

# AIMBE POSITION STATEMENT

## CONGRESS MUST SUPPORT AND INVEST IN INNOVATION TO STRENGTHEN THE NATIONS HEALTH AND ECONOMY

The increased longevity and improved quality of life of humans over the past century can be significantly attributed to advances resulting from biomedical engineering research and innovation. Be it the development of the implantable pacemaker to treat those with cardiac health problems, the creation of vaccines to protect us all from potentially deadly diseases, or the advancement of imaging technologies as a means to earlier diagnose and treat illness and injury, biomedical engineering research plays a critical role in American's quality of life. Beyond health improvements, the biomedical research industry is a key component for economic growth and job creation in the 21<sup>st</sup> century.

### Biomedical Engineering Research's Role in the Economy

- Biomedical-related research and development accounted for about 10% of U.S. industry R&D. R&D intensity (the ratio of R&D expenditures to net sales) for biomedical research business was 33%, almost three times as much as the next most-intensive sector. National R&D intensity averaged 4%.
- Average annual growth in net sales for biomedical research operations exceeded growth of overall business operations (10.3% v. 5.9%).
- Value added of biomedical research business lines was at least \$33.5 billion or .33% of GDP; the value added for entire businesses was at least 2.7% of U.S. GDP.
- About 56% of biomedical research companies participate in some kind of government program and 34% participate in the Small Business Innovation Research (SBIR) program for initial "seed" investment.

### The Role of Federal Investment in Innovation

- Federal funding for research helps support private, university and federal laboratory research. Federal funds account for approximately 9% of R&D performed by industry. In addition, the federal government supports industrial research through the R&D tax credit. Scholarly research suggests that every federal dollar spent on the R&D credit spurs \$1 to \$2 of business R&D.
- Federal funds account for an even larger share of the research efforts of colleges and universities, providing approximately 60% of R&D performed by colleges and universities.

### Innovation as an Economic Stimulation

- An additional \$20 billion investment in research from the federal government would potentially create approximately 402,000 American jobs for one year. Jobs created would be high-tech, and high-wage.
- Spurring additional investment in research will modernize our nation's research laboratories and facilities, spur additional research, and provide an immediate boost in employment for our economy.

### Effect on Patients

- Increases in the federal investment in innovation (particularly in translational research) will offer biomedical engineers a greater opportunity to bring technologies from bench to a patient's bedside to improve the quality of life and wellbeing of the patient.
- Increased access to cutting edge medical treatments which will improve the productivity and quality of life for patients. This will further allow patient greater opportunity to live a more productive and happier life.
- Growing the biomedical engineering research investment allows for the potential for earlier diagnosis of what would otherwise be chronic illnesses. This earlier diagnose may lead to a decrease in system-wide healthcare costs.



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AIMBE supports the following actions as a means to bolster the federal investment in and support for innovation

- Support for the National Health Council's bill developing an Office of Discovery Research under the supervision of the Director of the National Institutes of Health. This would create, for the first time, new systems to support, manage, and fund translational research for all NIH institutes, facilitate translation of scientific discoveries, and oversee NIH funded translational research.
- Supports passage of the COMPETES Act reauthorization, which will increase federal investment in innovation, strengthen education opportunities in science, technology, engineering and mathematic (STEM) from elementary through graduate school, and strengthen the nation's innovation infrastructure. The reauthorization must also be a road map for appropriators to appropriately fund agencies such as the National Science Foundation, the National Institute for Standards and Technology and others to meet COMPETES Act goals.
- Urges an investment strategy for the federal government to fund the National Institutes of Health at a level of \$40 billion annually by FY2020. The FY2009 NIH funding level was \$30.4 billion, and as such, AIMBE is calling for five-percent increase to NIH over the next five years.
- Specifically, AIMBE recommends a five percent increase in federal investment at the National Institute for Biomedical Imaging and Bioengineering over the next decade in order to fund additional biomedical engineering research within NIH.
- A long-term reauthorization of the Small Business Innovative Research (SBIR) and Small Business Technology Transfer (STTR) programs beyond the current "year-to-year" reauthorization to ensure a vital tool for small businesses seeking seed money for development of innovative technologies remains robust.
- Improve and streamline approval processes within the Food and Drug Administration in order to ensure a faster pace of innovation, and increase access to newly developed devices, pharmaceuticals and therapies. Additionally, AIMBE supports the need for improved collaboration between agencies such as the NIH, FDA, Center for Disease Control and others to reduce barriers between laboratory discoveries and clinical trials for new therapies.

For more information, please contact Benjamin Corb, Director of Legislative Affairs, via e-mail at [bcorb@aimbe.org](mailto:bcorb@aimbe.org), or via telephone at 202.496.9660.

Sources:

"National Patterns of R&D Resources" – *U.S. National Science Foundation*

"Where Do Innovations Come From? Transformations in the U.S. National Innovation System" – *Information Technology and Innovation Foundation*

Biotechnology Industry Organization Website

*The American Institute for Medical and Biological Engineering (AIMBE) is the authoritative voice for the value of medical and biological engineering to society. It is an organization of leaders in medical and biological engineering consisting of academic, industrial, professional society councils and elected fellows.*

