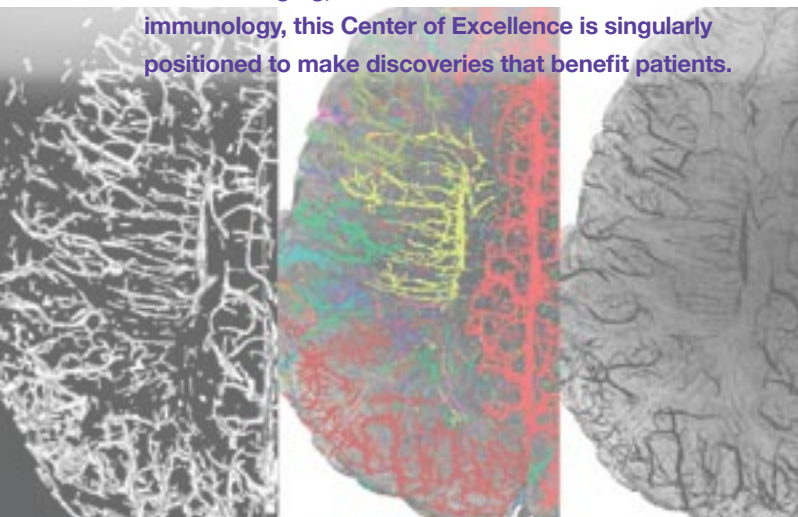


Bringing New Hope to the Study and Treatment of MS

Center of Excellence on Multiple Sclerosis

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Multiple sclerosis (MS) is a chronic, insidious disease of the central nervous system that affects approximately 400,000 Americans. MS is believed to be an autoimmune disorder, in which the body's immune system gradually eats away the myelin sheath that insulates the nerves and prevents them from sending impulses. Symptoms range from muscle weakness and numbness in the extremities to partial or total paralysis. While there is presently no cure for MS, researchers at NYU Langone see an unequaled opportunity for treating MS patients with the creation of the Center of Excellence on Multiple Sclerosis. By combining state-of-the-art clinical care, a nationally recognized translational program in neuroimaging, and world-class basic research in immunology, this Center of Excellence is singularly positioned to make discoveries that benefit patients.



Integrating several world-class facilities, the NYU Center of Excellence on Multiple Sclerosis assembles teams of distinguished clinician-researchers to create a preeminent facility dedicated to the study and treatment of MS. The MS Comprehensive Care Center (CCC) at NYU Hospital for Joint Diseases is taking part in 24 ongoing research studies, is participating in three worldwide MS registries representing a diverse population, and has developed its own customized database to track patient clinical courses and outcomes. The nationally recognized Center for Biomedical Imaging (CBI) now houses a highly advanced 7-Tesla MRI that in clinical studies elucidates underlying changes in the brain not visible using standard imaging techniques. The center is renowned for outstanding basic science related to autoimmunity, myelin biology, and neural degeneration. Using established murine models of demyelination and remyelination that will provide important insights into pathogenesis and potential targets for therapeutic intervention, we hope to clarify the source of cells required to repair damaged myelin, and to develop strategies to protect the injured neurons from undergoing neural degeneration.

The NYU Center of Excellence on Multiple Sclerosis has a strong foundation of funding. Key researchers currently receive major grants from the NIH and the National Multiple Sclerosis Society (NMSS). In fact, NYU is one of the nation's few collaborative MS research centers funded by NMSS. What's more, the Center of Excellence will provide enhanced training for medical students, residents, and fellows, enabling us to recruit the best and brightest clinician-researchers. For patients whose lives have been ravaged by MS, the translation of advances from bench to bedside brings new cause for optimism.

The Center of Excellence on Multiple Sclerosis is superbly positioned to raise the profile for NYU Langone's groundbreaking MS research. At NYU Langone, a novel model of Experimental Allergic Encephalomyelitis (EAE), which produces in mice a condition analogous to MS, is enabling researchers to study the inflammatory process that destroys the myelin and will help identify potential targets for therapy. Also investigated are the sources of cells and signals required to promote effective remyelination, a major therapeutic goal of MS research. At the Skirball Institute, an advanced new imaging technique called intravital microscopy is producing live, moving images of cellular events in the nervous system that give investigators a real time picture of how immune cells attack nerve cells. In addition, NYU radiology researchers using the 7-Tesla MRI system can detect MS lesions in the brain before they develop, as well as monitor therapy that could help stop damage before it starts. Scientists at the CCC are creating a new classification system for MS, which we expect to become the standard for the development of therapeutic algorithms and clinical trial design. Patients will have access to promising new drugs being tested in a number of major international, multicenter drug trials.