

## Alumni Connection

### A Message From the Chair



John P. Williams, MD

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

Happy new year! I hope that you all had a safe and happy holiday season. We are pleased to present the fourth issue of our alumni newsletter. Just some of the topics featured in this edition include itch research (Dr. Sarah Ross, an investigator in the Pittsburgh Center for Pain Research) and the use of ultrasound guidance in performing peripheral nerve blocks (Dr. Steve Orebaugh).

I was pleased to see many of you at our annual alumni reception at the American Society of Anesthesiologists (ASA) Annual Meeting in October in Washington, DC. To ensure that you continue to receive invitations to this yearly

event, please make sure that you keep us up to date with your current contact info (both e-mail and postal mailing addresses). This year, department residents, fellows, and faculty delivered an impressive 85 presentations at ASA, and 11 faculty members served on ASA and ASA-related committees.

In other news, you may have been notified via our e-mail list in the fall that we have a new alumni Facebook group page. Alumni Drs. Bryan Lee and Richard Riley started the page and recently passed the torch to us so that we can publicize the page and keep it growing. Also, you may be interested to know that our Residency Program also maintains a Facebook page. For anyone who is interested in following either of these Facebook pages, we have provided links to them on the right.

Donations to the alumni fund are now more important than ever in the face of recent budget cuts. Alumni can donate to specific departmental efforts, whether it be our missionary, research, academic, or educational missions. Information on donating to the department can be found on the last page of this newsletter. If you need assistance in making a donation, please do not hesitate to write or call me.

Also, I again ask alumni to continue to send your feedback on this newsletter and any current news to [Christine Heiner](#) here in the department or to me directly. We would like to know what you think of our newsletter, what kind of articles you would like to see, and what we can do to improve this publication. We also want to know what you are up to, if you don't mind possibly being spotlighted in a newsletter article!

Thank you all for your continued support and leadership and for staying connected to us. I wish you all success and happiness in the new year.



### The Department on Facebook

UPMC Anesthesiology Residency, Fellowship, and Faculty Alumni Association

[www.facebook.com/groups/34236242755/#!/groups/34236242755/](http://www.facebook.com/groups/34236242755/#!/groups/34236242755/)

UPMC Anesthesiology Residency Program

[www.facebook.com/UPMCAnesthesiology](http://www.facebook.com/UPMCAnesthesiology)

### Team Pitt Competes at ASA "Run for the Warriors"



The University of Pittsburgh Department of Anesthesiology fielded a team for the 2012 ASA Run for the Warriors. Although diminutive in size, the team was not lacking in spirit! Members include Drs. E. Gail Shaffer, Patrick Hackett, Keith Vogt and Steve Orebaugh, shown above, enjoying some post-race camaraderie.

## Itch: Pain's Counterpart

Sarah Elizabeth Ross, PhD

*Assistant Professor, Department of Neurobiology and Department of Anesthesiology  
Pittsburgh Center for Pain Research, University of Pittsburgh*

Anesthesiologists are usually thinking about pain (and how to prevent it). But pain is not the only defense mechanism that alerts us to harm — the other is itch. Although pain and itch feel qualitatively different, these two sensations share many qualities. Both are aversive sensations that evolved to protect us. Moreover, both can become pathological conditions that ruin one's quality of life.

Patients suffering from itch typically visit a dermatologist. In fact, itch is most common reason for a dermatological visit. But, given the similarities between pain and itch, pain specialists may have valuable insight into possible new therapies for itch, which are greatly needed. It is estimated that ~10% of the general population and 30% of the elderly suffer from pruritus, which negatively affects sleep, mood, and quality of life, thereby presenting an enormous health burden.

Despite the high prevalence of itch, we know very little about how itch works. Itch afferents are thought to be predominantly C-fibers, but whether there exists a specific subset of fibers that respond selectively to pruritogens remains controversial. Anterolateral tract neurons are known to convey itch input from the dorsal horn to the brain, but it is not at all clear which of these neurons are involved in itch (rather than pain). Thus, the manner in which itch is distinguished from pain remains unknown, and this critical gap in our knowledge remains the central question in the field of itch.

### Why do we scratch?

Scratching in response to an irritant is seen across vertebrates, who use this strategy to remove potential threats from the skin's surface, thereby minimizing exposure to potential harm. (Even animals that can't scratch find a way to scratch. For instance fish will rub themselves against abrasive rocks.) The highly conserved nature of this response to topical irritants suggests that itch, like pain, confers an important evolutionary advantage.

### The basics of itch

The key difference between itch and pain is that itch is triggered by aversive stimuli at the very surface of the skin, whereas pain can be elicited from all cutaneous layers, ranging from superficial to deep, as well as most other regions of the body. Thus, the primary sensory neurons that detect pruritic stimuli are postulated to be a subset of dorsal root ganglia (DRG) and trigeminal neurons (perhaps 5% or 10%) that selectively innervate the dermis. Most itch fibers are likely to be a subset of unmyelinated, slowly conducting C-fibers, though recent studies suggest that some A fibers may also be involved mediating itch (1). What is the identity of itch fibers? Remarkably, we do not yet know which sensory neurons mediate itch. Moreover, whether this subset of afferents is specific for itch and not pain remains highly controversial. The best evidence that there exists a dedicated subset of sensory neurons that are selectively tuned to convey pruritoception rather than nociception comes from

human studies in which single nerve units were recorded.

This approach allowed the identification of nerve fibers that respond to itch-inducing chemicals, such as histamine and cowhage. Importantly, the activity of these individual fibers corresponded to the sensation of itch, rather than pain, arguing that these are itch-specific afferents.

Furthermore, there appear to be (at least) two subtypes of itch-sensitive afferents, since those that respond to histamine do not respond to cowhage, and vice versa (2, 3).

But not everyone agrees that these itch-responsive neurons are really specific for itch. The controversy arises because these putative itch-afferents also respond to chemicals that we consider painful — capsaicin and/or mustard oil. So how can this work?

### Pruritogen receptors couple to Trp channels

Part of the confusion about which sensory neurons are tuned to convey itch likely stems from the fact that many pruritogen receptors appear require Trp channels for activity. Thus, the very same Trp channels that we associate with pain — the capsaicin receptor, TrpV1 and the mustard oil receptor, TrpA1 — are also involved in signaling itch. In particular, several recent studies have revealed that MrgprA3 (a receptor for chloroquine), and MrgprC11 (a receptor for SLIGRL and Bam8-22) are coupled to TrpA1, whereas the histamine receptor is coupled to TrpV1 (reviewed in (4)). Since TrpV1 and TrpA1 are essential downstream mediators for a number of itch receptors, it is not surprising that neurons that respond to histamine and other pruritogens also respond to capsaicin and/or mustard oil.

### Noxious chemicals are not specific to pain or itch

The recent finding that Trp channels are involved in mediating itch highlights an emerging idea — many noxious chemicals can elicit pain or itch depending on the circumstances. For instance, capsaicin can elicit itch if it is applied to the skin in a punctate fashion and topical application of capsaicin can cause itch in addition to pain. Analogously, agents that are widely considered as pruritogens can also elicit pain. For instance, histamine causes itch when applied to the surface of the skin, but it elicits pain when it is injected into underlying tissue. In fact, many noxious agents have been found to cause both pain and itch, including SLIGRL, Bam8-22, serotonin, acetylcholine, bradykinin, endothelin-1, formalin and prostaglandin J2. This observation suggests that classifying an aversive stimulus as either an algogen or a pruritogen may be overly simplistic. Indeed, given that the function of both itch and pain is to warn us of noxious agents, it makes sense that the sensory neurons that are tuned to convey nociception and those tuned for pruritoception would be tuned to overlapping sets of irritating stimuli.



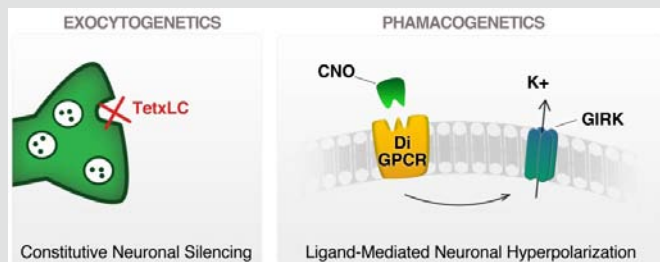
## So how is itch coded?

Given this overlap, how can itch be distinguished from pain? One possibility is that pain and itch are initially detected by sensory afferents that express common receptors but show distinct stratification within the skin (with fibers mediating itch being exclusively superficial). The sensation of itch would require the activation of itch-fibers alone — in other words, without the concurrent activation of nociceptors. This idea, which is the basis of the selectivity theory, also posits that the central nervous system plays a key role in helping to sharpen these two sensory modalities by providing a mechanism through which pain inhibits itch. Thus, if a small number of itch-selective sensory neurons are activated by a noxious agent at the outermost aspect of the skin, itch would ensue. If, in contrast, if a larger number of both itch and nociceptive afferents are activated simultaneously, the nociceptive input would inhibit the itch signal and itch would be suppressed. The existence of such a neural circuit is attractive because it could also provide the cellular basis for the everyday experience that scratching (which activates nociceptors) inhibits itch.

## But does such a circuit really exist?

My lab is trying to address the nature of spinal circuits involved in the processing of aversive stimuli in order to understand how itch and pain are coded. Our overall approach involves using new genetic tools to target and manipulate the activity of specific populations of neurons in the dorsal horn of the spinal cord in order to delineate their function. These genetic approaches allow us to target gene expression solely to select populations of spinal interneurons. Next we can express whatever gene we want to visualize or manipulate the cells of interest. For instance, we can visualize a defined population of neurons with a green fluorescent protein, we can permanently silence these interneurons with tetanus light chain toxin (exocytogenetics) or we can transiently inhibit these cells through the expression of inhibitory receptors (pharmacogenetics)(Figure 1). Together, these genetic approaches are giving us unprecedented ability to address the function of targeted populations of spinal interneurons involved in the modulation of itch and pain. Understanding these neural circuits is a critical step toward identifying potential therapeutic targets for both itch and pain.

Figure 1. Genetic approaches we are using to selectively regulate the activity of specific populations of neurons involved in pain and itch.



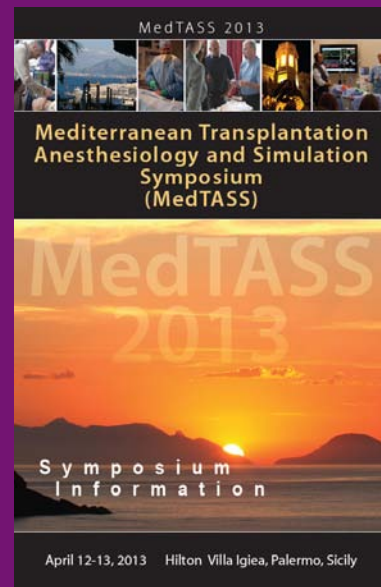
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## PCPR Researchers Receive Perfect Score on NIH R21 Grant Proposal

Sarah Elizabeth Ross, PhD and H. Richard Koerber, PhD (Professor, Neurobiology) received a “perfect score” from the National Institutes of Health (NIH) for their R21 grant submission, “Using Dual Intersectional Genetics to Understand And Modulate Itch,” ranking it in the first percentile of NIH grant submissions. Drs. Ross and Koerber are researchers in the Pittsburgh Center for Pain Research, directed by Gerald F. Gebhart, PhD (Professor, Anesthesiology).

## Upcoming Conference



### MedTASS 2013

The 2013 Mediterranean Transplantation Anesthesiology and Simulation Symposium (MedTASS) will be held April 12-13, 2013 at the Hilton Villa Igiea in Palermo, Sicily.

[Online symposium brochure/agenda](#)

[MedTASS Program 2013 \(PDF\)](#)



## How Has Ultrasound Guidance Impacted the Safety of Patients Receiving Peripheral Nerve Blockade?

Steven L. Orebaugh, MD

Associate Professor, Departments of Anesthesiology and Critical Care Medicine

In the past, many anesthesiology practitioners viewed peripheral nerve blockade (PNB) as a “black box” with sometimes unpredictable effects, including fearful toxicities and tissue injury. With landmark or nerve stimulator techniques,

results were too frequently unsatisfactory, and some practitioners felt that it was not worth the risk to the patient, especially if they were not frequently performing these techniques. And it was quite rational to avoid such interventions since it was well established that “general anesthesia is 100% effective.”

The ability to visualize anatomy in real time at the bedside while performing PNBs has dramatically changed many practitioners’ perceptions of regional anesthesia. Knowledge of anatomy remains a cornerstone of regional anesthesia, but with ultrasound, one correlates the two-dimensional image of underlying structures with an understanding of three-dimensional morphology. Instead of relying on a mystical “feel” for the underlying anatomy (which I would qualify has the ability to create a three-dimensional construct in one’s mind, from prior study of anatomy in books or cadavers), a practitioner now may image the anatomy in real time, as well as plan the needle pathway, avoiding vulnerable structures and ensuring close delivery of the local anesthetic to the nerve. Furthermore, the needle tip may be kept in view at all times as it is advanced, and the spread of local anesthetic modified as necessary to ensure it surrounds the nerve in question.

This ability to directly image the process has resulted in some fairly predictable advantages of ultrasound use, which explain its ever-increasing popularity among those who perform regional blocks. These advantages include a higher success rate when compared to nerve stimulation guidance, fewer needlesticks with less trauma, more rapid onset of block, and a greater degree of sensory blockade (1-5). Other improvements include a more rapid onset of block, more rapid conduct of the block itself, and longer duration of analgesia (1,5,6). These advantages have translated into greater ease and success of peripheral catheter insertion as well (7).

In the first five or so years of ultrasound use for PNB guidance, there was considerable doubt as to whether this imaging modality provided measurable practical benefit or whether it was an expensive extravagance. The studies and meta-analyses noted above have markedly strengthened the evidence in favor of ultrasound use for PNB. Other reports have made it clear that instructing residents is facilitated by use of ultrasound imaging—in our own academic practice we have seen the frequency of inadequate or partial interscalene block drop from 11% to just over 2% (8). From a rotation director’s perspective, the advent of ultrasound was truly

a remarkable advance in instructing residents to perform PNB, while at the same time ensuring patient safety. Guidelines for instruction in regional anesthesia now routinely incorporate use of ultrasonography (9).

However, the impact of ultrasound imaging on patient safety is not so clear. With regard to nerve injury, several large databases and some randomized trials have failed to show any difference between guidance techniques, in either significant nerve injury or more mild postoperative nerve dysfunction (i.e. numbness and tingling) (3,10-12). This may be because the majority of such injuries are not related to the block (10.), or because the neural dysfunction, if block-related, is attributable to factors other than needle-tip trauma, such as local anesthetic neurotoxicity. Given these issues and the very low frequency of serious nerve injury, it may not be possible to show a difference in postoperative neurologic outcomes with use of ultrasound to guide needle and local anesthetic deposition.

The impact of ultrasound upon the other major type of adverse outcome from PNB, local anesthetic systemic toxicity (LAST), has been more readily addressed in the literature. Two large databases provide evidence of very low frequency of seizure or cardiac toxicity when ultrasound is used to guide nerve blocks. While prior estimates of LAST ranged from 1/1000 to 1/3000 when nerve stimulation was the primary method of guidance, Sites *et al.* (13) recently reported the experience at Dartmouth, where, in a six-year period, over 12,000 ultrasound-guided blocks resulted in only one episode of LAST (a seizure). We also recently reported our six-year experience at UPMC Mercy South Side Outpatient Center (formerly UPMC-Southside Hospital) (14.). Our data are somewhat unique in that they reflect a multi-year transition from primary guidance by nerve stimulator, to almost complete use of ultrasound (over 90%), as well as the vast majority of blocks being conducted by supervised residents. In some 6,000 nerve stimulator blocks, there were six seizures, while in the 9,000-plus blocks conducted with ultrasound guidance, there were no episodes of LAST. Temporally, there was a clear correlation of fewer seizures with greater penetration of ultrasound guidance. Finally, the most compelling data regarding improved safety comes from a multi-center Australia-New Zealand database, recently reported as an abstract at the 2012 American Society of Anesthesiologists annual meeting in Washington, DC in October. Barrington, *et al.* (15) summarized their results with over 20,000 peripheral nerve blocks conducted with either ultrasound or nerve stimulator guidance. Both univariate and multivariate regression established ultrasound guidance as a factor less likely to result in LAST, with an odds ratio between 0.18 and 0.25. Total dose of local anesthetic and dose per patient body weight were likewise correlated with risk of toxicity.

Some of the reasons that ultrasound imaging favorably affects LAST are obvious. We clearly stick blood vessels less often (1,2) because we can see them. While this is a surrogate for intravascular injection, it probably plays a role. In addition, use of ultrasound has allowed us to markedly decrease local anesthetic doses while

still providing effective blocks (2,16,17), which mitigates against absorption of drug as a cause of toxicity. What is not so obvious, perhaps, is that for many blocks, use of the ultrasound transducer changes our trajectory of needle insertion—shallower, oblique approaches are necessary to image the needle and to align the needle under the probe. Thus, we are less likely to plunge the needle deep beyond the nerve, where sizable vessels may be inadvertently punctured and subjected to injection (one example of this is puncture of the vertebral artery with interscalene block).

In summary, ultrasound has clearly favorably impacted the technical and practical aspects of performing PNB, and its popularity continues to grow. Any effect on block-associated nerve injury has been difficult to establish. But one promise of real-time imaging, the ability to avoid injection of large amounts of local anesthetic into the bloodstream with resultant severe toxicity, has been realized by this technology. With the aid of ultrasound, patients are safer, and practitioners (and instructors) can proceed with greater confidence to integrate regional techniques into the anesthesia plan for their patients.

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## In Memory of Dr. Bryan Fritz

Bryan J. Fritz, MD, a UPMC Department of Anesthesiology Resident and Pediatric Anesthesiology Fellow (2006–2009), passed away at the age of 33 on Sunday, October 14, 2012.



*Dr. Bryan Fritz*

At the time of his passing, Dr. Fritz was a Pediatric Anesthesiologist with the Ochsner Medical Center in New Orleans, LA. He had just gotten married on June 9, 2012.

Bryan enjoyed traveling with his family and friends and on one of his trips to Guatemala, provided surgeries to children with cleft palates.

Dr. Fritz's full obituary can be read at <http://www.heraldstaronline.com/page/content.detail/id/579092/Dr--Bryan-Fritz.html?nav=5011>

Condolences may be sent via [http://www.mullenbachfh.com/fh/obituaries/obituary.cfm?o\\_id=1732042&fh\\_id=11480](http://www.mullenbachfh.com/fh/obituaries/obituary.cfm?o_id=1732042&fh_id=11480).

## FAER 2013 Medical Student Anesthesia Research Fellowship

**Application deadline: February 1, 2013**



Medical students with an interest in anesthesiology and research are encouraged to apply to the Foundation for Anesthesia Education and Research (FAER) Medical Student Anesthesia Research Fellowship (MSARF) program for the summer of 2013. The program offers medical students an eight-week anesthesia-related research experience, clinical anesthesia exposure, and the opportunity to attend and present research findings at the American Society of Anesthesiologists Annual Meeting. Students are provided with a stipend.

Anesthesiology departments across the United States participate in the MSARF program by hosting medical students at their institutions. The list of institutions, mentors and research projects can be found at [http://students.f aer.org/institutions/public\\_list](http://students.f aer.org/institutions/public_list).

For more information, visit: <http://faer.org/programs/medical-student-anesthesia-research-fellowship/>

Questions: Contact Mary Schrandt (FAER) at 507-538-7883.

Eligibility Requirements:

- Medical student enrolled full-time at a U.S.-based Liaison Committee on Medical Education (LCME) accredited medical school.
- Medical student who is in their first, second, or third year of school on the February 1 application deadline, and will remain enrolled in an MD or DO program throughout the summer research fellowship.

## New Faculty Appointments and Faculty Promotions

*Congratulations to the following Department of Anesthesiology faculty who were appointed since our last newsletter:*

Stephen Bader, MD – Visiting Associate Professor  
Stephen Esper, MD MBA – Assistant Professor  
MaEvelyn Gonzalez-Abola, MD – Clinical Associate Professor  
Manoj Iyer, MD – Assistant Professor  
Robert Scott Lang, MD – Clinical Assistant Professor  
Susan McElroy, DO – Clinical Associate Professor  
George Ranier, MD – Visiting Clinical Associate Professor  
Susan Rooksby, MD – Clinical Assistant Professor  
Joel Sarner, MD – Clinical Associate Professor

*Congratulations to the following Department of Anesthesiology faculty who were promoted since our last newsletter:*

Shawn Beaman, MD - Associate Professor  
Cheryl Bernstein, MD – Promotion to Associate Professor  
Franklyn Cladis, MD - Associate Professor  
Joseph DeRenzo, MD – Promotion to Clinical Associate Professor  
Patrick Forte, MD - Associate Professor  
Theresa Gelzini, MD –Promotion to Associate Professor  
Rita Merman, MD - Clinical Associate Professor  
Beverly Pearce-Smith, MD - Clinical Associate Professor  
Doreen Soliman, MD - Associate Professor

## News from WISER

### WISER Granted Society for Simulation in Healthcare Accreditation

The Society for Simulation in Healthcare (SSH) has accredited the Peter Winter Institute for Simulation, Education, and Research (WISER). The accreditation process included a rigorous evaluation to ensure WISER complies with or exceeds established best practice standards for simulation center administration, operations, curriculum development, teaching, quality assurance and improvement, governance, patient safety engagement, assessment, and education research standards. The nearly year-long endeavor included preparation of a comprehensive submission package in excess of 2,000 pages, as well as a site inspection in early November.

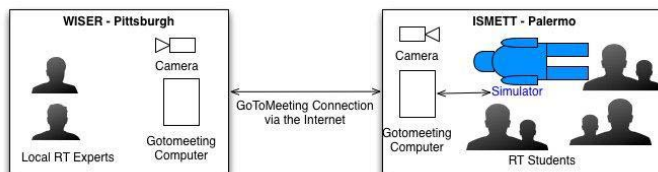
WISER began the multi-step accreditation process in early 2012. Over a period of several months, WISER faculty members and staff collected information and developed reports to address each area of the application. The SSH assessment team's site visit occurred on November 8th. The assessment team reviewed the facilities and interviewed dozens of students, faculty members, and staff. Trace queries were selected on site by the assessment staff to provide thorough verification of the submitted material. After the site visit, the assessment team compiled a comprehensive report of its findings and submitted them to the SSH Accreditation Board of Review.

In evaluating all of the information provided to the Board of Review, WISER was accredited in the Core Competency domain as well as all four elective areas of Assessment, Research, Teaching, and Systems Integration. WISER is only the second program accredited in all four areas of focus recognized by the SSH Accreditation Process.

Having been granted accreditation in all four elective areas is a significant milestone, as WISER is the only civilian simulation center to have achieved this distinction.

### WISER Offering Interactive Online Respiratory Training Course with IsMeTT

WISER also recently initiated a unique training course. Nationally known respiratory care expert Tom Roop, along with a team of local instructors, started an interactive video class with physical therapists at ISMETT (Istituto Mediterraneo per i Trapianti e Terapie ad Alta Specializzazione), the UPMC managed transplant hospital in Palermo, Sicily. Since there are no formal training opportunities in respiratory care in Italy at this time, this training will help introduce physical therapists to this aspect of healthcare. These weekly sessions cover all aspects of respiratory therapy, from patient anatomy to ventilator management. They use video and desktop presentations and interactive sessions over the internet. On June 27, 2012, WISER incorporated a session utilizing remote controlled manikins for enhanced training. The respiratory therapy instructors in Pittsburgh controlled the manikin while observing the students performing scenarios in Palermo using cameras connected to GoToMeeting software. The instructors manipulated the physiological parameters of the manikin in real time based upon the actions of the students. The students were then debriefed after the sessions by the remote instructors using the same cameras. The below diagram demonstrates how the training was accomplished.



## In the News.....

A summary of the symposium “Current Concepts, Methods and Progress in Pain Genetics Research, Official Satellite Symposium of the 14th World Congress on Pain,” written by **Inna Belfer, MD, PhD**, was posted on the [Pain Research Forum](#). Dr. Belfer and **William Lariviere, PhD** and were part of a group of organizers for the conference, which was held on August 26, 2012 in Milan, Italy.

An article by **Dawn A. Marcus MD**, “Complementary Medicine in Cancer Care: Adding A Therapy Dog To The Team,” previously published in *Current Pain and Headache Reports* (April 29, 2012) was selected among thousands to be included in the [American Academy of Pain Management’s June 12, 2012 E-newsletter, Currents: Pain Management News and Research](#). Dr. Marcus was also featured in a radio segment “Pooches, Pets, and Pain Relief” on Saturday, September 22, 2012 at 8 pm EST on WBAL Radio. A podcast of the show is posted on [www.paulchristomd.com](#).



**Andrew Herlich, DMD, MD, FAAP** was interviewed for an [article on sedation dentistry](#) published in the *Chicago Tribune* on August 9, 2012.

**William Lariviere, PhD** and Nurse Anesthetist and University of Pittsburgh School of Nursing Professor **Richard Henker** were spotlighted in the Fall 2012 issue of *PittMed* in an article, “[Survival of the Funded](#),” about University of Pittsburgh-based Clinical and Translational Science Institute (CTSI) research funding and awardees.

“[Gateway Medical Society, Inc. - Closing the Gap](#),” an article by **William Simmons, MD**, was published in the August 2012 issue of *Soul Pitt Quarterly*. Dr. Simmons’ article explains numerous efforts to address racial and ethnic disparities in health care and increase the number of minorities in the medical field, including the Journey to Medicine Program (JTM), in which WISER heavily participates.

In response to receiving the University of Pittsburgh Chancellor’s Distinguished Teaching Award this year, **Manuel C. Vallejo Jr., MD, DMD** was invited to speak at a University of Pittsburgh Katz Graduate School of Business and Center for Instructional Development & Distance Education (CIDDE) symposium on October 26, 2012 about his teaching philosophies and approaches. A video recording of the symposium was posted on the CIDDE website and an article about the event was published in the [November issue of Teaching Times](#).



## Recent Honors & Awards



**Shawn T. Beaman, MD** received the St. Vincent College Alumni Distinction Award on Friday, October 5, 2012 during their annual Alumni Homecoming and Fall Family Weekend on campus.

Dr. Beaman and **Manuel C. Vallejo Jr., MD, DMD** were recently appointed to the University of Pittsburgh School of Medicine Academy of Master Educators (AME) based upon their exceptional contributions to medical education.

The Mentoring Program Subcommittee of the American Association of Anesthesiologists (ASA) Committee on Professional Diversity will fund a new

Mentoring Program Award to Professor **Barbara W. Brandon, MD** and **Lena M. Mayes, MD**. Dr. Brandon mentored Dr. Mayes during and after her fellowship at Children’s Hospital of Pittsburgh of UPMC. Dr. Mayes is currently an Assistant Professor in the Department of Anesthesiology at the University of North Carolina.

The Ladies Hospital Aid Society (LHAS) chose **Jacques E. Chelly, MD, PhD, MBA** to receive their Innovation Award. Dr. Chelly was commended on behalf of the Acute Interventional Perioperative Pain Service (AIPPS) for their work regarding “safety issues associated with the use of opioids postoperatively and increased use of non-opioid pain relief techniques to decrease opioid requirement”.

Resident **Trent D. Emerick, MD** (PGY3) was chosen as President-Elect of the Pennsylvania Society of Anesthesiologists Resident Component for the 2012-13 year.

**Andrew Herlich DMD MD FAAP** was elected by the University of Pittsburgh School of Medicine Executive Committee to the Standing Committee for Non-Tenured Faculty Promotions and Appointments (NTFPA) for a three year term beginning September 1, 2012.

Resident **Kristin Schreiber, MD, PhD** (Class of 2012) received the 2012 American Society of Anesthesiologists (ASA) Research Resident Research Award at the Celebration of Research during the annual ASA meeting on Monday, October 15, 2012 in Washington DC. She was given a plaque and a \$250.00 honorarium check and presented a 20-minute summary of her work, which was supported and mentored by **Inna Belfer, MD, PhD** and performed during her CA3 resident research rotation (Kristin Schreiber, MD, PhD; Marc O. Martel, PhD; Helen Shnol, BS; John Shaffer, PhD; Carol Greco, PhD; Adam Bruvsky, MD, PhD; Gretchen Ahrendt, MD; Dana Bovjberg, MD; Robert R. Edwards, PhD; Inna Belfer, MD, PhD. Pain Phenotypes in American Breast Cancer Survivors Following Mastectomy: Analysis of Clinical, Demographic, Psychosocial, and Psychophysical Correlates).



**Pei Tang, PhD** was appointed to the University of Pittsburgh School of Medicine Standing Committee for Tenured Faculty Promotions and Appointments (TFPA) for a three-year term of service beginning January 1, 2013 through December 31, 2015.

## Recent Publications

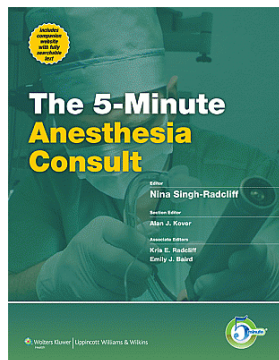
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## Department Faculty Contribute to New Textbook

Thirty-one Department of Anesthesiology faculty, resident, and fellow authors contributed to the recently published textbook, *The 5-Minute Anesthesia Consult*.



Ali Abdullah, MBChB  
Stephen O. Bader, MD  
Shawn T. Beaman, MD  
Michael L. Boisen, MD  
James G. Cain, MD  
Neal F. Campbell, MD  
Seth R. Cohen, DO  
Daniel Cormican, MD  
Patricia Dalby, MD  
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Trent D. Emerick, MD  
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Richard H. McAfee MD  
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David G. Metro, MD  
Daniel Mulcrone, MD  
Sharanya Nama, MD  
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Jay Roskoph, MD, MBA  
Shashank Saxena, MD  
E. Gail Shaffer, MD, MPH  
Sukhdip Singh, MD  
Kenichi Tanaka, MD, MSc

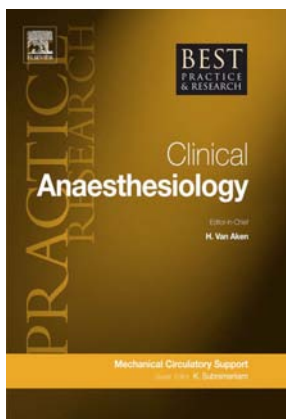
## Dr. Kathirvel Subramaniam Edits Two Special Journal Issues Featuring Articles by Department Faculty and Residents

Kathirvel Subramaniam, MD edited the summer 2012 issue of *International Anesthesiology Clinics* (IAC), which focused on the role of anesthesiologists in heart failure therapy, and contained contributions from department authors Tomas Drabek, MD, Theresa Gelzinis, MD, A. Murat Kaynar, MD, Dennis Phillips, DO, and Cynthia M. Wells, MD:

- Drabek T, Nemecek J. Anesthetic Management of Electrophysiological Procedures for Heart Failure. *International Anesthesiology Clinics*. 2012;50(3):22-42.
- Gelzinis TA, Subramaniam K. Systolic Heart Failure and Anesthetic Considerations. *International Anesthesiology Clinics*. 2012;50(3):146-70.
- Phillips DP, Kaynar AM. Septic Cardiomyopathy. *International Anesthesiology Clinics*. 2012;50(3):187-201.
- Subramaniam K. Early Graft Failure After Heart Transplantation: Prevention and Treatment. *International Anesthesiology Clinics*. 2012;50(3):202-27.
- Subramaniam K. Heart Failure: A Well-known Public Health Problem, Now A Major Perioperative Problem Too! (Editorial). *International Anesthesiology Clinics*. 2012;50(3):x-xi.
- Wells CMQ, Rangasetty U, Subramaniam K. Imaging in Heart Failure: Role of Preoperative Imaging and Intraoperative Transesophageal Echocardiography for Heart Failure Surgery. *International Anesthesiology Clinics*. 2012;50(3):55-82.



Kathirvel Subramaniam, MD



Dr. Subramaniam also guest edited the June 2012 issue of *Best Practice & Research Clinical Anaesthesiology* on the topic of mechanical circulatory support. The issue also contained articles from Dr. Subramaniam as well as department faculty Stephen A. Esper, MD and Vimala Ramesh, MD, FRCA, and residents Michael L. Boisen, MD and Pranav R. Shah, MD:

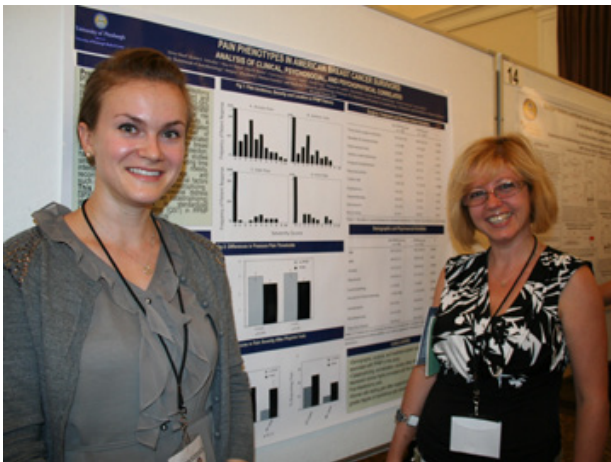
- Esper SA, Subramaniam K. Heart failure and mechanical circulatory support. *Best Pract Res Clin Anaesthesiol*. 2012;26(2):91-104.
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## 2012 Safar Symposium and Multi-Departmental Trainees' Research Day

The tenth annual Safar Symposium was held on June 27-28, 2012. This yearly event honors the late Dr. Peter Safar and his wife Eva for their contributions to the scientific community and highlights current research in areas spanning Dr. Safar's interests.

The symposium began with the third annual Multi-Departmental Trainees' Research Day on June 27th, a collaboration between the Departments of Anesthesiology, Critical Care Medicine, Emergency Medicine, and Physical Medicine & Rehabilitation, and the Peter M. Winter Institute for Simulation Education and Research (WISER). This multi-departmental event is an outgrowth of the first Anesthesiology Research Day held in 2009 and featured 33 posters and five oral presentations from trainees in the four collaborating departments. Forty percent of the abstracts were submitted by trainees in the Department of Anesthesiology.

Helen Shnol, BS, a research scholar working with Inna Belfer, MD, PhD, won best poster from the Department of Anesthesiology for "Pain Phenotypes in American Breast Cancer Survivors Following Mastectomy: Analysis of Clinical, Demographic, Psychosocial, and Psychophysical Correlates." In addition, Tommy S. Tillman, PhD, a postdoctoral scholar and manager of Dr. Yan Xu's laboratory, won first place among all the oral presentations for "Reversal of Ion Charge Selectivity Renders the Pentameric Ligand-Gated Ion Channels GLIC Insensitive to Anesthetics."



Top: Helen Shnol with mentor Dr. Inna Belfer  
Bottom: Dr. Tommy S. Tillman



The second day of the symposium included both the Peter and Eva Safar Lecture, as well as morning and afternoon sessions highlighting current research on breakthroughs in pediatric resuscitation.

Gabriel G. Haddad, MD, Professor of Pediatrics and Neuroscience, Chair, Department of Pediatrics, University of California, San Diego, and Physician-in-Chief and Chief Scientific Officer at the Rady Children's Hospital in San Diego, delivered the 32nd Peter and Eva Safar Annual Lecture in Medical Sciences and Humanities on the topic of "Tolerance and Susceptibility to Hypoxia: New Lessons From Vertebrate and Invertebrate Model Systems." John P. Williams, MD and Patrick M. Kochanek, MD (Director, Safar Center for Resuscitation Research) co-host this annual lectureship.



### Peter Safar's Laws for the Navigation of Life

At the yearly Safar Symposium, we remember and honor the life and tremendous accomplishments of our department's founder, Dr. Peter Safar. Dr. Patrick Kochanek opened the event by reviewing Dr. Safar's inspirational and amusing "Laws for the Navigation of Life":

1. If anything can go wrong, fix it!
2. When given a choice - take both!
3. Multiple projects lead to multiple successes.
4. Start at the top, then work your way up.
5. Do it by the book, but be the author.
6. When forced to compromise, ask for more.
7. If you can't beat them, join them, then beat them.
8. If it's worth doing, it's worth doing right now.
9. If you can't win, change the rules.
10. If you can't change the rules, then ignore them.
11. Perfection is not optional.
12. When faced without a challenge, make one.
13. "No" simply means begin again at one level higher.
14. Don't walk when you can run.
15. Bureaucracy is a challenge to be conquered with a righteous attitude, a tolerance for stupidity, and a bulldozer when necessary.
16. When in doubt, think!
17. Patience is a virtue, but persistence to the point of success is a blessing.
18. The squeaky wheel gets replaced.
19. The faster you move, the slower time passes, the longer you live.
20. Death is not the enemy, but occasionally needs help with timing.
21. When on thin ice, dance.
22. It is up to us to save the world.

## Faculty & Fellows on the Road

### Barbara W. Bandom, MD

Dr. Bandom will participate in a Malignant Hyperthermia (MH) meeting sponsored by MHAUS at the University of Toronto on November 1-2, 2013. At the meeting, David MacLennan, the scientist who identified the RYR1 MH mutation in pigs, will be honored for his continued studies in the molecular biology of MH. Dr. MacLennan has also been selected for induction into the Canadian Medical Hall of Fame.



Barbara W. Bandom, MD



Jacques E. Chelly, MD, PhD, MBA

### Jacques E. Chelly, MD, PhD, MBA

*3rd World Congress of Regional Anesthesia and Pain Therapy, Sydney Convention and Exhibition Centre, Australia, February 3-7, 2013.* Dr. Chelly will lead a workshop on Regional Anesthesia for Truncal Surgery and will also give a lecture entitled, "Is lumbar plexus block contra-indicated in patients receiving thromboprophylaxis?" Dr. Chelly will also present the following two lectures at the request of Dr. Asokumar Buvanendran (Director of Orthopedic Anesthesia Professor, Department of Anesthesiology Rush University Medical Center), who is unable to attend the meeting: "Post-surgical pain syndromes: Physiopathology, diagnosis and treatment" and "Postoperative pain syndrome physiology diagnosis and treatment".

*International Anesthesia Research Society Annual Meeting, Sheraton Hotel & Marina, San Diego, California, May 4 – 7, 2013.* Dr. Chelly will participate in an advanced ultrasound workshop as well as the nerve stimulation and ultrasound workshop.

### Raymond M. Planinsic, MD

Dr. Planinsic will participate on a panel organized by the Liver Intensive Care Group of Europe (LICAGE) at the *International Anesthesia Research Society (IARS) 2013 Annual Meeting in San Diego, CA on May 4-7, 2013.*

The panel will be held Monday, May 6, 2013 from 11:30 am – 1:00 pm:

#### *The Liver and The Kidney*

Moderator: Gebhard Wagener, MD

#### *Biomarkers in Liver and Kidney Disease*

Gebhard Wagener, MD, Associate Professor of Clinical Anesthesiology, Chief, Division of Vascular Anesthesia, Member, Divisions of Critical Care Medicine and Liver Transplant Anesthesia, College of Physicians and Surgeons of Columbia University, New York, New York

#### *The Liver and the Kidney: The Hepatologist's Perspective*

Elizabeth C. Verna MD, MS, Assistant Professor of Medicine, Center for Liver Disease and Transplantation, Division of Digestive and Liver Diseases, Columbia University College of Physicians and Surgeons, New York, New York

#### *Acute Kidney Injury After Liver Transplantation*

Raymond M. Planinsic, MD, Professor of Anesthesiology, University of Pittsburgh School of Medicine, Director of Transplantation Anesthesiology, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania



Raymond M. Planinsic, MD

## We Would Like to Hear From You!

*Alumni Connection* is not only a forum to keep alumni informed of the latest department news, but also what other alumni are up to. We would like to hear about where you are working and your recent projects and accomplishments!

Please send any news or suggestions to Christine Heiner at [heinerc@upmc.edu](mailto:heinerc@upmc.edu) or 412-647-7353.

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