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

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Message from the Chairman

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

In shining the spotlight upon one of our department's most highly interactive, collaborative programs, I would like to mention several exciting upcoming Grand Rounds speakers.

In June, we will welcome one of our illustrious graduates as Visiting Professor, Professor Matt Howard, Chair of Neurosurgery at the University of Iowa. Professor Howard is a renowned surgeon/scientist who will not only describe his research work but reflect on his academic career . He will be paired that day with his mentor, our own Professor George Ojemann, arguably one of the foremost cognitive neuroscientists of our time, and a beloved mentor to almost 4 decades of our graduates. Professor Ojemann will talk about his career long pursuit of understanding the neurophysiology and function of the cerebral cortex.

Lastly in late June during our graduation week, we will welcome Sir Henry Marsh, a senior consultant neurosurgeon at the Atkinson Morley Wing at St. George's Hospital, one of the country's largest brain surgery units. He is one of our residents' favorite educators and the director of the much heralded, unique British-American UW Neurological Surgery training program. Professor Marsh has been bestowed as *Commander of the Order of the British Empire* (CBE) for his charity work around the world. This amazing effort can be viewed on the Emmy award winning documentary 'English Surgeon'.

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

UW MEDICINE Presents... INSTITUTE FOR STEM CELL AND REGENERATIVE MEDICINE

The new University of Washington Institute for Stem Cell and Regenerative Medicine (ISCRM) is committed to the ethical pursuit of basic research to unleash the enormous potential of stem cells and thereby develop therapies and cures. The UW and its affiliated institutions, the Fred Hutchinson Cancer Research Center (FHCRC) and Children's Hospital, are widely regarded as world leaders in stem cell research and regenerative medicine. The underlying philosophy is to bring interdisciplinary strengths together, and to leverage basic research discovery to develop therapies.



South Lake Union Campus Home of UW Institute for Stem Cell and Regenerative Medicine (ISCRM)



Individual stem cell.

The Department of Neurological Surgery Associate Professor Philip Horner, Ph.D. and Professor Robert Rostomily, M.D. have substantial research activities sited in the new ISCRM facilities located on the South Lake Union campus close to the Seattle Children's Research Institute and the FHCRC. South Lake Union is a growing research hub for basic science discovery and biotechnology innovation in Seattle.

Philip Horner, Ph.D.

Dr. Horner's lab is focused on the interaction between glial and neural cells following central nervous system challenge and aging. Specifically: 1) mechanisms of adult stem cell-derived lesion remodeling/repair and 2) role of gliogenesis and gliosis in neural degeneration and aging. The laboratory uses systems biology and cell and molecular techniques to decipher the cues that regulate gliogenesis in the developing and aging spinal cord, following spinal cord injury and in models of ALS and glaucoma. His research has been



Philip Horner, Ph.D. Associate Professor

continuously funded by a combination of NIH and private foundation mechanisms since it was established in 2002. Over the past few years Dr. Horner's lab has been developing preclinical data for transplantation if induced pluripotent stem cells in a clinically relevant model of

spinal, cervical contusion injury. Through this process he has been meeting with Europe Medicines Association (similar to the FDA in the United States) to discuss plans for a clinical trial and have designed and executed pre-clinical safety trial testing in requisite to meet EMA safety requirements for transplantation in humans.

Robert Rostomily, M.D.

As a practicing neuro-oncologist and Professor of Neurological Surgery, Dr. Rostomily is acutely aware of the devastating outcomes of GBM and the need for new therapeutic approaches and clinical trials. His research focuses on genetic abnormalities in gliomas, using both animal models and human tissue. His research laboratory investigates the biology of gliomas and has made important discoveries of the role of TWIST1 in human GBM invasion and the impact of aging on the malignant glial potenfial of neural stem/progenitor cells



Robert Rostomily, M.D. Professor

Spinal cord progenitor cell migration.

(NSPCs). In the course of these studies his lab has developed and published novel techniques

for the quantification of glioma growth and invasion. His lab has unique experience in a broad range of animal glioma model systems including human xenotransplant with established cell lines and gliomaderived stem cells as well as syngeneic mouse glioma models derived from transformed NSPCs. Dr. Rostomily's clinical and research expertise uniquely

complements the exceptional team of investigators sited at ISCRM in pursuit of promising new approaches to GBM therapy.



Tumor cell growth plot.

Dr. Robert Rostomily's philosophy is the patient comes first and should be treated with respect and kept informed. He obtained his college degree at Yale University (where he also played Division I Football) and earned his medical degree at Case Western Reserve University in Cleveland. Dr. Rostomily also completed an internship and residency in neurological surgery at the University of Washington. He is board-certified in Neurological Surgery. His clinical interests include surgical management of tumors of the skull base, with special expertise in meningiomas, chordomas, and acoustic neuromas. Dr. Rostomily is the Co-Director of the Gamma Knife Center and the Acoustic Neuroma Team.

PIPELINE EMBOLIZATION DEVICE:

HARBORVIEW MEDICAL CENTER FIRST IN NORTHWEST

The UW Medicine Neurosciences Institute, already the region's busiest service for intracranial aneurysms, has added a tool that neutralizes aneurysms' threat of rupture more safely, and for a broader swath of patients.

The Pipeline Embolization Device (PED) is a braided, flexible metal tube delivered by catheter and seated in the artery from which the aneurysm emerges. The PED – or chain of PEDs, through the length of an oversize aneurysm – essentially re-creates the original vessel. Cut off from circulation, the aneurysm clots naturally and disappears.



Pipeline Embolization Device (PED) essentially recreates the original vessel.

The device poses a better option in cases of unruptured large, giant or wide-necked aneurysms.

Harborview Medical Center is second on the West Coast and *first in the Pacific Northwest to deploy the PED*, which the Food and Drug Administration approved this year. It has been used in Europe, Asia, and South America since 2009.

tially recreates the original vessel. Traditional treatments – by open surgery and endovascular approach – have targeted the aneurysm itself: clamping off its flow or mass with clips, or placing thin, clot-inducing coils inside the sac.

In wide-neck aneurysms, though, coils can fail at a high rate. In bulbous aneurysms that protrude over a greater circumference of vessel, coils are inappropriate because they would block circulation. And coils, even when introduced with the deftest hands, always risk perforating the aneurysm.

Clips placed across an aneurysm's neck can block it off. Clips, however, necessitate open surgery and are constrained to areas that surgeons' instruments can reach.



Patient treated at Harborview by Dr. Louis Kim. Pretreatment (left) and post Pipeline Endovascular Device placement (right) at 6months follow up with dramatic obliteration of a complex cavernous aneurysm.

(continued on next page)

Clinical Advances... Continued from previous page:

PIPELINE EMBOLIZATION DEVICE: HARBORVIEW MEDICAL CENTER FIRST IN NORTHWEST

"Neurosurgeons see [the PED] as a rare paradigm shift in attacking aneurysms," said Dr. Louis Kim, a neurosurgeon, UW Assistant Professor of Neurological Surgery, and soon to be named Chief of Neurosurgery at Harborview Medical Center. "With this device we are reconstructing the lumen within the normal artery. It's an elegant way to transform a subset of unwieldy and difficult-to-access aneurysms into very straightforward cases.

"It will lower the risk of complications and probably have a higher rate of permanent fix, if you will, than previous approaches."

The pipeline is exclusively for unruptured aneurysms. The device's metal-alloy composition encourages formation of blood clots, so PED patients must be on blood-thinning therapy for one week be-

fore and 6months after the procedure. Of course, blood-thinning in

the setting of an acutely ruptured aneurysm is inadvisable. Those



Louis J. Kim, M.D. Assistant Professor UW Medicine Department of Neurological Surgery



Laligam N. Sekhar, MD Professor and Vice-Chairman UW Medicine Department of Neurological Surgery

The UW Medicine Neurosciences Institute's surgeons and neuro-interventionalists (catheterization specialists) treat 250 to 300 intracranial aneurysms a year, most due to Harborview's status as a regional acute stroke care center. Such volumes make the facility one of the nation's busiest.

Dr. Laligam Sekhar, an internationally recognized skull-based vascular neurosurgeon, leads Drs. Raj Ghodke and Dan Hallam, interventionalists, and Dr. Louis Kim, dual-trained as a neurosurgeon and interventionalist.

By preventing an aneurysm from hemorrhage, the PED expands UW Medicine's comprehensive care to prevent stroke and mitigate its effects.

TO REFER A PATIENT OR LEARN MORE, CONTACT THE UW MEDICINE NEUROSCIENCES INSTITUTE AT (206)744 - 9300



NEUROLOGICAL SURGERY WEBSITE PATIENTS ARE FIRST OFFERS USEFUL INFORMATION FOR PHYSICIANS & PATIENTS

The *UW* Department of Neurological Surgery website is now available! The site has been created to keep you informed of research, education, training, clinical trials and advances within the field of neurological surgery.

http://neurosurgery.washington.edu/patientcare/patientinfo/articles/



New & Improved... Physician Pager/Contact Posters ...Now Available

Department of Neurological Surgery Physician Pager/ Contact posters are now available. Initial distribution is underway. To receive or order additional laminated posters contact Mary Gilbert at mmg@uw.edu

Grand Rounds...The Process...The Person...

Sharon Andrews has served as the UW Neurological Surgery Grand Rounds' Coordinator for the past 5+ years and has been with the Department of Neurological Surgery for 22 years! Sharon is the person 'behind the scene' assisting Dr. Ellenbogen with the organization and structure of weekly speakers, Journal Club, visiting professors, compliance training, and special events.



Aedicina

Sharon Andrews

Sharon strives to ensure our Grand Rounds comply with the *UW School of Medicine Office of Continuing Education* guidelines in order to provide attendees with CME credits.

We all know the person 'behind the scene' is often forgotten—except, of course, in the case of something being 'not quite right'....Sharon meets it with a determined look, a bounce to her step, and a smile.

Anyone wishing to provide a Grand Rounds lecture or receive electronic notices please contact Sharon Andrews at 206-543-3570 or soa@uw.edu

GIVING OPPORTUNITIES ... FOR FRIENDS & SUPPORTERS ...OF NEUROLOGICAL SURGERY



As a friend or supporter of UW Medicine Department of Neurological Surgery maybe your desire is to help create new opportunities for the next generation of neurosurgeons. Or be a part of the next tremendous discovery that solidifies the UW Department of Neurological Surgery's reputation as one of the top programs in the world. The truth is, there are many reasons to give...as we walk alongside our patients, our friends, and, at times, our family members we often do need to pause and reflect the gains made in neurological surgery. From the beginning of

man...we continue to discover new ways to treat neurological diseases and disorders...through research...through education and clinical care...through you.

TO MAKE A GIFT

Support the Department of Neurological Surgery by making a donation that will help support patient and familycentered care, breakthroughs in medical research, and the training of tomorrow's neurosurgeons. Options include:

NEUROSURGERY RESIDENCY FUND

The future of neurological surgery will be determined by the doctors, researchers, and other medical The future of neurological surgery will be determined by the doctors, researchers, and other medical professionals. Your gift will help the department support resident training.

NEUROSURGERY RESEARCH FUND

This fund provides support for research, resident training, and teaching programs in the Department of Neurological Surgery.

UW NEUROSURGERY SUMMER SCHOOL PROGRAM

To support the UW Neurosurgery Summer School Program whose purpose is to expose students to sciences as potential future career paths.

ENDOWMENTS ARE FOREVER

Depending on your individual passion or interest, your endowment will provide funds in perpetuity, can be focused or wide-ranging, and will support a purpose of your choosing. Distributions from endowments transform lives at the UW each year — those of students, faculty, researchers and of everyone participating in hundreds of programs and activities that enrich our community. *NAMED ENDOWMENTS:* To create a new endowment with a name you choose, the UW has several options available.

ANNUAL SUPPORT...SAME TIME NEXT YEAR!

When you make an annual gift to the UW, you can support your passion by directing your gift to any of more than 6,200 available funds. Whether or not you choose a specific fund your annual support helps the UW today and into the future.

To make a donation to the Department of Neurological Surgery please contact:

> James Policar Assistant Director for Philanthropy UW Medicine 206-221-7526 policar@uw.edu

...Faculty Spotlight...

To name but a few...

Jeffrey G. Ojemann, MD:

The Department of Neurological Surgery has received (unofficial) notification by NINDS of *Neurosurgery Research Training*

Grant in Interdisciplinary Neuroscience (R-25) funding for a 5-year period beginning 4/1/2012. This is one of only 13 NINDS neurosurgery training grants awarded nationally, of which 4 are located on the west coast.

Richard G. Ellenbogen, MD:

UW School of Medicine faculty members Dr. Richard G. Ellenbogen and Dr. Stan Herring have helped launch a new online course on sports concussions for healthcare professionals. The course, "*Heads Up to Clinicians: Address-ing Concussion in Sports among Kids and Teens*," is supported by the Centers for Disease Control and Prevention and the National Football League.

Pierre Mourad, PhD:

Dr. Mourad, Associate Professor of Neurological Surgery, has received a *State of Washington Life Sciences Discovery Fund Commercialization* award for his project entitled *Definitive Human Testing of Pain Localiza*-

tion and Quantification Based on Transcutaneous Acoustic Palpitation (TAP). His project is to conduct clinical testing of an ultrasound device that allows provid-

ers to identify the sources and extent of deep pain.

Richard Morrison, PhD:

Dr. Richard Morrison, Professor in the Department of Neurological Surgery ranks in the *top 10% of NIH awards nationally*.

Neurosciences Institute Names Kathy Derzinski Administrative Specialist

Kathy Derzinski

Kathy Derzinski has been selected by the *UW Medicine Neurosciences Institute* as the Administrative Specialist to assist, *under the direction of Dr. Anthony Avellino*, with the coordination and continued development of the Institute. Kathy notes her experience at Bell Laboratories, AT&T and Seattle Children's Hospital helped to prepare her for this role. "Healthcare, education and research are the three areas that I resonate to the most, and here I am surrounded by all three."

Kathy can be reached at derzik@uw.edu or 206-744-1874





Professor





...Staff Spotlight... Kris Lewis By Jana Pettit



In this issue, it is my pleasure to introduce Kris Lewis. Kris was born in Minneapolis and attended high school in Los Angeles, where he learned to enjoy cooking from his grandfather, a restaurateur and 1940s film noir actor. After moving back to Minnesota and earning a degree in Computer Science from the U of M, Kris left again in 2007 for the mild weather and natural beauty

of the Pacific Northwest. Kris is quite the outdoorsman and last August, summited Mount Rainier for the first time, a goal he had wanted to achieve since he first saw the Mountain.



Kris Lewis

Kris joined the University of Washington in 2007, working on the grants team in the Department of Laboratory Medicine at UWMC. In this role, he gained experience in post award administration and IRB submissions, and occasionally helped out with IT support. He joined our department in August 2010 as a fiscal specialist and is responsible for the department's financial processes including purchasing, travel reimbursements, and perhaps most importantly, payroll. We appreciate his dedication to detail! Kris also manages our website, providing all of the editing and IT expertise, and working closely with Jim Pridgeon on content development. He has been a key team member in developing the department's social media strategy and will be essential in the implementation as well. While Kris mostly uses his IT knowledge for good, he has been known to pull a prank or two on fellow employees. Kris provides excellent customer service to everyone he meets, is always willing to help with work outside of his own, and has been an outstanding addition to our fiscal team and department.

Kris spends his free time outdoors, working out, cooking with his wife, and reading about history and ancient cuisine. His next big goal is a

hiking trip across Ireland, followed by a stay with his brother who is currently living in Bologna, Italy.

STAFF IN THE KNOW... GRANT RELATED QUESTIONS? TRAM TRAN tvtran@uw.edu GRAND ROUNDS INFORMATION? SHARON ANDREWS soa@uw.edu RESIDENCY PROGRAM INFORMATION? KELLY JAIN kgjain@uw.edu

Upcoming Grand Round Lectures

... Mark Your Calendars

All lectures held on the UW Medicine-<u>Harborview</u> <u>Campus</u> in the Research & Training Building Auditorium (300 Ninth Avenue, Seattle, WA)

GRAND ROUNDS 2012



APRIL 4, 2012:	7:00 – 9:00AM	RISK MANAGEMENT TRAINING
		CLOSED SESSION – OPEN TO UW ONLY

APRIL 11, 2012:7:00 – 8:00AMNEUROLOGICAL SURGERY JOURNAL CLUB8:00 – 9:00AMNOOJAN KAZEMI, MBBSSpine Fellow, UW Department of Neurological Surgery

APRIL 18, 2012: 7:00AM SPINE LECTURE: K. DANIEL RIEW, MD 'AVOIDING AND MANAGING COMPLICATIONS

IN CERVICAL SPINE SURGERY'

DANIEL RIEW, MD

Professor Department of Orthopaedic Surgery Chief, Surgical Spine Center Director, Cervical Spine Institute Washington University School of Medicine St. Louis, MO

K. Daniel Riew, M.D.

8:00AM NEUROPATHOLOGY LECTURE (TBA)

APRIL 25, 2012: 7:00 – 9:00AM M&M

MAY 2, 2012:	7:00 – 8:00AM 8:00 – 9:00AM	NEUROLOGICAL SURGERY CASE PRESENTATION JEFFREY MAI, MD, PHD
MAY 9, 2012:	7:00 – 8:00AM 8:00 – 9:00AM	NEUROLOGICAL SURGERY JOURNAL CLUB Guest Lecturer—To Be Announced
MAY 16, 2012:	7:00 – 8:00AM <i>'Current C</i> 8:00 – 9:00AM	YU SUN, MD: oncepts of Cervical Spine Arthroplasty' NEUROPATHOLOGY LECTURE
MAY 23, 2012:	7:00 – 9:00AM	ORAL BOARDS REVIEW

CLOSED SESSION – OPEN TO UW ONLY

Upcoming Grand Round Lectures—2012 ...*Mark Your Calendars*

All lectures held on the UW Medicine-<u>Harborview</u> <u>Campus</u> in the Research & Training Building Auditorium (300 Ninth Avenue, Seattle, WA)

MAY 30, 2012: 7:00 – 9:00AM M&M

JUNE 6, 2012: 7:00 – 8:00AM NEUROLOGICAL SURGERY JOURNAL CLUB 8:00 – 9:00AM NEUROPATHOLOGY LECTURE GORDANA JURIC-SEKHAR, MD, PHD Pathology Fellow, UW Department of Pathology

JUNE 13, 2012: 7:00 - 8:00AM GEORGE A. OJEMANN, MD VISITING PROFESSOR 8:00 - 9:00AM MATTHEW A. HOWARD, III, MD

Professor George A. Ojemann received his doctorate at the University of Iowa College of

Medicine. After completing his neurological surgery residency at University of Washington Affiliated Hospitals, he began a distinguished career as a neurosurgeon and researcher specializing in epilepsy. He is in demand as speaker at medical conferences around the world, and has held visiting professorships across the U.S., Canada, and Taiwan. His most recent book (co-authored with William Calvin), *Conversations with Neil's Brain*, has also been published in German and Dutch. He is Professor *Emeritus* of Neurosurgery at the University of Washington School of Medicine. He was the Lennox lecturer for the American Epilepsy Society in 2002. He has served as President of the American Academy of Neurological Surgery. He also has been a recipient of an NIH Javitts Award, a Distinguished Alumni citation from the University of Iowa, and an honorary Doctor of Sciences degree from the Medical College of Ohio.

Professor Matthew Howard joined the University of Iowa faculty in 1993 and has led the UI Department of Neurosurgery since it was created in 2001. He is an expert in neurosurgical treatment of epilepsy, and his cutting-edge research explores how the brain processes sounds and emotions. Dr. Howard also is active in the development of medical devices. He helped pioneer the invention of the Stereotaxis Magnetic Navigation System, which uses magnets to precisely guide surgical instruments through the human body.

Dr. Howard earned a bachelor of science degree in physics and biology from Tufts University in Medford, MA, and received a medical degree from the University of Virginia in Charlottesville. He completed his

Neurosurgery Residency at the University of Washington in Seattle, including one year training at Atkinson Morley's Hospital in London, England.



George A. Ojemann, MD Professor Emeritus UW Department of Neurological Surgery



Matthew A. Howard, III, MD Professor & Chair Department of Neurosurgery University of Iowa



Upcoming Grand Round Lectures—2012

... Mark Your Calendars

All lectures held on the UW Medicine-<u>Harborview Campus</u> in the Research & Training Building Auditorium (300 Ninth Avenue, Seattle, WA)



JUNE 20, 2012: 7:00 – 8:00AM SPINE LECTURE: ORTHOPAEDIC FELLOWS 8:00—9:00AM AMY LEE, MD Assistant Professor, UW Department of Neurological Surgery SEATTLE CHILDREN'S HOSPITAL Craniofacial, general neurosurgery, neurodevelopment, brain tumors, spine. MR

JUNE 27, 2012:	7:00 – 8:00AM	M&M
VISITING PROFESSOR	8:00 – 9:00AM	SIR HENRY T. MARSH, MA, MB, BS, FRCS

Sir Henry Marsh attended the Dragon School in Oxford and graduated with Honors in Medicine from London University. He is now the senior consultant neurosurgeon at the Atkinson Morley Wing at St. George's Hospital, one of the country's largest specialist brain surgery units.



Sir Henry Marsh, MA, MB, BS, FRCS

Professor Marsh specializes in operating on the brain under local anesthetic and was the subject of a major BBC documentary '*Your Life in Their Hands*' in 2004, which won the Royal Television Society Gold Medal. He has been working with neurosurgeons in the former Soviet Union mainly in Ukraine with mentee neurosurgeon Igor Petrovich, since 1992 and his work there was the subject of the BBC Storyville film '*The English Surgeon*' from 2007. He has a particu-

lar interest in the influence of hospital buildings and design on patient outcomes and staff morale; he has broadcast and lectured widely on this subject. He spends his spare time either making furniture or practicing neurosurgery in the Ukraine.

Would you like to receive electronic notifications and updates regarding UW Department of Neurological Surgery Grand Rounds? Contact Sharon O. Andrews soa@uw.edu Department of Neurological Surgery Grand Rounds Coordinator

New Knowledge

2011-12 Publications (to date) by Drs. Phillip Horner, Louis Kim, and Robert Rostomily

<u>Chondroitinase ABC combined with neurotrophin NT-3 secretion and NR2D expression promotes axonal plas-</u> <u>ticity and functional recovery in rats with lateral hemisection of the spinal cord.</u> García-Alías G, Petrosyan HA, Schnell L, **Horner PJ**, Bowers WJ, Mendell LM, Fawcett JW, Arvanian VL. J Neurosci. 2011 Dec 7;31 (49):17788-99. PMID: 22159095

<u>Combined delivery of Nogo-A antibody, neurotrophin-3 and the NMDA-NR2d subunit establishes a functional</u> <u>'detour' in the hemisected spinal cord.</u> Schnell L, Hunanyan AS, Bowers WJ, **Horner PJ**, Federoff HJ, Gullo M, Schwab ME, Mendell LM, Arvanian VL.Eur J Neurosci. 2011 Oct;34(8):1256-67. doi: 10.1111/j.1460-9568.2011.07862.x. Epub 2011 Oct 13. PMID: 21995852

Increased re-entry into cell cycle mitigates age-related neurogenic decline in the murine subventricular zone. Stoll EA, Habibi BA, **Mikheev AM,** Lasiene J, Massey SC, Swanson KR, **Rostomily RC, Horner PJ**. Stem Cells. 2011 Dec;29(12):2005-17. doi: 10.1002/stem.747. PMID: 21948688

Aging neural progenitor cells have decreased mitochondrial content and lower oxidative metabolism. Stoll EA, Cheung W, Mikheev AM, Sweet IR, Bielas JH, Zhang J, **Rostomily RC, Horner PJ**. J Biol Chem. 2011 Nov 4;286(44):38592-601. Epub 2011 Sep 7. PMID: 21900249

<u>Chlamydia trachomatis infection during pregnancy: known unknowns.</u> Howie SE, **Horner PJ**, Horne AW. Discov Med. 2011 Jul;12(62):57-64. Review. PMID: 21794209

<u>Chlamydia trachomatis infection increases fallopian tube PROKR2 via TLR2 and NFκB activation resulting in a microenvironment predisposed to ectopic pregnancy.</u> Shaw JL, Wills GS, Lee KF, **Horner PJ**, McClure MO, Abrahams VM, Wheelhouse N, Jabbour HN, Critchley HO, Entrican G, Horne AW. Am J Pathol. 2011 Jan;178(1):253-60. Epub 2010 Dec 23. PMID: 21224062

Immunity and vaccines against sexually transmitted Chlamydia trachomatis infection. Howie SE, **Horner PJ**, Horne AW, Entrican G. Curr Opin Infect Dis. 2011 Feb;24(1):56-61. Review. PMID: 21124214

Association of Mycoplasma genitalium with balanoposthitis in men with non-gonococcal urethritis. **Horner PJ**, Taylor-Robinson D. Sex Transm Infect. 2011 Feb;87(1):38-40. Epub 2010 Sep 18.

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Fast bound pool fraction imaging of the in vivo rat brain: association with myelin content and validation in the <u>C6 glioma model</u>. Underhill HR, **Rostomily RC**, **Mikheev AM**, Yuan C, Yarnykh VL.Neuroimage. 2011 Feb 1;54(3):2052-65. Epub 2010 Oct 26.PMID: 21029782

Cerebral Bypasses for Complex Aneurysms and Tumors: Long-Term Results and Graft Management Strategies. Ramanathan D, Temkin N, Kim LJ, Ghodke B, Sekhar LN. Neurosurgery. 2012 Jan 24. PMID: 22278357

Balloon Test Occlusion with the Doppler Velocity Guidewire. Levitt MR, Vaidya SS, Mai JC, Hallam DK, Kim LJ, Ghodke BV. J Stroke Cerebrovasc Dis. 2011 Nov 17. PMID: 22100827

<u>Ribavirin Impairs Salivary gland function During Combination Treatment With Pegylated Interferon Alfa-2a</u> <u>In HEpatitis C patients.</u> Aghemo A, Rumi MG, Monico S, Banderali M, Russo A, Ottaviani F, Vigano M, **D'Ambrosio R**, Colombo M. Hepat Mon. 2011 Nov;11(11):918-24. Epub 2011 Nov 30. PMID: 22308157

Guideline of the Month:

COMMUNICATION means that we treat all with whom we interact with respect. Effective **COMMUNICATION** improves the work environment and the patient experience.

HOW TO FIND US: UW MEDICAL CENTER

DRIVING DIRECTIONS TO UW MEDICAL CENTER

1959 N.E. Pacific St. Seattle, WA 98195



FROM INTERSTATE 5

Take Exit No. 168B (Bellevue /Kirkland) onto (SR) 520.

Take the first exit off SR 520 to Montlake Boulevard N.E. Turn left onto Montlake Boulevard and continue north.

FROM THE EAST VIA STATE ROUTE 520 WESTBOUND:

Take the Montlake Boulevard exit.

Continue north on Montlake Boulevard and cross the drawbridge. At the traffic light, turn left onto N.E. Pacific Street. Turn right at the second "Patient Parking" directional sign onto N.E. Pacific Place, then immediately turn right into the Triangle Parking Garage, connected to the medical center via a pedestrian tunnel.

UWMC PARKING

SURGERY PAVILION PARKING GARAGE

This garage is located beneath the Surgery Pavilion and is primarily for surgery patients and their visitors. Enter the garage from N.E. Pacific Street, and turn left at the stop sign after passing the Emergency Department entrance.

TRIANGLE PARKING GARAGE

Underground parking garage located across N.E. Pacific Street from UW Medical Center.

Enter the garage from N.E. Pacific Place, one-half block west of Mont-lake Boulevard.

A pedestrian tunnel leads from the garage to the third (main) floor of the medical center.



Note: Light rail is coming to the University District, and Sound Transit has begun construction on the UW Station at Husky Stadium, which will open in 2016.

HOW TO FIND US: HARBORVIEW

Whether you are coming to see us for our Grand Round Lectures, as a visitor, or as a patient, you will find us at:

DRIVING DIRECTIONS TO HARBORVIEW CAMPUS

FROM INTERSTATE 5 NORTHBOUND

Exit at James Street, Exit 164A. Turn right (east) and travel to Ninth Avenue.
Turn right (south) on Ninth Avenue and go one block to Jefferson Street.
FROM INTERSTATE 5 SOUTHBOUND Exit at James Street, Exit 165A. Turn left (east) on James and travel to Ninth Avenue. Turn right (south) on Ninth Avenue and go one block to Jefferson Street.

HARBORVIEW PARKING

VIEW PARK GARAGE

The View Park Garage is located at the west side of Harborview between Alder and Jefferson streets. People with disabilities may park on Levels A, B and 1. Oversize vehicles may park on Level A at kiosk.

NINTH & JEFFERSON BUILDING PARKING

Underground parking also is available in the Ninth & Jefferson Building. The parking garage entrance is on the east side of the building, off of Terry Avenue, between Jefferson and James Streets. Parking is available 5:00 a.m. to 8:30 p.m. weekdays.



