

Billions Flow in Science Race; Institutions, Donors Aim to Reclaim City's Stature

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In January, Yeshiva University's Albert Einstein College of Medicine opened 40 laboratories for examining everything from new vaccines to the best treatments for diabetes. Einstein hopes the 200,000 square feet of modern lab space will lure more of the nation's top researchers and help the school claim a bigger piece of the National Institutes of Health's funding pie.

"The new facilities are crucial to our effort to establish Einstein in a nationwide leadership role in medical research," says Alan Spiegel, who left his directorship at the NIH's diabetes institute in 2006 to take the helm at Einstein.

The Einstein expansion is one of nearly a dozen recently completed or under way at the city's major research institutions. With the help of a handful of major philanthropists, the city's medical schools and research universities are investing billions to add a whopping 2 million or so square feet and hundreds of new medical science researchers by 2012.

The expansions are part of an attempt to reclaim New York's stature in the world of medical research. With five major medical schools and research powerhouses, including Rockefeller University and Memorial Sloan-Kettering Cancer Center, New York City is still at the forefront of many kinds of research, especially in areas such as neuroscience, the study of HIV and other viruses, and the emerging field of structural biology.

Less funding

But the revolution in bioscience in the past decades, one based on the mapping of the human genome and requiring ever-greater investments in technology and space, has to some extent pushed New York into the background. Its share of NIH funding, the clearest measure of a state's standing in the world of science, has been dropping steadily.

"We've got a lot of work ahead of us," says Edward Reinfurt, executive director of the New York State Foundation for Science, Technology and Innovation. "We've lost part of our share of the nation's funding over the last 20 years, and it's a challenge for everyone involved in supporting medical research in the state to regain that share."

While New York still ranks third in the nation in NIH funding, garnering more than \$1.9 billion in 2007, it has lost ground to the top two, California and Massachusetts, over the past decade. Its reputation for doing cutting-edge bioscience research has also slipped. Since 1998, the portion of NIH funding going to New York state has declined nearly 2 percentage points, to 8.19%, while funding to Massachusetts and California is down about 1 percentage point.

New York doesn't have a school among the top 10 NIH grant recipients. Columbia University Medical Center ranks highest at 12th, followed closely by Mount Sinai School of Medicine at 14th. By contrast, California boasts three schools in the top 10, and four in the top 15.

Meanwhile, the competition for the NIH's \$28 billion funding budget--which has been flat since 2004 and is not slated to increase in 2009--has grown increasingly intense of late. As states like Texas, Pennsylvania and Missouri make big public bioscience investments of their own, New York may only be able to keep what it's got.

"The NIH funding decrease reflects a brain drain of medical investigators from the state," observes Dr.

Antonio Gotto, dean of Weill Cornell Medical College. "That has slowed, and New York is now able to attract top researchers. But overall, there's still a net negative. Our aim is to turn that around."

The new expansions are likely to help. In the past two years alone, multibillion-dollar fundraising campaigns at Columbia, Weill Cornell, NYU School of Medicine, Memorial Sloan-Kettering and Albert Einstein have produced new research centers focusing on everything from cancer and genomics to neuroscience, and more are on the way from Mount Sinai, Rockefeller and Weill Cornell in the next few years. The state's commitment to invest \$600 million in stem cell research over the next 10 years should spur even more growth.

To a man, the deans at the city's top medical schools say the chief obstacle to bringing in more top scientists--and more NIH dollars--has been the severe lack of space for cutting-edge research.

State-of-the-art draw

In a technological era, having the best equipment makes a difference. Dr. Harold Varmus, president of Memorial Sloan-Kettering, notes that MSK's new Zuckerman Research Center helped lure Ingo Mellinghoff, a top oncologist at UCLA, to head its human oncology and pathogenesis program.

"That's really what's held us back, the lack of lab space and infrastructure," says Dr. Varmus.

The heads of New York's medical institutions also are still pining for a real bioscience industry in New York. In Massachusetts and California, the industry has turned Boston and San Francisco into major drug discovery hubs. That status has in turn attracted more top-notch researchers to those cities' medical schools.

"It's all about achieving a critical mass of medical science, and if you don't bring together the academic discovery side with the companies that translate the research into new drugs, it places a ceiling on New York's ability to compete with other states as a medical research center," says Dr. Spiegel, noting that an Einstein team had to turn to an Israeli biotech firm to develop a promising drug. "I wish we could be developing that drug right here in the city, but no one's here," he adds.

After long years of lobbying by New York's business and health care communities, the city's Economic Development Corp. is set to open in 2010 at the East River Science Park, a publicly sponsored, privately developed 550,000-square-foot commercial lab campus on East 29th Street and First Avenue. Seth Pinsky, EDC president, says there have already been promising conversations with drug companies that want to take space in the science park.

"We're very sensitive to the need for a bioscience industry to support our academic centers," Mr. Pinsky says.

But Lee Goldman, the dean of health sciences and medicine at Columbia University, points out that public investment, not a thriving biotech industry, made the University of California San Francisco--where he oversaw a life sciences department--the single biggest recipient of NIH funding in the country.

"The real engine of biomedical research is the universities," he says. "If we get the kind of financial support from the city and state we need to help build strong programs, then believe me, the private sector, and the talent, will come to us."

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