



## *Making* HISTORY

### **The GW Department of Neurology Case for Support**

Understanding the nervous system is medicine's final great frontier. All the qualities that make each person unique are based in the brain. When disease alters the brain's structure in an instant by a stroke or over years through the slow, cruel degeneration of diseases like Lou Gehrig's or Alzheimer's, a part of that individual is lost forever.

The mission of the GW Department of Neurology is to sustain the dignity of human beings by treating nervous system disorders. We do this by providing expert patient care, training the next generation of physicians and scientists and working to discover therapies that will help people with nervous system disorders live longer with a better quality of life.

#### **Understanding the Need**

In the United States and other developed countries, we are fortunate to have extended life expectancy. But not without a price – hand-in-hand with longer life expectancy goes an increase in neurologic diseases of old age like stroke and dementia. These diseases will touch every individual, personally, or through a loved one's life.

Neurological disorders cut across all ages. The youngest children can be affected by autistic spectrum disorders, cerebral palsy, epilepsy and a host of other disorders with lifelong implications. For many of these conditions, there is no cure, and treatment often is ineffective. Epilepsy alone affects 3 million people in the United States at a cost of \$12.5 billion a year and 30 to 40 percent of people with the disease do not respond to current medications.

The lives of thousands of young adults are changed irrevocably every year by traumatic brain injury and spinal cord injury due to war, sports injuries and car and motorcycle accidents. The incidence of multiple sclerosis (MS) peaks at age 30, and women have twice the rate of MS as men. The toll these neurologic disorders extract from young adults is costly in personal, social and economic terms.

Alzheimer's, Parkinson's, stroke. The older we get, the higher our risk for these diseases and disorders. By 2050, experts estimate 13.8 million Americans will have Alzheimer's disease. A million Americans have Parkinson's disease, 96 percent of them age 50 and older. Like Alzheimer's, Parkinson's has no cure, and the exact cause is still unknown. Someone in America – usually someone 65 and older - suffers a stroke every 45 seconds. Nearly 5 million Americans have survived a stroke, and stroke affects 700,000 new victims a year.

Beyond these common neurologic disorders, consider the rare afflictions: myasthenia gravis, amyotrophic lateral sclerosis, Guillain-Barre disease, chronic inflammatory demyelinating peripheral neuropathy, diabetic neuropathy, and postherpetic neuralgia. Taken together, these so-called “rare” disorders account for significant disability and death every year.

As our society ages, the need for neurologic care, research to advance new treatments and education to train future neurologists is expanding. **Yet, the U.S. government and the private health care sector have failed to respond.**

The number of physicians specializing in neurology is dropping, leaving patients and their families desperate to find quality neurologic care in their communities. And with the demand for neurologists predicted to grow faster than supply for at least the next 10 years, the future is uncertain.

Meanwhile, drug discovery and development for neurologic conditions is lagging. National Institutes of Health funding continues to decline, and industry is pulling away from neurologic drug research. As a result, the number of new drugs approved for neurological disease is plummeting. And with fewer research labs available, young physicians and scientists are losing interest in specializing in the neurosciences. We face a gap in training for the next generation of neurologists and neuroscientists.

### **Responding to the Need: Neurology and Neurosciences**

Under the direction of respected physician-scientist Henry J. Kaminski, MD, the Department of Neurology is committed to providing the highest quality patient care, training future physicians and scientists and, through engagement with GW’s basic neuroscience researchers, developing new and better treatments for neurologic disorders. In patient care, physician education and training and research, everything we do is focused on helping patients with these conditions live longer and enjoy the best quality of life possible.

Our areas for focused development include:

- An Epilepsy Center that provides comprehensive, multidisciplinary diagnosis and treatment for patients with epilepsy and other movement disorders with the goal of helping them live productive and independent lives. Our specialists also participate in clinical research to help advance epilepsy treatment.
- The Neuromuscular Disease Division includes clinicians that care for patients with peripheral nerve diseases, motor neuron disorders, muscle and neuromuscular transmission disorders. Within the division is our ALS Clinic which is supported by the ALS Association and provides interdisciplinary care of patients with Lou Gehrig’s disease. The division evaluates novel treatments within its Clinical Trials Unit.
- A Cerebrovascular Center that is unmatched in the region, acknowledged by the American Heart Association’s Get with the Guidelines Gold Plus Quality Achievement Award and the Target Stroke Award for delivering rapid, coordinated patient care for patients with acute stroke.

- A Physical Medicine and Rehabilitation clinic being developed with GWUH, where an innovative care plan will deliver seamless patient care, provide earlier diagnosis and treatment and enhance the patient experience.
- The Parkinson's and Movement Disorders Program. The program will create a network of Parkinson's specialists to provide care for every patient coming to GW-MFA practice sites across the region.
- Center for Immune and Nervous System Disorders which will focus on deciphering how each of these systems interact and how disease of one influences the other. The Center will develop novel therapies for multiple sclerosis and myasthenia gravis. We will collaborate with internationally recognized scientists in the GWU Department of Tropical Medicine and Immunology and Children's National Medical Center.

### **Training Tomorrow's Innovators**

The future of patient care and research in neurology lies in today's medical students, residents and fellows. To help secure that future for generations to come, the Department of Neurology mentors medical students, trains physicians in our four-year residency program and provides sub-specialty training in sleep medicine, neurophysiology and epilepsy. Our faculty trains post-doctoral MD and PhD fellows in our research laboratories, preparing them to make tomorrow's breakthrough discoveries.

We expect that residents trained here will become leaders in neurology who practice their profession with personal integrity, high ethical standards and respect for the patients and families entrusted to their care.

### **Participate in a Bold Vision of the Future**

We have a bold vision for the future: meet the expanding need for the highest quality patient care for neurologic diseases in the DC Metro region and the nation; build programs that link compassionate, expert care with innovative research; and train physician-scientists who can translate breakthrough discoveries to advances in patient care.

Financial pressure has come at a time when our physicians are experiencing the greatest demand for their services. Like medical institutions nationwide, our department is experiencing expanding patient volume coupled with decreasing reimbursement and limited resources for education and research.

These conflicts between available resources and demand for services mean that shaping the future of neurology for GW Medicine requires visionary individuals. For those who share our passion for making a positive impact on the health and well-being of patients and families bearing the burdens of neurologic disorders and diseases, this is the opportunity to share in our vision.

Numerous opportunities for giving are available that are tangible evidence of your personal or family commitment to GW Medicine. Unique opportunities for your consideration include:

### **Research**

- Translational Neuroscience research
- Myasthenia Gravis Research Fund
- Epilepsy Research Center
- Department of Neurology Discovery Fund to support medical education and innovations in clinical care and research in neurology at GW

### **Clinical Care**

- ALS Clinic Operations Fund to fund needed services not covered by insurance, including speech, nutrition, physical and occupational therapies
- The Division of Physical Medicine and Rehabilitation to support our multidisciplinary clinic opening in 2015 that will provide “one-stop shopping” for patients being treated for neurological disorders
- Epilepsy Center to expand the diagnosis, monitoring and treatment options we can offer patients

### **Education**

- Professorship in Neurology to create an endowed chair that honors a special physician
- Fellowship in Neurology/Neurology Health Policy Research Fellowship naming opportunities
- Annual Lectureship in Neurology naming opportunity
- Department of Neurology Residents’ Education Fund to foster exceptional training in clinical and basic neurology and to provide the opportunity for clinical or basic research in the neurosciences.

For more information about GW Neurology and specific opportunities, please contact Michele D. Bertrand, Director of Development, at [mbertrand@gwu.edu](mailto:mbertrand@gwu.edu) or, 202-994-5671.