

## The Montlake Cut

A Publication of the Department of Neurological Surgery, UW Medicine Health Care System

October 2012



### *Chairman's Message... The View from Puget Sound ...*

Welcome to the latest issue of *'The Montlake Cut'*. It is written with the goal of keeping our colleagues, staff and graduates informed about the UW Medicine *Department of Neurological Surgery*.



*Richard G. Ellenbogen, M.D., F.A.C.S.*

### *Two New Brain Surgeons*

One of my great pleasures as Chairman is to introduce new board eligible neurological surgeons to their peers. To participate in the 7-year maturation process from nervous, beginning physician to confident,

thoughtful healer is a great honor for the entire faculty. It is an inspiration for the younger residents who will eventually join these ranks. It deserves to be a time of celebration and recounting of significant technical achievements, intellectual milestones and emotional maturation. We had a joyous, well attended party on Sunday June 24 at 7PM in the Fairmount Hotel Garden Room. It was made possible by the generous donations of our faculty. Two more accomplished, well trained UW neurological surgeons graduated from the residency program. Andrew Ko and Eric Peterson were sent into the world after not



*2013 UW Department of Neurological Surgery graduation reception at Seattle Olympic Fairmont*

only surviving the 7 long years of training but also excelling in their craft. They are now onto the next phases of their lives.

*Continued on next page*



Dr. Andrew Ko (left) and family

Eric will be a neurovascular fellow for a year at the University of Florida in Miami and hopes to pursue an academic career in micro and endovascular neurological surgery. Andrew stayed in Seattle as a junior faculty member to help manage the neurosurgery service at Valley Medical Center before he too will start a fellowship in functional neurosurgery at OHSU with another of our graduates, Professor and Chair Kim Burchiel. His goal is to pursue an academic job in Functional and Tumor neurological surgery.

The celebration included not only all the residents and their significant others, but faculty members and their spouses, as well as the parents and siblings of the graduates. The mothers of both these gentlemen had the honor of sitting in their son’s inscribed UW graduation chairs and listen to me extoll their individual and unique virtues. I discussed Eric’s unmitigated passion for neurological surgery and his intense and intellectually rigorous approach to mastering his craft and educating his fellow residents. I talked about Andrew’s Zen like philosophical approach to complex problems and his calm but unwavering moral compass. Their mothers beamed and the men were characteristically embarrassed. Both Andrew and Eric deserved the praise heaped upon them and responded with their characteristic modesty and humor, while regaling us with their travails along the way.



Dr. Eric Peterson (4th from right) and family

Eric and Andrew are matured, talented, dedicated, and technically skilled neurosurgeons who are also compassionate physicians. The entire faculty and resident corps are proud of having played a role in their educations. We wish them happiness, good health and success in their promising careers.

Sincerely,

Richard G. Ellenbogen, M.D., F.A.C.S.  
Professor and Chairman  
Department of Neurological Surgery

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# *Raising Academic Neurosurgeons: How effective are we?*

*George A. Ojemann, MD*

This newsletter regularly discusses innovations in neurosurgical care derived from research activities of the UW faculty, whether basic science insights or translational studies involving new therapies or technical innovations. Continuing that innovation requires training academic neurosurgeons in a career combining clinical

## **Professor Emeritus George Ojemann**



*George A. Ojemann, MD*

is part of a medically remarkable family that included his late brother Robert, long Professor of Neurological Surgery at Harvard, and a younger sister, Kathryn, who graduated with a degree in neuropsychology, also from Harvard. He and his wife Linda Moretti Ojemann, a neurologist, have three children, all doctors. Jeff is professor of Neurological Surgery at UW and Chief of Service at Children's Medical Center. Another son, Steve, is a neurosurgeon on the faculty of the Department of Neurological Surgery of the University of Colorado in Denver. Their daughter, Ann-Elizabeth Ojemann Rowe, is an emergency physician in Seattle.

care and research. To provide such training has been a goal of this department since its inception in 1948 under the direction of Dr. Arthur A. Ward, Jr. In the spirit of outcomes measures now expected of clinical care, the author recently undertook an evaluation of our effectiveness in achieving that training goal, determining the careers, academic or practice, publication record and NIH grant support of the 84 residents who finished the program from the first one in 1957 thru 2009. [There have now been 94 graduates, ed.]

Of those 84 residents, 53 (63%) started their careers in academic positions, but at last follow up (for those working or at retirement), only 33 (39%) still were. When residents were divided by decile of finishing, 50 (82%) initially entered academic positions, with a bulge in the 1990-99 decile, but otherwise differed little across the years. However, only

19 (33%) of those 20 or more years since finishing residency were still in academia, compared to 56 (59%) of those finishing more recently. Of those who changed careers, 22 went from academia to practice, 2 the reverse and 4 went back and forth several times.

How should this information be viewed? The single paper that included data on the residencies that produced the faculty of ACGME accredited neurosurgical programs (Campbell et al, 2011) examined 986 faculty members in 97 programs. The UW program had the fifth most graduates that remained in academia. Unfortunately, there was no effort to correct for the different number of graduates in each residency, though all the programs ahead of the UW had been training more residents, at least three per year, for much longer periods. Our outcome can also be compared to that for PhD trainees in science fields where, like neurosurgery, there is a lucrative nonacademic option. Less than half of science PhDs aspired to faculty positions. Although the vast majority started as post docs for the first few years, by 14 years only slightly less than half

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## Academic Neurosurgeons

of biochemistry and one-third of computer science and electrical engineering PhDs remained in academics, (Nerad and Cerny, 2002). Therefore, UW outcomes compare very favorably to other neurosurgical programs in the total number of trainees and to science PhD's in the proportion that remain in academic positions.

However, by any of these metrics only about one third of trainees stayed in academia. Our study identified one factor in the selection of residents that might improve this outcome. Although graduates with or without PhDs prior to residency were equally likely to start in academia (69% either category), those with PhDs were surprisingly *less likely to remain*, a difference that is nearly statistically significant ((PhD: 44% of those starting in academia remained; no PhD: 79%.  $p=0.07$ ). Moreover, only 11% of the 73 of our trainees who were still active during the last ten years were primary investigators on an NIH research grant anytime during that period. Neurosurgical resident research training should be altered to reflect this by emphasizing either collaboration with basic scientists or technical innovations where industry sponsorship can be obtained, rather than research that requires increasingly difficult to obtain NIH grant support. Mentors actually combining research and clinical practice should be encouraged. Training programs should also direct those completing the residency to positions in departments authentically dedicated to the support of teaching and research. Institutional commitments that make an academic career more attractive by recognizing the inherent central value of research and that reduce external administrative and fiscal demands are also important.

But the most important factor to insure continued innovation in neurosurgery may be to instill such a passion for research and teaching that the resident will persevere in academia despite all the obstacles.

### Bibliography:

Campbell, P., Awe O, Maltenfort, M., Moshfeghi D., Leng, T., Moshfeghi A., Parliff, J., Medical school and residency influence on choice of an academic career and academic productivity among neurosurgery faculty in the United States. *J. Neurosurg.* 115, 380-386, 2011.

Nerad, M, Cerny J., Postdoctoral appointments and employment patterns of science and engineering doctoral recipients ten-plus years after PhD completion. *Communicator VXXXV(7)*: 1-6, 2002.



Photographs in the Department office at Harborview of all ninety-four Chief Residents who have graduated.



## *Faculty Spotlight/Research News*

In addition to a primary faculty of clinicians and scientists, the Department of Neurological Surgery has almost twice as many associate faculty members with joint or adjunct appointments. To start introducing them, here are four sketches of their work.

**Kyra Becker, MD** Professor of Neurology and Neurological Surgery; co-director, UW Medicine Stroke Center at Harborview.

Dr. Becker's research is focused on the role of the immune response in modulating ischemic brain injury. Her studies are fully translational, performed using animal models of stroke, which then extend into the clinic. Specifically, Dr. Becker is investigating CNS antigen specific immune responses that develop as a consequence of stroke. Ultimately, she hopes to identify ways to modify the post-ischemic immune response.



*Kyra Becker, MD*



*Thomas Montine, MD, PhD*

**Thomas Montine, MD, PhD** Alvord Professor and Chair of Pathology; Adjunct Professor of Neurological Surgery; Director of the Pacific Northwest Udall Center and the UW Alzheimer's Disease Research Center.

The Montine laboratory studies the structural and molecular bases of cognitive impairment in Alzheimer's and Parkinson's diseases. The goal is to define key pathogenic steps through a combination of epidemiologic neuropathology, biomarker development and application in clinical trials and, thereby, to identify new and potential therapeutic targets.

**Jonathan Weinstein, MD, PhD** Associate Professor of Neurology; Adjunct Associate Professor of Neurological Surgery.

A major focus of Dr. Weinstein's work is to characterize the cellular and molecular mechanisms that underlie preconditioning. This is a neuroprotective phenomenon in which a brief ischemic exposure protects the brain against a subsequent prolonged ischemic exposure (or stroke). Elucidating these mechanisms will help identify novel targets for pharmacological intervention.



*Jonathan Weinstein,  
MD, PhD*

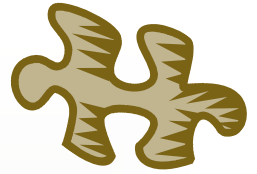


*Miqin Zhang, PhD*

**Miqin Zhang PhD** Kyocera Professor of Materials Science and Engineering; Adjunct Professor of Neurological Surgery, Radiology, Orthopedics & Sports Medicine.

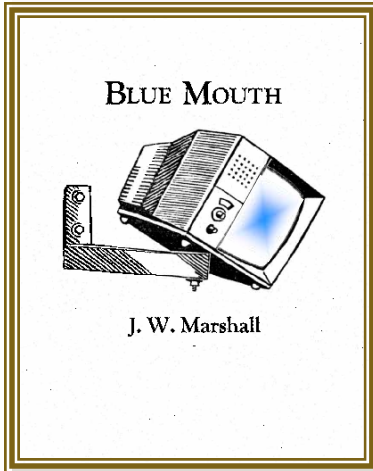
Dr. Zhang's research is in drug delivery, cancer diagnosis and therapy, tissue engineering and biosensors for drug screening and toxin detection. Her laboratory has developed multifunctional, tumor-targeted nanoparticles that cross the blood brain barrier and slow tumor metastasis, as well as various natural polymer-based biomaterials (nanoparticles and fibers, thermal reversible gels, porous scaffolds) for tissue engineering.

## Puzzler, Poetry, and Perseverance



The last Puzzler asked, “To what does the term “blue mouth” refer as regards Harborview Medical Center.” The answer is known to a well regarded Seattle poet.

For more than twenty years, J. W. Marshall has been recommending poetry to his customers while writing it himself. He and his wife, poet Christine Deavel, own Seattle's Open Books: A Poem Emporium, one of only a few bookstores in the United States devoted exclusively to poetry---and a fixture in our city's literary community. In early 1972, John was run down in a gas station by an erratic driver, and admitted critically ill to the ICU until late March of that year. His book of poems, *Blue Mouth*, came from that experience. They teach us something about ourselves. John Remembers, “I was in off and on several times for various procedures and procedures to correct procedures for two or three years after that. I know I was in for a memorable stay the fall in which Reggie Jackson hit three consecutive home runs in one World Series game. I was extremely feverish and had the TV on and kept drifting in and out of consciousness. It seemed like every time I worked back to the surface Jackson was rounding the bases.”



### HARBORVIEW MEDICAL CENTER

There was this hospital  
that came into my life  
at the end of an ambulance.

A surge of people in a cloud  
in a pool of watery uniforms  
guided me through open doors.

I sank under gnat-thick language.  
This was welcome to Harborview  
which was thorough when I was not.

### TELEVISION IN HOSPITAL

Always on  
that tender fixture dressed  
emptiness up  
like a circular parade  
seven days long with faces  
changing on the hour  
and the half.

My blue calendar  
my blue watch  
bolted to the room's white wall.

The image that has joined me  
until death  
is of a glad dog bounding toward  
its meal and the hand that left it.

## *New Puzzler Editor*

The newly created job of *MONTLAKE CUT* Puzzler-in-Chief was advertised on the Internet several months ago, and more than 12,000 qualified applicants for this sought after position replied. The editorial board went on retreat for an entire week to sort through the résumés and, after sometimes violent debate, selected Minku Chowdhary. In the end, Dr. Chowdhary was chosen because he has never once failed to divine the correct answer to the lame efforts at confusing readers attempted by the Editor, even though he was permanently disqualified from winning the 10 million dollar Grand Prize. He will take up his duties with the January issue. Salary and emoluments have yet to be determined, but will not include the cost of plane fare to Seattle.



*Dr. Minku Chowdhary*

## *HOW TO WASH YOUR HANDS:*

*An essay that can be read in about the time it now takes to do it*

*Richard Rapport*

At the start of my first surgical rotation, the residents on the service taught me how to scrub. The lesson only lasted a few minutes. I tried to do it exactly as they did, those almost surgeons who I saw then as far beyond me, a 24-year-old third-year medical student. It seemed to me complex and even technically daunting then, perhaps because so little was disposable in 1967. Scrubs, hats and shoe covers were all made of reusable



heavy green cotton. Masks were white, but also washable. The stiff brushes we dispensed to ourselves from wall mounted stainless steel rectangles with a lever on the bottom. Out popped identical rectangles of black bristles mounted in an amber colored plastic top that just fit into a hand. They too were reusable.

We had two soap alternatives then: betadine, the dark choice, or phisohex, the white one. People favored one or the other, although there didn't seem to be a clear advantage between the two. Each variety had its own soap container hung on the wall above a large set-tube sized porcelain scrub sink, and a black rubber foot activated bubble connected to a hose that snaked up the side. One operated the dispenser simply by stepping on the bubble. The soap came out with a sort of whooshing sound.

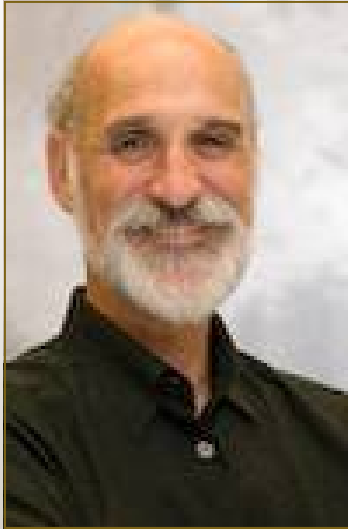
I obtained my brush by pushing the bar. It was like winning a plastic prize out of a bin at the county fair. Moving the knee activated water valve to the right I wet my hands and stepped on the soap dispensing bubble. A squirt of thick maroon creamy stuff oozed onto my hand. I was a betadine man from the start.

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## WASH YOUR HANDS

“Now,” one of the swaggering residents told me, “start with your nails and rub the brush along the ends like this.” He demonstrated the proper way to move the soap from my palm onto the brush, and from there to the ends of my fingers, rubbing vigorously along them. “Then you scrub all the surfaces of each finger twenty



Richard Rapport, MD

times, and your palms and the backs of each hand twenty times. After that, up to your elbows on all the surfaces twenty strokes each. You do that for ten minutes by the clock. When you’re done, hold your hands up in front of you like this.” I watched him demonstrate the correct technique, imagining that I was about to do the operation myself. The process of scrubbing thrilled me more than anything I’d done in medical school before that moment. Although I’ve likely scrubbed my hands nearly thirty thousand times since that day, I always found it a little thrilling in the same way I did on that first morning, two thousand miles and a lifetime away. I miss that sensation now that I don’t operate anymore.

The idea that surgeons should wash their hands before operating took a while to catch on. Even after Louis Pasteur, Ignaz Semmelweis, and Oliver Wendell Holmes (the doctor, not his lawyer son), predicted that microorganisms cause infection, doctors didn’t hurry to practice sterility. Finally, Joseph Lister proved that he could reduce and then prevent infection by the generous use of carbolic acid, a substance found to kill skin bacteria. For some time, nurses sprayed the stuff around operating rooms like air freshener. By late in the nineteenth century, sterility in the operating room was widely accepted as normal practice. When the residents taught me to scrub, it was a ritual.

Ritual is one of the things that builds a community. That first day I learned to scrub, I was joining the community of surgeons. Not all medical students do that, of course, but the ones who combine a certain mechanical inclination with the intellectual interests that lead people to medical school are drawn to the active job of surgeons. Although over the past few years newer soaps have shortened the time it takes to scrub to a few minutes, still surgeons are found standing together in front of huge sinks, chemically impregnated, disposable synthetic brushes with plastic bristles on one side and a soft pad on the other, washing their hands. Often jokes are exchanged, or tales of family, girl friends, difficult cases. Even though the ritual is shortened, it persists. The surgeons still elevate their hands above their elbows so that the water drops away to the floor as they back away from the sinks, push the door open with their behind, and walk into the operating room, hoping to help another human being.



# *A Brief History of the Pain Center at the University of Washington*

*John D. Loeser, M.D.*

The Pain World at the University of Washington began in 1960 when John J. Bonica was appointed the founding Professor and Chairman of the Department of Anesthesiology. He established a Pain Clinic with the assistance of a nurse, Dorothy Crowley, and a neurosurgeon, Lowell E. White, Jr. In 1964 I first had the opportunity to sit in on the Friday noon Pain Clinic sessions. These were held in the conference room in the back of the surgery clinic on the third floor of the UWMC. Dr. Bonica presided over much debate and discussion by the assembled group of specialists. Although most of them were biomedically oriented, a Freudian analyst, a psychiatrist and a clinical psychologist were also regular attendees. After the conference, at which time the patient was briefly presented and answered questions from the assembled group, a management



*John J. Bonica, MD*



*Dorothy Crowley, RN*

plan was designed and whomever was delegated to treat this patient would meet with that person and spouse to explain the treatment recommendations. Some of these patients were referred to Dr. Fordyce for his new-fangled and marginally accepted behavioral pain management that was carried out in Rehabilitation Medicine.

I joined the faculty in December 1969, and immediately became the neurosurgeon for the Pain Clinic. In 1974, the UWMC underwent its first expansion project since it opened, and I was asked to be the chairperson of that project. The Pain

Clinic was experiencing growing pains due to increasing numbers of referrals and Dick Black, who was the Clinical Director, and I designed new, parochial space for the Pain Clinic on the 2<sup>nd</sup> floor adjacent to the ER and the operating rooms. It had a waiting room, a small conference room, an office for the director and an office for secretarial support, four examination rooms and a procedure room. This was the first space in the UWMC actually assigned to the Pain Clinic.

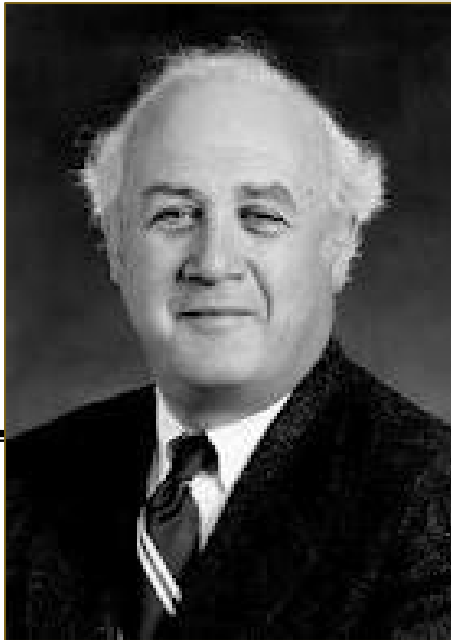


*Lowell E. White Jr, MD*

In 1978, Dr. Bonica obtained regential approval for a Multidisciplinary Pain Center and recruited two psychologists, Judy Turner and Steve Fey. In 1983, I became the Director of the Multidisciplinary Pain Center. Bill Fordyce and I consolidated inpatient and outpatient activities on 4 S, converting one side of the ward to clinic rooms and a procedure and recovery area. We had twenty beds on the other side of the ward and a conference room. The faculty consisted of psychologists (Fordyce, Turner, Romano, Egan and Jensen) and

## *UW Pain Center*

physicians (Loeser, Butler, Buckley, Ready, Taylor). This program became the model for pain management throughout the world. In 1994, UWMC opened a new outpatient clinic on Roosevelt and moved the Pain Center into space there designed for our program needs. We were adjacent to the physical therapy gym and had adequate clinical space. Patients enjoyed the new facilities and the underground parking. We were a teaching resource for the UWMC and for the burgeoning world-wide interest in pain medicine. However, the support of the Pain Center decreased and I resigned as director in 1997. In 2007 new Chairperson of Anesthesiology



*John D. Loeser, MD*

began to reverse decade of relative disinterest in pain. The appointment of a remarkable new Director of Pain Medicine has resulted in a phoenix-like resurrection of the Pain Center so that we are again a nationally recognized institution. John Bonica should again be smiling at us.

### *Professor Emeritus John D. Loeser*

is recognized as an expert in the surgical treatment of pain and multidisciplinary pain management. He was the Director of the Multidisciplinary Pain Center from 1982-1997, and a pediatric neurosurgeon at Children's for much of his career. His research and teaching efforts have included the development of the human nervous system, neuropathic pain, low back pain and multidisciplinary pain management. Though retired from clinical practice, John continues to teach.

## **STAFF IN THE KNOW...**

**GRANT RELATED QUESTIONS?**

JIM PRIDGEON

[pridgeon@uw.edu](mailto:pridgeon@uw.edu)

TRAM TRAN

[tvtran@uw.edu](mailto:tvtran@uw.edu)

**GRAND ROUNDS INFORMATION?**

SHARON ANDREWS

[soa@uw.edu](mailto:soa@uw.edu)

**RESIDENCY PROGRAM INFORMATION?**

KEN FORSSEN

[kforssen@uw.edu](mailto:kforssen@uw.edu)

## 2012 HIKE TO THE HEAVENS

2012 HIKE TO THE HEAVENS



2012 HIKE TO THE HEAVENS

*Dr. Kim and friends on the fifth annual Hike to the Heavens. Although there was a brown bear citing, and a few mountain goats spotted, there were no casualties to report.*

### *New Baby...*

R4 Ali Ravanpay and his wife announce that on Thursday, Aug 16, 2012 a second son, Matine Elham Ravanpay, was born. Mother, the new son and the old son are all doing well. Ali's call nights at HMC have prepared him well for feeding/diaper changing duties q2hr over night.



*Matine E. Ravanpay*

We remain anxious to publish stories, photos about all aspects and activities of the Department. Please share your memories, ideas, and suggestions for stories and news items that expand our common ground. Please contact us at these email addresses:

Editor-in-Chief .....	Richard G. Ellenbogen, M.D. ....	rge@uw.edu
Editor.....	Richard Rapport, M.D. ....	rappor@uw.edu
Scientific Editor .....	Sean Murphy, Ph.D. ....	seanm6@uw.edu
Associate Editors.....	James Pridgeon, MHA .....	pridgeon@uw.edu
.....	Mary Gilbert.....	mmg@uw.edu
Layout Director .....	Mary Gilbert.....	mmg@uw.edu