

Neurotransmitter

Published by the Oregon Health & Science University Department of Neurological Surgery



Cover Illustration: OHSU Neurological Surgery
at the new Center For Health & Healing in Portland's South Waterfront

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Introduction

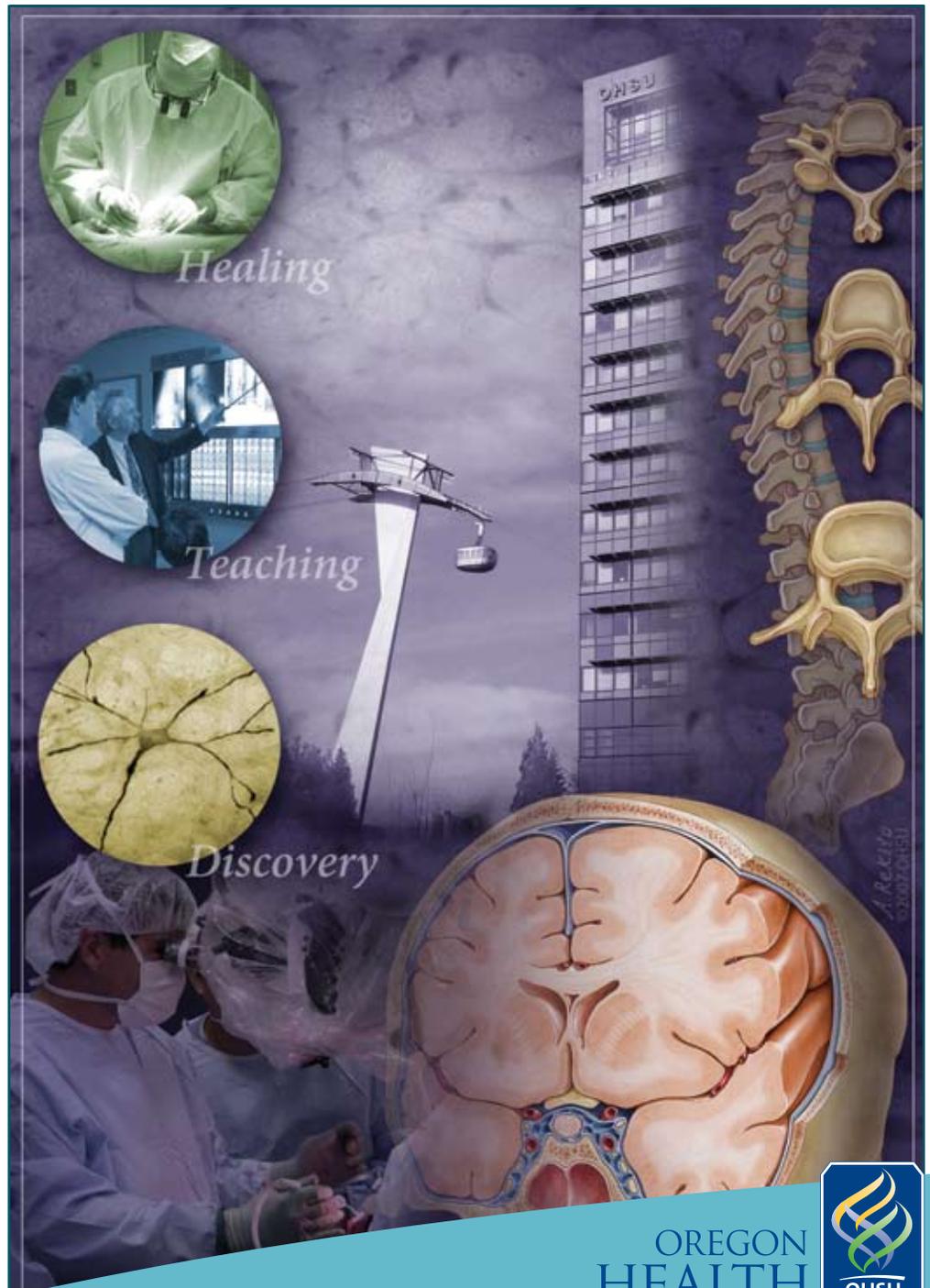
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John Raaf Professor and Chairman

Kim J. Burchiel, M.D., F.A.C.S.

Neurosurgery

Feridun Acar, M.D.
 Stanley L. Barnwell, M.D., Ph.D.
 Kim J. Burchiel, M.D., F.A.C.S.
 Johnny B. Delashaw, Jr., M.D.
 Aclan Dogan, M.D.
 Jorgé L. Eller, M.D.
 Dilantha Ellegala, M.D.
 Edmund H. Frank, M.D., F.A.C.S.
 Daniel Guillaume, M.D.
 Andrew N. Nemecek, M.D.
 James K. Liu, M.D.
 Edward A. Neuwelt, M.D.
 Nathan R. Selden, M.D., Ph.D., F.A.C.S.

Neuroendocrinology

Maria Flaseriu, M.D.

Neurointensivist

Anish Bhardwaj, M.D.

Neuroradiology

Gary Nesbit, M.D.

Neuropsychology

David Gostnell, Ph.D.
 Richard Kolbell, Ph.D., A.B.P.P.

Otolaryngology

Sean O. McMenemy, M.D.

Pain Management

Kim J. Burchiel, M.D., F.A.C.S.

Physician Assistants

Stephen Giles, M.S., P.A.-C., Ph.D.
 Anthony Gomez, M.S., P.A.-C.

Nurse Practitioners

Wendy O. Domreis, M.S., R.N., C.P.N.P.
 Jane Olsen, R.N., C.R.N.P.
 Chris G. Yedinak, M.N., C.F.N.P.

Research

Valerie C. Anderson, Ph.D., M.C.R.
 Thomas K. Baumann, Ph.D.
 Mary M. Heinricher, Ph.D.

Emeritus Faculty

Harold D. Paxton, M.D.

Administration

Sally Rodgers, M.A.
 Shirley McCartney, Ph.D.
 Andy Rekito, M.S.

Chairman's Update

We are pleased to submit this next installment of the *Neurotransmitter*. In part, this issue has an emphasis on neurocritical care at OHSU. Much has happened since **Dennis Bourdette**, M.D., was fortunate enough to recruit **Anish Bhardwaj**, M.D., to the Department of Neurology. Dr. Bhardwaj has now assembled a team of neurointensivists, and we have just celebrated the sixth-month milestone of our Neurosciences Intensive Care Unit (NSICU). The unit, which started with 13 beds, soon to increase to 17, is now staffed 24/7 with a dedicated neurointensivist, and Dr. Bhardwaj has added postgraduate fellows and several physician assistant students to the team. Both neurological surgery and neurology residents add to the physician staff, and this has become an essential part of their training and experience.

Likewise, nursing administration has stepped up to the challenge, under the leadership of **Judi Huffman**, R.N., M.S., and it has been able to rapidly recruit an outstanding team of neuro-intensive care nurses. Respiratory therapists and physical therapists round out the staff, and others devoted to the recovery of the most critically ill patients with neurological disorders. The NSICU has become synonymous with excellence in patient care, and this unit represents a major resource for OHSU, and for Oregon. I am extremely proud of what has occurred in this ICU in such a short period of time.

I also want to highlight some important upcoming events, (see pg. 5 for further details).

» **J. Michael Bliss**, Ph.D., author of *Harvey Cushing: A Life in Surgery*, will be joining us May 17-18, 2007. Dr. Bliss will present a special public lecture, Friday, May 18, from 12-1 p.m. in the OHSU Old Library Auditorium.

» In June, we have the honor of hosting **Neville Knuckey**, M.D., from Perth, Australia, as our second Paxton International Professor. Dr. Knuckey is one of only two full-time academic neurosurgeons in Australia, and he brings with

him many innovative insights into the training of neurosurgical residents. From the brief time I spent in Perth two years ago, I was impressed that Dr. Knuckey and his colleagues have much to contribute to the discussion of how to best train the neurosurgeons of the future. Dr. Knuckey will be visiting us for two weeks, and we hope to show him both the department, and our beautiful environs during that time.

» At the annual Paxton dinner and alumni reunion, to be held June 16, 2007, we will also be honoring an outstanding alumnus, **Larry Tice**, M.D., from Grand Junction, Colo. Dr. Tice exemplifies the highest professional and ethical standards in the clinical practice of neurosurgery, and I believe his example sets a high bar for all of us. We will be honored to have Dr. Tice with us for this evening to accept this recognition.

» In July, visiting professor **Anthony L. Asher**, M.D., an active community-based practitioner from Charlotte, NC, and president-elect of the Congress of Neurological Surgeons, will visit OHSU.

» Upcoming this fall, **Volker Sonntag**, M.D., has accepted our invitation to be the 2007 John Raaf Day Lecturer. Dr. Sonntag is arguably the pre-eminent spinal surgeon in the world, and will honor us with his thoughts on the specialty.

» I am pleased to announce the Campagna Scholarship in Neurological Surgery (see below). I am honored to be serving as mentor for the first Campagna Scholar. I am also deeply grateful to Dr. Mario Campagna and his wife, Edith, for providing this innovative and unprecedented opportunity for medical students to gain hands-on experience with neurosurgical research, prior to entering residency training.



Kim J. Burchiel, M.D., F.A.C.S.
 John Raaf Professor and Chairman
 OHSU Neurological Surgery



OHSU *Neurotransmitter* is published by the Department of Neurological Surgery, Oregon Health & Science University, School of Medicine, for colleagues, alumni and friends of the department.

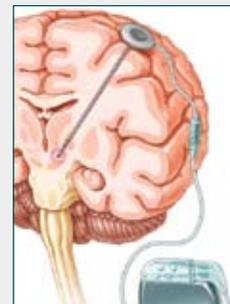
For inquiries, submissions or suggestions, please contact Shirley McCartney, Ph.D., at 503 494-7469 or mccartns@ohsu.edu. Learn more about us on our website: www.ohsu.edu/neurosurgery

Editor: Shirley McCartney, Ph.D.
Illustrator: Andy Rekito, M.S.
Contributors: Kim J. Burchiel, M.D., Anish Bhardwaj, M.D., Tamara Hargens, Shirley McCartney, Ph.D., and Nathan Selden, M.D., Ph.D.

1st Campagna Scholar in Neurological Surgery

Thanks to the kind philanthropic gesture of Dr. Mario Campagna and his wife, Edith, the Department of Neurological Surgery is pleased to announce the Campagna Scholarship in Neurological Surgery. This unique scholarship supports a 10-week summer semester of research under the supervision of a neurosurgical mentor at OHSU and residence expenses in Portland. Students in the first or second year of study at an accredited U.S. medical school are eligible to apply. One scholar will be selected annually.

The scholar selected for the summer of 2007 is **Christopher Urban**, who is a first-year medical student at the University of Pennsylvania. Christopher was selected from a highly qualified and interested group of applicants. He will work with **Kim Burchiel**, M.D., on a functional and stereotactic project relating to the mechanism of action of deep brain stimulation.



Neurosciences Critical Care Program: Update and Future Directions



The OHSU Neurosciences Intensive Care Unit (NSICU) was officially opened on Oct. 1, 2006. The unit presently functions at a capacity of 13 beds and, as planned, focuses on the management of critically ill neurosurgical patients (post-operative

craniotomy for tumors, aneurysms and arterial-venous malformations, traumatic spinal cord injuries and other myelopathies), post neuro-interventional procedures (coil embolizations for aneurysms and arterial venous malformations, intra- and extracranial stents and post-embolectomy), and critically ill neurologic patients (large ischemic strokes and intracerebral hemorrhage). The unit functions in a multi-disciplinary, collaborative model that includes staff members from the departments of Neurology, Neurological Surgery, Anesthesiology & Peri-Operative Medicine, Diagnostic Radiology and Pulmonary Medicine, Division of Critical Care Medicine. The team approach to providing this comprehensive care is evolving with particular emphasis on bedside nurse participation, system approach and evidence-based practices.

Milestones following the implementation of the neurosciences critical care program include the appointment of **Ansgar Brambrink**, M.D., Ph.D., associate professor, as associate director of the program, and **Ines Koerner**, M.D., Ph.D., assistant professor joining as a faculty member. In addition, the Anesthesiology & Peri-Operative Medicine department physician assistant fellowship program has become an integral part of the NSICU team. House staff rotations from the departments of Neurology, Neurological Surgery and Anesthesiology & Peri-Operative Medicine have been integrated with an educational and training curriculum for this ICU rotation. Strong emphasis is placed on teaching and training house staff members, fellows (neuro-trauma and pulmonary/critical care) and nursing staff members on the fundamentals of cerebral pathophysiology in a variety of brain injury paradigms as it pertains to direct patient care. In addition, the NSICU team works intricately with the trauma service to provide day-to-day management of patients with multi-system trauma that includes isolated traumatic brain and spinal cord injury. The protocol committee of the program is systematically developing and implementing general and disease-specific protocols in the NSICU. In keeping with the overall academic mission of the program, faculty and staff are actively reviewing and publishing manuscripts and reviews in scientific journals. A few examples include:

1. Koerner IP and Brambrink AM: **Brain protection by anesthetic agents**. *Current Opinion in Anesthesiology* 19:481-6, 2006
2. Raslan A, Bhardwaj A. **Medical management of cerebral edema** Invited Review for *Neurosurgical Focus*, in press
3. Raslan A, Bhardwaj A. **Cerebral Edema and Intracranial Pressure** In *Principles of Neurocritical Care* Ed. Torbey MT, in press
4. Liu K, Bhardwaj A. **Use of prophylactic anticonvulsants in neurological critical care** *Neurocritical Care*, under review

In addition, a book titled *Evolving paradigms in the Management of Acute Brain and Spinal Cord Injury*, edited by Anish Bhardwaj, Dilantha Ellegala, and Jeffrey R. Kirsch is in preparation and will be published in June 2007. Numerous faculty and staff members from the departments of Neurology, Neurological Surgery and Anesthesiology & Peri-Operative Medicine from OHSU are contributing authors. The book highlights many existing controversies in the management of critically ill neurologic and neurosurgical patients.

Future Directions:

- We anticipate opening the NSICU to a full capacity of 17 beds over the next six months in a step-wise fashion with appropriate nurse staff recruitment.
- Neurosciences ICU fellowship commencing July 1, 2007. This structured, two-year fellowship aims to train board eligible/certified neurologists and anesthesiologists as future leaders and clinician-scientists in the field of neurocritical care.
- Development of a structured educational training program for nursing staff targeted toward this subset of neurological and neurosurgical patients under the leadership of **Betty Cole**, B.S.N., R.N., C.N.R.N. and **Judi Huffman**, R.N., M.S. (see page 6).
- Areas of growth of the program as it pertains to patient care include:
 - a) Focused management of patients with ischemic stroke and patients with seizures and status epilepticus requiring Neuro-ICU care. The Neuro-ICU team works closely with the leaders of the stroke team, **Wayne Clark**, M.D. and **Helmi Lutsep**, M.D. and other faculty and staff members. The overall goal is to formulate and implement a cerebrovascular center of excellence at OHSU that would include an interdepartmental, multi-faceted and comprehensive approach to patients with stroke; from a rapid response team for interhospital transfers, emergency room triage and care, acute neurointerventions, ICU management to rehabilitation. Stroke certification for Joint Commission on Accreditation of Healthcare Organizations (JCAHO) is under way. Similarly, the goals are to develop a multi-disciplinary approach with the OHSU Comprehensive Epilepsy Center and neurophysiology services for patients with status epilepticus.
 - b) Developing and implementing multi-modality monitoring in the NSICU, particularly in patients with traumatic brain injury, under the leadership of **Dilantha Ellegala**, M.D., director of neurotrauma at OHSU.
 - c) Development and implementation of protocols for clinical research and participation in multi-center trials for subarachnoid hemorrhage, traumatic brain injury, and ischemic stroke.

Recognition and appreciation is due for the unwavering support of departmental chairmen (**Kim Burchiel**, M.D., **Dennis N. Bourdette**, M.D., and **Jeffrey R. Kirsch**, M.D.) the **hospital leadership, faculty and staff** of the NSICU and, most importantly, the **nursing staff** (see page 6) for the continued growth and development of this unique and multidisciplinary Neurosciences Critical Care Program at OHSU.

by Anish Bhardwaj, M.D.

Neurological Diseases and Disorders: How can OHSU Neurosciences help you?

| Condition | National Prevalence* (NREF) | Oregon Prevalence* | OHSU Clinical Neurosciences offers: |
|--|---|--------------------|---|
| Parkinson's disease | An estimated 1.5 million people have Parkinson's disease, with about 60,000 new cases diagnosed each year. | 22,500 (NINDS/NPF) | The OHSU Parkinson Center of Oregon aims to improve the care of people with Parkinson's disease by offering expertise and comprehensive care, providing education to patients, families and professionals, and promoting research into causes and treatment of Parkinson's disease. A comprehensive spectrum of medical and neurosurgical evaluation and treatments for adult patients with movement disorders, including evaluation for deep brain stimulation (DBS), is provided. |
| Stroke | Stroke is the third leading cause of death, with more than 700,000 people affected every year. It is a leading cause of serious long-term disability, with an estimated 5.4 million stroke survivors currently alive today. | 70,500 (NINDS) | The Oregon Stroke Center (OSC) was established more than 20 years ago to provide comprehensive treatment and prevention services to stroke patients throughout the Northwest. Recognized as a national leader in acute stroke treatment, the OSC mobile stroke team provides novel stroke treatments to multiple Portland hospitals. In addition to clinical care, the OSC is actively involved in clinical and basic research and provides extensive stroke-related education to the public and providers. |
| Epilepsy | Epilepsy and seizures affect 2.5 million people of all ages, with about 181,000 new cases of epilepsy diagnosed each year. | 33,000 (NINDS/EF) | The OHSU Comprehensive Epilepsy Center provides a full spectrum of comprehensive epilepsy care, from surgical treatment of complex epilepsy disorders to inpatient video-EEG monitoring. The goal of the center is to set the standard for state-of-the-art care for patients with epilepsy disorders. |
| Brain and other central nervous system tumors | An estimated 18,500 new cases of brain and other central nervous system tumors are diagnosed each year. | 5,300 (CBTRUS) | A team of physicians, nurses, neuropsychologists and preclinical researchers work together to meet the challenges of successfully treating people with brain tumors. The OHSU team uses a variety of approaches. If surgery is necessary, neurosurgical therapies for skull base and pituitary tumors, acoustic neuromas, and vascular lesions (aneurysms, arterio-venous malformations) are offered. |
| Spinal cord injury | As many as 450,000 people are living with a spinal cord injury (SCI), and every year, there are about 11,000 new cases of SCI. | 3,400 (NSCIA) | Comprehensive treatment of injuries associated with brain, spine and spinal cord trauma are provided in collaboration with the OHSU trauma service and the neurosciences critical care unit team (see pg. 3). These teams work intricately to provide day-to-day management of patients with multi-system trauma that includes isolated traumatic brain and spinal cord injury. |
| Head injury | Every year, between 1.4 million and 2 million people sustain head injuries, and 80,000 to 90,000 people experience the onset of long-term or lifelong disabilities associated with these injuries. | 79,500 (CDC) | OHSU is a Level 1 Trauma center authorized by the Oregon Department of Human Services: health services, emergency medical services and trauma systems to provide tertiary trauma care. OHSU is the only academic Level I trauma center in Oregon serving injured persons throughout Oregon and the Pacific Northwest. |

What is Neurosurgery? — Surgery of the nervous system

Most people think of neurosurgery as brain surgery — but it is much more! It is the medical specialty concerned with the diagnosis and treatment of patients with injury to, or diseases/disorders of the brain, spinal cord and spinal column, and peripheral nerves within all parts of the body. As such, neurological surgeons, and dependent upon the nature of the injury or disease, may provide surgical and/or non-surgical care (see disease conditions above). Adult and pediatric neurological surgeons at OHSU work in collaboration with patients, families and other health care professionals to ensure patients receive the best possible care.

(See "2007 Top Docs List" pg. 7.)

Data Sources

- Neurosurgery Research and Education Foundation (NREF)
- National Institutes of Neurological Disorders and Stroke (NINDS)
- National Parkinson's Foundation (NPF)
- Epilepsy Foundation (EF)
- Central Brain Tumor Registry of the United States (CBTRUS)
- Centers for Disease Control and Prevention (CDC)
- The National Spinal Cord Injury Association (NSCIA)

* Prevalence: the total number of cases of a disease in a given population at a specific time, not the number of individuals.

Alumni Update

Alumni Survey:

OHSU Neurological Surgery Residency Program Curriculum

If you are an OHSU Department of Neurological Surgery alumnus we would appreciate your help. We have compiled a short Web survey and request your help in gathering data. The survey should only take 5-10 minutes of your time to complete. Please link directly to the survey. Thank you in advance.

www.ohsu.edu/neurosurgery/alumni.shtml

Distinguished Alumni Award: Larry Tice, M.D.

The OHSU Department of Neurological Surgery appreciates there are many distinguished former departmental residents who have made significant achievements in, and contributions to, academic and clinical neurosurgical practice. In recognition of their contribution to the field, the department has created an annual Distinguished Alumni Award. The awardee for 2007 is **Larry Tice, M.D.** from Grand Junction, Colo. The award will be presented at the Paxton Alumni Reunion on Saturday, June 16 (*by invitation*).

The 1st Anthony Gallo, Jr. Lecturer: Alan R. Cohen, M.D.

The Gallo Lecture was created by the OHSU Department of Neurological Surgery to honor the legacy and dedication to teaching and medical ethics of Anthony J. Gallo, Jr., M.D. A medical school graduate of Harvard University, Dr. Gallo was a highly respected pediatric neurosurgeon and throughout his career was devoted to the care of disabled children. He was a professor of neurosurgery at OHSU from 1968 to 1989.



Alan R. Cohen, M.D., is professor of neurosurgery and pediatrics and the Reinberger Professor of Pediatric Neurological Surgery at Case Western Reserve University School of Medicine and chief of pediatric neurosurgery at Rainbow Babies and Children's Hospital, where he also is surgeon-in-chief. He specializes in pediatric neurosurgery and minimally invasive (endoscopic) neurosurgery. He discussed *Nuances of Neuroendoscopy* and *Doctor Patient Communication: The Art of Breaking Bad News* during his visit to OHSU on March 10.

OHSU History of Medicine Society

An American Epic: Harvey Cushing and the Founding of Neurosurgery

Guest Lecturer: J. Michael Bliss, Ph.D., F.R.S.C., D.Litt.(Hon.), F.R.C.P.S.C.(Hon.), Emeritus University Professor of History/History of Medicine, University of Toronto.

Professor Bliss is a pre-eminent medical historian and the author of *Harvey Cushing: A Life In Surgery*.

Date: Friday, May 18, 2007

Time: 12 - 1 pm

Place: OHSU Old Library Auditorium, Marquam Hill
Public welcome.

The Harvey Cushing biography will be available for purchase at the lecture. In the OHSU Main Library lobby, a related exhibit on Portland's first neurosurgeon, A.J. McLean, will be on display.

For more information, contact Carrie Willman at (503) 494-5667.

Events & Announcements

Harold D. Paxton International Professor: Neville Knuckey, M.D. June 12-20, 2007



In June 2007, the OHSU Department of Neurological Surgery will host **Neville Knuckey, M.D.**, as the second Paxton International Professor. Dr. Knuckey is an associate professor of neurosurgery at Sir Charles Gairdner Hospital, Perth, Australia. The neurosurgery department at Charles Gairdner Hospital is a major tertiary service for the investigation and treatment of neurosurgical disorders, training and research in the state of Western Australia. Dr. Knuckey's many areas of interest include: neurosurgical training, best practice protocols for neurosurgery, and neuronal survival. His lectures at the Vey Conference Center, Doernbecher Children's Hospital are as follows:

The Changing Face of Neurosurgical Training in Australia

Monday, June 18, 7 a.m.

Why Neurons Die

Thursday, June 14, 7 a.m.

Visiting Professor: Anthony L. Asher, M.D. Saturday, July 28, 2007



Anthony L. Asher, M.D., F.A.C.S., is chairman of the Department of Neurosurgery at Presbyterian Hospital and an adjunct professor of biology at the University of North Carolina, Charlotte. He joined Carolina Neurosurgery & Spine Associates in 1995, where he maintains a very active, community-based practice with primary clinical interests in neuro-oncology and functional neurosurgery. He will discuss *Clinical Research Fundamentals for Neurosurgeons: A Review of Opportunities, Obligations and Pitfalls* when he visits OHSU.

The 17th Annual John Raaf Day: Volker K. H. Sonntag, M.D. Saturday, September 29, 2007



Volker K. H. Sonntag, M.D. is a professor of clinical surgery at the University of Arizona and the vice-chairman of the Department of Neurosurgery at the Barrow Neurological Institute. At the institute, he is also chairman of the spine section and director of the residency program. He specializes in spinal disorders. His subspecialties include degenerative spine disease, spine tumors and fractures.

For more information regarding any of the above events or announcements, please contact Joanie Mastrandrea at 503-494-6207 or mastrand@ohsu.edu

Appointments

Kim J. Burchiel, M.D., appointed president of the Western Neurosurgical Society, 2007.

Nathan R. Selden, M.D., Ph.D., appointed to the 10 member Strategic Planning Committee of the Congress of Neurological Surgeons (CNS), and to serve as the scientific program chairman of the CNS Annual Meeting, Orlando, Fla., Oct., 2008.

Neurosciences Nursing

Neuroscience Intensive Care Unit

Nursing Division Director: Judi Huffman, R.N., M.S.



Judi directs all aspects of management and ensures the provision of quality patient/family centered care within the service lines she is assigned. She provides leadership development, evaluation of policies, procedures and strategies for the service lines and assures interdisciplinary collaboration among staff and management to optimize care and work environment. Judi also oversees administration of five

operating budgets totaling \$24 million. She works with physician and administrative partners and other disciplines to maximize interdisciplinary care and set priorities in accordance with institutional and departmental goals. Judi has 20-plus years clinical nursing experience.

Interim Manager and Nursing Practice & Education Coordinator: Betty Cole, B.S.N., R.N., C.N.R.N.



Betty has been a nurse for 28 years, having worked the continuum of care from emergency to inpatient rehabilitation. Her passion lies with the neuroscience patient population, particularly stroke patients. In her capacity as nurse practice & education coordinator and interim manager she enjoys the challenges of coordinating, teaching, and working as a part of the process that allows nursing staff to maintain high-standard neuroscience patient care. "It is wonderful to see how the culture of our unit has evolved since it opened in October. We enjoy an atmosphere that is truly collaborative, team oriented, and supportive."

to see how the culture of our unit has evolved since it opened in October. We enjoy an atmosphere that is truly collaborative, team oriented, and supportive."

Number of Beds: 13 (new facility with a planned expansion to 17)

Primary patient populations served: Critically ill patients with primary neurological medical and surgical conditions such as ischemic and hemorrhagic strokes, brain tumors, traumatic brain injury, seizure disorders, infections of the central nervous system, neuromuscular disorders, post-angiography of coils and clippings of cerebral aneurysms, and cerebral stents.

What makes the unit special: The RNs are specialty trained and highly skilled in the care of critically ill neuroscience patients. The nursing and medical staff are dedicated to the care of this special patient population. The nursing care team is led by a nurse manager and nursing practice and education coordinator in collaboration with a neurointensivist medical director. The unit is located in a new, state-of-the-art facility in University Hospital South.



Clinical Neurosciences & Otolaryngology

Nursing Division Director: Judi Huffman, R.N., M.S.

Manager: Nancy Trumbo, R.N., B.S.N.

Nursing Practice & Education Coordinator: Judy Van Dyke, B.S.N., R.N.

Number of Beds: 30 (new facility in the Kohler Pavillion)

Primary patient populations served: Otolaryngology, Head & Neck Surgery, Neurology, Neurological Surgery



What makes the unit special: The unit is located in a new facility in the Kohler Pavillion and serves a mixture of complex surgical cases (such as head and neck resections for cancer, pituitary surgeries, aneurysm clippings) to overnight surgeries (such as micro-dissectomies, thyroid and parathyroid removals). As part of the The Oregon Stroke Center, the unit team treats and cares for stroke patients from around the state. Seizure monitoring rooms for epilepsy patients are available also. Neurosurgeon, **Johnny Delashaw, M.D.**, and endocrinologist, **Maria Fleseriu, M.D.**, work together to treat and care for pituitary patients. Referrals from their Web site, www.ohsupituitary.com, bring pituitary patients to OHSU from all over the country. Services are efficient and as a result, patient discharge needs and education are determined as quickly as possible. The unit-based nursing practice council supports four subcommittees: education, practice, spirit and quality, and inspires neuro/ENT nurses to be team players and implement a nursing philosophy of modeling and role-modeling with patients with complex needs.

Portland's "2007 Top Docs List"

compiled by Portland Monthly magazine

Surgery-Neurological

Kim J. Burchiel, M.D.
Johnny B. Delashaw, Jr., M.D.

Surgery-Neurological (Pediatric)

Daniel J. Guillaume, M.D.
Nathan R. Selden, M.D., Ph.D.

Neurology

Dennis N. Bourdette, M.D.
John G. Nutt, M.D.
W. Brewster Smith, M.D.

Neurology (Pediatric)

Amy Kao, M.D.
Thomas K. Koch, M.D.
Colin M. Roberts, M.D.

New Director of Pituitary Unit

Maria Fleseriu, M.D., assumed the role of director of the OHSU Pituitary Unit in January 2007. Her research interests include pituitary and thyroid disorders. Dr. Fleseriu is board certified in internal medicine and endocrinology.



For more information or patient referrals, please contact:

OHSU Pituitary Unit, c/o Maria Fleseriu, M.D.
Mail Code: BTE472, 3181 S.W. Sam Jackson Park Rd.
Portland, Oregon 97239

Phone: 503-494-9060
E-mail: pituitary@ohsu.edu
web: www.ohsupituitary.com

Doernbecher Children's Hospital Team Completes First-Ever Stem Cell Transplant in Human Brain; first stem cells recipient goes home

Neurosurgeons and physicians at Doernbecher Children's Hospital, Oregon Health & Science University, performed the first transplant of purified human fetal neural stem cells into the brain of a 6-year-old boy with neuronal ceroid lipofuscinosis (NCL), also known as Batten disease, on Nov. 14, 2006.

Neuronal ceroid lipofuscinosis is a rare and fatal neurodegenerative disorder that affects infants and children. The transplant is the focus of a Phase 1 clinical trial to evaluate the safety and preliminary efficacy of HuCNS-SC — a proprietary human central nervous stem cell product developed by StemCells Inc., Palo Alto, Calif. (www.stemcellsinc.com). This one-year trial will involve up to six children with NCL.

"Doernbecher's specialists are privileged to care for this child and family and to push forward groundbreaking work in degenerative brain diseases," said study co-principal investigator **Nathan R. Selden**, M.D., Ph.D., F.A.C.S., F.A.A.P., who performed the surgery. "Our team is pleased that our patient's recovery thus far has been as expected."



Dr. Selden

The parents of the first child to receive the stem cells, Marcus and Joanna Kerner, provided an update on their son's progress at a press conference Dec. 12, just prior to their going home. Study co-principal investigators Selden and **Robert D. Steiner**, M.D., F.A.A.P., F.A.C.M.G., were present to support the family.

The research team will continue to concentrate its efforts on the health and well-being of this and future study participants and their families and will, along with Stem Cells, Inc., provide periodic updates as appropriate until the trial is completed.

The clinical trial is being led by Steiner, vice chairman of pediatric research at Doernbecher Children's Hospital, and professor of pediatrics and molecular & medical genetics in the OHSU School of Medicine; Selden, Campagna Associate Professor of Pediatric Neurological Surgery and head of the Division of Pediatric Neurological Surgery, Doernbecher and OHSU School of Medicine; and Thomas K. Koch, M.D., F.A.A.P., F.A.A.N., director of pediatric neurology and professor of pediatrics and neurology at Doernbecher.

Media contacts : www.ohsu.edu/stemcelltrial

OHSU: Tamara Hargens, hargenst@ohsu.edu; 503 494-8231

StemCells Inc.: Jayme Maniatis, Schwartz Communications; stemcells@schwartz-pr.com; 781 684-0770

Visiting Resident



Jonathan P. Miller, M.D., joined neurosurgical residency in July 2006 and is completing a year-long enfolded fellowship in stereotactic and functional neurosurgery with Kim Burchiel, M.D. A native of Ohio, Dr. Miller majored in molecular biophysics and biochemistry at Yale University, New Haven, Conn., and completed medical school at Case Western Reserve University in Cleveland OH in 2002. He completed a surgical internship at University Hospitals, Case Medical Center, and entered

neurosurgical residency at the same institution. He is scheduled to complete neurosurgical residency training in 2009. Dr. Miller's neuroscience research interests include neuroprosthetic development and neuroimaging. His interests include music and classical languages. He is a classically trained pianist and studied at the Cleveland Institute of Music under Anita Pontremoli and Betty Zimmer.

New Residents

by Nathan R. Selden, M.D., Ph.D.

I am extremely pleased to announce the OHSU neurological surgery matches for 2007.

Hai Sun, M.D., Ph.D., will graduate from Dartmouth Medical School, Hanover, NH in June 2007. Dr. Sun is trained in both medicine and biomedical engineering. His interests include woodwork, distance running and international travel.



Dr. Sun

Neil Roundy, M.D., will graduate from the University of Arizona, Tuscon, AZ in June 2007. Dr. Roundy has served as coordinator of the Cross Streets Medical Free Clinic in Tuscon, and in other volunteer capacities for the underserved. His interests include rock climbing, mountain biking, snowboarding and photography.



Dr. Roundy

As in previous years, we were fortunate to match some of the finest U.S. medical students interested in neurological surgery. Both candidates were highly sought nationally and it is testament to the exemplary clinical, research and educational opportunities provided by OHSU and neurological surgery that they have selected OHSU for training.

Resident Award

Neurosurgery Research and Education Foundation (NREF) Award
Central mechanisms of pain in dural inflammation

Justin Cetas, M.D., Ph.D., has been selected as one of the recipients of the 2007 NREF Award. Dr. Cetas is presently a senior resident (5th year) and will utilize these funds in his sixth year of residency, which is dedicated to research. His mentor is professor **Mary Henricher**, Ph.D. In particular, this award will allow Dr. Cetas to pursue advanced research exploring dural inflammation. The dura constitutes the tough, fibrous membrane forming the outermost of the three coverings of the brain and spinal cord.

Dural inflammation accompanies many neurological and neurosurgical disorders, and is associated with significant morbidity, not least of which is severe pain and hyperalgesia (an exaggerated sense of pain). An important factor may be brainstem modulatory circuits, including the rostral ventromedial medulla. Recent migraine studies suggest that brainstem neurons may also play a role in generation and maintenance of pain arising from dural inflammation.

Dr. Cetas plans to examine the recruitment of identified pain modulating neurons in the rostral ventromedial medulla in a rat model of dural inflammation. Dr. Cetas's studies may lay the foundation for future studies on novel therapeutic interventions for pain arising from inflammation of the dura.

For more information or patient referrals,
contact OHSU Neurological Surgery

www.ohsu.edu/neurosurgery

Phone: 503 494-4314

Fax: 503 494-7161

nsg@ohsu.edu

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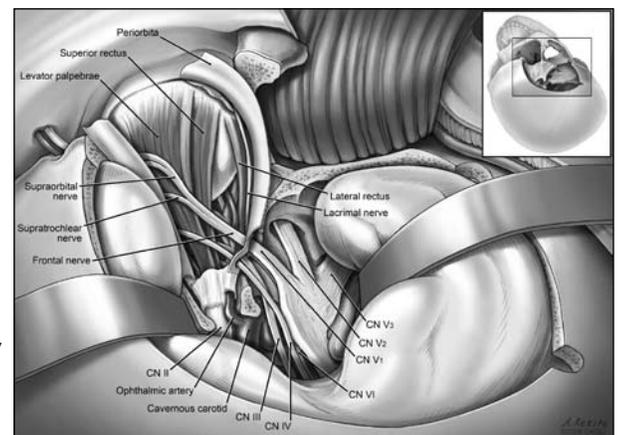


illustration from Sincoff, Delashaw chapter, Orbitosphenoid Meningiomas

