



## Pennsylvania

### Economic Impact of Health Research

#### Investment: Funding sources for overall research and development (2004)

Source of R&D Funding	Investment	State Rank
Federal Government	\$2,355,400,000	9
Industry	\$8,000,400,000	9
Universities	\$226,500,000	12
Non-profit	\$130,000,000	5
Other *	\$100,600,000	10
Total	\$10,812,900,000	10

\* Other represents funding from state and local governments and funding for Federally Funded Research and Development Centers from non-federal sources.

Source: National Science Foundation, National Patterns of R&D Resources, 2006

#### Economic Impact: Statistics for research-driven health industries (2004)

Industry	Employment	Annual Salary
Pharmaceutical	23,307	\$88,754
Medical Device	19,876	\$50,590
Research, Testing, and Laboratories	27,488	\$67,405
Overall Private Sector		\$38,055

Source: Battelle Memorial Institute and Biotechnology Industry Organization (BIO), Growing the Nation's Biotech Sector: State Bioscience Initiatives 2006

#### Highlights from local economic impact studies

Pennsylvania BIO reports that in 2006, the bioscience industry in the state supported more than **326,000 jobs** and paid out **\$5.1 billion in wages**. Research institutions in the state brought in **\$1.5 billion** in research funding from the NIH that year.

The Pennsylvania State System of Higher Education reports that the 14 public universities it represents had an annual economic impact of nearly **\$4.47 billion** on the Commonwealth and supported **51,000 jobs** in FY 2003-2003.

For every dollar from the Commonwealth, Pennsylvania State University returned **\$19.42** in 2003. Penn State had an annual economic impact of more than **\$13 billion** and supported **60,000 jobs** that year.

In 2002, Penn State Hershey Medical Center generated **13,500 jobs** and had an economic

impact of \$613 million.

The Association of American Medical Colleges reports that the member medical schools and teaching hospitals in the state had a combined economic impact of \$35.6 billion (ranked 2<sup>nd</sup> in the nation) and a total employment impact of 219,600 in 2005.

The Milken Institute reports that the Greater Philadelphia life science industry supports 276,000 jobs and \$13.7 billion in total earnings in the region (accessing report requires free registration).

The University of Pittsburgh spent \$1.5 billion in the local economy and supported nearly 32,100 jobs in 2006. The \$188 million Biomedical Research Tower 3 will add 200 new professional jobs with \$10 million in salaries.

The University of Pittsburgh Medical Center has a regional economic impact of \$6 billion and supports 100,000 jobs beyond direct employment.

The statewide economic impact of the University of Pennsylvania is equal to \$25 million per day. Penn's expenditures generated \$9.6 billion in economic activity and support 100,000 jobs in the state.

In FY 2004, research projects at Carnegie Mellon University generated nearly \$280 million for the local economy. Between 2001 and 2005, Carnegie Mellon also helped create 17 companies that have created 100 jobs in the region and raised \$40 million.

# The Bioscience Continuum in Pennsylvania

## Start-up Biotech, Device, Diagnostic companies

Companies are in the start-up phase with just a few employees. They are in the pre-clinical stage with their products or may be in early clinical trials. Early-stage risk capital and seed funding is most needed:

- PA Life Sciences Greenhouses
- PA Franklin Technology Partners

### Priorities:

- NOL Tradability
- Expansion of R&D Tax Credit
- CS&FT Phase Out

## Global pharmaceutical, device and diagnostics

Companies are operating on a global scale. They are manufacturing products while continuing to research new breakthroughs.

### Priorities:

- Single Sales Factor
- Expansion of R&D Tax Credit
- Uncapped NOL
- CS&FT Phase Out
- Overall CNI Reduction

## Mature Industry: Biotech, Device, Diagnostic

Companies are well capitalized, publicly traded or a wholly owned subsidiary. They have at least one product on the market or are filing their NDA to the FDA.

## Development Stage

Companies are usually venture-backed and have started clinical trials. They are in need of capital for growth and to advance their product through clinical trials:

- PA Venture Capital Program (HVIA)
- Greenhouses
- Ben Franklin Technology Partners

### Priorities:

- Uncapped NOL
- Expansion of R&D Tax Credit
- CS&FT Phase Out
- Tradability of NOL

### Priorities:

- Single Sales Factor
- Expansion of R&D Tax Credit
- CS&FT Phase Out
- Uncapped NOL
- Overall CNI Reduction