

A photograph of a woman with long, wavy brown hair, smiling warmly. She is wearing a magenta sleeveless top and a diamond earring. She is holding a baby with short brown hair, who is wearing a yellow polo shirt with blue and white stripes on the collar and sleeves. The baby has a neutral expression. The background is plain white.

re:view

A View of Excellence at NYU Langone Today

With 230,000 square feet of space, the 13-story Joan & Joel Smilow Research Center accommodates dozens of researchers. Its open bench, modular design promotes interaction among colleagues and adapts to the changing needs of investigators. Laboratories along the eastern façade enjoy sweeping views of the East River and beyond.



Excellence Across the Spectrum of Medical Science

NYU Cancer Institute

Director: William L. Carroll, M.D.

The research mission of the NYU Cancer Institute is to discover the origins of cancer, and to use that knowledge to eradicate the personal and societal burden of cancer in our community and around the world.

The Cancer Institute specializes in translational research programs in melanoma, genitourinary cancers, and breast cancer, among other areas. Its basic research programs are devoted to cancer immunology, stem cell biology, and environmental and molecular carcinogenesis.

NYU cancer researchers are highly regarded for their studies of the complex cellular pathways leading to cancer—particularly breast cancer, childhood leukemia, prostate cancer, and lung cancer—which may provide new targets for treatment. New programs in neuro-oncology, developmental therapeutics, and cancer healthcare disparities have expanded research and treatment capabilities in these critical areas.

Leading-edge clinical trials at the institute, based on NYU research, are currently evaluating vaccines, new tools to detect lung and ovarian cancer at their earliest stages, and new treatments for prostate and breast cancer that appear to cause fewer side effects than existing treatments.

The Helen L. and Martin S. Kimmel Center for Biology and Medicine at the Skirball Institute for Biomolecular Medicine

Director: Ruth Lehmann, Ph.D.

The mission of the Helen L. and Martin S. Kimmel Center for Biology and Medicine at the Skirball Institute for Biomolecular Medicine is to conduct basic research in the cellular and molecular mechanisms that underlie the way organisms function, with the goal of improving human health.

Founded in 1993, the Skirball Institute conducts cutting-edge studies in four thematic areas: developmental genetics, molecular neurobiology, immunology and pathogenesis, and structural biology. It is home to some 280 researchers, including 27 principal investigators, from a diverse range of specialties—creating a fertile ground for multidisciplinary collaboration.

Such collaborations and the research of individual investigators have led to important discoveries in many areas, such as autoimmunity, the unfolded-protein response, cardiac development, cell polarity, signaling and migration, and neural networks. Researchers at Skirball have developed models for muscle wasting, Alzheimer's and Parkinson's disease, discovered the structural basis of antidepressant function and identified drug targets for HIV entry into human cells.

Among many honors, six Skirball investigators have received prestigious MERIT Awards from the NIH, two are also Howard Hughes Medical Institute investigators, and three others were recently elected into the National Academy of Sciences.

NYU Child Study Center

Director: Harold S. Koplewicz, M.D.

NYU Child Study Center is the nation's leading organization for research, prevention, and treatment of child and adolescent psychiatric and learning disorders. Through science-based clinical care, cutting-edge research, expert professional training, and extensive public education, the center strives to generate new knowledge about children's mental health, improve the practices of healthcare professionals who serve children, and influence child-related public health policy. Most importantly, the center provides hope, help, and care to children who suffer from these disorders and to their families.

Founded in 1998, the NYU Child Study Center is the only New York State Center of Excellence in Mental Health. The center is known worldwide for its research and clinical programs for children with attention deficit hyperactivity disorder (ADHD), autism and Asperger syndrome, Tourette's syndrome, anxiety and mood disorders, and for traumatized children. It has also established highly regarded suicide and obesity prevention programs.

The NYU Child Study Center also offers advanced training programs for child and adolescent psychiatrists and psychologists. Outreach programs focus on translating research into everyday skills for parents and educators and into practical applications for pediatricians and mental health professionals around the country.

Our leadership goals are bold: building on the great legacy of this institution, we aim to set the standard for world-class medicine in the 21st century.

Howard Hughes Medical Institute Investigators

Ruth Lehmann, Ph.D., *the Laura and Isaac Perlmutter Professor of Cell Biology, Director of the Helen L. and Martin S. Kimmel Center for Biology and Medicine at the Skirball Institute for Biomolecular Medicine, and Director of the Helen L. and Martin S. Kimmel Center for Stem Cell Biology*

Dan Littman, M.D., Ph.D., *the Helen L. and Martin S. Kimmel Professor of Molecular Immunology and Professor of Pathology and Microbiology*

Michele Pagano, M.D., *the May Ellen and Gerald Ritter Professor of Oncology in the Department of Pathology*

Danny Reinberg, Ph.D., *Professor of Biochemistry*

National Academy of Sciences Members

Ruth Lehmann, Ph.D., *the Laura and Isaac Perlmutter Professor of Cell Biology, Director of the Helen L. and Martin S. Kimmel Center for Biology and Medicine at the Skirball Institute for Biomolecular Medicine, and Director of the Helen L. and Martin S. Kimmel Center for Stem Cell Biology*

Dan Littman, M.D., Ph.D., *the Helen L. and Martin S. Kimmel Professor of Molecular Immunology and Professor of Pathology and Microbiology*

Rodolfo Llinas, M.D., Ph.D., *the Thomas and Suzanne Murphy Professor of Neuroscience and Chairman of the Department of Physiology and Neuroscience*

Richard P. Novick, M.D., *Professor of Microbiology and Medicine*

David D. Sabatini, M.D., Ph.D., *the Frederick L. Ehrman Professor of Cell Biology and Chairman of the Department of Cell Biology*

Cochlear Implant Center

Co-Directors: J. Thomas Roland, Jr., M.D., Susan B. Waltzman, Ph.D.

Established in 1984, the Cochlear Implant Center is one of the largest and most highly respected clinical and research implant centers in the world. The center provides a wide range of services for the hearing impaired, including preoperative diagnostic evaluation, implant surgery, implant programming, and rehabilitation.

Since its founding, NYU's hearing specialists have performed approximately 1,800 cochlear and auditory brainstem implants—one of the largest caseloads anywhere. A pioneer in the field, the center has played a key role in clinical studies of cochlear and auditory brainstem implants over the years, leading to the routine use of these devices.

Today, researchers at the center are involved in numerous projects. They are investigating the efficacy and safety of new implants, evaluating whether implants should be offered to new groups of patients such as young children and people with residual hearing, assessing the variables affecting implant programming and outcomes, evaluating the complications related to surgical techniques with the aim of eliminating those problems, and conducting work to improve electrode design.

Comprehensive Epilepsy Center

Director: Orrin Devinsky, M.D.

The mission of the NYU Comprehensive Epilepsy Center, the largest center of its kind in the U.S., is to set the standard of care for people with epilepsy through innovative therapies and cutting-edge research.

The center offers the most complex forms of intensive epilepsy monitoring, extensive neuropsychological and psychosocial services, and neurosurgical services for epilepsy treatment, earning it a level four designation from the National Association of Epilepsy Centers—the highest such rating.

NYU Langone epilepsy specialists are also involved in dozens of research projects. The center is a member in the Epilepsy Clinical Trials Consortium, formed by leading research centers to accelerate clinical trials of epilepsy treatments. In addition, the center is co-leading the Epilepsy Phenome/Genome Project, a major new NIH-funded initiative aimed at understanding the genetics of epilepsy. Other research highlights include the Hybrid Neuroprosthesis Study, which is developing an implantable device to treat seizures by detecting them and then delivering a drug to the epileptic region; a study of brain cooling to treat epilepsy; and a study of magnetic resonance spectroscopy for analyzing neurochemical changes in patients with epilepsy.

Center for Biomedical Imaging

Director: Daniel K. Sodickson, M.D., Ph.D.

One of the premier imaging research centers in the world, the Center for Biomedical Imaging is pushing the frontiers of biomedical imaging in ways that directly translate into better health care.

The center's researchers investigate neurologic and neurovascular disorders, cardiovascular disease, breast and prostate cancer, pulmonary function and disease, hepatobiliary and renal function and disease, arthritis and musculoskeletal disease, and other areas.

Among the center's arsenal of imaging devices is a 7-Tesla MRI machine—the most powerful human MRI system in the New York metropolitan area, and one of only a handful of ultra-strong imaging magnets available in the world for clinical and basic research. The machine allows researchers to obtain highly detailed snapshots of anatomic structures and metabolic pathways in living tissue—improving our understanding, for example, of how disease affects the brain's metabolism.

The center is also home to two 3-Tesla MRI systems for research and clinical use, offering superior imaging both for adults and for the smaller anatomical structures in children. Other core technologies at the center include magnetic resonance spectroscopy, diffusion mapping, novel MRI detectors, and quantitative multimodality image analysis and modeling.

NYU Center for AIDS Research

Director: Fred Valentine, M.D.

The Center for AIDS Research supports a large multidisciplinary effort to advance basic, clinical, epidemiologic, and behavioral research into the prevention, detection, and treatment of HIV/AIDS. Basic research at the center spans many areas, including laboratory studies on the HIV genome and proteins, mechanisms of immunodeficiency, drug development, vaccine design, and interactions between HIV and tuberculosis.

One of the first centers of its kind in the U.S., the center has a distinguished history: NYU clinicians and scientists were among the first to identify, study, and treat adults and children with HIV. The center works to promote the highest quality of care for HIV-positive individuals by encouraging the involvement of providers and the community in clinical research.

The center participates in a wide variety of clinical trials, including studies that evaluate use of multiple drugs to control the virus as well as opportunistic infections. Other clinical trials assess strategies that reduce the negative side effects of HIV medications. Our researchers are also engaged in vaccine research aimed at preventing HIV infection, and programs aimed at changing behavior among people at risk of infection. The center's efforts now span the globe with training programs and studies in Africa and Asia.



Our basic scientists are intrepid explorers whose discoveries—sometimes serendipitous, often transformative—help us to understand the why and how of diseases.

Vital Statistics*

M.D. candidates	641
M.D.'s awarded	153
M.D./Ph.D. candidates	75
M.D./Ph.D.'s awarded	5
Ph.D. candidates	238
Ph.D.'s awarded	27
M.S.'s in Clinical Investigation awarded	9

Faculty Statistics*

Full-time	1,582
Part-time	3,491
Residents & Fellows	975
Postdoctoral Fellows	350
Registrants for Postgraduate Medical Education Courses	4,979

**Based on data for calendar year 2007*

Sackler Institute of Graduate Biomedical Sciences

Director: Joel Oppenheim, Ph.D.

A division of NYU's Graduate School of Arts and Science, the world-renowned Sackler Institute offers interdisciplinary training programs in the basic medical sciences, leading to the Ph.D. degree.

Degrees are offered in the following areas: biomedical imaging, cellular and molecular biology, computational biology, developmental genetics, medical and molecular parasitology, microbiology, molecular oncology and immunology, molecular pharmacology, neuroscience and physiology, pathobiology, and structural biology.

Ph.D. candidates also have the opportunity to enroll in a unique graduate program in structural biology linked with the National Institutes of Health (NIH) that combines the academic environment of NYU and the breadth and depth of research at the NIH.

The Sackler Institute, which attracts students from around the globe, also offers a combined M.D.-Ph.D. degree in coordination with the NIH's Medical Scientist Training Program, a Summer Undergraduate Research Program for qualified sophomores and juniors who are interested in pursuing research careers, and extensive opportunities for postdoctoral study.

Clinical and Translational Science Institute

Co-Directors: Bruce Cronstein, M.D., Judith Hochman, M.D.

One of NYU's newest centers, the Clinical and Translational Science Institute was established to transform the way that research is conducted at NYU Langone Medical Center, with the ultimate goal of speeding the translation of scientific discoveries into new therapies.

A partnership between NYU and the New York City Health and Hospitals Corporation, the institute aims to increase collaboration among clinical, translational, and basic scientists across the colleges and schools of NYU in order to better determine the relevance and applicability of scientific advances to clinical problems. In addition, the institute will provide the leadership, infrastructure, and resources to support novel science and the rapid, efficient, and safe application of scientific discoveries to the community.

This new venture will also support the education, training, and development of researchers who can carry on the investigations necessary to bring scientific advances to the public.

Finally, the institute will work to enhance ties between NYU researchers and the many communities in our large and polyglot city. This will enable researchers to move more rapidly to identify health problems, investigate their scientific basis, apply the knowledge gained, and promote the community's use of new advances and evidence-based medicine.

Nelson Institute for Environmental Medicine

Director: Max Costa, Ph.D.

The Nelson Institute for Environmental Medicine is part of the Department of Environmental Medicine, which was founded in 1947 and is one of the nation's oldest and most distinguished centers for research into the health effects of environmental pollution. It is particularly known for its studies of urban air pollution, and is one of a handful of centers nationwide focused on characterizing the biological basis of how tiny airborne particles affect mortality and morbidity, and cause pulmonary and cardiovascular diseases.

The institute played a leading role in warning the public about the dangers of air pollution resulting from the attacks of 9/11, and its researchers continue to study and treat respiratory disorders in people exposed to dust and debris from Ground Zero.

The institute's researchers have conducted groundbreaking studies on the role of ambient air pollution in causing asthma among children living in the South Bronx. In another area, they continue to employ biomedical, ecological, and engineering analyses to assess the potential hazardous impact of toxic metals on humans and on aquatic ecosystems. Nelson Institute researchers are particularly interested in how metals and other carcinogens cause cancer. Their projects focus on the effect of environmental carcinogens on cell signaling, epigenetic homeostasis and DNA damage, which can all lead to tumor formation.

Center for the Prevention of Cardiovascular Disease

Director: Edward A. Fisher, M.D., Ph.D., M.P.H.

The mission of the Center for the Prevention of Cardiovascular Disease is to reduce the impact of cardiovascular disease—the number one cause of death in the U.S.—through prevention and research.

One of the leading facilities of its kind, the center offers patients comprehensive risk assessment of cardiovascular disease, as well as medical and dietary treatment plans aimed at attaining a “heart healthy” status.

The center's clinical researchers recently launched a major study of how to optimize adherence and compliance with guidelines on blood pressure control and lipid levels. Also underway is a trial of rosuvastatin, a statin drug for lowering LDL cholesterol (“bad” cholesterol) in individuals who are overweight and at high risk for diabetes. In basic research, investigators are studying cellular pathways regulating LDL production, and have created pioneering animal models in which the arterial plaques that cause heart attacks have been eliminated.

Institute for Community Health and Research

Principal Investigator: Mariano Rey, M.D.

The mission of the Institute for Community Health and Research is to reduce health disparities in disadvantaged minority populations through community-based participatory research, outreach, and training. The institute works in partnership with community-based organizations, governmental agencies, healthcare institutions, and other academic centers.

There are four centers within the institute: the Center for the Study of Asian American Health; the Center for the Health of the African Diaspora; the Center for Latino Health; and the Center for Health and Human Rights. The institute addresses diseases that create an undue health burden in these populations, including cardiovascular disease, diabetes, hepatitis, and specific types of cancer.

The institute is funded through the National Institutes of Health and the Centers for Disease Control and Prevention. The institute has been designated a National Research Center of Excellence and a National Center of Excellence in the Elimination of Health Disparities. In January 2009, the institute will publish a book entitled *Asian American Communities and Health*, the first of its kind.

