

FROM THE TOP



VOLUME V ISSUE I

April 2012

Department News

A Few Notes From Dr. Holtzman:

I hope everyone is having a great Spring. It's hard not to be happy with Spring temperatures starting in March in the 70's and 80's! The Department is doing very well this academic year. We just had our match for Adult and Pediatric Neurology as well and Physical Medicine & Rehabilitation. All programs filled with excellent medical students from all over the country. We look forward to their arrival in late June.

While you can see the highlights throughout the Department in the section/ Division reports, I wanted to point out a few of these highlights. Dr. Anne Cross, head of the MS section, was appointed Chair of the National MS Society Research Programs Advisory Committee. Randy Bateman will receive a promising investigator award from the MetLife Foundation, one of the two most prestigious awards in Alzheimer's research internationally. David Brody received a Washington University Distinguished Investigator Award. Doug Larsen recently was selected as a Carol B. and Jerome T. Loeb Teaching Fellow for 2012 -2014.

We have an exciting upcoming Bishop and Hope Center afternoon of translational neuroscience on Tuesday April 10 from 1-5PM with Helen Mayberg from Emory speaking about DBS for depression and David Julius about molecular aspects of neurotransmitter receptors and ion channels.

I hope to see everyone at the annual AAN Washington University alumni reunion on Tuesday evening, April 24 at the Hilton New Orleans Riverside at 6PM.

Office of Neuroscience Research Dr. Anneliese Schaefer

Mark your calendars for the Third Annual Neuroscience Colloquium to be held on Fridays in September and October. Co-hosted by 19 WU departments and centers (including the Dept. of Neurology), the Neuroscience Colloquium is the only series to represent the Neuroscience Community on both the Medical and Danforth Campuses. The 2012 schedule is below; additional details are available on the ONR website: NeuroscienceResearch.wustl.edu.

2012 Neuroscience Colloquium
Fridays 4-5p (reception immediately following), Connor Auditorium (Farrell LTC)

September 7: Jay Gottfried (Northwestern University)

September 14: Anne Bertolotti (MRC Laboratory of Molecular Biology, Cambridge)

October 5: Matthew State (Yale University)

October 19: Robert Shannon (University of Southern California)

October 26: Arderm Patapoutian (The Scripps Research Institute)

NICU
Dr. Michael Diring

The neuro critical care division would like to welcome Salah G. Keyrouz, MD to our group. It might be more appropriate to say that we are welcoming him back as he completed his critical care training under Dr. Diring. He is originally from Lebanon where he attended medical school and he came to the States for his neurology training. Dr. Keyrouz is both an experienced researcher and clinician and will certainly contribute to our group's robust development. Dr. Diring has decided to hand down the responsibilities of medical director of the 10400 ICU to Dr. Keyrouz. Dr. Diring, the founder and soul of our expanding section, will remain division head.

ADRC Dr. John Morris

In The News:

ADRC Pilot Grant Recipients Selected

The Knight ADRC is pleased to announce the 2012 Pilot Research Grant awardees. The pilot research grant awards support investigators new to Alzheimer's disease, both those who are early in their career development and those who are more senior but not currently working in this area, to initiate research in dementia and aging. The 2012 awardees are:

Beebe, David C., PhD, FARVO, Ophthalmology & Visual Sciences, "Lens opacities as predictors of Alzheimer disease"

Kim, Jungsu, PhD, Neurology, "Plasma microRNA biomarkers for early detection of Alzheimer's disease"

Roe, Catherine, PhD, Neurology, "Driving performance in preclinical Alzheimer's disease"

Department News Continued...

Poletsky Award Presented

The Knight ADRC is pleased to honor Aging and Development program doctoral candidate **Jonathan Jackson** with the 2011 Richard & Mildred Poletsky Education Award. The Poletsky Award was established by Ms. Poletsky in 1995 to support education and career development for a promising graduate student or postdoctoral fellow working in the field of Alzheimer's disease or related dementias.



Jackson was selected from a competitive field of nominees and was awarded the \$1000 prize during an October reception with Ms. Poletsky. Jackson has been working with Dave Balota, PhD, and Denise Head, PhD, investigating multiple cognitive, neural and personality factors that may be most useful for early detection of AD. On hand at the presentation: **John C. Morris, MD; Poletsky; Jackson;** and mentors **Head and Balota.**

Honors

Randall Bateman, MD, was honored in November with the 2011 Alzheimer Research Forum Innovation Award. AlzForum said of Bateman and his work with the Dominantly Inherited Alzheimer's Network (DIAN): "you are pioneering what a growing number of scientists believe is a critically important project for the future of AD clinical trials. You do that despite having to tackle ethical, legal, logistic, funding and scientific challenges all at once, not to mention having to forge a public-private partnership around a goal that pushes beyond the boundaries of pre-competitive space. All along the way, you have openly

shared information with the worldwide research community and other stakeholders via AlzForum. In every way, your work on DIAN embodies what we are trying to reward."

Washington University School of Medicine has 15 finalists (see list below)..

Each finalist will be presented with an award at a dinner/reception on Thursday, April 19th at the Ritz Carlton. The overall winner in each category will also be revealed for the first time at the reception. In addition, the winners will be named in the May issue of St. Louis Magazine. The panel of judges included: Dr. Karen Drenkard, Executive Director of the American Nurses Credentialing Center, Lora Lacey-Haun, dean of the University of Missouri- Kansas City School of Nursing, Jill Kliethermes, CEO of the Missouri Nurses Association (MONA) and Missouri Nurses Foundation, and Dr. Diane Twedell, Vice President and Chief Nursing Officer of Austin Medical Center

Please join us in congratulating the following WUMS finalists:

Christi Abeln—Orthopedic Surgery
Anne Albers—Pediatrics-Neurology
 Mary Clare Blackburn—IM-Endocrine/Metab
 Jill Conway—Surgery
 Heidi Craddock—IM-Cardiology
 Madelyn Curry—Orthopedic Surgery
Laura Kuchnicki—Pediatrics-Neurology
 Barbara Merz—Orthopedic Surgery
 Sandra Odenwald—IM-Immunology
Angela Oliver—Neurology – Memory & Aging
 Stacy Pokorny—Pediatrics-Surgery
 Mary Quasebarth—Surgery
 Christine Rimkus—IM-Med Oncology
 Mary Ellen Swatske—Radiology
 Kathleen Winborn—IM-Cardiology

Randall Bateman, MD was selected for membership in the American Society for Clinical Investigation Council. The induction will be held in April.

Congratulations to **Randall Bateman, MD**, upon his receipt of the prestigious 2012 MetLife Promising Investigator Award. The award provides a \$100,000 institutional prize in recognition of Dr. Bateman's work in Alzheimer's Disease, and will be presented in New York City in May. |

Congratulations to **Chris Carpenter, MD, MSc, FACEP, FAAEM**, who received the WUSM 2012 Distinguished Educator House Staff Teaching Award. Dr. Carpenter is an Assistant Professor in the Division of Emergency Medicine and the Director of Evidence Based Medicine at Washington University. Dr. Carpenter has most recently been researching the effectiveness of various clinical strategies for dementia care.

Chris Carpenter, MD, MSc, FACEP, FAAEM was named Associate Editor of the Journal ACP Journal Club.

Congratulations to **David B. Carr, MD; David Clifford, MD; John C. Morris, MD;** and **Gene Rubin, MD, PhD** who were named to the 2011 Best Doctors In America list. Best Doctors in America uses peer-to-peer surveys to identify specialists considered by fellow physicians to be the most skilled in their fields and most qualified for reviewing and treating complex medical conditions.

David Holtzman, MD was selected to receive a 2011 Alzheimer Research Forum Extra Mile Award. The award was presented in November at the Society for Neuroscience meeting in Washington, DC. Of special note: having received an AlzForum award in 2002, Dr. Holtzman is the only scientist to win twice. The editors of AlzForum felt strongly about the award given the extensive amount

Department News Continued...

of time, effort, and expertise Dr. Holtzman contributes to the forum, despite his busy schedule.

David Holtzman, MD; David Carr, MD; B. Joy Snider, MD, PhD; and John C. Morris, MD were all recognized by WUSM for FY11 Patient Satisfaction scores which ranked them in the top 10% of medical school faculty. The satisfaction survey polled patients on 5 key areas including: the caring and respect shown by your physician; the ability to communicate clearly about your condition; how well your physician explained your tests, procedures, and medications; the effort to include you in decisions about treatment; and how well concerns were addressed.

John C. Morris, MD was appointed to the Alliance for Aging Research Science Advisory Board. The Alliance's Science Advisors are actively engaged in understanding the aging process, age-related disease, and the implications of an aging society. They offer the not-for-profit Alliance scientific insight, guidance, and expertise, and ensure that the organization's public education and policy development efforts continue to meet the highest standards.

Catherine Roe, PhD and **Nigel Cairns, FRCPATH, PhD** were selected to serve on the National Alzheimer's Coordinating Center (NACC) Steering Committee's Scientific Review Committee. **Chengjie Xiong, PhD** is phasing off the committee and was commended for his hard work and dedication.

Martha Storandt, PhD, Professor of Psychology and Neurology, received a Washington University Alumni Association Distinguished Faculty Award November 5th at the annual Founders' Day dinner.

Allyson Zazulia, MD, Associate Professor of Neurology and member of the HASD Project 1 investigative team, was honored with the Class of 2013 Second-year Distinguished Service Teaching Award. **Joel Price, MD**, Professor of Anatomy and Neurobiology, was honored with the Class of 2014 First-year Distinguished Service Teaching Award.

Funding / Awards

Randall Bateman, MD was awarded the 2011 Alzheimer's Association Zenith Fellows Award. The award provides \$450,000 over 3 years to support the project A Blood Isotope Labeled Amyloid-Beta Test for Alzheimer's Disease, which will study how the body produces and disposes of beta-amyloid, and how changes in those processes affect the development of disease.

Chris Carpenter, MD, MSc, FACEP, FAAEM was awarded a \$45,000 grant for his project Measurement Approaches to Capture and Evaluate Implementation Strategies through the BJHF/ICTS Funding Program.

Carlos Cruchaga, PhD received an Alzheimer's Association 2011 New Investigator Research Grant for the project Exome Sequencing of Late-Onset Alzheimer's Disease Families.

Incoming Knight ADRC Fellow **Suzanne Schindler, MD, PhD** received the AAN/Alzheimer's Association Katzman Clinical Research Training Fellowship for 2012-14. The fellowship provides \$55,000 per year for two years, plus \$10,000 per year for tuition to support formal education in clinical research methodology.

Catherine Roe, PhD was awarded \$41,964 from the Longer Life Foundation for her project Improving Presymptomatic Detection of Impending Alzheimer's Disease. The project will examine how cognitive reserve and brain reserve factors combine with amyloid imaging and cerebrospinal fluid biomarkers to predict cognitive impairment and AD, and will build biomarker models that yield individual risk profiles predicting the time of onset of cognitive impairment and AD. Congratulations to the following Knight ADRC faculty and collaborators who received 2011 Hope Center Pilot Project Awards. The awards fund collaborative

efforts towards a translational goal, and are made possible through funding from the Danforth Foundation Challenge.

Quantitation of Amyloid- β Peptides in CSF of Alzheimer's Disease Participants by Immunoprecipitation/Mass Spectrometry (IP/MS) and Solid Phase Extraction/Mass Spectrometry (SPE/MS). Principal investigators: **Randall Bateman, MD** and **Anne Fagan, PhD**

Isolating Cell-Type Specific miRNAs from Mice. Principal investigator: **Tim Miller, MD, PhD** and co-investigator **Joe Dougherty, PhD**

DNAJB6 in Protein Aggregation: Integration of Clinical Material, Mouse Models and Yeast Genetics. Principal investigator: **Chris Wehl, MD, PhD** and co-investigators **Matt Harms, MD** and **Heather True, PhD**

Faculty and Staff Updates

Congratulations are Extended to:

David Brody, MD, PhD, who was recognized with a Distinguished Junior Investigator Award in February. The prestigious award recognizes Dr. Brody's excellence in translational research as a young investigator.

David Carr, MD, upon promotion Professor of Medicine.

Jason Hassenstab, PhD, upon promotion to Assistant Professor and the funding of his K-23 Award "Neural Response to Insulin Resistance Treatment in February 2012.

Raphael Kopan, PhD, upon being named the Wolff Professor of Developmental Biology.

Erik Musiek, MD, PhD, Knight ADRC Fellow, upon passing the Neurology boards.

Department News Continued...

B. Joy Snider, MD, PhD, upon her recent United Council for Neurologic SubsPECIALTIES (UCNS) Certification in Geriatric Neurology.

Chengjie Xiong, PhD, upon receiving tenure in September, 2011.

Fond Farewells

- **Cherese Fisher**, MDC Research Patient Coordinator
- **Sue McCann**, Accounting Assistant
- **Mary Weis**, Knight ADRC and Friedman Center for Aging Administrator

Welcome to the team:

Rachel Chasse, BA – Psychometrician and Clinical Core. Rachel is a 2011 graduate of Baylor University with a Bachelor of Arts in Psychology and experience in social psychology as a study coordinator and lab manager.

Nan Moore –Accounting/Purchasing Assistant I. Nan spent 21 years in the IT field before transitioning careers and spending 10+ years in administration and accounting.

Renate Reimers, MD - Clinical Research Specialist. Dr. Reimers will serve as clinician conducting MAP participant research interviews. Dr. Reimers graduated with a Doctor of Medicine Degree from the University of Dusseldorf, Germany and is licensed and board certified in Internal Medicine and Rehabilitation Medicine in Germany.

Yvette Rockett, CNA - MDC Research Patient Coordinator - Yvette has 25 years of experience at BJH with registration and assisting with patients in the Surgical Care Center (Surgery, Trauma and Wound).

Linda Schimmoeller, RN, BSN, CCRC – Research Nurse Coordinator, Project 1. Linda's extensive experience includes research coordination for several projects at WUSM, plus experience in radiology, cardiovascular, ICU, and acute medicine.

Suzanne Schindler, MD, PhD - Knight ADRC Fellow. Dr. Schindler will split her

time between the Memory and Aging Project and conducting basic research in Dr. Marc Diamond's laboratory. Future aspirations including becoming an academic biomedical researcher - combining patient care and basic research to develop mechanism-based therapies for neurological diseases.

Julia Siebert – 2012 Ruth and Sam Hacker Graduate Nursing Research Fellowship in Aging. Julia is a graduate nursing student at the Goldfarb School of Nursing working toward her master's degree in nursing.

Christy Stewart, MBA – Grants/ Budget Specialist. Christa previously worked in the areas of marketing research, medical publishing and continuing education, and sales before joining the Knight ADRC.

Cassandra Ward, MSN, CWS, ANP-C - Nurse Practitioner, Memory Diagnostic Center. Cassie brings 7+ years of experience with Acute Care Surgery/Trauma, and in the outpatient Wound Center at Barnes.

Upcoming Events

Monday, April 30, 2012: John Morris, MD will present the Annual Friedman Lecture: "The Aging Mind: Realities and Myths." 3 pm: Lecture, Graham Chapel, Washington University Danforth Campus, 5 pm: Reception, Washington University Danforth University Center. The lecture is sponsored by the Harvey A. Friedman Center for Aging.

Tuesday, May 29, 2012: John C. Morris, MD will present the annual State of the Knight ADRC address at 10:00 – 11:00 a.m. in Connor Auditorium. Additionally, a full-group photograph of all Knight ADRC faculty, staff, and collaborators will be taken immediately after the lecture. Please plan to attend both the lecture and the photo session. If you are interested in taking a group photo of your lab or department, please contact Jennifer at 286-2882 by May 15th.

Tuesday, July 10, 2012: Alzheimer's Association International Conference (AAIC, for-

merly ICAD) Pre-Conference Poster Preview Session. 11:30 – 1:00 p.m. in the Atrium of the FLTC. This event will be held in place of the regularly scheduled Tuesday conference. We invite each investigator who was accepted for the 2012 AAIC to present his/her poster at this practice session.

Friday, September 28, 2012: The 8th Leonard Berg Symposium will be held from 7:30am to 5:00pm at the EPNEC. The Symposium, "Prevention of Alzheimer's Disease: Current Considerations," features a field of international experts and qualifies for 7.75 hours of CME credit. The event is free for members of the Washington University Community, \$40 for community guests, and \$100 for any attendee who would like CMEs. More details are coming soon, but a full schedule of events, including speakers, topics, and instructions on submitting abstracts for the poster session can be accessed at: <http://alzheimer.wustl.edu/education/berg/berg2012/>

The Knight ADRC hosted the 6th Annual Norman R. Seay Lecture in October. **Patrick A. Griffith, M.D., FAAN**, Professor of Clinical Medicine and Chief of the Division of Neurology, Morehouse School of Medicine, Professor of Clinical Medicine and



Chief of the Division of Neurology, Morehouse School of Medicine, provided the keynote presentation, "Are African Americans Part of the Alzheimer's Disease Story?" Pictured from left to right: **Griffith; Ida**

Department News Continued...

Goodwin Woolfolk, Chair of the Knight ADRG African-American Advisory Board (AAAB); AAAB Founding Chairman and civil rights leader **Norman R. Seay**; and **John C. Morris, MD**. The 7th Annual Seay Lecture is tentatively scheduled for October 16th, with more details coming soon. The DIAN team paused for a photo during the July DIAN Steering Committee meeting held in Paris in conjunction with the Alzheimer's Association International Conference on Alzheimer's Disease. The DIAN project is expanding and will soon include new clinical



sites at the Mayo Clinic in Jacksonville, FL, and two locations in Germany.

Neuroimmunology Dr. Anne Cross

Dr. Anne Cross was appointed Chair of the National MS Society Research Programs Advisory Committee.

New Grants:

"Physiologic and pathogenic interactions between innate immune cells and central nervous system axons" from the Dana Foundation to co-principal investigators, Laura Piccio and Gregory Wu. In addition, Laura and Greg were each named Dana Foundation Neuroscience Scholars, a distinction that carries with it a prize of \$50,000 each!

Rob Naismith has received a two-year grant from the National MS Society entitled, "Quantitative imaging of tissue recovery, repair, and clinical outcomes in Multiple Sclerosis."

Anne Cross received a three-year grant from the NMSS entitled, "Gradient Echo Plural

Contrast Imaging to Better Understand Multiple Sclerosis."

Our Radiology collaborator, Dr. Sheng-Kwei (Victor) Song received notice that his submission "Noninvasive Detection and Differentiation of Axonal Injury/Loss, Demyelination, and Inflammation," on which we are co-investigators, will be funded by the U.S. Department of Defense.

Recent Section Publications:

Wang Y, Wang Q, Haldar JP, Yeh FC, Xie M, Sun P, Trinkaus K, Klein RS, Cross AH, Song S-K. Quantification of increased cellularity during inflammatory demyelination. *Brain*. 2011; 134:3587-98.

Naismith RT, Xu J, Tutlam NT, Lancia S, Trinkaus K, Song SK, Cross AH. Diffusion tensor imaging in acute optic neuropathies: predictor of clinical outcomes. *Arch Neurol*. 2012; 69:65-71.

Cathie Martinez, MS Section nurse, is a grandmother for the second time! Lillian Katherine ("Lilly") was born on December 28th, 2011, weighing 6 lbs 12 oz. All are well and happy and awash in pink!

Pediatric Neurology Dr. Michael Noetzel

Dr. Michael Wong has received a Washington University/Pfizer Biomedical Collaboration grant, "Development of mTOR inhibitors as antiepileptogenic drugs for epilepsy". Dr. Wong also recently received notification that he will be receiving a Department of Defense/Congressionally Directed Medical Research Program grant in 2012, entitled "The role of brain inflammation in epileptogenesis in tuberous sclerosis complex."

Dr. Christina Gurnett has been awarded four new grants: (1) NIH, Eunice Kennedy Shriver National Institute of Child Health and Human Development, Familial vertical talus exome se-

quencing, \$100,000.

(2) Shriners Hospital, A genomic approach to adolescent idiopathic scoliosis, \$900,000.

(3) Shriners Hospital, Vertical talus exome sequencing, \$120,000.

(4) Children's Discovery Institute Research Grant, Genetic studies of scoliosis etiology in humans and zebrafish, \$450,000.

On March 16th, Dr. Michael J. Noetzel and the Division of Pediatric and Developmental Neurology hosted the 6th Annual Missouri Valley Child Neurology Colloquium at the Sheraton Westport Plaza. Attendees from institutions including Washington University, Saint Louis University, Children's Mercy Hospitals and Clinics (Kansas City), and the University of Missouri-Columbia, took part in this one day forum of clinical presentations, topic reviews, and networking. The Keynote Address "Protecting the Newborn Brain" was given by Dr. Terrie Inder. The 2013 colloquium will be hosted by Children's Mercy in Kansas City.

Dr. Douglas Larsen has been selected as a Carol B. and Jerome T. Loeb Teaching Fellow for 2012-2014 for his application to employ a program of reflective learning within the clerkship focusing on the goals of overcoming barriers to ideal performance and building upon successful practices. Congratulations to Dr. Larsen for this well-deserved recognition of his contributions to enhancing the educational experience of our medical students.

Epilepsy Dr. R. Edward Hogan

Congratulations to **Dr. Samiya Rashid** and family for the birth of baby boy Zain on 10/14/2011.

The epilepsy section is glad to welcome new section members:

Department News Continued...

Keith Day, M.D. Ph.D. will join the section as an instructor in the 2012-2013 academic year. Keith will work in the outpatient and inpatient epilepsy clinical services, and also pursue his research interests in pathogenesis and comorbidities of chronic epileptic seizures.

Michelle Trevaskis joined the section as a patient services representative. Please join us in welcoming Michelle.

In the December 2011 American Epilepsy Society annual meeting in Baltimore, Drs. Hogan, Eisenman, and Maccotta participated in the Hot Topics Symposium "Semiology, Functional Connectivity, and MRI." Dr. Hogan was the chairperson for the meeting, while Dr. Maccotta presented on the topic "BOLD-Based MRI Functional Connectivity" and Dr. Eisenman presented "Concepts of Neuronal Network Function."

Current trials for antiepileptic medications include:

A 14-Month Open-Label Extension Phase of the Double-Blind, Placebo-Controlled, Dose-Escalation, Parallel-Group Studies to Evaluate the Efficacy and Safety of E2007 (perampamil) Given as Adjunctive Therapy in Subjects with Refractory Partial Seizures.

P09-004, A Randomized, Multicenter, Double-Blind, Placebo-Controlled, Parallel-Group, Phase 3 Study to Evaluate the Efficacy and Safety of USL255 as Adjunctive Therapy in Patients with Refractory Partial-Onset Seizures.

Movement Disorders **Dr. Joel Perlmutter**

The faculty and staff of the Movement Disorders Section have had lots of exciting progress this past quarter.

Dr. Allison Willis and Racette were recently awarded \$30,000 from the local Chapter of the American Parkinson Disease Association

to support their studies of environmental risk factors for Parkinson disease. Their recent studies have suggested that those who live in areas with higher levels of industrial release of heavy metals like manganese have a higher risk of developing parkinsonism.

Dr. Willis along with Schootman, Kung, Evanoff, Perlmutter and Racette just published a paper in the Archives of Neurology that described predictors of survival in people with Parkinson disease. They used Medicare-based records to determine that dementia substantially reduced survival in someone with Parkinson disease.

Dr. Brad Racette was an invited speaker and member of the panel at the National Institute of NIEHS which was convened to develop a new data sharing policy.

Dr. Susan Criswell and co-authors JS Perlmutter, TO Videen, SM Moerlein, HP Flores, AM Birke, and BA Racette published an article in Neurology on defects in the nigrostriatal system identified with PET in asymptomatic welders. This study suggests that PET could be a biomarker of the early effects of welding exposure on brain function.

Other recent papers by Dr. Racette's group (with Nelson, Criswell, Zhang and Murray) on manganese toxicity including a report in Neurotoxicology on their methods to obtain and implement ex vivo MRI scans on brains of manganese miners from South Africa. They (Racette, Aschner, Guilarte, ydak, Criswell, Zheng) also published a study on the health status in welding exposed workers that reveals parkinsonism occurs in welders and impairs their quality of life.

Dr. Paul Kotzbauer just obtained a new Michael J Fox Foundation grant to investigate the neurotransmitter abnormalities that may underlie different types of cognitive impairment that occur in people with Parkinson disease. This study, along with collaborators Meghan Campbell, Nigel Cairns and Joel

Perlmutter) will obtain brain tissues from those participants in Dr. Perlmutter's RO1 Investigations of Dementia in Parkinson Disease.

Dr. Erin Foster obtained a new K23 5-year mentored career award starting January 15, 2012 entitled "Cognitive Rehabilitation for Everyday Executive Dysfunction in Parkinson Disease." Dr. Tamara Hershey is her primary mentor and JS Perlmutter is a co-mentor. She will continue her work on studies of prospective memory in people with Parkinson disease.

Dr. Morvarid Karimi obtained a new grant from the Dystonia Coalition to investigate the neuroplasticity that occurs after deep brain stimulation of the globus pallidus for treatment of dystonia. She plans to use a persurgical MRI and PET and then do follow-up FDG PET scans to determine the changes in brain networks that occur with the relatively gradual onset of benefit from deep brain stimulation.

Joel Perlmutter along co-author David Eidelberg from the Feinstein Institute of Medical Research published an Editorial in Neurology "To Scan or Not to Scan: DaT is the Question" in which they describe the lack of clinical utility of using the newly released SPECT imaging agent DaT Scan that measures dopamine transporters in the brain. They argue that the scans do provide clinically useful information beyond that which can be obtained from a neurologic evaluation of the patient.

Dr. LinLin Tian along with co-authors Karimi, Loftin, Brown, Xia, Xu, Mach and Perlmutter published an article in PLoS One demonstrating that the membranous dopamine transporter (DAT; transports dopamine from the synaptic back into the presynaptic neuron) and the vesicular monoamine transporter type 2 (VMAT2; transports dopamine from the cytosol into the presynaptic vesicles for storage

Department News Continued...

before release into the synapse) do not have any differential regulations as the number of dopamine neurons decreases. This is particularly important for interpretation of PET or SPECT scans using DAT or VMAT2 radiotracers. In the past, most people thought that the number of DAT or VMAT2 sites per neuron changed as the number of dopamine neurons changed – but this apparently is not correct.

Dr. Gammon Earhart received the inaugural Arcadia University College of Health Sciences Alumni Achievement Award. She earned her undergraduate and physical therapy degrees at Arcadia before obtaining her PhD at Washington University. As part of her award acceptance she gave a talk at Arcadia entitled "From Turtles to Turning to Tango: Studies on the Neural Control of Movement."

Dr. Tamara Hershey gave two invited talks recently: one entitled "Regional brain vulnerability in Wolfram Syndrome" at the International Wolfram Syndrome Association, Paris, France and the other "Effects of glycemic control on brain development" at the American Diabetes Association; Diabetes and the Brain Research Symposium, Alexandria, VA.

Save the Date

Please join us:

Residents' Day Symposium

Friday, May 18, 2012

7:30am – 9:15am

Farrell Learning and Teaching Center ~ Atrium

Poster presentations will begin at 7:30am

Awards will be presented at 9:00am

Pediatric Neurology Residency Program

Pediatric Neurology Residency Program Residency Director Brad Schlaggar, MD, PhD

We are delighted to announce the results of the 2012 match recruitment season.

We have 4 residents who will start their preliminary pediatrics at St. Louis Children's Hospital July 1 2012 and then their Neurology training July 1, 2014. They are: 1) Jennifer Griffith, MD PhD, Washington University School of Medicine 2) Stephanie Stewart, MD, University of Southern California School of Medicine 3) Robert Rudock, MD, University of Miami School of Medicine and 4) Erin Casey MD, University of Rochester School of Medicine.

In addition, Katherine "Kit" Meddles MD, currently a resident in Pediatrics at Oakland Children's Hospital and graduate of the University of Colorado School of Medicine has signed on with us. She will join Alex Fay, Heather Riordan, and Jacqui Anderson, all currently in their preliminary pediatrics training at St. Louis Children's Hospital, to start their Neurology training on July 1, 2012.

Dr. Bryan McGill has been named the Administrative Chief Resident for 2012-2013. We would also like to thank Rafael Galindo for his exceptional service as chief resident this year.

PM&R Residency Program

PM&R Residency Program

Residency Director Oksana Volshteyn, MD

Mark Adderley	Des Moines University	Internship Botsford Hospital in Michigan—employed in Missouri	PGY-2
Ikram Malik	Ross University	Internship Atlanticare in New Jersey	PGY-2
Britney martin	University of Oklahoma		PGY-1
Sri Patchala	Siddhartha Medical College India		PGY-1

Adult Neurology Residency Program

Adult Neurology Residency Program

Residency Director
Joy Snider, MD, PhD

Welcome Class of 2016!

We welcome our incoming PGY1's who will be here in July. Their names and graduating schools are listed to the right.

Congratulations to our incoming Administrative Chief Residents Stefanie Geisler, MD and Deb Roberts, MD, PhD. Stefanie and Deb are already hard at work preparing the schedule for next year. They are both outstanding residents and will likely be stellar chiefs.

BABIES!!!



Congratulations to Pouya and his wife on the addition of their daughter Jasmine Sophia Fahadan born on 02/28.

Congratulations to Bethany Catlett the Neurology Inpatient NP on the birth of her son Luke Aaron Catlett born on 02/25.



Laura Baldassari
Georgetown University



Alexander Dietz
University of Iowa



Jonathan Grabe
Georgetown University



Seth Hepner
University of Pittsburgh



Peter Kang
University of Pittsburgh



Joe Mendez
University of California ~
San Francisco



Kyle Mitchell
Medical College of Georgia



Charlene Ong
Columbia University College of
Physicians and Surgeons



Michael White
University of Buffalo

We are looking forward to another positive year in the Neurology Residency Program.

Special Thanks!

The chief residents would like to thank all neurology residents, faculty, and staff that assisted with yet another successful resident recruitment period. We had another very successful match this year, and look forward to meeting our newest members when they arrive to St. Louis in June.

None of this would have been possible without residents going beyond the call of duty to serve as part of the ARRC committee, respond to applicant emails, attend the welcome reception and dinner, sit with applicants on Tuesday morning, and join them for lunch on Tuesday afternoon. In addition, a large portion of the faculty took time out of busy schedules to welcome candidates at the welcome reception on Monday nights and to join us for lunch on Tuesdays. We'd like to extend a special thanks to Carol Lane for her integral role in seamlessly coordinating all aspects of the process. While it was a lot of extra work for everyone, we are confident that it was all worth it.

It was especially wonderful to receive feedback from numerous applicants regarding the unique sense of collegiality and collaboration that they experienced at Washington University. This culture is what further attracted many of us to this otherwise exceptional academic training program. Thanks again to everyone!

-Scott Norris, Pablo Bravo and Dr. Joy Snider

Faculty in the Spotlight

Aging and Dementia Catherine Roe, PhD

The Knight ADRC is pleased to nominate Catherine Roe, PhD, for Faculty in the Spotlight Recognition. Cathy has been with the Center for 10 years, first as a data analyst and research statistician, and most recently receiving promotion to Research Assistant Professor of Neurology. Dr. Roe earned her BA degree at Purdue University, and her MA and PhD at Southern Illinois University in Carbondale, specializing in Clinical Psychology and Experimental Psychology with an emphasis on Learning, Memory and Cognition. At Washington University, Dr. Roe completed the postdoctoral program of the Clinical Research Training Center. Dr. Roe is the author of over 50 peer-reviewed publications, and is a patent holder as a co-inventor of the AD8 (Ascertaining Dementia 8) dementia screening tool.

There are very few research projects at the Knight ADRC that don't benefit from Cathy's critical eye and skill in data analysis. Additionally, she maintains a very rigorous research agenda. Cathy was awarded a 2012 Knight ADRC pilot grant to support the project Driving Performance in Preclinical Alzheimer's Disease, and will partner with faculty from the Departments of Geriatrics, Psychology, and Occupational Therapy to study medical fitness to drive in individuals with pre-symptomatic dementia.

Dr. Roe was also received a grant from the Longer Life Foundation for her project Improving Presymptomatic Detection of Impending Alzheimer's Disease. The project will examine how cognitive reserve and brain reserve factors combine with amyloid imaging and cerebrospinal fluid biomarkers to predict cognitive impairment and AD, and will build biomarker models that yield individual risk profiles predicting the time of onset of cognitive impairment and AD.

Aside from her research responsibilities, Cathy generously shares her time and expertise in the mentorship of others. Cathy has fostered a strong partnership with the St. Louis College of Pharmacy, and has provided valuable summer research projects to advanced pharmacy students for the past 4 years. Most recently she innovated a weekly roundtable discussion group so ADRC and Friedman Center for Aging summer students could gather and discuss research progress and issues in data analysis. Cathy also volunteers on the Washington University Peer Group Mentoring Program for Women Faculty, and was invited to serve on the National Alzheimer's Coordinating Center Scientific Review Committee.

Aside from her significant professional achievements, faculty and staff at the Knight ADRC enjoy working with Cathy. Says one person of Cathy, "despite maintaining a hectic schedule with many competing demands, she is always receptive to new ideas, new partnerships, and new opportunities to support the development of the Center and others. And in the midst of that, her calm demeanor and sense of humor are always refreshing."

Congratulations to Cathy for this well-deserved Faculty in the Spotlight Recognition!

Douglas Larsen, MD, M.Ed. Pediatric and Developmental Neurology



Dr. Larsen recently was selected as a Carol B. and Jerome T. Loeb Teaching Fellow for 2012 -2014. Doug's application focused on employing a program of reflective learning on a clerkship-wide basis. Such a program will allow medical school students and house staff to build on their experiences to overcome barriers to ideal performance and thereby establish more successful clinical practices. The distinguished honor of being a Loeb Teaching Fellow is not only an endorsement of Doug's proposal, but also serves to recognize his outstanding clinical and medical skills. Mr. and Mrs. Loeb established the Loeb Teaching Fellows Program to enhance the educational experiences of the nation's very best medical students and residents, and their generous gift contributes to the advancement of the educational and patient care goals at the School of Medicine. Dr. Larsen's appointment as a Loeb Teaching Fellow will be effective July 1, 2012 until June 30, 2014 and includes \$50,000 per year in compensation.

Staff in the Spotlight

Pediatric Neurology

Taylor Ferguson

Taylor joined the Neurofibromatosis (NF) Center less than one year ago to serve as our center coordinator. In this capacity, Taylor singlehandedly manages the NF Center website and Facebook site, is responsible for facilitating many of our clinical research activities, coordinates all Team NF functions, operates Club NF (a play-based therapy program for children and their families affected with NF1), and is organizing the first annual NF Center Symposium. She works tirelessly, with enormous passion and enthusiasm. Her accomplishments in the first year of employment are nothing short of spectacular. I am proud to say that Taylor has become the glue that holds our clinical research and outreach program together. The greatest measure of her stellar attributes is the honest realization that our NF Center Clinical Program has become defined by her dedication, passion, and hard work. For all of these reasons, I believe that the word "star" was created specifically to describe the performance of Taylor Ferguson. David H. Gutmann, MD, PhD

Aging and Dementia

Pam Millsap MSN, RN GNP-BC

The Aging and Dementia Section is pleased to recognize our Star Performer Pam Millsap MSN, RN GNP-BC, who has worked in our section since 1995. Pam is an extraordinarily skilled and a compassionate Gerontological nurse practitioner. She evaluates and treats patients in our faculty practice, Memory Diagnostic Center. Our patients and their caregivers are in good hands when Pam is initiating a plan of care or dealing with a difficult caregiving situation. At the Memory and Aging Project (MAP) Pam does research evaluations and provides research diagnoses to participants with dementia. Pam is a successful coordinator of clinical trials for Alzheimer's disease, serves as our Occupational Safety and Health Agency (OSHA) liaison, and contributes to the Alzheimer

Association Speakers Bureau. She serves the medical school further by volunteering on a review committee for the Washington University Human Research Protection Office (HRPO). Pam is a "go to" person. She is always willing to help other faculty and staff and due to her experience helps others in difficult situations or trying to make tough decisions. Pam gives 120% every day. We are grateful to her family: Joy, Zander and Zach for sharing her with us.

Upcoming Event

Washington University Neurofibromatosis (NF) Center Symposium

The Washington University neurofibromatosis (NR) Center is proud to announce its first NF Symposium to be held on Friday, May 4, 2012 in Seminar Room B of the Eric P. Newman Center (EPNEC) from 8:00 am to 4:00 pm.

In addition to invited talks from researchers and clinicians in the Washington University NF Center, we are delighted to have two keynote speakers.

Dr. Luis Parada [University of Texas Southwestern] will speak about his pioneering studies on mouse models of neurofibromatosis type 1 (NF1). Dr. Parada is an internationally recognized leader in basic neuroscience research, particularly in the areas of nervous system development and cancer. Dr. Parada currently holds the Diana K. And Richard C. Strauss Distinguished Chair in Developmental Biology.

Dr. Bruce Korf [University of Alabama] will speak on the clinical management of NF1. Dr. Korf is one of the world's leading authorities on human genetic disorders, including neurofibromatosis. Dr. Korf currently holds the Wayne H. and Sara Crews Finley Professor of Medical Genetics and serves as Chair of the Department of Genetics at the University of Alabama at Birmingham.

Invited researchers and clinicians from the Washington University NF Center include Drs. David H. Gutmann, Elaine R. Mardis, Joshua B. Rubin, Abby S. Hollander, Courtney M. Dunn and Jill C. Isenberg.

During the symposium attendees will have the opportunity to view poster presentations from graduate and post-graduate trainees.

This inaugural event is free. Breakfast and lunch are provided for those attendees who register. Following the symposium, The Washington University NF Center will host a reception for attendees to meet the speakers in EPNEC Event Room B.

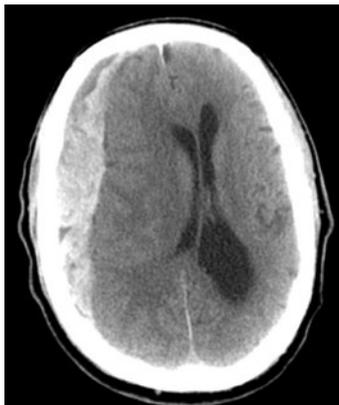
You can learn more about the symposium, speakers or accommodations at <http://nfcenter.wustl.edu>. Please do not hesitate to contact our program coordinator, Taylor Ferguson, fergsont@neuro.wustl.edu for additional information or questions.

Medical Student Education

Medical Student Education Dr. Allyson Zazulia

Thanks to all who participated in the 2012 edition of the WUMS2 Diseases of the Nervous System course, including our new lecturers Greg Wu and Sonika Dahiya and small group leaders Rafael Galindo, Seth Perlman, Enrique Alvarez, and Gabi De Bruin. In addition to our lineup of top notch lectures and labs led by members of the departments of Neurology, Neurosurgery, and Pathology and three case-based Neurologist-led small group sessions, this year's course included two team-based activities requiring self-directed learning and collaboration. Imagine 24 groups of 5-6 students working simultaneously in Connor Auditorium with only one faculty member supervising. It may sound like chaos, but it is surprisingly effective and efficient. One of these activities was a Brainstem Localization exercise, designed to combat the "brainstem anxiety" some students report. We started with a brief review of basic anatomy and then students worked in groups to determine expected constellations of deficits associated with given lesion locations and expected lesion locations associated with given constellations of deficits. In the other exercise, student groups created vignette-based multiple choice questions with answer explanations on a variety of topics from the course. The final products were then compiled and sent out to the class for their use in studying for the exam. This exercise gives the students an opportunity to learn about a topic in enough depth to become the "experts" and also gives them some experience as teachers. Here are samples of their work:

- 1) A 64-year-old man fell out of a first story window while dreaming that he is escaping from a crashing plane. He presents to the ER the next day complaining of worsening headache and vomiting that began several hours prior to presentation. Head CT is shown in the adjacent figure. Which of these structures was most likely damaged during the fall?



- A) Anterior communicating artery
- B) Lenticulostriate artery
- C) Middle meningeal artery
- D) Cerebral bridging vein
- E) Superior sagittal sinus

Correct answer: D

The acute onset of headache and vomiting indicates a sudden increase in intracranial pressure due to the presence of a rapidly expanding intracranial lesion. While the history of trauma is consistent with a number of different types of hemorrhage that could cause these symptoms, the crescentic hyperdense pattern on CT is most characteristic of a subdural hematoma¹. Subdural hematomas are most often caused by damage to the cerebral bridging veins and are especially common in older patients due to cerebral atrophy which results in the formation of a space between the dura and arachnoid membranes². In contrast, the anterior communicating artery is a common site of aneurysms which lead to subarachnoid hemorrhage upon rupture. The lenticulostriate arteries are small arteries which supply blood to deep structures of the brain and are often involved in hypertensive intracerebral hemorrhage³. Laceration to either the middle meningeal artery or the superior sagittal sinus would result in an epidural hematoma, although the middle meningeal artery is the most frequently involved in this condition.

(Authors: Brittanie Broersma, Ravi Gottumukkala, Andrew Jallouk, Lauren Perlin, Michael Scott)

Medical Student Education Continued....

- 2) Your patient is a 63-year-old man who suffered a right parietal stroke one week ago. It was noted that his head was turned to the right and he would only eat food that was on the right side of the plate. He was asked to draw a clock face as part of his post-stroke neurological exam. Three days later he suffered a second stroke in his left frontal lobe. After he was stabilized, nurses noticed that he now kept his head looking straight forward. Again, as part of his neurological exam he was asked to draw a clock face. Which of the following images most likely represent his two clock drawings?



Figure 1

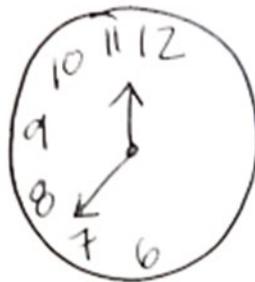


Figure 2



Figure 3



Figure 4

- A) His first clock was figure 1, the second was figure 2
- B) His first clock was figure 1, the second was figure 3
- C) His first clock was figure 2, the second was figure 1
- D) His first clock was figure 2, the second was figure 3
- E) His first clock was figure 4, the second was figure 1

Correct answer: B

The patient's first stroke was in the right parietal lobe which produced left sided (contralateral) neglect and right sided (ipsilateral) bias. This was apparent by his lack of attention to the food on the left side of his plate and the turn of his head toward to the right side. When asked to draw a clock face, the picture would most likely resemble figure 1. His second stroke was on the left side, which would reduce over stimulation from the left side and alleviate his neglect. Thus his second clock would likely produce figure 3 – a normal looking clock face. Figure 2 would indicate right sided neglect and Figure 4 is more consistent with comprehension difficulties or a psychiatric disorder.

(Authors: Rittik Chaudhuri, Linda Jin, Nichelle Megowan, Stephanie Thomas, Melissa Wright)

How Do I Get There?

Attending Schedules on the Neurology Website:

Open <http://neuro.wustl.edu>

In the main navigation above the image, click on Employee Login.

You will need to use your entire email address and password to login. If you do not remember your password or do not have one, please email Jennifer Barfield at barfieldj@neuro.wustl.edu and she will email it to you.

Once you are logged in, click on "Attending"

Here you will find all of the current and up to date Neurology Attending Schedules..

There are many other useful links under the "Employee Login" section as well.

Please email Jennifer with updates for the website or if you have questions or suggestions.

GRANTS

Paul Kotzbauer
Michael J. Fox Foundation
"Neurochemical Correlates of Cognitive Phenotypes of PD"
1/1/2012 – 12/31/2014

John Cirrito
Private Organization
"Effect of Anti-Abeta Antibodies on ISF Abeta Metabolism in Aged APP Mice"
11/1/2011 – 10/31/2012

David Holtzman
NINDS – Supplement
"Washington University Center for Translational Neuroscience"
9/1/2011 – 8/31/2012

David Gutmann
St. Louis Children's Hospital
"Neurofibromatosis Fund"
1/1/2012 – 12/31/2012

Paul Kotzbauer
NBIA Disorders Association
"Therapeutic Approaches to Increase Acyl Coenzyme A Production in Neurodegeneration with Brain Iron Accumulation"
12/1/2011 – 11/30/2012

David Gutmann
Children's Discovery Institute
"Sexually Dimorphic cAMP Signaling Impacts the Rate of Brain Tumors in Prepubertal Boys and Girls"
2/1/2012 – 1/31/2014

Cynthia Garcia
National Institute of Neurological Disorders and Stroke
"Merlin Regulation of Spinal Cord NSC Function"
3/1/2012 – 2/29/2014

David Gutmann
Children's Tumor Foundation
"CTF NFCN Stipend Funds"
4/1/2012 – 3/31/2013

Anne Cross
National Multiple Sclerosis Society
"Gradient Echo Plural Contrast Imaging to Better Understand MS"
7/1/2012 – 6/30/2015

David Clifford
NIH/NINDS
"Washington University Network of Excellence in Neuroscience Clinical Trials Site"
9/30/11-8/31/18

Maurizio Corbetta
Barnes-Jewish Hospital Foundation
"A Brain Recovery Core for Measuring the Efficacy of Stroke Care to BJH/WU/Rehab Institute of St. Louis"
1/1/12-12/31/13

Christina Gurnett
NIH/NICHHD
"Familial Vertical Talus Exome Sequencing"
3/1/12-2/28/14

Douglas Larsen
American Academy of Neurology
"Test-Enhanced Learning in Continuing Medical Education: Measuring and Augmenting the Long-Term Effectiveness of AAN Annual Meeting Activities"
1/1/12-12/31/13

Conrad Wehl
Muscular Dystrophy Association
"Autophagic Treatment Paradigms for Desminopathies"
2/1/12-1/31/15

We want to hear your feedback!

Dear Neurology Faculty, Fellows, Residents and Staff—

As always we are pleased to hear so many positive comments following the distribution of the previous newsletters and welcome further comments and suggestions for future issues.

Thank you so much.

Lorraine Edrington
edringtonl@neuro.wustl.edu



We're on the Web
www.neuro.wustl.edu