“Lee Selisky takes final scuba dive after ALS diagnosis” is based on a story originally appearing in Brain and Life by Richard Laliberte; photo by Stephen Frink. Reprinted with permission. Other photos are by Maddy Gray, Ken Huth, William Alexander and others. Thanks to Alissa Kocer, Imani Taylor, JT Solomon, MBA, Rich O’Brien, MD, PhD, and many others for their help. Written material by William Alexander; design by Agata Rocka @ Rocka Design. For more information about the Duke Department of Neurology, or to order copies, email William.Alexander@duke.edu.
I hope that you enjoy our latest annual report. This report details some of our recent accomplishments, including the expansion of our residency and fellowship programs, a national physician survey that ranked Duke University Hospital as a top location for neurology care, and research that uncovered new potential avenues for treating neurodegenerative conditions.

We’ve had other successes as well. In the past year we’ve developed a formal neurohospital program for Duke University, Duke Regional, and Duke Raleigh hospitals. This program will improve outcomes and quality of care for patients who suffer from stroke, who are in need of neurocritical care, and those with other neurological conditions. Together with the Department of Neurosurgery, the Duke Spine Center, the Preston Robert Tisch Brain Tumor Center and the Department of Pediatrics, we completed a strategic plan for Duke Neurosciences over the next five years. The Duke Center for Neurodegeneration and Neurotherapeutics, led by our new Vice Chair for Research, Al La Spada, MD, PhD, is now investigating the origins of, and possible therapies for, conditions like Huntington’s, Alzheimer’s, and Parkinson’s disease in the brand-new six-floor, 155,000-square-foot Medical Sciences Research Building III on Erwin Road.

I’d like to personally thank each member of the Department, our colleagues within the Duke University Health System and the School of Medicine, and the alumni, academic collaborators, family members, philanthropic partners, and other individuals who have allowed us to thrive. In particular, I’d like to single out John Sampson, MD, PhD, Steve Lisberger, PhD, Bill Fulkerson, MD, A. Eugene Washington, MD, and Dean Mary Klotman, MD, for their continued support.

I’m also excited about the opportunities we’ll encounter in this coming year. Our incoming Stroke Division Chief, Wuwei (Wayne) Feng, MD, MS, will make Duke a national leader in researching stroke rehabilitation, one of the last untapped frontiers of neurology. The Duke Comprehensive Epilepsy Center, under Aatif Husain, MD, is gearing up to become a national leader for the comprehensive care of patients with epilepsy, offering the latest medical and surgical therapies, as well as mental and social health counseling and other services. Lastly, we hope to reestablish Duke as a federally recognized Alzheimer’s Disease Research Center so that our patients can have access to the latest diagnosis, treatment, and care for Alzheimer’s and memory disorders.

It’s been a great year, and our future is looking even better.

RICHARD O’BRIEN, MD, PHD
DISQUE D. DEANE UNIVERSITY PROFESSOR
CHAIR, DUKE DEPARTMENT OF NEUROLOGY
BY THE NUMBERS

CLINICAL CARE

16,908
New patient visits in 2018

214,255
Work RVUs in 2018

54%
increase in WRVUs between 2013-2018

$37.5M
Charges

RESEARCH

112
peer-reviewed journal articles published by members of our Department in 2018
DEPARTMENT

- 20 Fellows
- 19 Residents
- 8 Fellowship programs

FUNDING FY 2019

- 106 faculty
- 125 staff members
- 37 Trainees

- 437 donors
- $4M Total private support
  - $2.9 M: Philanthropy support
  - $1.1 M: Private grants
2018: A YEAR IN REVIEW

JANUARY

Rick Bedlack, MD, PhD, becomes Duke Today’s “Blue Devil of the Week,” where he discusses his work with patients with amyotrophic lateral sclerosis (ALS) as well as his own unique fashion sense. Meanwhile, members of our faculty attended the 2018 International Stroke Conference, the premier meeting on the science and treatment of cerebrovascular disease, contributing to 10 posters on topics such as how hospital transfers affect stroke care and an international survey of progressive stroke system processes.

FEBRUARY

Duke Neurology faculty members and housestaff stand out at the 2018 North Carolina Neurological Society annual meeting, where their lectures and posters advanced the field of clinical neurology. Also in February at the Duke School of Law, Joel Morgenlander, MD, joins professional football players as well as experts in the fields of neurology, law, biomedical engineering, history, and other fields to discuss football, concussions, and head trauma.

MARCH

Our neurology clinic opens its doors in the new Duke Health Center South Durham. Meanwhile on Duke’s main campus, Leonard White, PhD, accepts the 2018 Duke Medicine Golden Apple Award, the most prestigious teaching award presented by the student body of the School of Medicine, at the School’s Student-Faculty Show.
Residents, fellows, postdoctoral researchers, and students highlight their contributions to neurology research at our Department’s third annual Resident, Fellow, and Postdoc Research poster night. Topics range from the potential of using mitochondrial DNA damage as a blood-based biomarker for Parkinson’s disease to a case study of the cognitive difficulties faced by one bariatric surgery patient.

Dozens of current and former members of the Duke Department of Neurology gathered to catch up on old times, enjoy the Southern California weather, and celebrate the career of Janice Massey, MD, at the 70th annual AAN meeting in Los Angeles. Over the course of the meeting, more than 20 faculty members, residents, and fellows from the Department directed courses, gave lectures, or presented posters and abstracts.

National experts on Alzheimer’s disease from Duke and around the country lead discussions of the latest advances in research at the Allen Roses Symposium, named in honor of the famed Duke neurologist whose research team identified the first two genes associated with an increased risk of Alzheimer’s disease. Roses’ official portrait is unveiled before taking its place in the Bryan Research Building where Roses used to work.
Four familiar faces join the Neurology Department faculty: former resident and fellow Suma Shah, MD, Parkinson’s and Movement Disorders fellows Noreen Bukhari-Parlakturk, MD, PhD, and Ian C. Lee, MD, and former Senior Research Associate Carlene Moore, PhD.

Christa Swisher, MD, above, introduces Rana Awdish, MD, author of In Shock, and director of the Pulmonary Hypertension Program at Henry Ford Hospital. Before an audience of hundreds in the Great Hall of the Trent Semans Center, Adwish delivers a riveting, first-hand account of her own near-death experience and how it affected her interactions with her patients and future practice.

The Neurology Department welcomes a new division chief for the Division of Parkinson’s and Movement Disorders: Nicole Calakos, MD, PhD (left). Later that year, she would be followed by Aatif Husain, MD, the new chief of the Division of Epilepsy, Sleep and Clinical Neurophysiology, and Kim Johnson, MD, the new chief of the Division of Memory Disorders.
New research by Laurie Sanders, PhD, and colleagues at the University of Pittsburgh, Johns Hopkins, Boehringer-Ingelheim, and Stanford uncovers the culprit behind why skeletal muscle loses its ability to heal with age: the so-called “longevity protein” Klotho. Their article shows that, in young animals, Klotho expression soars after a muscle injury, whereas in old animals, it remains flat. By raising Klotho levels in old animals, or by mitigating downstream effects of Klotho deficiency, the researchers could restore muscle regeneration after injury.

Department Chair Rich O’Brien, MD, PhD, takes to the stage with gut-brain neuroscientist Diego Boroquez, PhD, to discuss secrets of the brain before an audience at the Washington-Duke Inn. Boroquez and O’Brien discuss the potential development of “statin”-like drugs that prevent Alzheimer’s, how the connections between the gut and brain may influence neurodegenerative disease, and how a seven-year-old’s brain can repair itself in ways that a 50-year-old’s cannot.

The Neurology Department’s Al La Spada, MD, PhD, and Nicole Calakos, MD, PhD, and the Department of Cell Biology’s Cagla Eroglu, PhD, receive a grant of more than $1 million to study the role of astrocytes, common, star-shaped support cells within the brain, in the development of Parkinson’s disease. The team hopes to identify how astrocytes express genes associated with Parkinson’s and how the resulting astrocyte dysfunction leads to neuron loss and neurodegeneration.
CLINICAL CARE

Duke is home to one of the country’s leading neurology programs, with an expert team of other specialists who offer the latest neurological care, including tests, treatments, and breakthrough research. Our clinical neurologists are national experts in their field and work side-by-side with specialists from throughout the Duke Health system, from anesthesiologists and neurosurgeons, to physical therapists, advanced practice providers, and social workers to treat disease, improve quality of life, and offer rehabilitation.

LEE SELISKY TAKES FINAL SCUBA DIVE AFTER ALS DIAGNOSIS

Five months after Lee Selisky had been diagnosed with amyotrophic lateral sclerosis (ALS), the amateur diver sat in the Nai’a, a 120-foot sailboat in the tropical Pacific waters near Fiji. ALS had reduced Selisky’s ability to swim effectively, but after consulting with Duke Neurology’s Wayne and Janice Massey, MD, he had made arrangements for a final guided diving trip. Selisky had the help of a dedicated “driver diver” helping guide his movement and control his depth, as well as several other experienced divers swimming nearby. “Lee’s respiratory capacity was still very good,” said Wayne Massey, an experienced Navy diving researcher and a member of the Diver’s Action Network. “He also was an experienced diver and had several highly capable diving buddies with him at all times.” The 10-day trip allowed Selisky to see sharks, barracuda, and angel fish. Selisky remained optimistic until his death in 2018. “No one can make this better, so I want to enjoy my life as much as I can,” he said in an interview for Alert Diver.

DUKE UNIVERSITY HOSPITAL TOPS PHYSICIANS’ CHOICE FOR NEUROLOGICAL CONDITIONS

More than 11,000 U.S. physicians ranked Duke University Hospital as a top hospital nationwide for stroke, multiple sclerosis, and amyotrophic lateral sclerosis (ALS) in a national 2018 Medscape survey. Duke University Hospital ranked in the top 10 in the nation for all three neurological conditions included in the survey, one of only seven institutions to do so. Duke University Hospital tied for 7th place for ALS and 9th for stroke. It also ranked 9th nationwide for multiple sclerosis.

These rankings are the result of the dedication of our physicians and staff to providing exceptional care to patients with all neurological conditions. They’re also a sign of the commitment to excellence all members of Duke Neurology made when we became a Department four years ago. I’m looking forward to what we can accomplish in the next year.

Richard O’Brien, MD, PhD | Department Chair
HOSPITAL TRANSFERS FOR EVT INCREASE STROKE RISK

Research by Shreyansh Shah, MD, and colleagues uncovered an important contributor to stroke-related death and disability and points the way to improving stroke outcomes: delays from hospital transfers to receive endovascular therapy (EVT). The *Circulation* article found that transferring patients from one hospital to another to receive endovascular therapy increased mortality for acute ischemic stroke patients. Patients who received EVT without a transfer were more likely to be discharged from the hospital and walk on their own. Non-transferred patients were also less likely to have complications such as intracranial hemorrhage. These disparities persisted even after accounting for time delays and other factors.

While the delay in treatment and worse outcomes for the transferred patients were expected, the stroke community is taken aback by the extent of the problem revealed by this study. The fact that of all patients receiving EVT in our country, 45% had to go from one hospital to another to receive the therapy, highlights the seriousness of the access issue. The solution to this problem is going to require a number of innovative ideas and collaboration across institutions.

Shreyansh Shah, MD

Shah is already working on possible solutions including recognizing and triaging patients who need EVT on-scene, reducing interhospital transfer times, and identifying other factors in patients that result in poorer outcomes.

Vani Chilukuri, MD, treats a patient in Duke University Hospital’s Neuroscience Intensive Care Unit (or Neuro ICU). The state-of-the-art, eight-floor pavilion includes 160 critical care rooms, 16 operating rooms, and imaging equipment.
Our faculty are actively engaged in cutting-edge research spanning from the bench to the bedside. Each year, members of our Department contribute to more than 100 journal articles in the scientific and medical literature. The scope of our research ranges from analyzing subcellular misfolding of proteins to better understand and treat neurodegenerative diseases, to analyzing data from hundreds of thousands of stroke patients to better understand who is at risk and how to improve treatments. The following stories highlight just a few of these recent accomplishments.

**FINE-TUNING GENES TO TREAT PARKINSON’S DISEASE**

**Ornit Chiba-Falek, PhD**, is working with **Boris Kantor, PhD**, (Duke Neurobiology), to develop a new therapeutic strategy for Parkinson’s Disease. Normally, the SNCA gene provides instructions for making a protein integral for normal brain function, but overexpression of SNCA can cause Parkinson’s disease and other related disorders. Chiba-Falek and her team created an innovative platform that allows regulation of gene expression programs to be fine-tuned.

“This approach would be highly attractive for developing ‘smart drugs’ as disease modifying interventions for Parkinson’s, Alzheimer’s disease, and other neurological diseases and pathologies associated with dysregulation of gene expression.”

**OPTIMIZING TREATMENT FOR STROKE**

For people with atrial fibrillation, medications known as NOACs (non-vitamin K antagonist oral anticoagulants) can reduce the risk of stroke by as much as 70 percent. However, when individuals taking NOACs do have a stroke, clinicians have sometimes held off on providing intravenous tPA, believing this front-line treatment could increase the risk for bleeding complications. A *Stroke* study by **Ying Xian, MD, PhD**, **Daniel Laskowitz, MD, MHS**, and colleagues, appears to provide an answer to this dilemma. The team analyzed 55 studies with a total of nearly 500 NOAC patients who received tPA. Xian’s team found that tPA was well-tolerated and did not increase the risk for bleeding, indicating that tPA may be a safe, effective treatment for this population.
DEVELOPING NEW THERAPIES TO TREAT NEUROGENETIC DISEASES

Al La Spada, MD, PhD, and colleagues, have pioneered a new form of therapy to restore vision in a previously untreatable form of progressive vision loss. The team's research also offers a new pathway to treat neurogenetic diseases. La Spada’s team used a hyper-focused form of therapy known as antisense oligonucleotides (ASOs) to treat a rare disease known as spinocerebellar ataxia type 7 (SCA7). ASOs directly target harmful proteins produced by genetic disorders like SCA7 before those proteins can be expressed. Mice with SCA7 treated with the ASOs showed improved visual function that lasted for weeks after treatment. “By developing ASOs to treat the retinal degeneration in SCA7, we are creating a powerful new therapy,” said La Spada, who believes similar techniques will eventually help patients with Alzheimer’s disease, Parkinson’s, and other conditions caused by accumulation of misfolded proteins.

“By developing ASOs to treat the retinal degeneration in SCA7, we are creating a powerful new therapy.”

Al La Spada, MD, PhD (photo, right)
EDUCATION

The Duke Neurology Department is a national leader in training the next generation of neurology clinicians, researchers, and providers. Our residency program provides excellent training in all areas of general and subspecialty neurology. We also offer eight ACGME-approved fellowship programs for additional subspecialty training. Our residency program for advanced practice providers, now in its fourth year, is being emulated by academic centers across the country.

RESIDENCY PROGRAM

Our residents spend their first year in general internal medicine, and their three following years working with Department faculty, treating patients, and conducting their own research with gradually increasing responsibility. Our residents spend time on inpatient services at Duke University Hospital as well as outpatient clinics at Duke Clinic and the Durham Veterans Affairs Medical Center. The variety and volume of the patients visiting these locations ensure that every resident has an ample opportunity to gain expertise in all areas of neurology.

“All of the faculty and residents have been incredibly helpful by sharing their knowledge and giving me feedback on examining and presenting patients. My peers demonstrate great teamwork, resourcefulness, and a good sense of humor on a daily basis.”

Lina Barker, MD | Chief Resident

“The internal medicine year I completed at Duke provided an outstanding foundation in general medicine, which is fundamental to becoming a neurologist and caring for patients with neurological problems. In the next year there’s a steep learning curve and my senior residents and attendings have helped me gain the fundamental skills, while over time allowing for more autonomy with decision-making and formulating plans.” Martin Weiss, MD - Third-Year Resident (center in photo)
FELLOWSHIP PROGRAM

Our fellowship programs provide subspecialty training to allow established neurologists to become clinical and research experts in their field of choice. The Duke Neurology Department offers eight ACGME-approved fellowship programs—more than any other Department in the Duke School of Medicine. Fellows work with faculty from our Department, many of whom have completed multiple fellowships themselves, as well as national experts in neurosurgery, anesthesiology, immunology, and other fields.

ADVANCED PRACTICE PROVIDERS (APP) RESIDENCY PROGRAM

Our one-year residency program provides specialty neurology training for licensed advanced practice providers. Our APP residents work side by side with faculty and residents in both the inpatient and outpatient setting. After graduation, residents are well-versed in clinical neurological principles and are prepared for a general or subspecialty practice. The program is now a national model for improving the quality and availability of neurological care.

“

We typically see both rare genetic and acquired disorders as well as more common peripheral neuropathies. At various times we will see inpatient consults and we have didactic conferences throughout the week. It is really exciting and I have come to enjoy the experience in a short time.

Derrick Fox, MD, Neuromuscular Fellow

“I was delighted to discover that the Neurology Department at Duke had a training program for APPs. Though I was an experienced PA, I had been away from the bedside for long enough to feel like my skills were rusty. This program gave me a chance to refresh my skills as well as gain a tremendous amount of new experience in neurology. Without exception, faculty, fellows, residents and APPs in the department have been motivated and supportive teachers, making my time as an APP resident rewarding and enjoyable.”

Margarethe Goetz, PA-C, PhD
APP Resident
ALUMNI

For more than seven decades, our residents and fellows have found success in academic medicine, private practice, hospital systems, and other areas of neurology. We are proud of the work all of our graduates do to treat people affected by neurological conditions, conduct new research, and train their future colleagues. The following map highlights the current status of a small portion of the hundreds of the neurologists who have trained here as residents or fellows.

Ilkcan Cokgor, MD, (Resident, 1994-1997) practices general neurology in California’s Marin County, near San Francisco, where she sees patients with stroke, dementia, migraine, multiple sclerosis, and Parkinson’s disease. She is also stroke director for Marin General Hospital.

Kim Mebust, MD, (Resident and Sleep Fellow, 1991-1996) has an active clinical practice in sleep medicine, where she sees patients in three different offices in two counties near Puyallup, Washington. She also manages the local MultiCare Health System’s sleep centers, maintains their center accreditation, and interprets sleep tests.

Anastasie Dunn-Pirio, MD, (Resident, 2012-2015, MS and Neuroimmunology Fellow, 2017-2018) recently began practicing at UC San Diego health where she treats patients with general neurology disorders, as well as multiple sclerosis and other neuroimmunological disorders.

Eric Prince, MD, (Resident, 2013-2016) is currently a neurohospitalist at Swedish Medical Center in Seattle, WA.

Ching-Chiang “Allen” Chu MD, PhD, (Resident, 1995-1998) continues to run his private practice, the Houston Neurology and Sleep Diagnostic Center, which includes a 4-bed AASM accredited sleep center and an AANEM-accredited electrodiagnostic laboratory.
Larry Goldstein, MD, (Cerebrovascular Fellow, 1985-1986, faculty, 1986-2015) is Chair of the University of Kentucky College of Medicine’s Neurology Department, and Co-director of the Kentucky Neuroscience Institute in Lexington, KY.

Jonathan Halford, MD, (Resident and Clinical Neurophysiology Fellow, 1996-2001) was recently appointed Professor of Neurology at the Medical University of South Carolina in Charleston.

Peter Kaplan, MD, (Resident, 1983-1985, Epilepsy and Clinical Neurophysiology Fellow, 1985-1987) Professor of Neurology and Director of Epilepsy and EEG at Johns Hopkins Bayview Medical Center in Baltimore, MD, recently stepped down from being President of the American Board of Clinical Neurophysiology, and was nominated for the American Clinical Neurophysiology Society’s Pierre Gloor Award.

Emma Ciafaloni, MD (Resident and Neuromuscular Fellow, 1996-2000) splits her time between running clinical trials for children with Duchenne and other conditions, and treating patients of all ages with neuromuscular disease at the University of Rochester Medical Center.

Arman Sabet, MD, (Resident, Clinical Neurophysiology Fellow, 1997-2001) is one of seven neurologists in Australia’s Gold Coast University Hospital, where he treats patients in the inpatient and outpatient setting.

Emma Bjorsdottir, MD, (Movement Disorders Fellow, 2016-2017) is seeing patients with movement disorders in Reykjavik, Iceland and working with the Icelandic Parkinson Society to create educational courses and printed material for patients with Parkinson’s disease.

Anna Bjorsdottir, MD, (Movement Disorders Fellow, 2016-2017) is seeing patients with movement disorders in Reykjavik, Iceland and working with the Icelandic Parkinson Society to create educational courses and printed material for patients with Parkinson’s disease.

Khalid El-Salem, MD, (Neuromuscular Fellow, 2001-2002) is Vice President and Professor of Neurology at the Jordan University of Science and Technology (JUSt), which is the leading university in Jordan. He is also a clinical neurologist at the nearby King Abdullah University Hospital.

Sith Sathornsumetee, MD, (Parkinson’s and Movement Disorders Fellow, 2006-2007) is an Associate Professor of Medicine and Director of Neuro-oncology Program in the Department of Medicine in Mahidol University, in Bangkok, Thailand. He also serves as the Chair of the Thai Brain Tumor Society.

Arman Sabet, MD, (Resident, Clinical Neurophysiology Fellow, 1997-2001) is one of seven neurologists in Australia’s Gold Coast University Hospital, where he treats patients in the inpatient and outpatient setting.

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Atrac Kay, MD, (Resident, 2009-2012) was recently appointed Medical Director of Stroke Services, INOVA Fairfax Hospital, one of the largest healthcare systems in the Washington DC area.

Suma Shah, MD, (Resident, MS and Neuroimmunology Fellow, 2014-2018) joined our faculty after completing our residency and multiple sclerosis fellowship and is now seeing patients at our new clinic in Crooked Creek, Durham, NC.

Vern Juel, MD, (Neuromuscular Fellow, 1993-1994) - continues to lead the division of Neuromuscular Diseases, 25 years after completing his neuromuscular fellowship at Duke. Other former Duke Neurology residents and fellows on our faculty include Nicole Calakos, MD, PhD, Rick Bedlack, MD, PhD, Christa Swisher, MD, Mariam Wasim, MD, Joel Morgenlander, MD, and Matt Luedke, MD.

Chen Lin, MD, (Resident, 2013-2016) was recently appointed Assistant Professor of Neurology at the University of Alabama - Birmingham.
The Duke Department of Neurology relies on individual gifts and philanthropic partnerships to support our missions of providing transformational patient care, conducting research into neurological conditions, and training the next generation of neurologists.

Because of your support, we are able to:

- **Develop new and innovative forms of patient care**, such as telemedicine for patients with stroke and ALS, or smartphone apps to help multiple sclerosis patients record their symptoms and reactions.

- **Conduct research to investigate** the mechanisms behind Alzheimer's disease, multiple sclerosis, Parkinson's disease, movement disorders, chronic pain, and other conditions, as well as develop new treatments.

- **Train medical students, residents, fellows** and allow them to build careers and advance the field of neurology.

Donations to our neurology Gift Fund will help us fulfill these goals and designate funding where it is most needed. In addition, contributions to specific funds, such as those listed below, have a profound impact on today's care and tomorrow's cures.

**OUR SUPPORTERS**

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Andrew Adamchik  
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Margaret Dillon  
Joan Dimeglio  
Diversified Service Contracting  
Nancy Dixon  
Cathy Dolinger  
James Dolinger  
Margaret Donohoe  
Suzanne Downs  
Michelle & Lee Dresser  
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Don Edwards  
Nicole Edwards  
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Dana Lasher  
Ronald Lassiter  
Carl Lawrence  
Audrey & Gerald Lazarus  
Kathleen & William Leach  
Ian Lee  
Sharmaine Lee  
Courtney Leggett  
Andrea Lenon  
Selma & Harold Lerner  
Louise & James Levitt  
Gail Lilley  
Jeanne Link  
David Long  
Morgan Love  
Judith Loveday  
Theresa Lowe  
Jean Lynch  
Judith Lyons  
Carol Mackie  
Patricia Maehr
JUMP-STARTING THE WORK OF YOUNG NEUROLOGISTS

For neurologists at the beginning of their careers, even small amounts of funding can make a huge difference. At the right time, a few hundreds of dollars can pay for an early research project, travel opportunity, or other project that catalyzes a career-long interest in a disease or condition.

The Donald B. Sanders Residents and Fellows Research Fund, or the Sanders Fund, provides this opportunity to residents and fellows within the Department of Neurology.

This fund was started in 2011 through the generous support of Donald B. Sanders, MD, who envisioned a self-sustaining source of support to help our Duke trainees become future leaders in Neurology. Early recipients included several of our trainees who later transitioned to faculty positions at Duke, including Christa Swisher, MD, and Jeffrey Guptill, MD. The fund has also helped current trainees such as Neurocritical Care fellow Jennifer Kang, MD, who is working with Swisher to train nurses to read quantitative EEGs (QEEG) in our Neuro Intensive Care Unit. This research will help detect seizures as they happen resulting in more rapid treatment, less secondary brain injury, and improved patient outcomes.
DREAMS OF A WORLD WITHOUT MULTIPLE SCLEROSIS.

The Duke center for Research in Autoimmunity and Multiple Sclerosis (DREAMS) is dedicated to improving our understanding of, and patient care for, multiple sclerosis (MS) and autoimmune diseases. Gifts to DREAMS will fund cutting-edge research that will improve our ability to detect, understand, and treat MS.

Donors to DREAMS get regular updates on the current projects within DREAMS, straight from the researchers themselves. Giving to DREAMS allows you to learn more about cutting-edge MS research and to be a part of the conversation about creating a world without MS.

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Karen Ramos
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Kenneth Rasmussen
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Yvonne Ricciardelli
Ellen Riccio
Kitty Richardson
Kathryn Ring
Robin Robichaux
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The past generation has seen huge advances in treatments for individuals with cancer, heart disease, and other major killers. However, for individuals with acute brain injury or stroke—two devastating, incurable neurological conditions—there are currently no neuroprotective drugs to improve outcomes.

Daniel Laskowitz, MD, MHS, and members of the Brain Injury Translational Research center hope to change that. The multidisciplinary team is committed to developing new treatments that directly help individuals who have had traumatic brain injuries, strokes, and other serious neurological conditions. They also investigate the genetic factors and molecular mechanisms that underlie the brain’s response to acute injury and chronic degeneration over time.
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