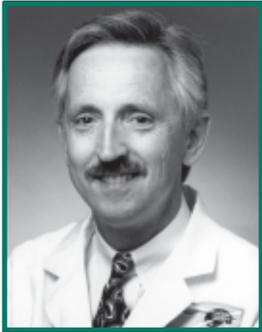


Neurotransmitter

Department of Neurological Surgery, OHSU School of Medicine

www.ohsu.edu/som-neurosurgery

December 2001



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

Neurotransmitter is published biannually by the Department of Neurological Surgery, Oregon Health & Science University, for colleagues, alumni and friends of the department. For inquiries, submissions, suggestions, please contact Shirley McCartney, Ph.D., at 503 494-7469 (mccartns@ohsu.edu) www.ohsu.edu/som-neurosurgery

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Calendar

The events of this past fall have prompted us all to focus on thoughts of family, home and nation. For many, this has been a time of reconsideration of the deeper meaning of our lives and our work. In particular, for health care professionals, physicians and non-physicians alike, this should be a time for rededication to the precepts of professionalism, collegiality and mission. By professionalism, I mean that what we do is as much a calling as it is a job. We should look for opportunities to go the “extra mile” for our patients. By collegiality, I mean treating all of our professional associates with courtesy and respect. By mission, I mean the tripartite goals of “healing, teaching and discovery”. In honoring these professional ideals, we honor our country and our fellow citizens. We can all strive to make our work a tribute to our national values and aspirations.

I am pleased to welcome Steven Toms, M.D., M.P.H. to the department. Steve comes to us from Vanderbilt University where he had an active practice of neurosurgery and a productive laboratory effort devoted

to the genomics of malignant gliomas. Steve will be chief of the Section of Neurosurgery at the Portland VA Medical Center and will be building his neuro-oncology laboratory at the N.W. Cancer Center at the PVAMC. He will also be entering the neurosurgery call schedule rotation, and he will be starting an outpatient clinic in the Hatfield Research Center. Please join me in welcoming Steve, his wife Helen, and their young son Michael to the Department of Neurological Surgery and to Portland.

We were honored to host Russel Patterson, M.D., at the 2001 Raaf lecturer this year. The entire faculty and resident staff appreciated Patterson’s experience and insights during his visit, and during two outstanding presentations on Raaf Day. Like many previous Raaf speakers, Patterson knew Raaf well, and was one of the “youngsters” at the Rogue River Neurosurgical Society meetings held at the Raaf’s cabin on the Rogue, Crooked Rifle. His observations on John and Lorene during those days on the Rogue were both humorous and heartfelt. We were touched that Raaf’s

daughter, Jean Binnewies, could be there for morning presentations.

Once again we have persevered in the throes of resident interviews! It represents an enormous amount of work for many on our staff. In particular, Joanie Mastrandrea once again performed yeoman’s duty (above and beyond the call). Thank you to Joanie, and to all who helped make these interviews a success. I know that we are doing something right when I receive so many genuine statements of appreciation from the candidates. They are impressed with our warmth and concern for their interview experience.

Lastly, I am pleased to announce that my textbook *Surgical Management of Pain* has now been released. This was a multi-year effort that could not have been completed without the constant support of Beth Fee. I think we are both glad to have this “baby” delivered!

Best wishes to you all for a safe, happy and, above all, peaceful holiday season.

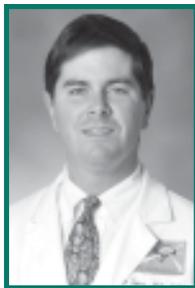
Kim J. Burchiel, M.D., F.A.C.S.

Welcomes/Farewells and Congratulations

Faculty

Steven A. Toms, M.D., M.P.H.

Toms joined the Department of Neurological Surgery as an assistant professor in November 2001. Toms studied political science as an undergraduate at Brown University, earning a B.A. in 1986. Toms completed his M.D. at Brown University in 1989, earning the Brown University Program in Medicine Award for Outstanding Performance in Medical Studies. Toms then began his neurosurgical residency at the Cleveland Clinic Foundation. During this time, he took an one-year hiatus to obtain a master's degree in public health at The Johns Hopkins University. He completed his residency in 1997, receiving several awards including the International Center and the Crile traveling fellowships as the outstanding graduating resident. He also received the Bruce Hubbard Stewart Award for compassion and skill in the practice of medicine.



Toms

In 1998 Toms completed a fellowship in neurosurgical oncology at The M.D. Anderson Cancer Center. Since that time he has been an assistant professor of neurological surgery and otolaryngology at the Vanderbilt University Medical Center. As head of the section of neurosurgical oncology, his primary clinical responsibilities have been in the care of individuals with primary and metastatic brain tumors, skull base neoplasms, and spine and spinal column tumors. His research has been published in international journals, including *Clinical Cancer Research*, *Oncogene* and *Neurosurgery*.

Toms will continue his clinical practice in neurosurgical oncology at both OHSU and the VA. He will continue clinical research into the optical spectroscopy of brain tumor margins and investigations into improvements in the delivery of therapeutic agents to the brain. His laboratory will be in the N.W. Cancer Center and will focus on the investigation of the molecular biology of gliomas, including the study of several novel tumor suppressor genes implicated in gliomagenesis.

Fellows

Moo Seong Kim, M.D., Ph.D., M.S.

Kim is a visiting professor in the Division of Functional and Stereotactic Neurosurgery. Kim comes to neurological surgery at OHSU from Korea where he is an assistant professor at Inje University Pusan Paik Hospital, Korea. Kim and his family will be in Portland through August 2002.

Grzegorz Kiwic, M.D.

Kiwic is a visiting professor in the Division of Functional and Stereotactic Neurosurgery. Kiwic, who is originally from Poland, has already spent one year at OHSU with Ed Neuwelt, M.D., in the Blood-Brain Barrier Program. Kiwic will be with the department until December 2001.

Jeffrey Chiu-Jeffrey a student at Boston University majoring in biology, observed faculty and residents for one month in July, 2001.

Employees

Kelly Fox, R.N., B.S.N.

Fox joined Burchiel's pain practice as a pain nurse coordinator in September 2001. Fox comes to the Department of Neurological Surgery from Medtronic where she served as a clinical educational specialist. The department is very pleased to have someone with Fox's experience and background as a member of the pain program in Burchiel's division. Fox is in the pain practice Tuesday through Thursday.



Fox

Jennifer Reeder, B.A.

Reeder joined the laboratory of Thomas Baumann, Ph.D., as a research assistant in December 2001. Reeder a recently graduated from Northern Arizona University with a major in microbiology and chemistry.

Adam Sanchez, C.N.A.

Sanchez joined the Department of Neurological Surgery in December 2001 as a certified nursing assistant. Sanchez is a prospective nursing student. Sanchez's most recent employment was with OHSU hospital where he worked with the Departments of Neurological Surgery and Otolaryngology/Head and Neck Surgery patients in the inpatient care areas.

Farewells

The Department of Neurological Surgery would like to extend its best wishes to staff members who have, or will be, moving on to new opportunities.

Larissa Jeffreys, R.N., B.S.N.

Jeffreys is now a full-time student in the Psychiatric Mental Health Nurse Practitioner Program at the OHSU School of Nursing. She continues to work several hours on Fridays in neurological surgery programming and educating post-op pump and stimulator patients. Jeffreys also spends a few hours a week as a graduate research assistant in the "ADHD, Ethnicity and Family Environment Study" through OHSU, in addition to working a couple of shifts a month in the inpatient Child and Adolescent treatment unit at Emanuel Hospital.

Kelly Schoo, C.M.A.



Schoo is not returning to work after the birth of her baby. Schoo has been an essential asset in the smooth running of the neurological

From left Poirier, Schoo and Olmsted

cont. on Page 7 ...

2000-2001 Highlights in Research and Education

ANDERSON AND BURCHIEL Medtronic Neurological

Five-year contract for continued investigation of deep brain stimulation (DBS) for patients with Parkinson's disease and to initiate studies of DBS for tinnitus.

Surgical Management of Pain 2002 NEW!!!

Burchiel's complete, one-volume pain management sourcebook features: current concepts of pain neuroanatomy, physiology and pathophysiology; new procedures that minimize invasiveness and postoperative neurological deficiencies; and the entire scope of surgical and medical management of pain. Visit, www.thieme.com/SID2006360790612/products/subpages/pubid959197670.html, for more information.

Medical Research Foundation of Oregon

Award to develop an Intraoperative Neurophysiology Special Interest Group. This will be an international group of investigators with the mission of standardizing the collection of microelectrode recording (MER) data from deep nuclei of the brain. The group will create and validate data-analysis tools and an Internet-accessible data archive for the data. Burchiel will be working with James McNames, Ph.D., from the Portland State University Department of Computer Engineering, to develop the initial data sets and tools.

Micronet Medical, Inc.

A contract to study spinal cord stimulation in the treatment of chronic pain, evaluating the effectiveness of Micronet Medical's Axxess lead over the next two years.

CHESNUT AND SELDEN Guidelines for the Management of Severe Head Injury in Children.

Randall Chesnut, M.D., associate professor, and Nathan Selden, M.D., Ph.D., assistant professor of neurological surgery, with a team of investigators heavily represented by OHSU faculty and staff, have taken on the task of developing guidelines for the acute medical management of TBI in children and adolescents. With funding from the International Brain Injury Association, the team first met in Chicago in the summer of 2000, and on the OHSU campus last June, to work on the guidelines.

JOHNNY B. DELASHAW, M.D. Guilford Pharmaceuticals

Guilford Pharmaceuticals has recently named OHSU as one of 15 hospitals nationwide that will participate in a data analysis project to look at Medicare reimbursements for patients with glioblastoma multiforme treated with GLIADEL wafers. Delashaw has utilized these wafers in his treatment of glioblastoma patients for several years now and will provide data to Guilford Pharmaceuticals with the hope of improving thera-

peutic access.

BARNWELL AND DELASHAW Discovery Health

The television show "Super Surgeries" aired Dec. 12 and addressed skull-based surgery. It featured a patient with an aneurysm that was clipped. The crew followed the patient through surgery and for a few weeks post-op. The show also featured Barnwell and Delashaw.

MARY HEINRICHER, Ph.D. National Institutes of Health

A \$1.4 million dollar grant from the National Institutes of Health for a four-year study of the role of pro-inflammatory cytokines in controlling the activity in pain modulating circuits in the brain stem.

Society for Neuroscience

Heinricher, M.M.; Kincaid, W.; and Neubert, M.J. Neural substrate for analgesic and hyperalgesic actions of neurotensin within the rostral ventromedial medulla. Kincaid, W.; Xu, M.; Kim, C.J.; Roberts, W.J.; and Heinricher, M.M. Medullary substrate of secondary hyperalgesia produced by mustard oil in lightly anesthetized rats.

SARAH LAYMAN, A.R.N.P. Speaker

National American College of Nurse Practitioner's Clinical Symposium

Brains, Drains and Head Injury in Children
Neurological Exam With Diagnostic Correlation.

OHSU School of Nursing
Antiepileptics

University of Washington School of Nursing
Neuropharmacology and Neuroassessment

OHSU Trauma Nursing Conference
Trauma in the Elderly

Instructor

National American College of Nurse Practitioner's Clinical Symposium

The Society of Critical Care Medicine's Fundamental
Critical Care Course

Neurotrauma and Trauma/Burn Management

Nathan Selden, M.D., Ph.D. National Institutes of Health

Congratulations to Selden on the submission of his first K08a grant "Purinergic control of medullary pain modulation." Now that he has literally "felled a rainforest" in the process, he awaits news of funding.



Selden

John Raaf Day 2001

The Department of Neurological Surgery is proud to recognize the accomplishments of John Raaf, M.D., 1905 - 2000, widely regarded as the father of neurosurgery in the state of Oregon. Raaf advanced the profession during his years as chairman of the Department of Neurosurgery at Good Samaritan Hospital by creating an outstanding resource for the neurosciences community in the Pacific Northwest.

The 11th John Raaf Lecture



The John Raaf Lecture for 2001 featured Russel Hugo Patterson Jr., M.D., F.A.C.S., former professor of neurosurgery at the New York Hospital/Cornell Medical Center.

Kim Burchiel, M.D., started the day with a tribute to John Raaf, M.D., and a presentation and overview of the Department of Neurological Surgery, and a history of OHSU. This was followed by presentations by Patterson.

Past John Raaf Lecturers

Lawrence F. Marshall, M.D.	1991
John A. Jane, M.D., Ph.D.	1992
Julian T. Hoff, M.D.	1993
Albert L. Rhoton Jr., M.D.	1994
Martin H. Weiss, M.D.	1995
Robert H. Wilkins, M.D.	1996
John M. Tew, Jr. M.D.	1997
Donlin M. Long, M.D., Ph.D.	1998
Robert Grossman, M.D.	1999
William A. Buchheit, M.D.	2000

Patterson discussed the Rogue River Neurological Society, founded in 1948. (The original founders of the Rogue River Neurological Society were Raaf, Rupert Rainey, M.D., Dr. Mac and Francis Murphy, M.D.) The Rogue River Neurological Society met in Agness, Ore., at the Raaf's cabin, "The Crooked Rifle Lodge." Patterson shared his memories and experiences of times fishing in Agness with other members of the society and then proceeded to discuss: "Some Tricks For Safe Subfrontal Surgery" and "Transpedicular Approach to Thoracic Spinal Lesions." Members of the Raaf family were able to attend this section of the day.



Burchiel and Patterson



Patterson and the residents

Visiting Professor Lecture Series

The Visiting Professor Lectures feature some of the most outstanding medical professionals in the field of neurological surgery. Guests are invited to present cases of interest for discussion. The Department of Neurological Surgery and its faculty were pleased to invite the following visiting professors.

Johnny B. Delashaw Jr., M.D.

Saturday, Aug. 18, 2001

Transferrin Targeted Therapy for Brain Tumors Presented by Karin Muraszko, M.D.

Karin Muraszko, M.D. the chief of pediatric neurosurgery at the University of Michigan, visited the Department of Neurological Surgery in the OHSU School of Medicine, in August 2001. Muraszko's research interests include: experimental therapies for the treatment of pediatric brain tumors; treatment and diagnosis of Chiari Malformations and other congenital anomalies of the spine and brain; and treatment of children with complex craniofacial anomalies.

Muraszko is actively involved in organized neurosurgery, serving on a variety of committees within the American Association of Neurological Surgeons, the Congress of Neurological Surgeons, the American Society of Pediatric Neurosurgery, and the American College of Surgeons.



Muraszko and Selden



Hsu, Abo, Muraszko and Sandquist

Friday Oct. 5, 2001

Signal Processing and Pattern Recognition in Microelectrode Recordings Presented by Jacques Favres, M.D.

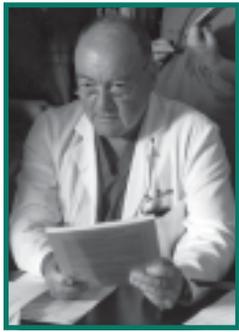
Jacques Favres, M.D. is an academic neurosurgeon in Lugano, Switzerland, and clinical associate professor in neurological surgery, OHSU School of Medicine. Favres was a functional and stereotactic research fellow in neurological surgery at OHSU from 1995 - 1996 and appointed to clinical associate professor in 1999. Favres research interests include epilepsy, functional and stereotactic neurosurgery and computer-assisted teaching. Favres is actively involved in organized European and American neurosurgery and is a member of the World, European, and American Societies for Stereotactic and Functional Neurosurgery. Favres is an active clinical resident instructor and has taught a number of practical courses at AANS and CNS meetings. Visit www.neurochir.ch/

Saturday Dec. 1, 2001

The Bloody Crossroads: The Orbit, Paranasal Sinus & Craniosynostosis

Presented by John Anthony Jane, M.D., Ph.D.

John Anthony Jane Sr., born in September 1931 in Chicago, Ill., grew up on the south and west side of Chicago. Jane graduated cum laude from the University of Chicago in 1951. Jane then attended the University of Chicago School of Medicine, receiving his M.D. in 1956.



Jane then performed an internship at the Royal Victoria Hospital, McGill University, returning to his neurosurgical residency with Sean Mullan, M.D. at the University of Chicago clinics in 1957. In 1958 Jane was a fellow in neurophysiology with Herbert Jasper, M.D., at Montreal Neurological

Institute. In 1959 Jane was a senior fellow in neuropathology and in 1960 a demonstrator in neuropathology, both at McGill University in Montreal.

In 1961 Jane was a research assistant in neurosurgery with Sir Wylie McKissock at St. George's Hospital and the National Hospital, Queen Square in London, England. In 1962 he was a research associate with Irving T. Diamond, (who was his Ph.D. adviser) in the Department of Psychology at Duke University. Jane completed his neurosurgical residency from 1963 - 1964 with Oscar Sugar, M.D. and Eric Oldberg, M.D. at the University of Illinois Research & Educational Hospital and the Illinois Neuropsychiatric Institute. The year 1965 found Jane as senior instructor in neurosurgery with Frank Nulsen, M.D. at Case Western Reserve. In 1967 Jane was awarded a Ph.D. from the University of Chicago, Division of Biological Sciences, Section of Biopsychology. After four years at Case Western Reserve Jane assumed in 1969, his present position of professor and chairman of the Department of Neurosurgery, University of Virginia School of Medicine in Charlottesville, Va.

Jane previously visited the Department of Neurological Surgery in 1992 as the John Raaf lecturer.



Jane and Burchiel

.....

Community Outreach

Did you know that neurological surgery offers four neurosurgical consult services at clinics throughout Oregon?

Edmund Frank, M.D.

1 Salem Clinic. Edmund Frank, M.D., is available for consultation for spine and cervical cases at the clinic one day (Thursdays) every other week. This clinic is located in the Spine Center at the Orthopaedic and Fracture Clinic, Salem, Ore.

2 Mid-Columbia Neuroscience Clinic. Located in The Dalles, Ore., the Mid-Columbia Neuroscience Clinic provides comprehensive neurosurgical consultation in association with the Mid-Columbia Medical Center. Edmund Frank, M.D., is available for consultation at the clinic on Tuesdays every other week.

Both of the above clinics provide an important service for rural and outlying areas by giving health care providers in the area access to specialized neurosurgical services that could otherwise be accessed only by travel to the Portland metropolitan area.

Johnny Delashaw, M.D.

3 Longview Neurosurgical Clinic. The Longview Neurosurgical Clinic is staffed by Johnny Delashaw, M.D., four days per month (Wednesdays) and provides consultation in general neurosurgery, skull-base tumors, neurovascular disease and neurooncology. The clinic is provided in association with the Triangle Medical Clinic.

Sarah Layman, A.R.N.P.

4 Doernbecher Pediatric Outreach Clinic. The Doernbecher Pediatric Outreach Clinic at the CDRC center in Eugene, Ore., takes place on the second Wednesday of each month. Sarah Layman, A.R.N.P., neurosurgical nurse practitioner, staffs a clinic devoted to routine postoperative follow-up appointments, annual hydrocephalus check-ups, and other visits that do not require a trip to the main clinic in Portland. The clinic has been very successful in saving travel time for families from Eugene and southern Oregon who are cared for by the pediatric neurosurgery service at OHSU Doernbecher Children's Hospital.

OHSU

Neurosurgical Web Sites

- ❖ www.ohsu.edu/som-neurosurgery
- ❖ www.ohsu.edu/som-cerebrovascular
- ❖ www.ohsu.edu/som-ntrg
- ❖ www.ohsu.edu/som-pedneurosurg
- ❖ www.vertedyne.com/consulting.htm

- ❖ ozone.ohsu.edu/som-neurosurgery/
(INRANET internal use only!)

Employees of the Quarter 2001

The Department of Neurological Surgery has many hardworking and dedicated employees. We often receive feedback from patients, families, OHSU employees and co-workers within the department on individuals that have shown extraordinary customer service. If you believe that an employee has, does and continues to go beyond the call ... then nominate them for Employee of the Quarter!

Winter 2001 - Todd Ellingson

Spring 2001 - Christine Hammerton

Summer 2001 - Jodi Philips

Fall 2001 - Megan Brooke

Employees of the Year.

- ❖ **1998** **Joanie Mastrandrea**
- ❖ **1999** **Elisa Kilbane**
- ❖ **2000** **Megan Brooke**
- ❖ **2001** **Christine Hammerton**

Recognizing Outstanding Service Excellence (ROSE AWARDS)

To date, the following individuals have received ROSE awards in 2001:

Sarah Layman, A.R.N.P.
Jane Olsen, R.N.
Keeley Olmsted
Nathan Selden, M.D., Ph.D.
Frank Hsu, M.D., Ph.D.
Warren Roberts, M.D.



CALENDAR

Neurological Surgery Calendar Online. Please bookmark:

www.ohsu.edu:8900/cgi-bin/cals/webevent.cgi?cM.D.=openca&cal=cal11&

All departmental events/meetings, etc., can now be located at the above URL (presently available for view on campus only). The on-call and OR schedules can also be located here (login and password required). Send events and details to Joanie Mastrandrea at mastrand@ohsu.edu.

Spine Conference

Held first and third Thursdays of each month, OHSU- HRC 12D03. Contact Megan Brooke at brookem@ohsu.edu for details.

"The Developing Brain"

<http://soar.ohsu.edu/baw/>

Brain Awareness Week, March 9 - 16, 2002.

The mysteries of the developing brain may seem unfathomable to most of us, but some of the top neuroscientists and physicians in Portland and around the nation will help explain how the brain develops, does what it does (or doesn't do what it should). The national celebration will be marked in Oregon by a series of public events sponsored by OHSU and held at the Oregon Museum of Science and Industry.

"Life of the Brain Lecture Series" at OMSI

Wednesday nights, Feb. 6, 13, 20, 27, 2002.

"The Secret Life of the Brain" on Oregon Public Broadcasting

Tuesday nights, beginning Jan. 22, 2002.

"Brain: The World Inside Your Head" at OMSI

A whirlwind trip into the brain. The exhibit stops in Portland for three months before continuing on its five-year countrywide tour. The exhibit covers the practical to the philosophical with a walk-through brain, virtual reality video games, did you know about the brain, metaphysics of mind, demystifying mental disorders, such as depression and bipolar disorder, anxiety to schizophrenia, migraines, Alzheimer's, epilepsy and more. Look for the Dreamscape Theater. "Brain: The World Inside Your Head" will be open daily at OMSI, Jan. 30 - May 5, 2002.

Submit your information news, articles and ideas for the June 2002 issue of OHSU *Neurotransmitter* to Shirley McCartney, Ph.D., at mccartns@ohsu.edu

2001 Holiday Party



Delashaw, discusses "Some Tricks For Safe Subfrontal Surgery Approach"

Noguchi, counters the presentation with "The Japanese Approach"



Helgerson, Tien, Hsu and Nikkhab, discuss the pros and cons.

cont. from Page 2 ...

surgery clinic for the past six years. The clinic will continue to run under the expert care of Theresa Poirier, Keeley Olmsted, and Adam Sanchez (see above new employees). Schoo's last scheduled day of work was Dec. 7, 2001. The department wishes her well as she embarks on this new adventure.

Congratulations

The Department of Neurological Surgery would like to extend its congratulations to the following staff members:

☆ Jonathan Carlson, M.D., and his family on the birth of their daughter in July 2001.

☆ Todd Ellingson and Lori Andreas, who were married in June 2001.

☆ Miranda Neubert, whose paintings were featured at the All-Hill Art Show, Sept 24 - Oct 26, 2001 in the BICC gallery. The titles were: "Impressions of Van Gogh: Willow," "Impressions of Van Gogh: Cypress," and "Coastal Tranquility."

Thanks

Medical supplies for rescue dogs

The Department of Neurological Surgery wishes to thank Jodi Philips, Melissa Bogges and Christine Hammerton for their concern and help for the rescue dogs involved the New York City rescue efforts. They pooled their resources and sent medical supplies and food supplies: antibacterial spray, antibacterial shampoo, ear wipes, eye wipes, doggie aspirin, food dishes, doggie treats (to reward them for all of their hard work), and hydrocortisone spray (for the itches caused by the debris). All of the above items were purchased by specific request of the rescue effort workers in NYC.

Neurosurgical Researchers 2001- 2002

Gregory Anderson, Ph.D.,

Res. Asst. Professor, Skull Base Surgery

Priya Chaudhary, Ph.D.,

Postdoctoral Research Fellow

Beverly Cooke, R.N., B.S.N.,

Clinical Nurse Coordinator

Chris Coverdill, B.A.,

Research Assistant

Susan Cullinan, R.N., B.S.N.,

Research Associate

Cynthia Davis-O'Reilly, B.S.,

Sen. Res. Asst., Community Resource Advocate

Hugo duCoudray, Ph.D.,

Professor, Dept. of Neurological Surgery, OHSU

Professor Emeritus, Dept. of Psychology, Portland

State University

Kelly Fox, R.N., B.S.N.,

Clinical Nurse Coordinator

Chaeng-Jae Kim, M.D.,

Visiting Fellow, Korea

Susan Loehner, B.S.N.,

Clinical Nurse Coordinator

Melissa Martenson, M.S.,

Research Associate,

Miranda Neubert, B.A.,

Research Assistant

Jennifer Reeder, B.A.,

Research Assistant

Mei Xu, Ph.D.,

Postdoctoral Research Fellow



Department of Neurological Surgery, L-472

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You Can Help the Department of Neurological Surgery Meet Its Mission

The Department of Neurological Surgery has a variety of programs that support research and resident/fellow education. Listed below are brief descriptions of the different activities supported by these funds:

- ❑ **Raaf Chair:** This endowed chair supports research in neurological surgery and neurosciences.
- ❑ **Paxton Fellowship:** This endowed professorship will support the development and implementation of the most advanced and innovative methods in neurological surgical education. This special professorship will be filled by an academic neurological surgeon with a national reputation for education, innovation and state-of-the-art approaches to neurosurgical teaching techniques.
- ❑ **Neurosurgical Educational Gifts:** These gifts provide support for numerous endeavours, in keeping with neurological surgery’s mission statement. Emphasizing innovation and the dissemination of new knowledge; development of curricula and an environment that stimulates the spirit of inquiry; and research into the prevention and cure of neurological disease and disability.
- ❑ **Campagna Professorship:** This professorship provides support for a pediatric neurosurgical professorship and promotion of research in pediatric neurosurgery, and maintenance of the highest level of care for children with neurosurgical problems.

If you would like to make a tax-deductible contribution to any of these funds, please make your check payable to “OHSU-Dept. of Neurological Surgery” and submit it to **Bryce Helgerson at the address above, along with a copy of this page and the fund(s) you wish to contribute to checked off.** You will receive a letter stating that you have made a tax-deductible donation as proof of your charitable giving.

John Raaf, Department Chairman

Kim J. Burchiel, M.D. 503 494-7978

Faculty

Stanley L. Barnwell, M.D., Ph.D. 503 494-0371
 Johnny B. Delashaw, M.D. 503 494-7737
 Randall M. Chesnut, M.D. 503 494-3217
 Edmund H. Frank, M.D. 503 494-0371
 Nathan R. Selden, M.D., Ph.D. 503 494-0872
 Steven A. Toms, M.D., M.P.H. 503 494-4425

Valerie A. Anderson, Ph.D. 503 494-6393
 Thomas Baumann, Ph.D. 503 494-6393
 Mary Heinricher, Ph.D. 503 494-6393
 David Gostnell, Ph.D. 503 494-6393

Bryce R. Helgerson, M.H.A. 503 494-6428

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 Portland: 503 494-4567
 Outside Portland: 800 494-6478

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