BIOSCIENCE 08

FLORIDA

In both the medical devices and equipment subsector and the research, testing, and medical laboratories subsector, Florida has approximately 5 percent of national employment and growth rates exceeding the national average. Academic research expenditures in the biosciences were $835 million in 2006, heavily concentrated in the medical sciences, and growing somewhat faster than the national average. The $682 million in bioscience venture capital investments in Florida during the past 6 years were made most heavily in medical therapeutics, followed by medical/health services and medical/health information technology. The 3,338 patents issued (ranked eighth nationally) were most commonly in surgical and medical instruments. Additionally, Florida's colleges and universities graduated the sixth most students in bioscience-related disciplines in 2006.

Major Industry Developments and Recent Successes

- Max Planck Institute will begin operations in 2008 at Jupiter in Palm Beach County, housing 150 researchers in molecular imaging, biosensing, and cellular mechanisms.
- Torrey Pines Institute for Molecular Studies will add a Florida branch in 2009, moving to a new 104,000-square-foot facility in Port St. Lucie.
- Burnham Institute will complete a Florida branch in 2009, moving researchers in diabetes, obesity, and heart disease to a new 175,000-square-foot facility at the Lake Nona Science and Technology Park in Orlando.

Recent State Initiatives

In the past 3 years, Florida has placed heavy emphasis on recruiting branches of nonprofit research institutions. Following the Scripps Florida deal highlighted in the last BIO report, the State has also used incentive funds to secure commitments from the **Burnham Institute for Medical Research**, **Torrey Pines Institute for Molecular Studies**, **Max Planck Institute**, and the **Vaccine and Gene Therapy Institute** of the Oregon Health and Science University (which will locate a satellite facility in Port St. Lucie).

Florida also continued to invest in its university-based **Centers of Excellence**. To the five centers in its existing roster, Florida is adding two new initiatives in the bioscience category: a **Center on Biomolecular Identification and Targeted Therapeutics** at the University of South Florida and a **Center for Nano-Bio Sensors** at the University of Florida. Additional centers are expected to be announced later this year.

A new wet-lab incubator was opened by **Alexandria** at Jupiter, and plans for additional commercial wet-lab space were announced at Lake Nona, University of Miami, and other locations. New medical schools are under construction at the University of Central Florida (Lake Nona) and Florida International University. In late 2006, Moffitt Cancer Center in Tampa and Merck formed **M2GEN**, a joint venture targeting individualized cancer therapies.

The State now provides university licensing offices access to a **State University Research Commercialization Assistance Grant** through a newly created **Institute for Commercialization of Public Research** and will be investing in locally targeted venture-capital partnerships through a $30 million **Florida Opportunity Fund** (a fund of funds with a matching requirement).

Among the 11 **Employ Florida Banner Centers** created by Workforce Florida to steer curriculum development in targeted sectors are a biotechnology center (with the University of Florida in the lead) and a health sciences center (led by Valencia Community College).

For additional information on Florida's bioscience policies and programs, please see http://www.eflorida.com and http://www.bioflorida.com.

Bioscience Industry Base, 2006

Industry Subsector	Florida		United States	
	2006	2001–06 Change	2006	2001–06 Change
Agricultural Feedstock & Chemicals				
Establishments	109	17.4%	2,183	3.8%
Employment	6,010	-2.8%	105,846	-6.1%
Location Quotient	0.94		n.a.	
Direct-Effect Employment Multiplier	6.72		11.22	
Total Employment Impact	40,403		1,214,709	
Average Annual Wage	$59,315		$67,870	
Drugs & Pharmaceuticals				
Establishments	93	4.5%	2,654	1.9%
Employment	4,027	-5.5%	317,149	4.0%
Location Quotient	0.21		n.a.	
Direct-Effect Employment Multiplier	4.16		9.92	
Total Employment Impact	16,732		2,880,242	
Average Annual Wage	$56,260		$86,892	
Medical Devices & Equipment				
Establishments	1,074	5.4%	15,215	0.3%
Employment	24,689	6.5%	422,993	-0.9%
Location Quotient	0.96		n.a.	
Direct-Effect Employment Multiplier	2.85		4.85	
Total Employment Impact	70,473		1,980,128	
Average Annual Wage	$49,443		$59,441	
Research, Testing, & Medical Laboratories				
Establishments	1,745	44.5%	22,857	32.7%
Employment	22,466	25.1%	449,991	17.8%
Location Quotient	0.82		n.a.	
Direct-Effect Employment Multiplier	2.14		3.25	
Total Employment Impact	48,038		1,440,500	
Average Annual Wage	$52,324		$71,284	
Total Private Sector				
Establishments	577,514	28.7%	8,575,730	10.2%
Employment	6,885,696	11.9%	113,463,842	3.1%
Average Annual Wage	$37,806		$42,272	

Note: n.a. = metric is not applicable.

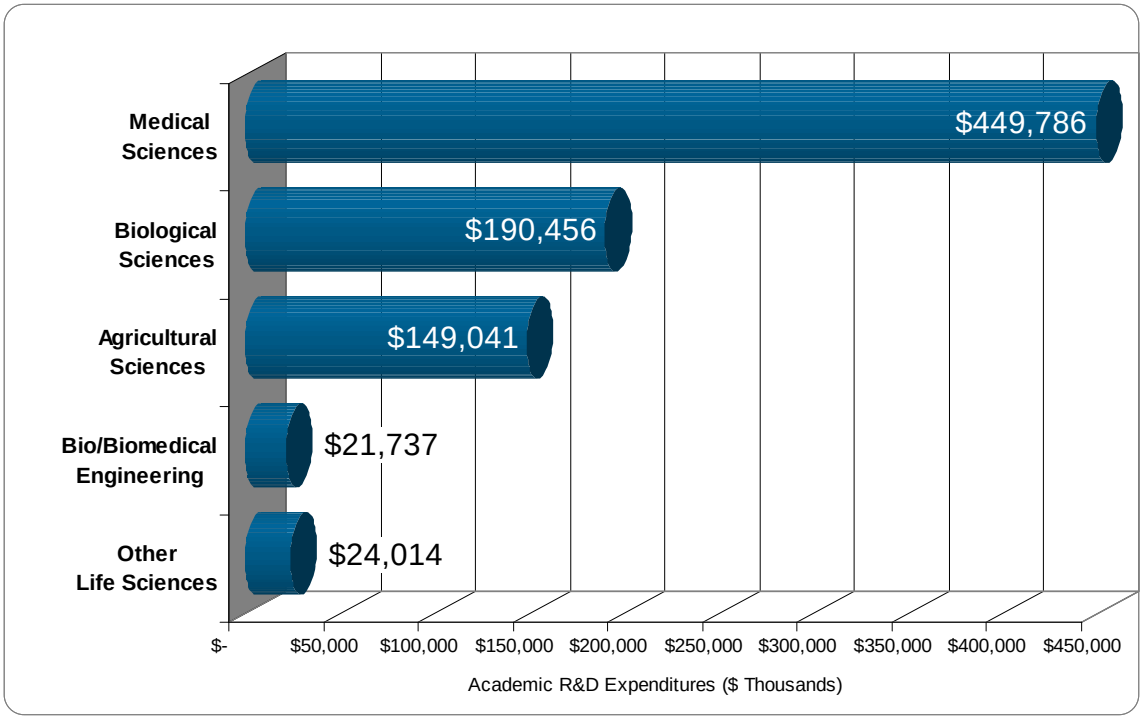
Additional Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

	Florida	United States	Rank
Academic R&D Expenditures, FY 2006			
Total ($ thousands)	$1,527,666	$47,760,402	10
Bioscience R&D ($ thousands)	$835,034	$29,307,628	11
Bioscience Share of Total R&D	54.7%	61.4%	
Bioscience R&D Per Capita	$46.24	$98.10	
Change in Bioscience R&D FY 2002–2006	49.0%	36.9%	
NIH Funding, FY 2007			
Total ($ thousands)	$339,608	$21,066,389	18
Per Capita Funding	$18.61	$69.84	
Change in Funding, FY 2002–2007	16.8%	11.2%	
Higher Education Degrees in Bioscience Fields, AY 2006	5,717	143,433	6
Employment in Bioscience-related Occupations, 2006	21,870	588,520	7
Bioscience Venture Capital Investments, 2002-2007 ($ millions)	$682.3	$51,260.9	15
Bioscience and Related Patents, 2002-2007	3,388	121,817	8

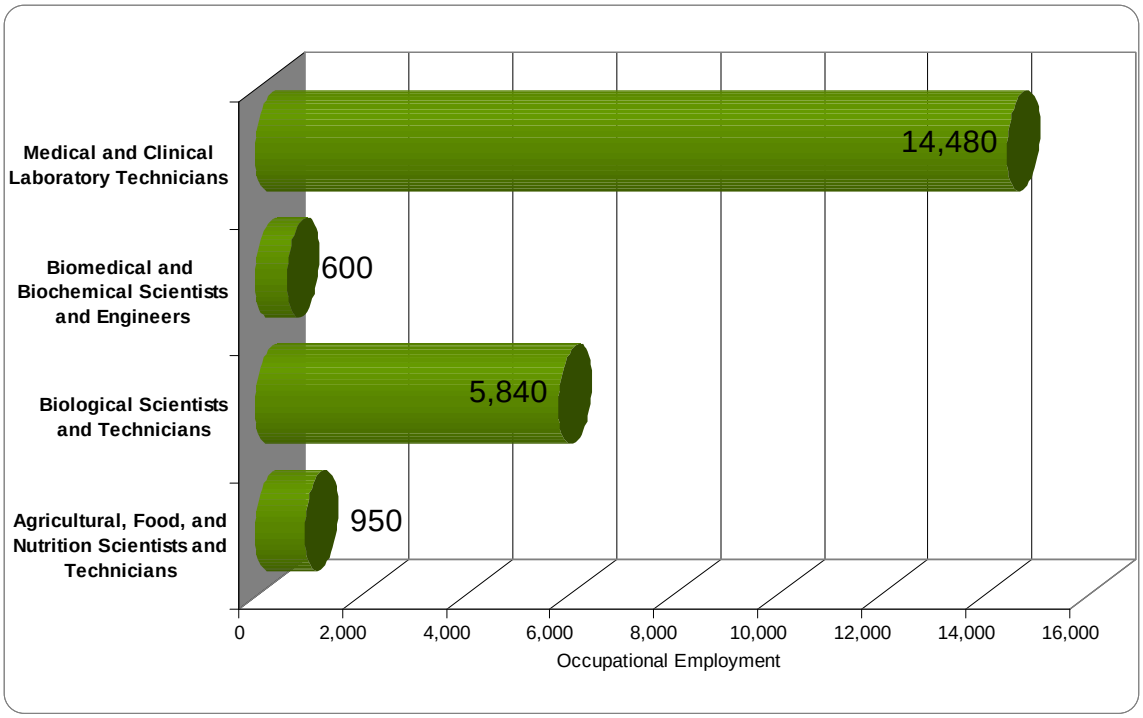
Bioscience R&D Base

Bioscience Academic R&D Expenditures in Florida, FY 2006

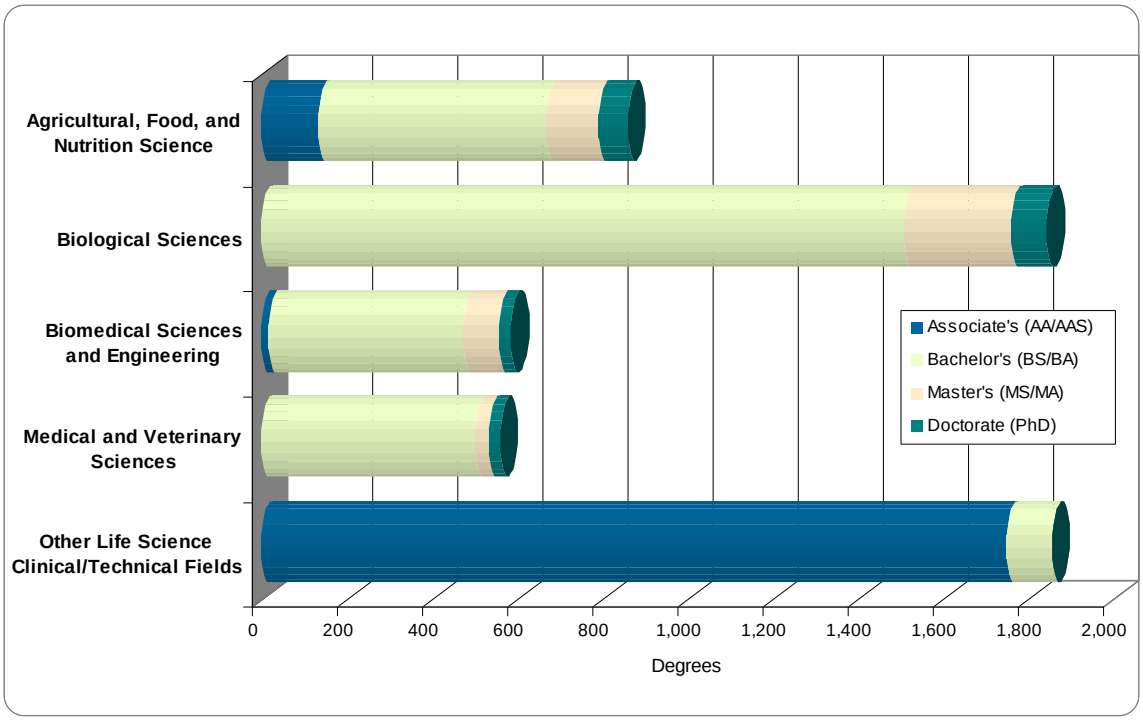


Bioscience Talent Base

Bioscience-related Occupational Employment in Florida, 2006

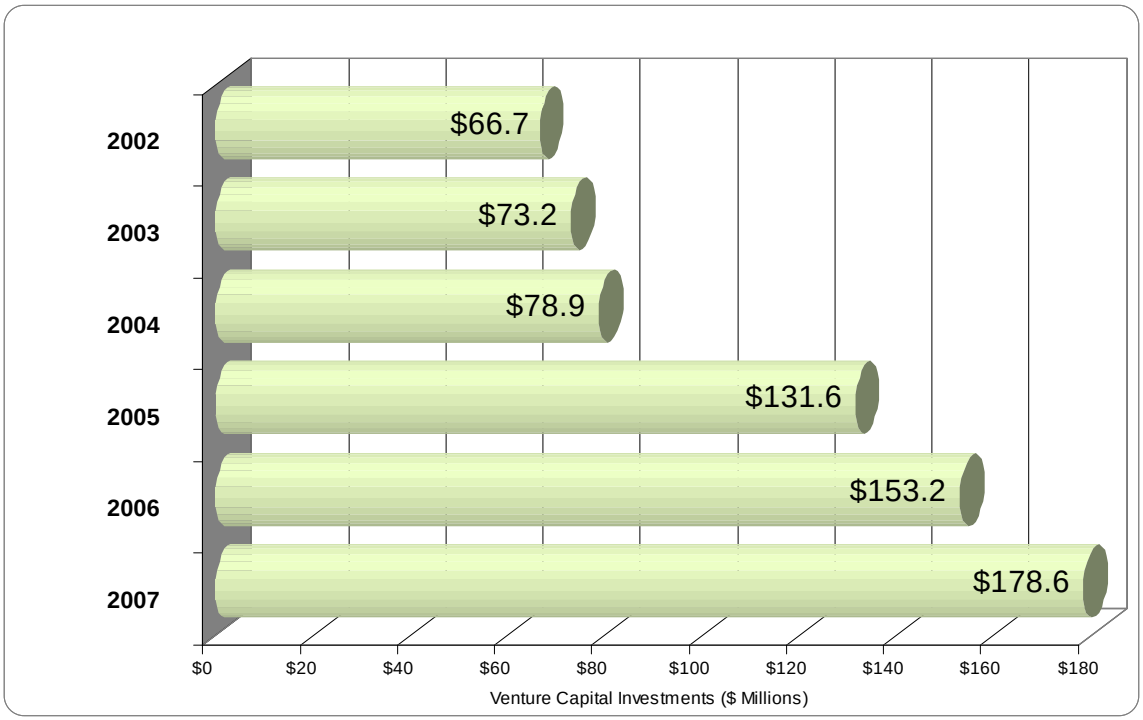


Bioscience-related Degrees in Florida, AY 2006

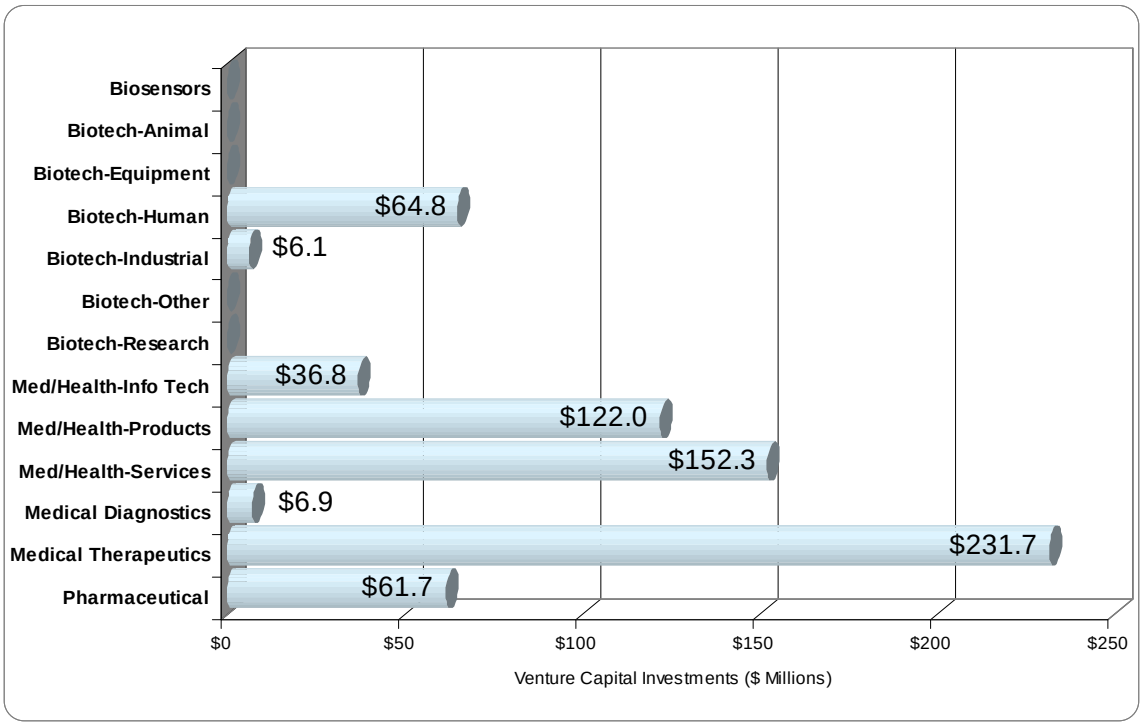


Bioscience Venture Capital

Bioscience-related Venture Capital Investments in Florida, 2002–2007

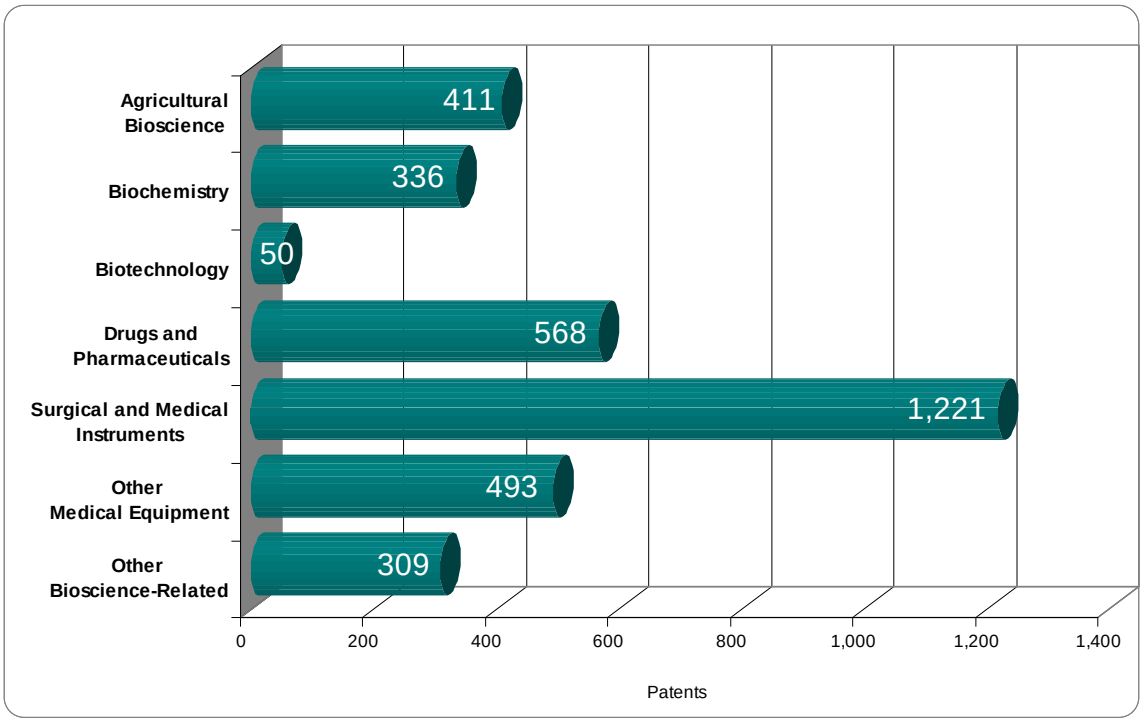


Bioscience-related Venture Capital Investments in Florida by Segment, 2002–2007



Bioscience Patents

Bioscience-related Patents by Classification Group in Florida, 2002–2007



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Source Notes:

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) industry data provided by the Minnesota IMPLAN Group, 2001 and 2006.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2005 (most currently available).

Academic R&D Expenditures: National Science Foundation (NSF) Survey of Research and Development Expenditures at Universities and Colleges, 2002 and 2006.

NIH Funding: National Institutes of Health – Office of Extramural Research, Award Trends – Dollars Awarded by State, 2002 and 2007.

Higher Education Degrees: National Center for Educational Statistics, Integrated Postsecondary Education Data System (IPEDS), 2006.

Occupational Employment: U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES) survey data, 2006.

Venture Capital: Thomson Reuters VentureXpert Database, 2002-2007, as of May 1, 2008.

Patents: U.S. Patent & Trademark Office data as available from the Thomson Reuters' Delphion Patent Analysis Database, 2002–2007, as of May 1, 2008.

For a more detailed discussion of the data and methodology used please see the Appendix to the full national report.