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New Jersey Takes Leadership Position in Stem Cell Research and Commercialization

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As a leader in the development of medical technology, it is not surprising that New Jersey has chosen to take the lead in creating the environment necessary to nurture stem cell research and clinical applications. Recently, New Jersey became the first state in the nation to provide state government financing for stem cell research. The legislation, which envisages the creation of a stem cell research institute, is designed to foster cooperative ventures between New Jersey-based private enterprise, university-based researchers and investment capital combining to create an irresistible force in New Jersey. Close on the heels of this enabling legislation, a leadership group has formed which will utilize the strengths of each institutional constituency to bring to life initiatives to drive research, development and commercialization of ethically sound stem cell therapies.

First, a secure, Internet-based Biomedical Enterprise Zone will function to link the talents and resources of the public and private sectors in our state and, eventually throughout the world. Capitalization by industry and New Jersey's banking and investment community will establish in perpetuity the New Jersey Stem Cell Research Endowment Fund -- a neutral and self-sustaining endowment fund that will be the life's blood for current and future stem cell research, development and commercialization in New Jersey.

Scientific advances over the past century have led to longer lives -- the average human life expectancy rose from 50 to 85 -- improving the quality of life and alleviating suffering. However, this increasing longevity has presented its own challenges, as more and more people face ailments associated with organ failure or malfunction. More than 50 million Americans suffer from one or more of heart or kidney failure, stroke, diabetes, arthritis, macular degeneration, spinal cord injury, or peripheral vascular disease.

These ailments and others like them have proven to be difficult to treat with the common therapy development models that were so successfully applied to human health in the recent past. As a result, a new branch of medicine has emerged -- genomic or regenerative medicine -- following on advances in organ transplant related sciences and technological advances associated with the Human Genome Project. We now stand at the precipice of a revolution in the medical treatment of debilitating diseases affecting tens of millions of people. Heralded in the Journal of the American Medical Association (Feb. 7, 2001), regenerative medicine may dramatically change American health care -- providing

benefits ranging from new therapies to reduced hospitalization needs. In the forefront of this opportunity is stem cell technology, which promises treatments based not on chemical compounds but on the use of living cells as the source of treatment or cure.

As is often the case in technology, however, the scope of the opportunity is matched by the scale of the associated challenge. In the case of stem cell technology, recent ethical debate has tended to mask the true test that the technology presents. Because stem cell therapy development is outside the customary model for pharmaceuticals, new and

"BIO believes that stem cell research holds tremendous potential to bring about revolutionary medical treatments. This research can be pursued ethically and must be pursued if we are to realize the potential to save the lives of people currently living with intractable diseases."

— BIO President Carl Feldman, March 22, 1999
Letter to National Bioethics Advisory Commission

innovative structures are required to bring together research, finance, regulatory, marketing and therapy delivery functions in order to convey the benefits of this technology to patients. Businesses large and small, universities and governments will find it necessary to create cooperative enterprises to provide seed capital, reward basic research, protect and build intellectual property assets and address the important ethical concerns regarding respect for life that this technology presents. Our collective imagination in creating this environment will have a dramatic impact on whether and when this technology is used successfully to reduce human suffering.

New Jersey's approach to cooperative enterprise should serve as a beacon for stem cell advancement around the country.

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