. IsMeTT has transplant programs for all solid organs: liver, kidney, heart, lung, and pancreas. The institution has also developed advanced programs for the treatment of end-stage organ diseases.

To learn more about IsMeTT, please visit www.ismett.edu.

This article was reprinted with permission from Sphere, a publication of the New York State Society of Anesthesiologists



Dr. Antonio Arcadipane (left) and Dr. Salvatore Vitale.



OR monitoring equipment



A typical ICU bed.

In the News.....

Inna Belfer MD, PhD was interviewed on Canadian Radio: [Mp3 Audio of CBC Radio Montreal Interview](#) (5MB - courtesy of the Canadian Broadcasting Corporation).

Zongfu Chen MD was featured on KDKA TV News in [a story on ultrasound-guided injections to relieve shoulder pain](#).

The Pittsburgh Post Gazette interviewed Doris K. Cope MD, MS for the article, "[The problem with pain: Latest in treatment](#)." WTAE's Sally Wiggin interviewed Dr. Cope for the television story "[Tylenol Ingredient Could Help Heal Emotional Pain](#)." Dr. Cope was also interviewed for an [Associated Press article](#) and the story was picked up by over 20 media outlets across the country.

The Orlando Sentinel interviewed Andrew Herlich DMD, MD, FAAP for an [article on malignant hyperthermia](#). *The Pittsburgh Tribune-Review* also interviewed Dr. Herlich for an [article on the safety of anesthesia during dental procedures](#).

A photo of James W. Ibinson MD, PhD was featured in [Investing in the Future](#), the new NIH National Institute of General Medical Sciences (NIGMS) strategic plan for biomedical and behavioral research training (see Table of Contents, page 2.)

Both the Department of Anesthesiology and William Simmons MD, Visiting Clinical Associate Professor and Chair of the Advisory Committee on Diversity in the Department of Anesthesiology and co-chair of the UPMC/University of Pittsburgh Physician Inclusion Council recruitment committee, have been participating in many school and hospital-wide diversity related efforts, several of which were recently featured in the news. [A recent Pittsburgh Courier article](#) showcased the Gateway Medical Society's (GMS) annual Physician of the Year Gala, held on October 29, 2010. GMS, a component of National Medical Society, has a mission to address underserved minority medical needs, "close the gap" to medical care provided to these communities, and improve the numbers of minority providers. The gala honored nine individuals who have been champions for GMS, as well as the young students who are part of the Journey to Medicine Mentor Program. GMS members mentor these youngsters starting in the sixth grade with the hopes that they will stay on course to become physicians. [WISER](#) and GMS also hosted a Journey to Medicine Program simulation workshop at in December, which was featured in [a Pittsburgh Tribune Review article](#).

Right: Journey to Medicine simulation workshop at WISER in December 2011.

Achiel Bleyaert MD



Dr. Achiel Bleyaert

It is with sadness that we share the news about the death of one of our former colleagues.

Achiel Bleyaert MD was a Professor in our department from 1980-1985, serving as Chief of Anesthesiology at both UPMC Presbyterian (1981-1984) and Eye and Ear Hospitals (1981-1984). Achiel passed away Sunday, October 30, 2011 at Clearfield Hospital after a long battle with multiple myeloma and Parkinson's disease.

Dr. Bleyaert was born on June 23, 1931 in Beernem, Belgium and received his medical degree from the University of Ghent, Belgium in 1957. After training in anesthesiology, he practiced his profession in Belgium until moving to the United States in 1969, where he continued a long career in medicine.

In the 1970's, he conducted research and published several articles describing protective interventions against brain ischemia; this work is still the cornerstone of such research. In addition to his many positions and appointments in the Department of Anesthesiology/CCM at the University of Pittsburgh School of Medicine, he also worked at Case Western Reserve University Hospitals in Cleveland, was Director of the Intensive Care Unit at the VA Hospital (1973-1975), and Director of Anesthesia at the Podiatry Hospital of Pittsburgh (1982-1992). He was a staff anesthesiologist at Clearfield Hospital since 1992. Dr. Bleyaert will be remembered for his tireless patient care, leadership, and compassion.

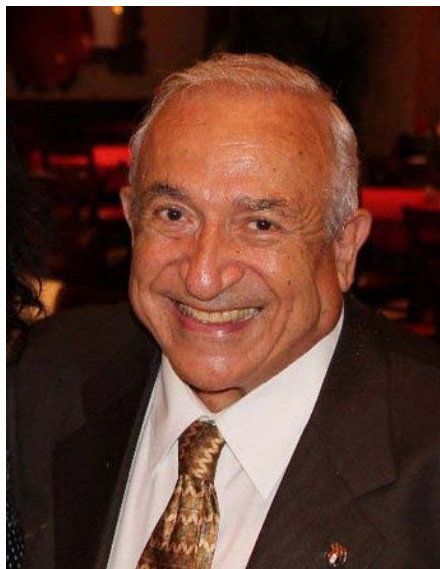
Dr. Bleyaert is survived by his wife, Renee Desnoyers, five children; Helga Stadick, Alex Bleyaert, Michelle Bleyaert, Lauren Bleyaert and Nicole Bleyaert, and two grandchildren; Kaylee and Darby Stadick. Also surviving are two sisters; Juliette and Eveline, a brother, Julien and Dr. Bleyaert's first wife, Cecile Van Vlaenderen, all of Belgium.

Memorial donations may be made to the Nathaniel D. Yingling MD Cancer Center, 815 Doctors Drive, Clearfield, PA 16830.



Alumnus Profile: Ezzat I. Abouleish, MB, ChB, DA, DM, MD

Christine Heiner, *Scientific Writer*



After the publication of our very first alumni newsletter this past spring, we began to hear regularly from Dr. Ezzat Abouleish, a Department of Anesthesiology faculty member from 1970 until 1982. In fact, he sent us the below “blast from the past,” a photo of the department’s 1970-1971 staff taken from the roof of Scaife Hall, home of the University of Pittsburgh School of Medicine.

Dr. Abouleish received his medical degree from Ain Shams University in Cairo in 1954 and immigrated to the United States from Egypt in 1968. He first spent two years as a Senior Instructor at Case Western Reserve University’s Department of Anesthesiology. After joining our department in 1970, he was appointed to Director of Obstetric Anesthesia at Magee-Women’s Hospital of UPMC.

Dr. Abouleish left Pittsburgh in 1982 to join the faculty of University of Texas-Houston, where he is currently Professor Emeritus of Anesthesiology.

He is the author or co-author of over 70 peer-reviewed original journal articles, almost 20 book chapters, and five books, including the classic textbook *Pain Control in Obstetrics*. He also owns the patent on a curved cannula for continuous spinal anesthesia (United States Patent Number 5,830,188).



In addition to his prolific career in medicine, Dr. Abouleish is an accomplished artist. He has created artwork all his life, the last eleven years on a full-time basis. He is a member of The American Society of Artists. Dr. Abouleish’s artwork has been exhibited in many different places in the US and won many awards both in classical fine and Islamic Art. In 2006, he was one of the main artists participating in the project “Painting for Peace” that was displayed at Rice University in Houston and the University of Houston Main Campus. Dr. Abouleish’s passion in Islamic Art because of its beauty in shape, design, and color. He thinks of art as a universal language.

Top left: Dr. Abouleish

Middle left: One of Dr. Abouleish’s paintings depicting King Akhenaten and his wife Nefertiti giving their offerings and receiving the blessings of their god Aten.

Bottom: Department of Anesthesiology staff, 1970-1971

First Row: Kyocki Chinen MD (Resident); Donald Mills MD (Resident); Boonrak Tantistira MD (Resident); Robert Binda MD (Resident); Daniel Wooten, MD (Resident); Howard Cartner MD (Intern); Raymond Whitney MD (Resident)

Back Row: Chul Wo Lee MD (Resident); Paul Berkebile MD (Resident); Eduard Figallo MD (MWH); Raymond McKenzie MD (MWH); Monita Lim MD (Resident); Edgardo Arcinue MD (Resident); Peter Safar MD (Professor and Chairman) (PUH); Marie Louise Kampschulte MD (Resident); Stephan Kampschulte MD (CHP); Charles Buttermore DDS (EEH); Brian Smith MD (PUH); Stanislav Paulter MD (PUH); Leonard Monheim DDS (PUH); Ezzat Abouleish MD (MWH); Bulent Kirimli MD (VAH)

Not Pictured: Major Cohn MD (MWH); Tapan Datta MD (VAH); Ramesh Desai MD (CHP); Ruden Tenicela MD (PUH); Ake Grenvik MD (PUH); Joseph Marcy MD (CHP); Robert Hingson MD (MWH); Harlan Douglas MD (EEH); Hugo Pfaeffle MD (Resident); David Torpey MD (PUH); Stephen Galla MD (PUH); Peter Wemyss-Gorman MD (MWH); Regino Gonzalez MD (Resident); Eugene Menard MD (Resident); Roger Pietras MD (Resident); James Snyder MD (Resident); David Solosko MD (Resident); Alfred Tiang MD (Resident); Hisayasu Yamaoka MD (Resident); Ching-Muh Lee MD (Resident); Thomas Beach MD (Resident); Mohammed Baddour MD (Resident); Ramon Jauregui MD (Resident); Marie Mesaros MD (Resident); Donald Benson MD (PUH); Jan Smith MD (PUH)



Faculty Spotlight: Tetsuro Sakai MD, PhD

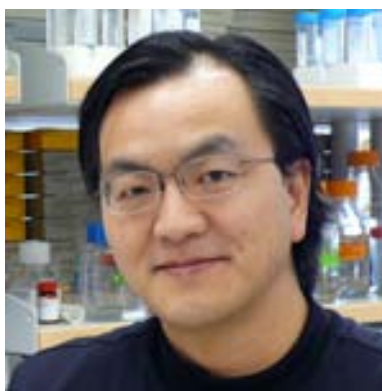
Associate Professor Dr. Tetsuro “Ted” Sakai has been a full time faculty member of the Department of Anesthesiology at the University of Pittsburgh since 2005. Since 2006, Dr. Sakai has served as the Director of our Resident Research Rotation and has also served both on the department’s Resident Education and Quality Improvement Committees. He has also served as a faculty member of the McGowan Institute for Regenerative Medicine since 2001.

Dr. Sakai began his medical training at the Faculty of Medicine, Kyoto University, Japan. Upon graduation in 1989, Dr. Sakai completed a two-year general internal medicine and surgery internship and afterwards, a four-year cardiovascular surgery residency at Japan’s Tenri Hospital, which is one of Kyoto University’s major affiliated teaching hospitals. During his surgical training at Tenri Hospital, Dr. Sakai focused his research on the effect of maintenance of annulo-papillary continuity in mitral valve replacement and continuous retrograde cerebral perfusion in aortic arch surgery to protect the brain.

After completing his residency, Dr. Sakai joined the Department of Cardiovascular Surgery at Tenri Hospital as a clinical instructor for one year, and afterwards joined the Division of Cardiovascular Surgery at The Toronto Hospital, University of Toronto, Canada for three years as a clinical - research fellow, where he received basic research training in cardiac cell transplantation. He had the privilege to work as a research fellow at Dr. Ren-Ke Li’s laboratory. Dr. Li was one of the pioneers of cardiac cell transplantation. Dr. Sakai demonstrated for the first time that cultured autologous adult cardiomyocyte transplantation improved cardiac function *in vivo* using a rat cryoinjury model. He also demonstrated for the first time that the degree of cardiac function improvement from cell transplantation depends on the origin of the cells transplanted. Both of his works were presented at the most prestigious meetings in the field of cardiovascular surgery, and the latter work was selected as a finalist for The C. Walton Lillehei Residents’ Award (Best Residents’ Original Papers) at the 1999 annual meeting of The American Association for Thoracic Surgery. Dr. Sakai was awarded the PhD in Medicine from Kyoto University in 2001 based on the research milestones he achieved at both Tenri Hospital and the University of Toronto.

Dr. Sakai’s interest in cardiopulmonary transplantation medicine led him to the University of Pittsburgh, where he joined the Division of Cardiothoracic Surgery in the Department of Surgery as a visiting instructor in 1999. For one-and-a-half years, Dr. Sakai worked both in clinical heart and lung transplantation and in basic stem cell transplantation research. He collaborated with Drs. William R. Wagner (University of Pittsburgh Departments of Surgery and Bioengineering and the McGowan Institute for Regenerative Medicine) and Johnny Huard (University of Pittsburgh Departments of Orthopedic Surgery and Molecular Genetics and Biochemistry) to introduce cardiac cell transplantation to test the skeletal muscle derived stem cells in Dr. Huard’s lab, and the animal model to test the bioengineered cardiac graft in Dr. Wagner’s lab.

To pursue his lifelong dream of becoming a physician-scientist, and having realized that the University of Pittsburgh was the ideal place to achieve this goal, Dr. Sakai made a transition in his career in 2001. He spent the next four years in the Anesthesiology Residency Program at the University of Pittsburgh School of Medicine and assumed a full time faculty position in our department in 2005.



Since joining the Department of Anesthesiology, Dr. Sakai has launched a new endeavor in the field of cell transplantation research to elucidate the neuro-protective mechanism by stem cell transplantation under Dr. Yan Xu. He received a Research Starter Grant from the Society of Cardiovascular Anesthesiologists (2010 – 2012).

As a staff anesthesiologist and a member of Hepatic and Intestinal Transplantation Anesthesia at UPMC, Dr. Sakai also conducts clinical research in liver transplantation. His demonstrated the safety of using a percutaneous veno-venous bypass cannula during liver

transplantation. Dr. Sakai’s further investigations of the effect of veno-venous bypass in the outcome of liver transplantation revealed an increased mortality and morbidity with the use of veno-venous bypass. These works were presented at national and international meetings. Since then, Dr. Sakai has been recognized as one of the leading specialists in this area; he was asked to offer professional clinical advice to fellow anesthesiologists at University of California, Los Angeles to initiate a percutaneous veno-venous bypass program at their institution.

Dr. Sakai also found his new passion in teaching and mentoring in the department. As the inaugural Director of Resident Research Rotation, he has supervised the research endeavors of over 20 residents. He has recently created the Abstract Review Committee, in which selected faculty members will serve as constructive reviewers for residents’ scientific abstracts prior to submission. As a research mentor, Dr. Sakai has directly worked with 17 anesthesiology residents, who presented 36 abstracts, published 11 first-authored peer reviewed manuscripts, completed four book chapters, and received a department seed grant. His novel work in anesthesiology resident scholarly activity lead him to provide a workshop in the annual meeting of the Society for Education in Anesthesia in 2012, and to present a lecture as a visiting professor at West Virginia University and Pennsylvania State University in 2011. He was recognized for his teaching excellence in clinical anesthesiology when he received the department’s Resident Teaching Awards for Hepatic Transplantation Anesthesia in 2007 and for Mentoring Resident Scholarly Activity in 2011. He received the Chairman’s Recognition of Teaching Contributions in 2011 for his outstanding OR teaching to residents and medical students.

Dr. Sakai’s has authored or co-authored over 65 published peer-reviewed journal articles (28 as the first or the corresponding author, and his 2011 h-index* is 17), six invited reviews, and seven book chapters. He is a member of many scientific organizations, including the Japanese Association for Thoracic Surgery, the Japanese Society for Cardiovascular Surgery, the American Society of Anesthesiologists, the International Anesthesia Research Society, the International Liver Transplantation Society, the Society of Cardiovascular Anesthesiologists, and the Society for Education in Anesthesia. He currently serves on the editorial boards of *World Journal of Transplantation*, *Journal of Pain & Relief*, *Open Journal of Organ Transplant Surgery*, and *Open Journal of Anesthesiology*. He lives with his wife and three children.

* The h-index is an index that attempts to measure both the productivity and impact of the published work of a scientist or scholar. The index is based on the set of the scientist’s most cited papers and the number of citations that they have received in other publications.

Recent Honors & Awards

Anne-Sophie Auroux, a visiting pharmacist from Lyon, France who worked in our Clinical Trials research program, won the first place best poster award for "Meta-Analysis of the Efficacy and Safety Data Supporting Marketing Authorization of Anticancer Drugs for Advanced Solid Cancers" at the 47th Drug Information Association (DIA) Annual Meeting in Chicago, IL on June 19-23, 2011.



Karen R. Boretsky MD

Karen R. Boretsky MD was invited to join a committee to create a one year fellowship program for pediatric regional anesthesia perioperative pain management.

Lawrence M. Borland MD was elected to a four year term as the new director of the Franklin Regional School Board.

Doris K. Cope MD, MS joined the editorial board of the *Journal of Anesthesiology and Clinical Science*. Also, the Pain Management Toolkit, developed by DeAndrea L. Jones (UPMC Health Plan) and UPMC

Marketing and Communication with the "Pain Blitz" team, received a Gold Award in the 2011 Aster Awards competition. Dr. Cope directs the Pain Blitz Initiative, a multidisciplinary group of pain physicians, addiction medicine specialists, and psychologists.

Joseph S. DeRenzo MD was a winner of UPMC's Award for Commitment and Excellence in Service (ACES) in the Physician Services Division for Fiscal Year 2011.



Dr. Silviu Gligor

Brent Dunworth CRNA, MSN was chosen as the first recipient of the University of Pittsburgh School of Nursing Alumni Association's "Outstanding Young Alumnus Award."

Catalin S. Ezar MD won the University of Pittsburgh School of Medicine Award for Excellence in Clinical Precepting

Dr. Silviu Gligor, an anesthesiologist at UPMC Beacon Hospital in Dublin, Ireland, was recently appointed sole representative of the Irish Anaesthetists in the European Society of Anaesthesiology Council.

Frank A. Kunkel MD was appointed to the editorial review board of *The Journal of Opioid Management*.

William R. Lariviere PhD and Department of Psychiatry Associate Professor Eva Szigethy, MD, PhD were awarded a Basic to Clinical Collaborative Research Pilot Program grant from the University of Pittsburgh Clinical and Translational Science Institute, "Mechanisms of Persistent Visceral Hyperalgesia in Inflammatory Bowel Disease."

William R. McIvor MD won the University of Pittsburgh School of Medicine Donald S. Fraley Award for Medical Student Mentorship.

Jerome Parness MD, PhD was selected to participate in the 2012 UPMC Physician Services Division Physician Leadership and

Management "Mini-MBA" Certificate Program.

Rita M. Patel MD was invited to join the Anesthesiology Milestone Project, an initiative sponsored by the Accreditation Council for Graduate Medical Education (ACGME) to take the next steps in advancing educational outcome assessment in anesthesiology graduate medical education.

Paul Phrampus MD will become President-Elect on January 1, 2012 and President in 2013 of the Society for Simulation in Healthcare.

Raymond M. Planinsic MD joined the *World Journal of Anesthesiology* Editorial Board.

Joseph J. Quinlan MD was elected by the Executive Committee of the University of Pittsburgh School of Medicine as a member of the Standing Committee for Non-Tenured Faculty Promotions and Appointments (NTFPA). Dr. Quinlan was also elected an at-large member of the Society for Airway Management Board of Directors.



Paul E. Phrampus MD

Nashaat N. Rizk MD was selected as a Best Doctor for 2011-2012.

Tetsuro Sakai MD, PhD was appointed to the editorial boards of the international open-access journals *Open Journal of Organ Transplant Surgery* and *Open Journal of Anesthesiology*.

The abstract "Director of Resident Research Rotation: a Facilitator for Resident Scholarly Activity" by **Tetsuro Sakai MD, PhD, Rita M. Patel MD, Yan Xu PhD, and David G. Metro MD** won Best Curriculum Poster at the Society for Education in Anesthesia 26th Spring Annual Meeting, June 3-5, 2011, San Antonio, Texas.

Erica S. Schwartz PhD won a \$500 travel award at the 2011 University of Pittsburgh Postdoctoral Association Data & Dine Symposium for her poster, "Synergistic Antagonism of TRPV1 and TRPA1 Reduces Afferent Excitability and Inflammation in The Progression of Chronic Pancreatitis." (Principle Investigator: **Gerald F. Gebhart PhD**).

Gary M. Stanich CRNA received the 2011 University of Pittsburgh School of Nursing's Cameos of Caring Award.

Jamie Vorhes CRNA received the Richard L. Simmons, MD Speak up for Patient Safety Award at UPMC for 2011.

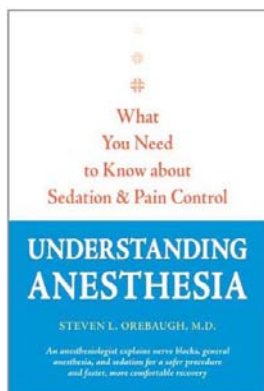
James Wilde, a medical student working with **Barbara W. Brandom MD**, won the Daniel Massik Award from the Malignant Hyperthermia Association of the United States (MHAUS) for his poster "Pain Reported by Malignant Hyperthermia Susceptible Subjects," which was presented at the 2011 American Society of Anesthesiologists (ASA) Annual Meeting.



Gary M. Stanich with Anne Zapletal, CRNA Clinical Director at UPMC Shadyside

Recent Publications

Books & Book Chapters:



Orebaugh SL. *Understanding anesthesia: what you need to know about sedation and pain control*. Baltimore, Johns Hopkins University Press, 2011.

Orebaugh SL & Bigeleisen PE. *Atlas of airway management : techniques and tools*. Wolters Kluwer Health/Lippincott Williams & Wilkins, Philadelphia, PA. 2nd Ed, 418 p, 2012.

Brandom BW, Watson C, Atilas R. Chapter 107: Hipertermia Maligna. In: *Cuidados Criticos*, Villar SR, Marban Libros (eds.), Madrid, Spain, pp. 679-684, 2011.

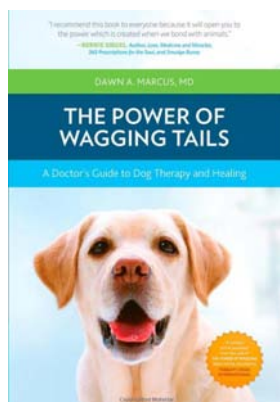
Beaman ST, Ball RD. Analgesia epidural y paravertebral. In: *Cuidados Criticos*, Villar SR, Marban Libros (eds.), Madrid, Spain, pp. 710-18, 2011.

Marcus DA. *The Power of Wagging Tails: A Doctor's Guide to Dog Therapy and Healing*. Demos, 2011.

Marcus DA, Bain P. *Practical Assessment and Treatment of the Patient with Headache in the Emergency Department and Urgent Care Clinic*. Springer, 2011.

Marcus DA, Deodhar A. *The Woman's Fibromyalgia Toolkit: Manage Your Symptoms and Take Control of Your Life*. Diamedica, 2011.

Marcus DA. Opioids for chronic pain management. In: *Handbook of substance use disorders: a treatment guide*, Parran T, Isaacson JH (eds.), HumanaPress, 2011.



Journals

Lauer J, Williams BA (eds.). *International Anesthesiology Clinics: Regional Anesthesia for Ambulatory Surgery: Patient Centered Outcomes and Health Economics*. 49 (3), Summer 2011.

Lauer J, Williams BA (eds.). *International Anesthesiology Clinics: Regional Anesthesia for Ambulatory Surgery: Anatomy, Applied Tools and Techniques, and Pharmacology*. 49 (4), Fall 2011.

Journal Papers

An J-X, He Ying, Qian X-Y, W J-P, Xi Y-K, Guo Q-L, Williams JP, Cope DK. A New Animal Model of Trigeminal Neuralgia Produced by Administration of Cobra Venom to the Infraorbital Nerve in the Rat. *Anesthesia & Analgesia*. 113(3):652-656, September 2011.

Ball R, Scouras NE, Orebaugh S, Wilde J, Sakai T. A Randomized, Prospective, Observational Simulation Study Comparing Residents' Needle-Guided vs. Free Hand Ultrasound Techniques for Central Venous Catheter Access. *British Journal of Anaesthesia*. Advance Access published November 14, 2011.

Belfer I, Segall SK. COMT Genetic Variants and Pain. *Drugs of Today*. 47(6): p. 457-467, 2011.

Brandom BW. Electronic Communication and Medical Research: Beyond the Record. *Mayo Clinic Proceedings*. 86(9): 1-2, 2011.

Brummett CM, Williams BA. Additives to Local Anesthetics for Peripheral Nerve Blockade. *International Anesthesiology Clinics*. 49(4): 104-116, 2011.

Brumovsky PR, Seroogy KB, Lundgren KH, Watanabe M, Hökfelt T, Gebhart GF. Some lumbar sympathetic neurons develop a glutamatergic phenotype after peripheral axotomy with a note on VGLUT2-positive perineuronal baskets. *Experimental Neurology*. 230: p. 258-272, August 2011.

Chelly JE. Thromboprophylaxis and Regional Anesthesia in the Ambulatory Setting. *International Anesthesiology Clinics*. 49(4): 166-173, 2011.

Cladis FP, Bykowski M, Schmitt E, Naran S, Moritz ML, Cray J, Grunwaldt L, Losee J. Postoperative hyponatremia following calvarial vault remodeling in craniosynostosis. *Paediatr Anaesth*. 21(10): 1020-1025, October 2011.

Cope DK, Zhao Z. Interventional Management for Cancer Pain. *Current Pain and Headache Reports*. 15: 237-243, 2011.

Drabek T, Janata A, Jackson EK, End B, Stezoski J, Vagni VA, Janesko-Feldman K, Wilson CD, van Rooijen N, Tisherman SA, Kochanek PM. Microglial depletion using intrahippocampal injection of liposome-encapsulated clodronate in prolonged hypothermic cardiac arrest in rats. *Resuscitation*. Available online October 2, 2011.

Groom L, Muldoon SM, Tang ZZ, Brandom BW, Bayarsaikhan M, Bina S, Lee H-S, Qiu X, Sambuughin N, Dirksen RT. Identical de novo Mutation in the Type 1 Ryanodine Receptor Gene Associated with Fatal, Stress-induced Malignant Hyperthermia in Two Unrelated Families. *Anesthesiology*. 115(5):938-945, 2011.

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Hudson ME, Chelly JE, Williams BA. Economics: Projecting Costs and Revenue for an Interventional Pain Service in the Ambulatory Setting. *International Anesthesiology Clinics*. 49(3): 68-83, Summer 2011.

Kolarczyk LM, Williams BA. Transient Heat Hyperalgesia During Resolution of Ropivacaine Sciatic Nerve Block in the Rat. *Regional Anesthesia and Pain Medicine*. 36(3):220-224, 2011.

Larach MG, Hirshey Dirksen SJ, Belani KG, Brandom BW, Metz KM, Policastro MA, Rosenberg H, Valedon A, Watson CB. Creation of a Guide for the Transfer of Care of the Malignant Hyperthermia Patient from Ambulatory Surgery Centers to Receiving Hospital Facilities. *Anesthesia & Analgesia*. 114(1):94-100, 2012.

Ley JT, Yazer MH, Waters JH. Hemolysis and red blood cell mechanical fragility in shed blood after total knee arthroplasty. *Transfusion*. Article first published online June 17, 2011.

Lin CJ, Williams BA. Postoperative Nausea and Vomiting in Ambulatory Regional Anesthesia. *International Anesthesiology Clinics*. 49(4): 134-143. 2011.

Matsusaki T, Sakai T. The Role of Certified Registered Nurse Anesthetists in the United States. *J Anesth*. 25(5):734-40, Oct 2011.

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Muhly WT, Orebaugh SL. Ultrasound evaluation of femoral vasculature in the femoral triangle. *Surg Radiol Anat*. 33:491-494, 2011.

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Williams BA, Hough K, Tsui BYK, Ibinson JW, Gold MS, Gebhart GF. Neurotoxicity of Adjuvants Used in Perineural Anesthesia and Analgesia in Comparison With Ropivacaine. *Regional Anesthesia and Pain Medicine*. 36(3):225-230, 2011.

Williams BA, Kentor ML. The WAKE© Score: Patient-Centered Ambulatory Anesthesia and Fast-Tracking Outcomes Criteria. *International Anesthesiology Clinics*. 49(3): 33-43, Summer 2011.

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Faculty & Fellows on the Road

Lectures & Presentations:



Joseph T. Samosky PhD

The workshop "How to Improve Resident Scholarly Activity in Your Department" by **Drs. Tetsuro Sakai (Faculty Leader), David G. Metro, Trent D. Emerick, and Harriet W. Hopf** (University of Utah), was accepted for presentation at the Society for Education in Anesthesia (SEA) 2012 Spring Annual Meeting in Milwaukee, WI, May 31 – June 3, 2012.

"BodyExplorerAR: Enhancing a Mannequin Medical Simulator with Sensing and Projective Augmented Reality for Exploring Dynamic Anatomy and Physiology" by **Joseph T. Samosky PhD** and his research group (**Douglas Nelson, Bo Wang, Russell Bregman, Andrew Hosmer, Brandon Mikulis and Robert Weave**) was accepted for podium presentation and demonstration at the February 19-22, 2012 Tangible and Embedded Interaction (TEI) Conference.

Dr. Samosky's research group was also awarded first place for their abstract "A Novel Intravenous Drug Recognition System for Medical Simulators Based on Direct Fluid Identification" in the Technology and Program Innovation (TPI) track of the 2012 International Meeting on Simulation in Healthcare in San Diego, CA from Jan 27-Feb 1, 2012.

Posters:

The abstract "Pain Phenotypes in American Breast Cancer Survivors: Analysis Of Clinical, Demographic And Psychosocial Factors" by **Dr. Kristin Schreiber** (PGY4) was accepted for presentation at two national meetings: the 10th International Association for the Study of Pain (IASP) Symposium, February 7-9, 2012, Miami Beach, FL, and the 31st Annual Scientific Meeting of the American Pain Society, May 16-19, 2012, Honolulu, HI. Her research mentor is **Inna Belfer MD, PhD**.

Dr. Dawn Marcus Featured in The American Dog Magazine

Professor Dawn A. Marcus MD wrote an article on dog therapy, published in the Fall 2011 issue of *The American Dog Magazine* (page 107).



Dr. Barbara Brandom Published in Pediatric Anesthesia, Mayo Clinic Proceedings, and Anesthesiology



Barbara W. Brandom, MD

A review article by Professor Barbara Brandom MD, Patrick M. Callahan MD, and Dale Micalizzi, Founder & Director of Justin's HOPE Project Task Force for Global Health and co-chair of the Institute for Healthcare Improvement Forum in 2011, entitled "[What Happens when Things Go Wrong?](#)" was published in the *Pediatric Anesthesia* July 2011 issue. The paper explores the published literature on adverse events resulting from pediatric anesthesia, which are more common in younger, sicker pediatric patients who undergo emergency surgery. The authors describe the chain of events

following such an incident and recommend the best course of action to take.

Dr. Brandom also wrote an editorial "[Electronic Communication and Medical Research: Beyond the Record](#)," published in the September 2011 issue of *Mayo Clinic Proceedings*, which addresses the barriers to ethically and effectively identifying and recruiting research study participants with rare medical conditions. Dr. Brandom discusses an [article by Mayo Clinic researchers](#) describing the use of a patient-initiated, disease-specific support group on a social networking site to recruit study participants.

Both the article and Dr. Brandom's editorial were highlighted in a [Mayo Clinic press release](#).

Dr. Brandom also contributed to a remarkable report by Groom et al., "[Identical de novo Mutation in the Type 1 Ryanodine Receptor Gene Associated with Fatal, Stress-induced Malignant Hyperthermia in Two Unrelated Families](#)," which documents that fatal malignant hyperthermia episodes have occurred without exposure to anesthetics. This *Anesthesiology* paper published in November 2011 was accompanied by an editorial and followed by letters to the editor.

Pain Genetics Research: Drs. Belfer and Lariviere Published in Nature Neuroscience; Dr. Belfer Published in Drugs of Today; Dr. Belfer Presents at International Conference



Inna Belfer MD, PhD



William Lariviere PhD

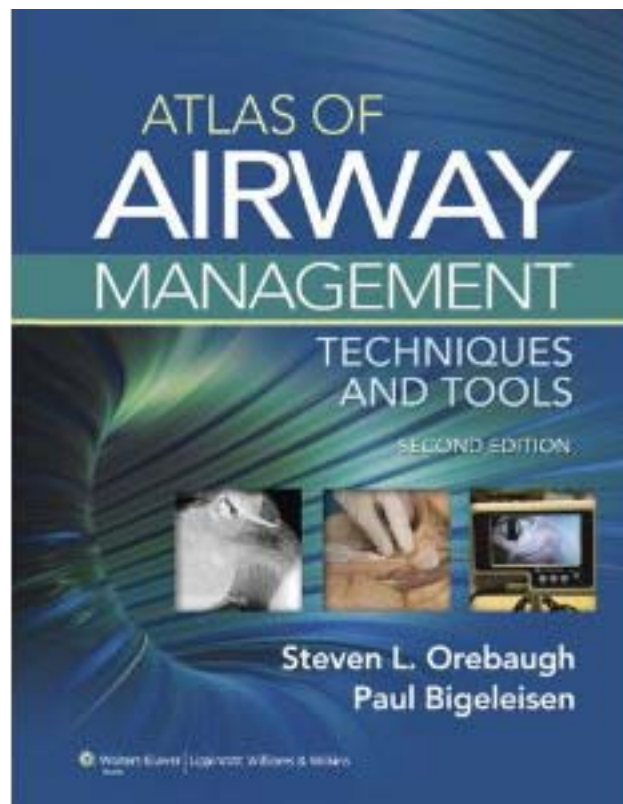
"[Pain sensitivity and vasopressin analgesia are mediated by a gene-sex-environment interaction](#)," co-authored by Associate Professor Inna Belfer MD, PhD, Assistant Professor William R. Lariviere PhD, and colleagues from McGill University, University of Florida, Johns Hopkins School of Medicine, the National Institute of Mental Health, Haverford College, and the University of Pittsburgh Departments of Otolaryngology, Neurobiology, Communication Sciences & Disorders, and Bioengineering, was published in *Nature Neuroscience* (Advance Online Publication, October 23, 2011, DOI 10.1038/nn.2941). This paper clearly demonstrates the importance of a comprehensive approach to the study of human pain that includes identification of genetic and environmental factors influencing pain and analgesia and their evaluation in animal and human studies. The group's findings represent the first explicit demonstration of analgesic efficacy depending on the emotional state of the recipient, and illustrate the heuristic power of a bench-to-bedside-to-bench translational strategy.

The paper by Drs. Belfer and Lariviere will also be featured in *Nature Neuroscience's* News & Views. *Nature Neuroscience* has a 2010 impact factor of 14.191, ranking it fifth among all neuroscience journals.

Dr. Belfer also co-authored a review article with Dr. Samantha K. Segall from the University of North Carolina, "[COMT Genetic Variants and Pain](#)" recently published in *Drugs of Today* (Jun 2011;47(6):457-6). The paper outlines pain symptoms and syndromes that are affected by functional variation of the enzyme Catechol-O-methyltransferase (COMT), summarizes findings of genetic association studies, and provides critical outlook on reported results. The authors contend that COMT has the potential to predict clinical outcomes and identify patients at risk for developing pain conditions.

Dr. Belfer also recently presented her work at an invited session on Pain Genetics at the International Congress on Human Genetics in Montreal, Canada, on October 11-15. Dr. Belfer moderated the session and was one of five speakers. The session attracted more than 250 attendees, as well as two interviews on Canadian Radio.

Dr. Steven Orebaugh Edits Recently Published Second Edition of Atlas of Airway Management: Techniques and Tools with Sixty-One Department Authors



Lippincott Williams & Wilkins published the second edition of *Atlas of Airway Management: Techniques and Tools* (432 pages) on October 13, 2011. Associate Professor Steven L. Orebaugh MD and former faculty member Paul Bigeleisen, MD edited the book, which included contributions from the following 61 department faculty, resident physicians, and CRNAs:

Ali R. Abdullah MBChB
Mark Backeris DO
Ryan D. Ball MD
Joshua Baisden MD
Shawn T. Beaman MD
Nikhil Bhatnagar MD
Brian Blasiole MD, PhD
Lawrence M. Borland MD
Adam P. Childers MD
Franklyn Cladis MD
Ivan Colaizzi MD
Daniel Cormican MD
Patricia Dalby MD
Derek Davis MD
William B. Ehrman DO
Stephen Esper MD
Patrick Forte MD
Theresa Gelzini MD
Brian Gierl MD
Joseph S. Goode Jr. CRNA, MSN
Kevin M. Hibbard MD

Ibtesam Hilmi MB CHB, FRCA
Dustin J. Jackson MD
Arun L. Jayaraman MD, PhD
A. Murat Kaynar MD, MPH
Miroslav Klain MD, PhD
Tara Knizner MD
Robert Scott Lang MD
Kristin Ondecko Ligda MD
Charles Lin MD
Mark I. Lischner DO
Matthew JP LoDico MD
Michael Mangione MD
Ana Manrique MD
Stephen M. McHugh MD
William R. McIvor MD
Samer Melhem MD
David G. Metro MD
Mario Montoya MD
Scott K. Muir DO
Adam Munson-Young MD
Andrew Murray MB ChB

Todd Oravitz MD
Katherin A. Peperzak MD
Paul E. Phrampus MD
Raymond M. Planinsic MD
Joseph J. Quinlan MD
Max E. Rohrbaugh MD
Ryan C. Romeo MD
Tetsuro Sakai MD, PhD
Kristin Schreiber MD, PhD
Pranav R. Shah MD
Anthony Silipo DO
Erin A. Sullivan MD
Kathirvel Subramaniam MD
Joseph F. Talarico DO
Paul G. Tarasi MD
Jay B. Tuchman MD, FAAP
Manuel C. Vallejo MD, DMD
Audra Webber MD
Cynthia Wells MD
Ryan R. Wilson MD

Dr. Brian Williams and Anesthesiology Faculty Shine in the Summer and Fall 2011 Issues of International Anesthesiology Clinics



The summer 2011 (Vol. 49, Issue 3) and fall (Vol. 49, Issue 4) editions of *International Anesthesiology Clinics (IAC)* showcased the work of several Department of Anesthesiology faculty. Professor Brian A. Williams MD, MBA, Director of Ambulatory Anesthesia at the University of Pittsburgh Department of Anesthesiology, and Director of Ambulatory Anesthesiology, Acute Pain Medicine Service, and Perioperative Evaluation at the VA Pittsburgh Healthcare System and John J. Laur, MD, MS from the University of Iowa guest edited the special editions of the journal focusing on regional anesthesia

for ambulatory surgery; specifically, patient centered outcomes and health economics, and Anatomy, applied tools and techniques, and Pharmacology.

The summer and fall IAC issues are a continuation of a 2005 *IAC* symposium issue (Vol. 43, Issue 3 - *IAC*'s top-selling issue) addressing regional anesthesia for ambulatory surgery, on which Dr. Brian Williams also served as a guest editor. The 2005 symposium issue was initially conceived by the new (2003) Committee on Regional Anesthesia (CORA) within the Society for Ambulatory Anesthesia (SAMBA), for which Dr. Williams served as inaugural chair. Years later Dr. Williams teamed up with new committee chair Dr. Laur to produce a sequel to the 2005 issue.

The overwhelmingly enthusiastic author response and large volume of contributions for the sequel expanded "the sequel" from one to three issues. The *IAC* series on regional anesthesia for ambulatory surgery will continue with Vol. 50, Issue 1 in 2012.

Several faculty in the University of Pittsburgh Department of Anesthesiology authored articles for the two *IAC* special issues:

- Brummett CM, Williams BA. Additives to Local Anesthetics for Peripheral Nerve Blockade. *International Anesthesiology Clinics*. 49(4): 104-116, 2011.
- Chelly JE. Thromboprophylaxis and Regional Anesthesia in the Ambulatory Setting. *International Anesthesiology Clinics*. 49(4): 166-173, 2011.
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 William Malcner, Center for Neurosensory Disorders, University of North Carolina, USA
 Jeffrey Mogil, Alan Edwards Centre for Research on Pain, McGill University, Montreal, Canada
 Christopher Nielsen, Department of Mental Health, Norwegian Institute of Public Health, Oslo, Norway
 Josef Penninger, Institute of Molecular Biotechnology of the Austrian Academy of Sciences, Vienna, Austria
 Ze'ev Seltzer, Centre for the Study of Pain, Faculties of Dentistry and Medicine, University of Toronto, Canada
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Alumni Connection is published twice a year. Issues of *Alumni Connection* are archived on our website, www.anes.upmc.edu.

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