



Henry Brem

Justin McArthur

In this time of tremendous excitement in the neurosciences, we are exceptionally fortunate to have the right people in the right place at precisely the right time in science to translate the important discoveries now taking place into improved patient care.

Deep brain stimulation, for example, highlighted in this inaugural issue of *NeuroNow*, is a surgical treatment principally for Parkinson disease, and Johns Hopkins has long been a leading center for DBS. Now investigators suspect that the technique holds tremendous promise for conditions as diverse as refractory depression, obesity, Tourette syndrome and obsessive compulsive disorder. But we want to systematically study and introduce these powerful new treatments in a responsible manner. To do so, our physicians cannot rely on clinical reimbursements alone.

Nor can our scientists rely on shrinking National Institutes of Health dollars. Our young investigators, in particular, who are making the jump from residency training to junior faculty, need to establish their clinical research programs, but without a proven track record of publications, they often face repeated rejections when applying for NIH grants. Some, no doubt, will be tempted to abandon academic medicine altogether. In the Department of Neurology we will endow a discovery fund which will help support—and retain—these talented young scientists who will help us translate neuroscience discoveries into effective treatments.

It's also a time of unprecedented growth. With six new faculty in pediatric neurosurgery, brain tumor and spine surgery, our Department of Neurosurgery now is one of the largest academic programs of its type in the country. In these areas, as well as in vascular neurosurgery, where new therapies for aneurysms and subarachnoid hemorrhage continue to be developed, breakthroughs are taking place at breathtaking speed.

But these innovations might never have been realized without the support of our many friends and donors. Each and every contribution, no matter how small, brings us closer to our goal of improving outcomes in neurologic disease.

Henry Brem,
Harvey Cushing Professor and Director of Neurosurgery

Justin McArthur,
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Unmasking the Mystery of Myositis

M yositis is a painful, debilitating muscle disease in which the immune system attacks healthy muscle tissue. Its chief symptom is muscle weakness, but because it so closely resembles other diseases, it's difficult to diagnose. In fact, most patients see as many as six doctors, on average, before they get a proper diagnosis.

Tamika Moore's primary care doctor believed she had liver disease. The 26-year-old physical therapist on staff at Johns Hopkins was inexplicably weak. When a blood test showed elevated liver enzymes, a gastroenterologist scheduled her for a liver biopsy. A second blood test, though, showed abnormally high amounts of the muscle enzyme creatine kinase, an indicator of muscle disease.

Moore's next stop? The Myositis Center, where specialists in muscle disease, including neurologists, rheumatologists and a pulmonologist, treat adults with all forms of the disease: polymyositis, which sometimes affects the lungs; dermatomyositis, which is often accompanied by a skin rash and is linked to a high rate of cancer; and inclusion myositis, an inherited form of the disease.

Patients undergo a battery of

tests, most often electromyography (EMG) to assess the health of the nerves controlling the muscles, muscle MRI, CT scans and pulmonary function tests. All can usually be done in one visit.

Patients are treated medically with drugs, especially corticosteroids. "A significant fraction go into remission. A second group continues treatment with some sign of disease. A third group," says center co-director Andrew Mammen, "is difficult to help, but you keep trying."

Center co-director Lisa Christopher-Stine is collecting information from large numbers of patients to help determine optimal treatments. "Now," says Mam-

men, "we have a grab bag of medicines, but we can't predict which patient will be most helped by which medicine."

One of the center's strengths is that it is jointly led by a neurologist, Mammen, and a rheumatologist, Christopher-Stine. "That's unusual because with autoimmune disease, neurologists and rheumatologists don't always see eye to eye," says Mammen. "Neurologists think rheumatologists are poor at diagnosis; rheumatologists think neurologists are poor at using medicines to treat immunosuppression. Lisa and I, though, have none of those hang-ups. We're learning from one another."

*Appointments: 410-550-6962.
Info: hopkinsmedicine.org/myositis*

Passano Physician Scientist Award

Andrew Mammen is investigating the link between dermatomyositis and cancer, research that could yield insights into the role the immune system plays in the development of tumors and in cancer itself. So critical is the research that Mammen, co-director of the Myositis Center, was recognized last year with a School of Medicine Clinician Scientist Award.

This year he was honored with a 2007 Passano Physician Scientist Award, given by the Passano Foundation to support the research activities of young clinicians. The Baltimore-based foundation has since 1946 annually also recognized outstanding senior investigators conducting research anywhere in the United States. More than 20 of these "Passano Foundation laureates" have gone on to win a Nobel Prize.

"Our mission is to encourage medical research with near-term clinical applications," says foundation chairman E. Magruder "Mac" Passano, who has involved his wife and three daughters in the foundation. "It's been exciting for us to get to know the award recipients and be a part of breakthrough medical research." ■

Andrew Mammen and Lisa Christopher-Stine direct a center dedicated to myositis, a rare muscle disease that may hold clues to the immune system's role in cancer.

