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Spitzer Shows Leadership in Stem Cell Research

By Susan Solomon

Gov. Eliot Spitzer's proposed budget includes \$100 million to jump-start stem cell research and other cutting-edge science in New York. This represents a historic first step in what can and should be a concerted effort to make the state a critical center of stem-cell research. The key to this ambitious effort will be embracing an effective private-public partnership. The results could be stunning, both in their clinical implications and their economic impact.

Stem-cell science -- human embryonic stem cell research, in particular -- represents the most important and promising area of scientific endeavor in the effort to help the millions of Americans affected by the worst diseases of our time.

Especially promising is a cutting-edge technique called somatic cell nuclear transfer, in which the DNA of an unfertilized, unimplanted egg is replaced with the genetic material from a donor. The donor's DNA can be obtained, for example, from a simple skin biopsy. If the patient has a particular disease, such as diabetes or Parkinson's, this technique allows for the creation of disease-specific embryonic stem cell lines. These lines could allow scientists to "reverse engineer" diseases and greatly improve our understanding of how they develop and affect the body -- knowledge that is key to developing better treatments and cures.

State money will serve as a tremendous force in moving stem cell science forward far more rapidly, but it will not provide a total solution to the urgent need for funding. Private philanthropy will continue to play a critical role by creating cutting-edge research programs, helping to establish proof of concept and getting them off the ground.

Private funding can be nimble in a way that even the most enlightened government agency cannot. It can be the catalyst, starting programs that can then be scaled up with the benefit of an infusion of government funding. In addition, private funding sources are able to support research programs the government cannot or will not fund.

The combination of public and private dollars focused on the most advanced scientific research has the potential to be enormously powerful. We are poised to create a fertile environment in New York for the world's best scientists and, in the process, provide a significant economic boost to regions in dire need of new industry. Governor Spitzer has planted a flag in the name of scientific and fiscal progress. All New Yorkers affected by disease and disability must show their support for his bold plan.

Right now, there are scientists engaged in human embryonic stem cell research here in New York. They, like their colleagues in places like Boston and San Francisco, have their hands tied by a federal policy that has eliminated government funding for this work, with the exception of research using a few approved stem cell lines that were created using outdated techniques. We are losing a generation of scientists. Young men and women coming out of medical school and doctorate programs have no incentive to pursue stem cell research, despite the fact human embryonic cell research offers the greatest hope for medical advances in our time.

The initial funding proposed by Governor Spitzer -- envisioned as the first element of a larger \$2.1 billion state effort to drive stem cell and other innovative research -- sends a clear message to young people here and around the world that advanced scientific research is vital, that we, as a society, believe in it, and that New York is a place where they can forge a career using scientific knowledge for the betterment of humankind.

Susan Solomon is the CEO and co-founder of the New York Stem Cell Foundation.