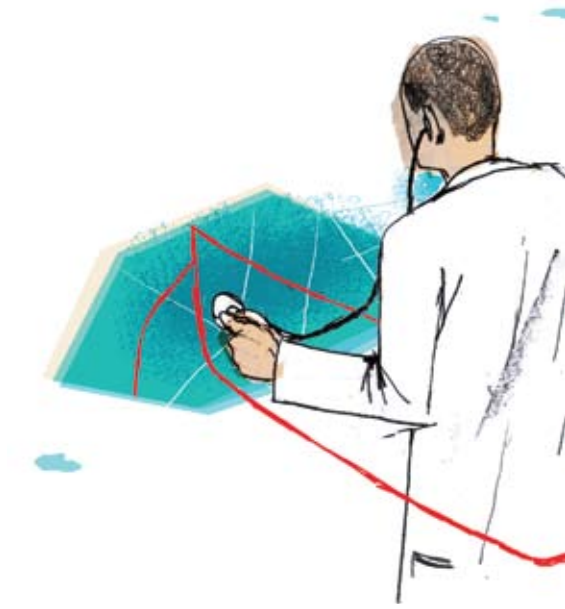
Centers of Excellence Created to Speed Medical Breakthroughs



WHEN IT COMES TO TRANSLATIONAL MEDICINE—converting discoveries in the research laboratory into effective therapies for patients—working collaboratively is the coin of the realm. NYU Langone Medical Center aims to take synergy to a new level with its recent designation of six new Centers of Excellence.

These centers without walls, comprising more than 260 scientists, will speed the development of new treatments, diagnostics, and disease-prevention strategies by bringing together integrated teams of experts from different fields to focus on selected groups of diseases.

The six centers—addiction, brain aging and dementia, multiple sclerosis, musculoskeletal diseases, skin cancer, and urological disease—address pressing health challenges and are fields where NYU claims leadership. "We're recognizing that these are areas of real strength that we want to continue to support and grow," explains Vivian Lee, M.D., Ph.D., M.B.A., vice dean for science and chief scientific officer.

"Each center has an impressive research component and a strong clinical track record," notes Dr. Lee. "And with this new designation," she adds, "our patients and their families will be further assured that they are receiving world-class care enhanced by the latest advances in science."

The announcement culminates a year-long effort. In the fall of 2007, Dr. Lee, together with Robert I. Grossman, M.D., Dean and CEO, invited physicians and researchers throughout the NYU community to submit proposals outlining potential centers. "A number of groups came together around different themes, such as diseases or areas of science," says Dr. Lee. This early stage of the selection process was extremely productive in and of itself, she points out. "The gatherings that resulted gave many people an opportunity to meet for the first time. For example, several retreats each drew nearly a hundred scientists and physicians, many of whom hadn't met before. In some cases, they even led to ideas for new grant proposals."

Seventy-six groups submitted letters of intent to the Science Strategy Committee, and 18 were asked to draft formal proposals. Of these, the six centers were ultimately selected by the committee.

The centers will receive additional financial support to fill key positions and add technical capabilities. Fifteen million dollars in new funding (made possible by gifts from, among others, NYU Langone board members Tom Murphy and Fiona Druckenmiller) will be available to the program. Another $15 million is slated for new core facilities and shared resources for the medical center, such as a mouse behavioral lab, a bioinformatics center, a biostatistical consultation center, a universal tissue biorepository, and a recently established high throughput sequencing facility.

"While some of these facilities have been specifically requested by one of the new centers, all of them will be utilized by many members of our faculty, to the benefit of the broader medical center," says Dr. Lee. "The Centers of Excellence process has been a tremendous success, and is just one of many initiatives under way to advance science and discovery at NYU Langone. These new shared resources will be an important part of that effort, as will ongoing efforts to develop and enhance the research environment and infrastructure."

She expects to see more centers designated in the years ahead. "The plan," she says, "is to review the Centers of Excellence in three years. The centers' leaders have set high expectations, and we look forward to celebrating their successes. At that time, we also will open up the process again and hope to designate new centers."

The Six Centers of Excellence

1 Addiction

DIRECTOR: John Rotrosen, M.D., professor of psychiatry / VA New York Harbor Healthcare System **GOAL:** To improve prevention, diagnosis, and treatment of all types of addictions, from drugs, alcohol, and tobacco to gambling, eating disorders, and sexual risk-taking. Clinicians will draw on the center's research in basic neuroscience, population health, genetics, imaging, social science, behavioral science, and other fields. Initial translational projects will focus on impulsivity, cognitive control, and addictive behaviors; physical exercise strategies; medication therapy; new forms of intervention in healthcare settings; and prevention and early intervention in children and adolescents.

ILLUSTRATION BY JON HAN

2 Brain Aging and Dementia

DIRECTOR: Ralph Nixon, M.D., Ph.D., professor of psychiatry and cell biology / vice chairman of research, Department of Psychiatry / director of Silberstein Institute for Aging and Dementia

GOAL: To provide one-stop multidisciplinary evaluation and cutting-edge care in the diagnosis, treatment, and prevention of Alzheimer's disease, Parkinson's disease, and other neurodegenerative disorders. The center will bring together specialists in neurology, psychiatry, medicine, psychology, and clinical social work. Scientists and clinicians will use animal models and humans to study the fundamental disease process of brain disorders, enabling the center to move new therapies quickly from drug discovery to early clinical trials.

3 Cancers of the Skin

DIRECTOR: Seth Orlow, M.D., Ph.D., the Samuel Weinberg Professor of Pediatric Dermatology and chairman of the Department of Dermatology, professor of cell biology and pediatrics **GOAL:** To develop new ways to prevent, diagnose, and treat skin cancers. Building on the existing Interdisciplinary Melanoma Cooperative Group—comprising some 40 researchers from more than a dozen disciplines—the center will offer patients unprecedented scientific focus on specific conditions. These include specialized clinics for organ transplant patients with skin cancer, as well as unique therapeutic protocols developed at NYU. Extensive patient tissue databases will also yield new clinical insights.

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4 Multiple Sclerosis

CO-DIRECTORS: Joseph Herbert, M.D., associate professor, neurology (neurorehabilitation/MS); James Salzer, M.D., PhD., professor of cell biology and neurology

GOAL: To pursue cures for multiple sclerosis (MS) by integrating various disciplines. The center's neuroscientists will use established mouse models to explore the disease's causes, in order to prevent damage to myelin and nerves and to enhance generation of new myelin. Clinicians will offer multidisciplinary clinical and rehabilitative care, including access to drug trials and new therapeutic strategies. The center's neuroimaging experts will interface with basic scientists and clinicians, and advance their pioneering work in MR spectroscopy, diffusion tensor imaging, diffusion/perfusion, and sodium imaging, in order to improve detection of MS lesions, explore the disease's pathogenesis, and monitor new therapies.

5 Musculoskeletal Disease

CO-DIRECTORS: Steven B. Abramson, M.D., professor of medicine and pathology, director, Division of Rheumatology; Joseph D. Zuckerman, M.D., Walter A.L. Thompson Professor and chairman of Orthopaedic Surgery **GOAL:** Build on expertise at NYU School of Medicine and NYU Hospital for Joint Diseases, to focus on advancing understanding and treatments of arthritis, autoimmunity, and the repair/regeneration of musculoskeletal tissues. Key areas of concentration are the molecular mechanisms of osteoarthritis, joint degeneration, and tissue repair; development of tissue biorepositories for genomic, pharmacogenetic, and toxico-genetic analysis; research on clinical trials and health outcomes; lupus and autoimmune diseases, including rheumatoid arthritis; and bioengineering more effective bone and cartilage implants.

6 Urologic Disease

CO-DIRECTORS: Herbert Lepor, M.D. the Martin Spatz Chairman of the Department of Urology, professor of pharmacology; Tung-Tien (Henry) Sun, Ph.D., professor of cell biology, Rudolph L. Baer professor of dermatology, professor of pharmacology and urology; Xue-Ru Wu, M.D., professor of urology and pathology

GOAL: To develop innovative treatments for urological disorders, including prostate and bladder cancer, urinary tract infection, and kidney stones. The center includes 34 basic scientists and clinicians from 12 academic departments. Areas of focus include improving detection of low-risk prostate cancers that can be treated with minimally invasive therapies; how bladder-specific cancer markers discovered at NYU can be used to assess effectiveness of bladder cancer treatments; and investigating an NYU-engineered virus that attacks tumor cells in the prostate and bladder while sparing normal cells. ●