This newsletter is made possible from the generous contributions of MUSC’s neurosciences faculty and staff. The success of this publication is dependent upon this support. Thank you for your interest, time and information. For inquiries, suggestions or submission information please contact Emma C. Vought, MS, CMI (vought@musc.edu).
Neurosciences Featured Events

November 7, 2013
Community Lecture Series with Drs. Braxton Wannamaker and Gigi Smith
7 pm - 8:30 pm, Cathedral of Praise Chapel, 3790 Ashley Phosphate Rd. North Charleston, SC

Please Join SC Advocates for Epilepsy in this free lecture to learn more about epilepsy and the community resources available in Charleston, SC. Guest speakers will be Dr. Wannamaker, presenting “Can SUDEP be avoided” and Dr. Smith, presenting “Caregiving in Children with Epilepsy”. Please RSVP to karen@scepilepsy.org. For more information visit www.scepilepsy.org.

November 9, 2013
Hockey Heroes for Epilepsy Preview Party
10 pm to close, The Original Ms. Rose’s Fine Food & Cocktails, 1090 Sam Rittenberg Blvd., Charleston SC

Join the Stingrays, after the hockey game, for a night of fun and music. Alumni Stingrays players will be guest bartending, and live music will be provided by the Saul Brooks Band. Bring your ticket stub from that night’s hockey game, or wear purple, and receive happy hour prices while in attendance. Purple awareness merchandise will be available for purchase, and proceeds benefit S.A.F.E. (SC Advocates for Epilepsy). For more information visit www.scepilepsy.org.

November 15, 2013
Comprehensive Stroke and Cerebrovascular Update
Presented by the MUSC Department of Neurosciences and Office of Continuing Medical Education, College of Medicine. Save the date for the Comprehensive Stroke and Cerebrovascular Update, taking place in historic Charleston, SC.

For more information, call the MUSC Office of CME at 843-876-1925 or visit www.musc.edu/cme

November 16, 2013
Hockey Heroes for Epilepsy
Save the date for Hockey Heroes for Epilepsy. Join MUSC, the South Carolina Advocates for Epilepsy (SAFE) and the South Carolina Stingrays for Epilepsy Awareness Night. Bring your family and friends out for a night of action-packed hockey and fun. This is going to be our best Hockey Heroes for Epilepsy so far! You don’t want to miss it! For more information, visit www.scepilepsy.org

November 22, 2013
Neuropalooza
Save the date for Neuropalooza which will take place at the College of Charleston. For more information, visit: www.musc.edu/neurosciences/events

March 14-16, 2014
Charleston Conference on Alzheimer’s Disease
Save the date for the Charleston Conference on Alzheimer’s Disease 2014. After the success of last year’s inaugural CCAD conference, plans for CCAD 2014 are underway. CCAD 2014 will be held in Charleston, South Carolina on March 14 - March 16, 2014. For more information, visit www.musc.edu/neurosciences/events

April 2014 - Parkinson’s Conference of the Carolinas
There is nothing like getting together with folks who know your situation and what it is like to live with, or care for someone with, an incurable disease like Parkinson’s. What’s even better is to get together with these folks at a conference to learn the newest in research, what is in the pipeline and hearing from folks on how they deal with this disease. Join us in Myrtle Beach in April 2014 for the Parkinson’s Conference of the Carolinas.

For more information, visit www.musc.edu/neurosciences/events

Progress Notes - Online CME Eligible Articles
Did you know you can now get AMA PRA Category 1 Credit(s)™ for reading an article in Progress Notes? To visit the Progress Notes web site, click on the below link.
www.muschealth.com/physician_portal/cme

August 2013 - Fighting Fatalism: Addressing Racial Disparities in Health by Aggressively Treating Hypertension
May/June 2013 - Short on Sunshine: Addressing Vitamin D Deficiency
March/April 2013 - Gut Decisions: Making the Right Preventive, Diagnostic and Treatment Choices to Better Control Clostridium difficile Infections

To find out more about Neurosciences events visit: www.musc.edu/neurosciences/events
A Rare Case of Bobble-Head Doll Syndrome
KIM McGEe, PhD | PROGRESS NOTES | AUGUST, 2013

At the age of two to three years, when most kids are entrenched in “the terrible twos,” Mickey was strangely agreeable, frequently bobbing his head back and forth in a gesture of seeming affirmation. It was only when the bobbing became constant, from the time he woke up in the morning until the time he went to sleep at night, that his parents suspected a problem and took him to see a physician.

When magnetic resonance imaging (MRI) revealed hydrocephalus (the accumulation of fluid in the brain), the local physician feared a brain tumor and recommended immediate surgery to remove it, surgery that would involve a craniotomy, the opening of the skull to allow surgical access to the brain.

Wanting a second opinion before subjecting their child to major, invasive surgery, Mickey’s parents brought him to MUSC for further evaluation. He was seen by Sunil J. Patel, MD, Chair of Neurosurgery, Department of Neurosciences at MUSC, who ordered a contrast-enhanced MRI, which ruled out a tumor but revealed an arachnoid cyst in the third ventricle, a very deep part of the brain. The cyst was benign but was preventing cerebrospinal fluid from draining appropriately, resulting in hydrocephalus.

Dr. Patel shared the unusual case with his colleagues Rebecca K. Lehman, MD, Assistant Professor of Neurosciences, and David J. Walsh, MD, Professor of Neurology, who diagnosed Mickey as having Bobble-Head Doll Syndrome.

Only a handful of cases of Bobble-Head Doll Syndrome have been reported. In his 30 years as a neurosurgeon, Dr. Patel had never seen a case until Mickey. The condition is named for its characteristic symptom, a “yes-yes” head bob, which is often associated with cystic abnormalities in the third ventricle that also produce hydrocephalus. If left untreated, the structural changes that cause Bobble-Head Doll Syndrome can result in permanent neurologic dysfunction, which had not yet manifested in Mickey.

Fortunately for Mickey, MUSC specializes in minimally invasive endoscopic neurosurgery, which decreases the risk of surgical complications and requires a much shorter recovery time. This was very good news for Mickey’s parents, who strongly preferred a less invasive approach because they, like Dr. Patel, “did not want to risk Mickey losing one drop of who he was.”

Instead of performing the traditional craniotomy to gain access to the third ventricle, Dr. Patel drained the cyst endoscopically, removing as much of the capsule as possible—a procedure that lasted 15 minutes and required an incision that was less than an inch long. Mickey was able to leave the hospital within 24 hours of the operation and to resume his normal life quickly.

Mickey will be followed up closely, with periodic brain imaging as he grows, to ensure that the cyst does not come back and that his mild residual head bobbing resolves, according to MUSC pediatric neurosurgeon Edward J. Kosnik, MD.

Although Mickey’s parents are grateful for the depth of diagnostic expertise and the minimally invasive treatment options that they found at MUSC, they are perhaps most grateful for the warmth and compassion of the physicians and staff: “The people at MUSC were so great. They really did look after him. He wasn’t another number; they treated him like he was a human being.”

Dr. Patel is well aware that “when you have a sick child, you also have very, very anxious parents” and is pleased to be able to offer his patients the services of a dedicated pediatric hospital. In addition to specialized pediatric nursing care and a child-friendly infrastructure, the Children’s Hospital of South Carolina at MUSC provides parental support and easy access to social workers. In short, it is a place where “everything is dedicated to the care of the child and the well-being of the family.”

Mickey today is a happy, healthy, outgoing 3-year-old boy who enjoys being able to play with his siblings and jump on his trampoline every day, realizing his parents’ dream that not even one drop of his personality be lost.

To watch the video “A Rare Case of Bobble-Head Doll Syndrome” visit http://www.youtube.com/watch?v=v7HuEnWiJq8
Garlic holds promise to combat deadly brain tumor

Dawn Brazell | Public Relations | September 24, 2013

If you weren’t already a fan of garlic, here’s new scientific evidence of its cancer-fighting properties.

Researcher Arabinda Das, PhD, said it was exciting to land the cover of the August issue of the Journal of Neuro-Oncology with the first direct evidence that the compound DATS, found in garlic, is effective in blocking pathways of the proliferation of cancer cells and ultimately may help reduce tumor growth in patients with glioblastoma, the most lethal brain tumor.

It’s a brain cancer that remains incurable despite aggressive chemotherapy, radiation and surgical interventions. That the study found a 60-to-74-percent rate in the shrinkages of tumors has the team of clinicians and researchers involved with this study cautiously thrilled.

Neuro-oncologist Pierre Giglio, MD, said it’s rare to get good results in the clinic. There’s only one drug being used – Avastin – that produces response rates, and those generally are in the 30-to-40-percent range, he said.

Drs. Arabinda Das and Pierre Giglio combine their talents with other colleagues to research potency of plant derivatives to combat deadly brain tumors.

“In the clinic, I declare victory when I don’t see any change in the tumor. When you get a response that cuts the tumor down by that sort of percentage, I can’t stress how exciting it would be if that would translate to a clinical truth. This paper showed the efficacy, and it was quite stunning,” he said, cautioning that it will take time for the results to be translated for clinical use. “What works in the lab sometimes does not work in the clinic.”

Das said it has long been known that plant derivatives have beneficial effects in many diseases. Plant derivatives that are or will be studied include lemon, mushroom, green tea, turmeric, soybeans and ginger.

“We have been working on several of these which are known to have anti-tumorigenic properties, and garlic compound is one of the agents, among many, we have chosen to study,” he said.

Researchers tested the garlic-derived organo-sulfur compound DATS in two ways. They applied it directly to glioblastoma cells taken from tumors removed from patients, and they also placed these cells in immunosuppressed mice using an orthotopic xenograft model, in which the tumor cells are implanted in the tumor site of origin, a technique advantageous for its ability to mimic local tumor growth and pathways of metastasis.

Giglio said it seems that glioblastoma cancer cells have multiple pathways within them that allow them to grow, divide quickly, invade the brain and form blood vessels for themselves. “In a nutshell, they have a lot of strategies that allow them to evade the body’s immune defense systems, evade the treatments that we may give, and most importantly, develop a resistance to the treatments that we give.”

Das said the DATS compound seems to have a selective effect on the cancerous cells and not the normal cells. Researchers want to explore all mechanisms by which the compound may be working against cancer cells. The response rate suggests it works in more than one pathway to block the cancer, he said.

“We demonstrated shrinkage of tumors in these animals and showed that DATS reduced division of cells within the tumors and worked against multiple proteins and pathways that promote tumor growth,” Das said.

There are several research projects planned to further this work. Das will be working with Giglio and Amy-Lee Bredlau, MD, director of the Pediatric Brain Tumor Program and a pediatric neuro-oncologist, to develop a highly-purified DATS gel capsule for a human safety and tolerability phase I study. “We are hoping to be able to do this in the next 12 months.”

The broad long-term objective is to use the information obtained from this study to develop a therapeutic strategy for the induction of
apoptosis, or cell death, of glioblastoma and recommend this natural compound as a therapeutic strategy for trials in glioblastoma patients.

The study found the compound didn’t impair liver functioning. Das said most medications pass through the liver and are broken down in this organ. Many medical agents carry warnings about possible liver injury, and it is always encouraging to note that the liver is not affected by the garlic compound at the doses used in the study.

Researchers caution that they are not recommending garlic consumption as a cure for glioblastoma or other cancers. “Our research shows promise but recommendations for actual treatment of cancer with DATS would be premature.”

Should patients want to take advantage of any potential anti-cancer benefits from garlic now, they should know to take certain precautions, he said. For example, it’s important to cut and peel a piece of fresh garlic and let it sit for fifteen minutes before eating or cooking it. This time lapse allows for the release of an enzyme (allinase) that produces the anti-cancer compounds. Consumers using this as a nutritional supplement also should know that eating too much garlic may cause diarrhea, allergies and internal bleeding, so it is important to monitor garlic consumption.

A collaboration of clinicians, surgeons and neuro-oncology researchers is opening new doors to discoveries. Meanwhile, Das and colleagues will take the clues from this study to further their work. Das said the success of this study depended on a strong team of clinicians and researchers. The team included clinicians Giglio, Scott M. Lindhorst, MD and Bredlau; surgeons Sunil J. Patel, W. Alex Vandergrift and Abhya K. Varma; basic scientists Das and Naren L. Banik, PhD, and researcher Swapan K. Ray, PhD of the University of South Carolina.

This collaboration of clinicians, surgeons and neuro-oncology researchers is opening up new opportunities for discoveries. Das said in the future, researchers will be able to take patient tumors and have them tested in their laboratory model to see the efficacy of certain drugs. “We can personalize it based on the response of the tumor.”

Plans also are on the table to test the DATS compound in a larger animal model and eventually as a nasal application to be delivered in a nanoparticle. Giglio said the hope is that the nanoparticles will prove small enough to pass through the blood-brain barrier allowing the compounds they carry to leach out very slowly to the area of the brain tumor. The first clinical trial will be with an oral preparation of some type of gel capsule, followed later by nanoparticle research depending on finding funding for these projects.

Given how difficult this glioblastoma can be to fight – it ranks in the top three cancers in how fast it may kill people – this breakthrough is energizing to the team collaborating to find clues to how to stop it, Das said.

“We just want to be able to help these patients.”

To read more stories about MUSC visit our News Center at: http://academicdepartments.musc.edu/pr/
Sports-related concussions in SC more than double over 14 years
Oct. 13, 2013 - The State, By Joey Hollerman

The growing epidemic of sports-related concussions hits as hard among young athletes as those playing sports professionally, according to a South Carolina-based study.

The rates of concussion symptoms among patients at hospitals and emergency departments in South Carolina more than doubled from 1998 through 2011, according to a study by Medical University of South Carolina researchers. And the highest rates, by far, were among ages 12-18.

The PBS Frontline documentary “League of Denial: The NFL’s Concussion Crisis” this week shed new light on the depth of the problem of traumatic brain injuries in professional football.

Read more here: [http://www.thestate.com/2013/10/13/3035551/sports-related-concussions-in.html](http://www.thestate.com/2013/10/13/3035551/sports-related-concussions-in.html)

Dr. Granholm Awarded Grant

Five investigators who focus in the development of Alzheimer’s disease in people with Down syndrome (DS) have won a combined $1.2 million in research grants from the Global Down Syndrome Foundation, the Alzheimer’s Association, and the Linda Crnic Institute for Down Syndrome.

The organizations are awarding the funding through a new joint grants initiative, “Understanding the Development and Devising Treatments for Alzheimer’s Disease in Individuals with Down Syndrome.”

Ann-Charlotte E. Granholm-Bentley, D.D.S., Ph.D., is one of the the winners. She will be awarded $300,000 for research on ‘Brain-derived neurotropic factor and executive dysfunction in DS.’

Awards & Accomplishments

- Dr. Sunil Patel is on the MUSC Physician Board of Directors, effective July 1, 2013.
- Dr. Avery L. Buchholz received Best Presentation at the 2013 North Carolina Spine Society Meeting in August.
- Jie Zhang received her ASET Fellow Award. This fellowship was given to selected individuals within a neurodiagnostic community, that have been involved for greater than 10 years and that have distinguished themselves through their acts of service. This was the second class of fellows to be awarded. “I truly believe that type of recognition not only reflects well on me as an individual but also to MUSC, I am happy to work here each day since I am working under such greatest leader”, Jie Zhang.
- Dr. Dan Lackland was elected President-Elect of the World Hypertension League (WHL). WHL is a federation of leagues, societies, and other national bodies devoted to promoting the detection, control and prevention of hypertension in populations.
- Dr. Vanessa Hinson will be joining the Editorial Board of The American Journal of the Medical Sciences, the official journal of the Southern Society for Clinical Investigation (SSCI) as Section Editor for Neurology.
- Diane Barrett won 1st place for the MUSC 2013 Heart Walk T-shirt Design Contest! This was the t-shirt participants, fundraisers and donors wear during this annual event in September.
- Dr. Shelly Ozark has been appointed Co-Director of the MUSC Neurovascular Lab. As many of you may be already aware transcranial doppler ultrasound (one of the main offerings of the Neurovascular Lab) has several potential outpatient applications including ready assessment of brain arterial vasculature, emboli monitoring, screening children and adolescents with Sickle Cell Disease for stroke, checking brain vasomotor reserve, diagnosing heart shunts, and detecting a tendency for migraines. We have a terrific Neurovascular Lab with highly competent techs led by Toni Mullins and Dr. Ozark will be helping to greatly enhance its visibility and outpatient referral base.

- W. Alex Vandergrift, Bruce Frankel and Alejandro Spiotta are newly-elected Senators, and Stephen Kalhorn and Sarah Denham are newly-elected Alternates
- Megan Fulton has accepted the position as Lead APP for NSGY (Outpatient). This role began on Oct 1. Many thanks to Patricia for a job well done.
- PGY-3 resident, Dr. Dongin Sinn’s case report entitled “Simultaneous optic neuropathy and osmotic demyelinating syndrome in hyperemesis gravidarum” was recently accepted for future publication in the American Journal of Medical Science. Drs. Bachman and Feng mentored Dr. Sinn on this work. Congratulations and well done!
Presentations

We are happy to announce the Robert J. Adams Visiting Professorship established to honor our esteemed colleague, Dr. Robert J Adams, MD, MSc. This Visiting Professorship will take place in May of each year, beginning 2014, and will involve the invitation of a Physician-Scientist of major national/international stature (chosen on the basis of their published work that will have a lasting impact on Neurologic science and clinical practice) coming to MUSC and spending a full day in our Department. The Professorship will involve a one-day series of activities that coincide with the MUSC Neurology Annual Residents Research and Reunion (3-R) day. Expected activities of the Visiting Professor include clinical case discussions, judging of resident research posters, and delivery of a special grand rounds lecture.


August 6, 2013 - EMS Certification Training, American Heritage Ambulance, Ladson, SC. Keynote speaker: Edward C. Jauch MS, MD

“Malnutrition and Brain Development” presented by Dr. Ken Holden on September 24, 2013 at the World Congress of Neurology in Vienna, Austria.

“The art and science of writing about clinical outcomes in neurology” and “Interpreting and publishing trial results” presented by Dr. Bruce Ovbiagele on September 23 and 24 respectively at the World Congress of Neurology in Vienna, Austria.

“Pediatric Migraine and Treatment for the Primary Care Provider” presented by Kimberly Griesemer, NP on September 20, 2013 in Myrtle Beach at the GSAPNA 10th Annual Lecture at the Beach.

“Pediatric Headaches: When to Worry, When to Refer?” presented by Dr. Rebecca Lehman on September 20, 2013 in Myrtle Beach at the GSAPNA 10th Annual Lecture at the Beach.

“Annual Neurology Update for the Primary Care Provider” on September 7, 2013:

- Time is Brain: Diagnosis and Management of Acute Stroke, by Christine Holmstedt, DO
- Stroke Prevention Measures: An Update, by Robert Adams, MD, MS
- Headache Syndromes & Fibromyalgia: Diagnosis and Evidence-Based Management, by Aljoeison Walker, MD
- Diagnosis and Management of Epilepsy: Current State of the Art, by Jonathan Edwards, MD
- All that Shakes Isn’t Epilepsy: Diagnosis and Management of Nonepileptic Attack Disorder, by Paul B. Pritchard, III, MD
- Multiple Sclerosis: Recognition, Diagnosis, and Current Management, by Aljoeison Walker, MD
- Recognition and Management of Common Neuropathies and Myopathies, by David Stickler, MD
- Parkinson’s Disease: An Update in Diagnosis and Management, by Christina Vaughan, MD, MS, MHS
- Dystonias and Dyskinesias: Diagnosis and Management, by Vanessa K. Hinson, MD, PhD
- Alzheimer’s Disease: Current Management and Treatment, by David L. Bachman, MD
- Palliative and End of Life Care, by Jerome E. Kurent, MD, MPH

Empowering African American Communities to Improve their Health with Broadband Technology “Live Demonstration REACH tele-stroke from Kingstree SC and Discussion” presented by Dr. Robert Adams on September 20, 2013.

CME Presentations organized by Dan Lackland, DrPH:


August 27, 2013 - Videoconference via SCHOOLS Network: Social Determinants of Health: “Race and Stroke” Bruce Ovbiagele, MD, MSc, Medical University of South Carolina.


Community Engagement:
July 25, 2013—“Strike out Stroke”. The MUSC Stroke Research and Education Center holds a blood pressure screening event for the fans of the Riverdogs at Joe Riley Stadium, Charleston, SC. Over 150 blood pressure screens were given to the public and they had the chance to meet the Pro Football Hall of Fame member Joe DeLamielleure.

Photo from Strike out Stroke
Featured Publications
Dr. Sabino J D’Agostino, who grew up in Medford, NY on Long Island, completed the neurosurgery residency program at MUSC in 2009. He graduated from Pennsylvania State University and the Philadelphia College of Osteopathic Medicine, where he finished in the top 5% of his class. Just prior to his residency, he studied in Milan, Italy through the Carlo Besta National Neurological Institute Traveling Fellowship.

As for his seven years of residency, he reports “only fond recollections.” As he put it, “I arrived here in 2002 knowing almost nothing, and I left in 2009 very well prepared to practice neurosurgery and spine surgery, thanks to the faculty who spent time teaching me.” He expressed profound gratitude to the faculty who fostered his education and his career. Of note, his research presentation during the final year of residency was judged “Best Neurosurgical Presentation” by the awards committee.

After he completed his training, Dr. D’Agostino joined a neurosurgical group based near Trident Medical Center. His subspecialty is in minimally invasive spine surgery.

In his leisure time, Dr. D’Agostino spends time in family-oriented activities. He is married to Dr. Janet D’Agostino, who is a hospitalist at East Cooper Medical Center. They have children aged 2 years and 2 months.

Dr. Julian Adams is a product of the first decade of the neurology residency program, having completed his training in 1967. A native of Columbia, SC, he is a graduate of the University of South Carolina. In 1963 he graduated from what was then known as the Medical College of South Carolina, followed by an internship in internal medicine at the School of Medicine, University of Alabama.

He returned to Charleston for his neurology residency which was directed by the founding program director, Dr. O. Rhett Talbert. Dr. Adams admired the rigorous approach and clinical logic Dr. Talbert demonstrated on ward rounds, which he considers among his finest learning opportunities. He shared the experience of watching a young neurology faculty member make the correct diagnosis of cerebellar hemorrhage prior to the advent of brain imaging and the two of them standing at the operating table to advise clinical localization to the neurosurgeon who removed the hematoma. His attending was Dr. Hiram Curry, who had just completed his stroke fellowship at the Massachusetts General Hospital with Dr. C. Miller Fisher and who went on to found the Department of Family Medicine at MUSC.

After he completed the residency program, Dr. Adams served with the U.S. Air Force as Chief of Neurology at March Air Force Base in Riverside, CA. Following his military discharge he established a neurology practice in his home town. Ultimately he founded the South Carolina Neurological Clinic in Columbia. He garnered a second board certification in Addiction Medicine later in his practice and retired from medicine in 2008.

Dr. Adams post-retirement activities have included the restoration of his family’s ancestral home near Sumter, SC, which has been in his family for over 200 years. He continues to have an abiding interest in gardening and horticulture and once established a commercial nursery which confined itself to plants native to South Carolina.
Nicholas G. Avgeropoulos, MD  

Dr. Nicholas (“Nick”) Avgeropoulos attended undergraduate school and initially medical school in Ohio. He transferred to the College of Medicine at MUSC, earned his MD in 1991 and completed the neurology residency in 1995. He was appointed as Chief Resident during his final year. Following residency, he served as fellow in immunology and virology under the tutelage of Dr. William Tyor.

Dr. Avgeropoulos currently serves Co-Director of Neuro-Oncology at the MD Anderson Cancer Center in Orlando, Florida. Following his fellowship at MUSC he completed fellowships in neuropathology at Yale and in neuro-oncology at the Massachusetts General Hospital. He was named the first Pappas Fellow in Neuro-oncology during his second year of training in Boston.

He indicated that in addition to his clinical work and leadership positions at MD Anderson, he spends a great deal of time in the design and execution of cooperative studies and translational research in Orlando. He is a member of the Brain Tumor Collaborative Group, along with Dr. Pierre Giglio of MUSC and other neuro-oncologists around the country. He was an enthusiastic and compelling teacher during his residency years, and he now delights in his opportunities to teach medical students at the University of Central Florida and the University of Florida, which he cited as his “leisure” activity.

As Dr. Avgeropoulos modestly put it, “I just backed into neuro-oncology. I had no idea one could subspecialize in neuro-oncology, but my interest grew in that direction, and I love what I do. As we truly serve our patients, it’s impossible not to gain great satisfaction in the process.” He made it clear that he looks fondly upon his time at MUSC: “I feel an organic connection with MUSC and with Charleston, where our sons were born, and I often return for visits to the area.”

Susan M. Brown, MD  
(Neurology Residency 2001, Fellowship 2002)

Dr. Susan Brown practices general neurology with Riverside Williamsburg Neurology group in Williamsburg, Virginia. A native of Rochester, New York, she earned BSN (University of Rochester) and MSN (Emory University) degrees, and she worked in industrial medicine prior to medical school.

She earned her MD at the Medical College of Georgia, and did an internship in internal medicine at Eastern Virginia Medical School before joining the neurology residency at MUSC. She served as chief resident during her final year. She recalls her time at MUSC and in Charleston fondly.

Dr. Brown was selected for the clinical neurophysiology fellowship here, and she showed a special interest in epilepsy, particularly women’s issues in epilepsy. She initiated an outreach program, Woman With Epilepsy, during her fellowship. As a memorable part of that effort she designed and issued bright orange WWE T-shirts for those who participated in the program!

Dr. Brown entered private practice of neurology in Beaufort, SC and then Savannah, GA before she moved to Williamsburg. The current focus of her practice is general neurology. The practice features an in-office four bed sleep laboratory. She is one of four partners in the practice.
Welcome New Employees

Bryan Kumiga, Neurointerventionalist, Neurosurgery
Scott Lindhorst, Neurologist
Stacey Luton, Neurology Practice Manager
Craig Woodard, Neurologist
Jordan Lane, Physician Assistant, Neurosurgery
Carrie Thompson, Physician Assistant, Neurosurgery
Tina Dvorin-Baker, Nurse Practitioner, Neurology
Stephanie Harris, Pediatric Neurology, Administrative Specialist
Natalie Foster, Nurse Practitioner, Peds Neurology
Patel Shivani, Student/Other
Cameron Craft, Adm Manager II
Eric Hamlett, Grad Asst
Sarah Barret, Grad Asst
Kathryn Spencer, Grad Asst
Audrey Padula, Grad Asst
Jennifer Osborne, Lab Spec I
Haylin Currie, Lab Spec I
Jamie Peters, Post Doc
Benjamin Zimmer, Post Doc
Matthew Riedy, Post Doc
Junshi Wang, Post Doc
Morgan James, Post Doc
Sergei Baryshnikov, Post Doc
Cassandra Gipson, Post Doc
Lisa Graves, Prog Coord II
Stephanie Warth, Program Coord
Nastassia Bryant, Res Spec I
Michelle DiBartolo, Res Spec I
Michelle Young, Res Spec I
Chinnakkannu Panneerselvam, Res Spec I
Kody Zalewski, Res Spec I
Neringa Stankeviciute, Res Spec I
Laurel Black, Res Spec II
Jennifer Bunch, Res Spec II
Patrick McConnell, Res Spec II
Seid Taheri, Research Asst Prof
Andrew O’Harney, Student
Jennifer Osborne, Student/Other
Stela Petkova, Student/Other
Jorge Jaramillo, Student/Other
Richa Lal, Student/MUSC
Harshini Mahanti, Student/MUSC
Regina Froeliger, Yoga Therapist

Goodye and Good Luck

Alyssa Cogdill, Peds Neurology Nurse Practitioner
Rachel Beard, Adm Specialist
Debbie Bordeau, Development
Kristen Thursby, Adm Specialist
Mary Evelyn Armstrong, Grants Adm II
Siri Kubalak, Adm Coord I
Brenda Parker, Fiscal Tech II
Jacob Beckley, Graduate Assistant
Agneszka Zelek-Molik, Postdoc
Michael Scofield, Postdoc
Sooyoun Park, Postdoc
Adrien Schramm, Postdoc
JoAnn Fisher, Prog Manager I
Kyle Brown, Res Spec I
William Wynn, Res Spec I
Benjamin Harlan, Res Spec I
Andrew Novak, Res Spec I
Jennifer Bunch, Res Spec II
Jason Parker, Res Spec II
Ashley Gantt, Res Spec II
Shelton Corbett, Student
Daniel Morrison, Student
Kaylin Currie, Student
Elizabeth Miller, Student/Other
Hannah Hughes, Student/Other
Jordan McCarthy, Student/Other
Logan Dowdle, Student/Other
Phuong (Sisi) Tran, Student/Other
Alex Jessmore, Student/Other
Zachary Gerber, Student/Other
Hleb Fedarovich, Student/Other
Andrew Guandran, Temp RS I

Employee Updates

• The Department of Neurosciences welcomes Scott Lindhorst, MD. He received his Medical Degree from the University of South Alabama in 2005. He completed his Internal Medicine Residency at the University of Alabama at Birmingham Hospital and School of Medicine in 2009 and completed his Fellowship in Hematology Oncology at the same institution in 2012. Dr. Lindhorst then went on to complete a Fellowship in Neuro-Oncology from Duke University Hospital and School of Medicine in 2013. Dr. Lindhorst’s clinical interests include head and neck cancer, general oncology, and neuro-oncology.

• The Department of Neurosciences welcomes Bryan T. Kumiga, DO. Specialty: Physical Medicine & Rehabilitation // Special Interests: Interventional spine care, Musculoskeletal medicine, Electrodiagnostics, Epidural steroid injections, Nerve blocks, Facet injections, Radiofrequency ablation // Medical School: New York College of Osteopathic Medicine // Residency: Long Beach Medical Center // Fellowship: University of Massachusetts Medical School

• Craig Woodard MD, PhD will be part of our General Neurology Division, focusing on outpatient general neurology care. He will have clinics in West Ashley, North Charleston, Mt. Pleasant, and RT. Dr. Woodard will also help staff at the Tuesday afternoon resident clinics. Sherri Avinger has been appointed as his administrative assistant. Welcome Dr. Woodard! We all look forward to working with you.

• Welcome to Master of Science in Clinical Research (MSCR) students; Rickey Miller, Harshini Mahanti, and Richa Lal. They are conducting individual research on neuro-oncology in Dr. Naren Banik’s Neurochemistry Laboratory, under the mentorship of Dr. Arabinda Das.

• Ronald See, PhD changed from Professor to Adjunct Professor
• Justin Gass, PhD was appointed as Assistant Professor
• Carmela Reichel, PhD changed from Research Assistant Professor to Assistant Professor
• Prakash Kara, PhD was promoted from Assistant Professor to Associated Professor.
• Angie Cason, PhD was appointed as Research Assistant Professor.
EMPLOYEE SPOTLIGHT

Stacey Simmons

Meet employee Stacey Simmons. From James Island, South Carolina, Stacey has worked for MUSC for over 10 years. She is currently the RT Neurology Clinic Manager. Stacey is a true asset to our team. She is a key player in maintaining clinic flow, quality improvement and customer service. Stacey strives for service excellence, and always puts our patients first. Thank you for always going above and beyond!

WORK

How are you changing what’s possible?
I have a talent for process improvement and feel my contributions to improving simple and complex processes have improved the patient care overall. I feel that a strong interdisciplinary team can accomplish any goal and have worked closely with other leaders in our department to nurture team relationships. By empowering my team and encouraging a positive attitude and accountability, I feel I have become a transformational leader.

What do you enjoy most about your job at MUSC?
I love our patients! I have worked with neurological patients for most of my career and have always been drawn to neurology. The patient population is so varied and have diagnoses that are life changing for them and their families. Helping patients and their families during difficult times and helping them manage and organize their care is very rewarding.

TELL US MORE!

Where are you originally from, and can you tell us a fun fact about the city?
I am actually from here in Charleston - James Island to be exact. My dad was such a well known captain in the fire department, I didn’t get tickets when I was pulled over for speeding - I got notes to take home and have signed! I would have rather taken the tickets!!

What do you like to do in your free time?
What’s free time?

What are your nicknames?
Cricket - but only my daddy called me that! and lil’ bit - but only my brother called me that!

When you were little, what did you want to be when you grew up?
A singer. I was singing before I was talking!

What tv show/movie are you ashamed to admit you love?
Big Brother!
STARTING FROM TOP LEFT (GOING CLOCKWISE)

TEAM VICKY AT THE BREAST CANCER WALK • TEAM VICKY AT THE BREAST CANCER WALK • DR. GRANHOLM AND TEAM AT THE WALK TO END ALZHEIMER’S DISEASE • THE WALK TO END ALZHEIMER’S DISEASE • DR. CHALELA (FAR RIGHT) POSES WITH THE MEDICS AND NURSES OF THE 212TH COMBAT SUPPORT HOSPITAL AT CAMP-SABALU-HARRISON IN AFGHANISTAN. THE UNIT IS TASKED WITH PROVIDING DETAINEE HEALTH CARE AND TROOP MEDICAL CARE. THEIR MOTTO IS “SKILLED AND RESOLUTE”!
Translational Research Unit (TRU) Clinical Trials

Clinical trials, also called research studies, are managed by government agencies, educational institutions, private not-for-profit organizations, or commercial businesses, to develop, produce, and evaluate the effectiveness of new treatments and therapies for diseases. New trials are added on a routine basis, and many clinical trials accept only a limited number of participants. The following is a list of TRU clinical trials that are actively enrolling patients.

If you are interested in viewing additional clinical trials, not included in the list below, please visit the site links below:

South Carolina Clinical Trials - http://scresearch.org/

MUSC Hollings Cancer Center Clinical Trials - http://prc.hcc.musc.edu/portal/cto/ClinicalTrials/tabid/488/Default.aspx

<table>
<thead>
<tr>
<th>Title</th>
<th>Principal Investigator</th>
<th>Study Coordinator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atomoxetine Treatment for Cognitive Impairment in Parkinson’s Disease (ATM-Cog).</td>
<td>Vanessa Hinson, MD, PhD</td>
<td>Amy DeLambo, ACNP 843-792-7262 <a href="mailto:delambo@musc.edu">delambo@musc.edu</a></td>
</tr>
<tr>
<td>A Pilot Study of Atomoxetine for Freezing of Gait in Parkinson’s Disease.</td>
<td>Gonzalo Revuelta, DO</td>
<td>Amy DeLambo, ACNP 843-792-7262 <a href="mailto:delambo@musc.edu">delambo@musc.edu</a></td>
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</tr>
<tr>
<td>A Study to Evaluate the Safety and Efficacy of IPX066 in Advanced Parkinson’s Disease</td>
<td>Vanessa Hinson, MD, PhD</td>
<td>Amy DeLambo, ACNP 843-792-7262 <a href="mailto:delambo@musc.edu">delambo@musc.edu</a></td>
</tr>
<tr>
<td>Multi-center, Prospective, Naturalistic, Observational Study of Cervical Dystonia and Therapy with Botox</td>
<td>Vanessa Hinson, MD, PhD</td>
<td>Amy DeLambo, ACNP 843-792-7262 <a href="mailto:delambo@musc.edu">delambo@musc.edu</a></td>
</tr>
<tr>
<td>An interventional study conducted in subjects with early-stage and advanced-stage idiopathic Parkinson’s disease suffering from apathy</td>
<td>Gonzalo Revuelta, DO</td>
<td>Amy DeLambo, ACNP 843-792-7262 <a href="mailto:delambo@musc.edu">delambo@musc.edu</a></td>
</tr>
<tr>
<td>A Double-blind, Randomized, Placebo-controlled, Multicenter, Parallel-group Study with an Open-label Extension Phase to Evaluate the Efficacy and Safety of Adjunctive Perampanel in Primary Generalized Tonic-Clonic Seizures</td>
<td>Jonathan Halford, MD</td>
<td>Kim Schnabel, 843-792-3855, <a href="mailto:schnabel@musc.edu">schnabel@musc.edu</a></td>
</tr>
<tr>
<td>This study will evaluate the efficacy and safety of brivaracetam at doses of 100 and 200 mg/day compared to placebo as adjunctive treatment in adult focal epilepsy subjects with partial onset seizures not fully controlled despite current treatment with 1 or 2 concomitant antiepileptic drugs. (BRIVARACETAM)</td>
<td>Jonathan Halford, MD</td>
<td>Kim Schnabel, 843-792-3855, <a href="mailto:schnabel@musc.edu">schnabel@musc.edu</a></td>
</tr>
<tr>
<td>A prospective, open-label study of the structure and function of the retina in adult patients with refractory complex partial seizures treated with vigabatrin (“Sabril”) High Performance Seizure Monitoring and Alert System</td>
<td>Ekrem Kutluay, MD</td>
<td>Kim Schnabel, 843-792-3855, <a href="mailto:schnabel@musc.edu">schnabel@musc.edu</a></td>
</tr>
<tr>
<td>Jonathan Halford, MD</td>
<td><a href="mailto:Schnabel@musc.edu">Schnabel@musc.edu</a></td>
<td></td>
</tr>
<tr>
<td>A pivotal phase III trial of detecting generalized tonic-clonic seizures with a seizure detection and warning system in epilepsy patients.</td>
<td>Jonathan Halford, MD</td>
<td>Kim Schnabel, 843-792-3855, <a href="mailto:schnabel@musc.edu">schnabel@musc.edu</a></td>
</tr>
<tr>
<td>The Epilepsy Study Consortium (ESCI)</td>
<td>Gabriel Martz, MD</td>
<td>Kim Schnabel, 843-792-3855, <a href="mailto:schnabel@musc.edu">schnabel@musc.edu</a></td>
</tr>
<tr>
<td>fMRI in Anterior Temporal Epilepsy Surgery “FATES”</td>
<td>Leonardo Bonilha, MD</td>
<td>Sheri Davis, 843-792-2845, <a href="mailto:davish@musc.edu">davish@musc.edu</a></td>
</tr>
</tbody>
</table>
Transcranial Direct Current Stimulation and Aphasia Treatment Outcomes “APHASIA”  
Leonardo Bonilha, MD  
Sheri Davis, 843-792-2845, davish@musc.edu

Utility of Intravenous lacosamide compared with fosphenytoin in the treatment of patients with frequent nonconvulsive seizures (TREndS)  
Jonathan Halford, MD  
Kim Schnabel, 843-792-3855, schnabel@musc.edu

A Prospective, Post-Market Assessment of NanOSS Bioactive 3D in the posterolateral spine  
Abhay Varma, MD  
Sheri Davis, 843-792-2845, davish@musc.edu

A double-blind, placebo-controlled study of AC105 patients with acute traumatic spinal cord injury  
Abhay Varma, MD  
Michele DeCandio, RN, 843-792-9016, decandio@musc.edu

Bruce Frankel, MD  
Michele DeCandio, RN, 843-792-9016, decandio@musc.edu

A Phase II Clinical Trial Evaluating DCVax®-Brain, Autologous Dendritic Cells Pulsed with Tumor Lysate Antigen for the Treatment of Glioblastoma Multiforme  
Pierre Giglio, MD  
Michele DeCandio, RN, 843-792-9016, decandio@musc.edu

“The Correlation between the Genetic & Neuroimaging Signatures in Newly diagnosed Glioblastoma”  
Pierre Giglio, MD  
Michele DeCandio, RN, 843-792-9016, decandio@musc.edu

The Efficacy of PF-02341066 (Crizotinib), a Dual alK/c-Met Inhibitor in Inhibiting Growth of Glioblastoma  
Pierre Giglio, MD  
Michele DeCandio, RN, 843-792-9016, decandio@musc.edu

The Effect of Garlic Compounds on Fresh Human Glioma Biopsies: CTO: 101378  
Arabinda Das, PhD  
Michele DeCandio, RN, 843-792-9016, decandio@musc.edu

BTTT 11-01 Randomized, Double-Blind Placebo-Controlled Trial of Lacosamide for Seizure Prophylaxis in Patients with High-Grade Gliomas  
Pierre Giglio, MD  
Michele DeCandio, RN, 843-792-9016, decandio@musc.edu

Endovascular treatment for Small Core and Anterior circulation Proximal occlusion with Emphasis on minimizing CT to recanalizationtimes (ESCaPE) trial  
Christine Holmstedt, DO  
Roberta Navarro, 843-792-4093, navarro@musc.edu

A randomized, placebo controlled, double blind study to evaluate the efficacy, safety, tolerability and pharmacodynamics of belimumab in subjects with Generalized Myasthenia Gravis (MG)  
David Stickler, MD  
Michele DeCandio, RN, 843-792-9016, decandio@musc.edu

Framing Eighteen coils in cerebral Aneurysms Trial  
Raymond Turner, MD  
Adrian Parker, 843-792-3164, parkerad@musc.edu

Evaluation of DeltaMaxx Microcoil System in Intracranial Aneurysms  
Raymond Turner, MD  
Adrian Parker, 843-792-3164, parkerad@musc.edu

SCENT Clinical Study The surpass intracranial aneurysm embolization system pivotal trial to treat large or giant wide neck aneurysms  
Raymond Turner, MD  
Adrian Parker, 843-792-3164, parkerad@musc.edu

Clinical trials are the primary way breakthroughs in treating diseases are made.
# Neurosciences Grants: July, August and September 2013

<table>
<thead>
<tr>
<th>PI</th>
<th>TITLE: AGENCY</th>
<th>TOTAL</th>
</tr>
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<tbody>
<tr>
<td>Banik, N</td>
<td>Inflammation and Degeneration of Optic Nerve in EAE; NIH/NINDS</td>
<td>$305,570</td>
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<tr>
<td>Beckley, J</td>
<td>Neuroplasticity Associated with Acute Toluene Inhalation; NIH/NIDA</td>
<td>$19,577</td>
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<td>Bhat, N</td>
<td>Role of a Stress Kinase in AD Pathogenesis; Amer. Health Assistance Fdn.</td>
<td>$133,007</td>
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<td>Chimowitz, M</td>
<td>Biomarkers of Ischemic Outcomes in Symptomatic Intracranial Stenosis (BIOSIS); Emory Univ.</td>
<td>$9,543</td>
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<td>Guzd, T</td>
<td>Ceramide and Oligodendrocyte Protection in Stroke; VAMC</td>
<td>$233,577</td>
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<td>Hinson, V</td>
<td>Atomoxetine Treatment for Cognitive Impairment in Parkinson’s Disease; Michael J. Fox Fdn.</td>
<td>$222,403</td>
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<td>McGinty, J</td>
<td>Drug Abuse Training Program; NIH/NIDA</td>
<td>$54,171</td>
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<td>Revuelta, G</td>
<td>Creatine Safety, Tolerability, and Efficacy in Huntington’s Disease: CREST-E; Massachusetts General Hospital</td>
<td>$1,500</td>
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<td>Sambamurti, K</td>
<td>Understanding the Neuroprotective Activities of Posiphen; NIH/NIA</td>
<td>$224,250</td>
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<tr>
<td>Turner, R</td>
<td>Trans1 Cadaver Lab (7/18/13); Baxano Surgical Inc.</td>
<td>$5,917</td>
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<tr>
<td>Varma, A</td>
<td>A Double-Blind, Placebo-Controlled Study of AC105 in Patients with Acute Traumatic Spinal Cord Injury; DP Clinical Inc.</td>
<td>$109,804</td>
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<tr>
<td>Martz, G</td>
<td>The Human Epilepsy Project (HEP); The Epilepsy Study Consortium</td>
<td>$33,990</td>
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<tr>
<td>Aston-Jones, G</td>
<td>Effects of Locus Coeruleus Activation; Selective Optogenetic Stimulation and fMRI; NIH/NIMH</td>
<td>$877,000</td>
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<td>Froeliger, B</td>
<td>Neuroimaging of Nicotine Dependence, Depression and Emotion Regulation; NIH/NIDA</td>
<td>$357,823</td>
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<td>Halford, J</td>
<td>An Extended Access Program for Perampanel; Eisai, Inc.</td>
<td>$5,200</td>
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<tr>
<td>Kindy, M (Mult. PI)</td>
<td>Role of Fibrinol-1 in APP Processing; NIH/NIA</td>
<td>$112,125</td>
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<tr>
<td>Mcguier, N</td>
<td>Homer2 and Ethanol-Associated Neuroadaptations; NIH/NIAAA</td>
<td>$42,232</td>
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<tr>
<td>Riedy, M</td>
<td>South Carolina INBRE- PACD Scholar Program; Univ. of South Carolina</td>
<td>$65,492</td>
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<tr>
<td>Adams, R</td>
<td>SMARTSTATE Stroke Endowed Chair; MUSC Fdn.</td>
<td>$124,881</td>
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<tr>
<td>Holmstedt, C</td>
<td>Endovascular Treatment for Small Core and Anterior Circulation Proximal Occlusion with Emphasis on Minimizing CT to Recanalization Times (ESCAPE); Trial Univ. of Calgary</td>
<td>$250,000</td>
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<tr>
<td>Stickler, D</td>
<td>Study Title: A Randomized, Placebo Controlled, Double Blind Study to Evaluate the Efficacy, Safety, Tolerability and Pharmacodynamics of Belimumab in Subjects with Generalized Myasthenia Gravis (MG); GlaxoSmithKline</td>
<td>$162,100</td>
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<td>Vaughan, C</td>
<td>Univ of Rochester - Center for Human Experimental Therapeutics; Univ. of Rochester</td>
<td>$75,000</td>
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<td>Banik, N</td>
<td>Extra-Nigral Neurodegeneration in Experimental Parkinson’s Disease; NIH/NINDS</td>
<td>$305,574</td>
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<td>Boger, H</td>
<td>Oxidative Stress and Glutamate Toxicity on Aged Dopaminergic Neurons; NIH/NIA</td>
<td>$235,359</td>
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<td>Cason, A</td>
<td>Role of Orexin in Conditioned Responding for Sweets; Implications for Obesity; NIH/NIDDK</td>
<td>$110,536</td>
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<td>Centanni, S</td>
<td>Adolescent Alcohol and GABAergic Neurotransmission in the Adult Prefrontal Cortex; NIH/NIAAA</td>
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<td>Chandler, L</td>
<td>Impact of Adolescent Alcohol Exposure on Prefrontal Cortical Function in the Adult; NIH/NIAAA</td>
<td>$317,640</td>
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<tr>
<td>Gass, J</td>
<td>The Role of mGluR5 Receptors in Extinction Learning of Alcohol Cues; NIH/NIAAA</td>
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<tr>
<td>Granholm-Bentley, A</td>
<td>High-Fat Diets and Memory Loss with Aging; NIH/NIA</td>
<td>$264,460</td>
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<tr>
<td>Halford, J</td>
<td>A Double-Blind, Randomized, Placebo-Controlled, Multi-Center Study to Evaluate the Efficacy and Safety of Adjunctive Perampanel in Primary Generalized Tonic Clonic Seizures; PPD Development</td>
<td>$264,460</td>
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<td>Jhou, T</td>
<td>Neural Mechanism By Which Punishment Modulates Drug-Seeking; NIH/NIDA</td>
<td>$177,000</td>
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<td>Joseph, J</td>
<td>Functional Neuroanatomy of Developmental Changes in Face Processing; NIH/NICHD</td>
<td>$215,431</td>
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<td>New, N</td>
<td>Adolescent Alcohol, Epigenetics, and Alterations in the Adult Prefrontal Cortex; NIH/NIAAA</td>
<td>$371,355</td>
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<td>Shih, A</td>
<td>Enhanced Detection of Cerebral Microinfarcts in Dementia using MRI; NIH/NINDS</td>
<td>$186,875</td>
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<td>Spencer, K</td>
<td>Chronic Ethanol-Induced Plasticity of NMDA and Kv4.2 is Mediated By KChIP3; NIH/NIAAA</td>
<td>$42,252</td>
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<td>Spencer, S</td>
<td>Investigating the Role of Astrocyte-Secreted Synaptogenic Molecules in Cocaine-Induced Synaptic Plasticity and Reinstate- ment Behavior; Burroughs Wellcome Fdn.</td>
<td>$20,000</td>
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<td>Woodward, J</td>
<td>Ethanol Sensitivity of Native and Cloned NMDA Receptors; NIH/NIAAA</td>
<td>$326,335</td>
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<td>Turner, R</td>
<td>Evaluation of DeltaMaxx Microcoil System in Intracranial Aneurysms; DePuy Orthopaedics</td>
<td>$98,888</td>
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<td>Turner, R</td>
<td>Next Generation ENTERPRISE Vascular Reconstruction Device and Delivery System DVA-108098-TP Rev A; DePuy Synthes</td>
<td>$2,990</td>
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<tr>
<td>Varma, A</td>
<td>DuraSeal Exact Spine Sealant System Post-Approval Study; Covidien</td>
<td>$69,625</td>
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