Steve Tang's Remarks
U.S. Congress Joint Economic Committee
May 25, 2011

Thank you, Senator Casey. I'm Steve Tang, President & CEO of the University City Science Center. It is an honor and a privilege to speak to this distinguished committee today.

Science and innovation are in my blood – and a part of my heritage. I'm the son of two Chinese-born scientists. I was born with high expectations from parents who sought – and largely achieved – the American dream.

My background is in both science and entrepreneurship. I have an undergraduate degree in chemistry from the College of William and Mary and a Ph.D in chemical engineering from Lehigh University - as well as an MBA from the University of Pennsylvania's Wharton School.

As a graduate student, I founded and ran my own technology assessment consulting firm, while at the same time pursuing my doctorate and managing Lehigh's biotechnology research center. After obtaining my MBA, I served as a management consultant at two international firms, focusing on projects in the chemical, environmental, health care and pharmaceutical industries. I then served as the CEO of a hydrogen and fuel cell company, guiding its growth as it moved beyond its start-up phase, completed a successful IPO, and attracted subsequent investment and financing. Next, I ran Olympus America's Life Science division, overseeing operations, finance, strategy, and product and business development.

Since 2008, I've had the privilege of leading the University City Science Center. I was motivated to take the position by my passion for science and technology -- and their ability and potential to make the world a better place. And as a newly appointed member of the U.S. Commerce Department's Innovation Advisory Board, I welcome the opportunity to contribute to the national discussion on innovation and economic competitiveness, particularly as it relates to the life sciences.

The Science Center is a private, non-profit research park and business incubator in Philadelphia. Located in the heart of the city's "meds and eds" community, we have existed at the intersection of innovation and economic development for close to 50 years. We are the nation's oldest and largest urban research park, with 15 buildings on 17 acres containing over 2.0 million square feet of lab and office space. More than 8,000 people come to work on our campus each day.

We are also home to innovative programs, such as the QED Proof-of-Concept Funding Program, which pulls technologies out of the lab and into the marketplace by pairing scientific researchers with experienced business advisors. At the Science Center, we firmly believe that our multi-institutional QED program is a unique and model "public-private partnership" that can be replicated across the nation to help promising ventures cross the "Valley of Death" in funding. I'm proud to report that QED achieved a funding milestone of its own last month when it received a two-year, $1 million grant from the U.S. Economic Development Administration. This federal funding is currently being leveraged with funding previously awarded to QED by the Commonwealth of Pennsylvania and the William Penn Foundation of

Philadelphia, plus additional funding from the Science Center and the 19 institutions participating in the program.

The Science Center is owned by 32 of the leading colleges, universities, hospitals and non-profit institutions throughout Pennsylvania, New Jersey and Delaware, including the University of Pennsylvania, Drexel University, and The Children's Hospital of Philadelphia.

More than 350 companies have passed through our doors since we were founded in 1963.The 93 that remain in the Greater Philadelphia region account for over $9 billion of sales and 15,000 current direct jobs. These jobs pay an average of $89,000 per year—a remarkable figure, especially in today's economy.

Our campus features two business incubators – collectively known as the Port – that are home to more than 30 start-up companies in life sciences, cleantech/greentech and information technology.

These companies are at the cutting edge of scientific innovation. To give you an example, one of our start-up residents – Invisible Sentinel – is working on a fast, efficient way to detect food contamination. Another, BioNanomatrix, is using nanotechnology to decode the human genome. And a third, Enzybel International, a Belgian company, is dedicated to the production and commercialization of sustainable compounds derived from nature.

In our 48 years of operation, we have helped to create the model for the modern research park and high tech business incubator. Our graduates include Centocor, the maker of Remicade, global software giant Bentley Systems and financial services powerhouse SEI Investments.

One of our latest incubator success stories, Avid Radiopharmaceuticals, exemplifies America's potential for innovation and entrepreneurship in the life sciences. Avid was founded by Dr. Dan Skovronsky, a neuro-pathologist at the University of Pennsylvania who had an idea for a technology that would revolutionize the ability to diagnose Alzheimer's and other diseases at an early stage.

In 2005, Dan moved his brand new company into the Science Center's incubator with one employee—himself. Over the next four years Avid refined its technology and added jobs. By 2009, the payroll had grown to 37 people. The company outgrew its space in our incubator and moved into custom-fitted, full-price office and lab space on our campus. Since then the company has grown to more than 50 employees.

Last fall, Avid was acquired by one of our nation's leading pharmaceutical companies, Eli Lilly, for $300 million in cash up front, plus another $500 million of additional payments over the next few years, based on the achievement of certain milestones. We were thrilled to learn that Avid currently plans to remain at the Science Center, continuing to bring new jobs and economic growth to Philadelphia and the region.

Avid represents a classic example of how research and development in the life sciences are essential to our nation's economic recovery.

Let's take a step back and look at the economic impact of the life sciences in the Science Center's home state of Pennsylvania.

As noted in the State Bioscience Initiative 2010 Report from Battelle and BIO, the biosciences sector in Pennsylvania employs 81,000 workers in the state at an average salary of $82,000 -- for a total of $6.7 billion in wages. With a multiplier effect of 4.38, the industry has a total employment impact of 354,000.

On a national level, according to the same report, total employment in the U.S. bioscience sector reached 1.42 million in 2008. When you figure in a multiplier effect of 5.8, the total employment impact of the bioscience sector is 8 million jobs nationwide.

Those are tough numbers to ignore. Yet, the life sciences industry does more than create well-paying jobs. Scientists and researchers are dramatically improving treatments, therapeutics and ultimately patient care and quality of life.

Think back to our Port business incubator resident Invisible Sentinel. Their work in detecting food contamination may also have applications in the detection of pathogens associated with hospital-acquired infections, as well as in cancer detection and homeland security.

At the Science Center, we look forward to helping our residents advance science and technology and invent new products that will change the world – while creating new jobs and economic growth along the way.

I also would like to express my strong support for the proposed Life Sciences Jobs and Investment Act. This legislation will help strengthen the biotech sector's culture of innovation, discovery, education and job creation across the nation.

The Life Sciences Jobs and Investment Act will offer tax incentives for small and mid-sized businesses to invest in life sciences research and development on a targeted basis. It will also ensure the availability of an educated, skilled workforce that will sustain our pipeline of bioscience innovations, companies and jobs over the long term.

One out of every six jobs in the Greater Philadelphia region can be traced back to the life sciences. The Life Sciences Jobs and Investment Act is key to the long-term success of this crucial industry sector. This is the kind of proactive legislation that we need to maintain our competitive edge as we ensure that biotech in the region – and the entire country – continues to grow and thrive.

Thank you for your kind attention! I welcome your comments and questions.