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**New York State Division of the Budget
Town Hall Hearings – Rochester**

Testimony for the record

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**November 17, 2007
3:00 p.m.
University of Rochester Medical Center**

Paul Francis and New York State Division of the Budget:

Thank you for allowing me this opportunity to submit testimony on behalf of the University of Rochester.

Rochester, and much of Upstate, is in the midst of economic transformation. Over the last three decades, New York has experienced a steep decline of its manufacturing base, particularly among many upstate communities. Rochester has lost 30,000 manufacturing jobs since 2000. In the years to come, as our manufacturing-based economy transitions to one that is knowledge-based and increasingly focused on such fields as biotechnology, biomedicine, nanotechnology, imaging, optics, and alternative energy, research universities, like the University of Rochester, will be particularly important agents of change. The success of this economic transformation will be dependent on partnerships between the business community, academia, and government.

New York does, however, have numerous strengths that hold promise for the future. The one comparative advantage that the United States still maintains, particularly in New York, is higher education. New York is home to some of the world's top colleges and universities. There are 248 public and private colleges and universities in the State with 1.2 million students overall. In four of Upstate New York's leading cities, a university is either the largest (Syracuse and Rochester) or one of the largest employers. In addition, we have a highly skilled and productive workforce, a long tradition of technological innovation, and leading companies in critical high-tech fields.

In addition to being a source of medical innovation, discovery and world-class patient care, New York's academic medical community also are economic engines across the state. It is

estimated that New York's medical schools and teaching hospitals generate more than 459,000 jobs statewide and have an economic impact of \$66 billion a year including jobs, construction, tax revenues and new business development.

In order to ensure the greatest impact on economic growth, one-time state investments, particularly for capital, in both academic institutions and others, will be critical to future economic success of Upstate. The recent announcement of state support for Midtown Plaza in downtown Rochester is a great example of how a one-time investment can help stimulate job creation and economic revival in our cities. There are many more projects Upstate that could benefit from this type of investment.

The University of Rochester's Clinical and Translational Sciences Building (CTSB) is one such project. The University of Rochester received a \$40 million Clinical and Translational Award from the NIH in October 2006. This award will position the University and Upstate New York as a national leader in translational research, bringing cutting-edge medical care to the region's residents, and serve as a catalyst for substantial economic growth. The CTSB has estimated regional impacts of nearly \$30 million annually and will create 600 jobs and 830 construction jobs. Additionally, the Institute will enable the University to aggressively expand the number of clinical and translational investigators over the next 5 to 10 years, which could yield an additional \$25 million in research revenue per year.

The University of Rochester has demonstrated success on a past one-time investment by New York State. With a \$30 million one-time investment in 2002, the University was able to invest more than \$500 million in biomedical research, which has resulted in more than 400,000 square feet of new state-of-the-art research facilities, including two new buildings, and the hiring of more than 500 new faculty and support staff. These faculty and staff work to develop new technologies and approaches to patient care. This expansion of basic research, and the corresponding doubling in our clinical enterprise, led to invention disclosures tripling, patent applications doubling, and the creation of 17 new local start-up companies directly stemming from this investment.

As our economy increasingly transitions to a global knowledge economy, continued state support for academic institutions is critical. In order to capitalize on New York's rich and diverse assets, public investment is needed to catalyze and sustain economic growth statewide and on a regional basis in emerging sectors. Last year's enactment of the Empire State Stem Cell Fund to promote stem cell research and development is one example that will not only have the potential to benefit millions of Americans who suffer from conditions that could benefit from stem cell research, but will stimulate biomedical research and biotechnology in New York for years to come.

Similar support from the state to fund cutting edge scientific, engineering, and medical research at New York's public and private colleges and universities would also encourage institutions to produce new knowledge through research; attract private sector financing; generate new products, processes, technology and start-up companies; create jobs; provide the highest quality health care; and attract and educate students in a wide array of fields in ways that will allow New York State to successfully compete on the world stage. These innovations will

draw the interest of local businesses and venture capitalists, helping stir investment in the region that can lead to additional jobs in the private sector. A great example of this at the University of Rochester is the research partnership between the University's Eye Institute and Bausch & Lomb, a collaboration that has already resulted in revolutionary advances in eye surgery. These university-business partnerships can also be in the form of new startup companies. Thanks to the \$750,000 in annual funding the University of Rochester receives from New York State Energy Research and Development Authority for the Laboratory for Laser Energetics, we have been able to leverage \$60-\$70 million a year on average in federal funding to support one of the world's most powerful lasers and one of the leading research facilities for future power sources. This has, in turn, created a number of start-up companies such as QED Technologies, Sydor Instruments, Chapman Instruments, and Lucid. Similarly, Rochester based biotech companies VirtualScopics, Vaccinex, OyaGen and Koning, to name a few, all have their origins in research at the University of Rochester Medical Center.

In addition to the direct investments made by New York State in our institution and others, perhaps one of the greatest areas where the state could provide assistance is by creating a fertile environment for biomedical research and biotechnology with early stage seed funding to mature nascent technology. The University of Rochester already has a highly integrated system of technology commercialization. Excell Partners and High Technology Rochester are two organizations that promote the creation and growth of technology companies that stimulate innovations, many of which stem from university research, that fuel the region's high-technology and bio-technology commercial sectors. Their efforts have been critical to keeping technologies generated in the region. Too many companies that should be emerging here are instead migrating to other markets where venture capital is more prevalent and accessible. Continuing strategic investments in organizations like these helps commercialize academic research and enhance economic opportunities in upstate communities.

New York State's ability to optimize its knowledge-based resources by strengthening its research universities, like the University of Rochester, will dictate the state's economic position in the 21st Century. Investing in academic research centers will have a direct impact on job creation, help stimulate innovations that fuel the region's high-technology and bio-technology commercial sectors, add to the area's rich cultural resources, and affect the overall health of our community.