

Dr. Scott Bruder
Senior VP and Chief Science and Technology Officer, BD
UMR/ITIF Event Remarks
5/17/12

Thank you to UMR and ITIF for organizing this morning's forum.

As a representative of the life science industry, BD is like many US-based companies, and we are pleased to be active in UMR and we appreciate the excellent work they do to highlight the important role NIH plays in growing our nation's economy.

Dr. Collins, thank you for your outstanding leadership of one of the world's most important biomedical research institutions.

BD was founded in 1897 by two entrepreneurs who met on a business trip and started a medical device company. BD has since grown into a global medical technology company with a substantial Research and Development and manufacturing presence here in the US that exports more products than it imports. With more than 12,000 US associates located in over a dozen states, we continue to invest in our US operations alongside our efforts to meet the demand of emerging markets.

I'd like to briefly discuss how federal investment in biomedical research is vital to our nation's prosperity in three critical ways.

First, NIH funds basic research which expands our knowledge base, creating scientific opportunities the private sector can build upon over time. NIH research supports the first leg of what I like to call the relay race against human disease. As the lead-off runner, it fuels the early stage discoveries that stimulate a 2 to 3-fold larger investment by the private sector to complete the research, development and commercialization of products that improve human health.

A good example of this teamwork, or "baton passing", is a technology called flow cytometry.

During Nixon's War on Cancer, a promising Stanford University researcher received an NIH grant that helped him to develop a machine to count and sort human cells at what was then an incredible speed of one thousand cells per second. Private investment from BD and others has turned flow cytometry instruments and reagents into a multi-billion dollar industry and indispensable tool used by hospital and university laboratories around the world.

Long after the initial NIH investment, US companies continue to lead the world in this technology. We at BD employ hundreds of scientists and engineers who continue to design and manufacture flow cytometers that are better, smaller and faster. In fact, we can now count and sort cells at the incredible speed of 50,000 per second.

Flow cytometry plays a pivotal role in unraveling the mysteries of cellular biology and our immune system. It's helping to diagnose and monitor a range of disease from HIV/AIDS to leukemia and lymphoma as well as improve life-saving treatments like bone marrow transplantation. It is so central to medical care that there have been over 100,000 scientific papers that reference its use.

NIH is helping to lay similar scientific groundwork in an emerging field called regenerative medicine, which represents an opportunity to revolutionize the treatment of devastating diseases such as diabetes, heart disease and neurodegenerative conditions including Alzheimer's. It leverages many different scientific disciplines in order to repair or replace damaged tissues and organs. The first wave of regenerative medicine products are already in use to treat wounds, cartilage defects and diabetic foot ulcers, but these are just the tip of the iceberg.

We must ensure that NIH has the resources to continue to play this critical role in the race against disease, or the US will fall behind in this and other cutting edge and highly promising areas of research.

The second way that NIH is critical to US prosperity is the role it plays in helping to train the next generation of scientists. As the beneficiary of an NIH training grant myself, I can say that such support is paramount to the development of top tier scientists and engineers who can both hand-off and accept the baton in the scientific relay race I described above. Whether serving as professors in academia or leaders in the private sector, NIH-trained researchers are amongst the most competitive athletes of their kind in the world.

For over sixty years, NIH has set the international standards for the quality and rigor of scientific pursuit. It has inspired generations of investigators to achieve their best. NIH is the lifeblood of the biomedical research community - without it, our most talented minds will simply gravitate to other fields or leave the US for the growing research opportunities in other countries. A decline in NIH investment will result in a cadre of scientists and technologies that are simply less competitive than what other countries will produce, as we heard about from Dr Atkinson.

I wanted to highlight a third critical impact of NIH funding on US prosperity. The practical performance of biomedical research requires the design, manufacturing and sales of advanced research tools made by US companies. These activities underpin the economic engine of our multi-billion dollar industry, create high paying jobs, and generate tax revenues for the state and federal governments.

Because over one-third of university research budgets depend upon NIH, and these universities are key customers, federal biomedical research funding is important to research tool companies. Biotech start-ups are also increasingly dependant upon NIH funding as venture capital has become harder to secure. Unfortunately, the nearly decade-long erosion of funding at NIH is having a negative effect on the US research tools sector.

Many of us here today have participated in complex policy debates about how to fine-tune US intellectual property laws and improve the US regulatory process in order to promote scientific innovation and grow our economy.

Federal support for basic biomedical research is equally as important. As today's report demonstrates, other countries grasp this. They clearly see investment in biomedical research as an investment in their future. Yet, in the US, we are dangerously close to squandering our investment and the hard-earned leadership we have built in this area. Let's work together to ensure that government support for biomedical research is strong enough to safeguard our scientific leadership and grow our economy.