

Research & Innovation: Central Virginia

RESEARCH AMERICA

Virginia Health Facts

- Cancer was the cause of 24% of deaths in 2005, and over 35,000 Virginians were diagnosed with cancer in 2007.¹
- Diabetes was diagnosed in over 480,000 Virginians in 2009.²
- Heart disease caused over 14,000 deaths in 2006.³
- Richmond was the asthma capital of the U.S. in 2010 and 2011 due to high pollen levels.⁴
- Health challenges include low immunization coverage, high air pollution and smoking.⁵

Virginia Commonwealth University (VCU) benefits from National Institutes of Health (NIH) funding

- Researchers developed a more effective radiosurgery for removing cancerous tumors.⁶
- VCU discovered a combination treatment for leukemia⁷, which kills about 500 Virginians per year.⁸

McGuire Research Institute – Richmond VA Medical Center

- Conducts patient studies to develop drugs for cancer, diabetes and heart disease.⁹
- Research enhances the medical center's ability to treat veterans.⁹

Growth of bioscience in Richmond

- The Massey Cancer Center saw a doubling in NIH research funding in the last five years and increased its investment in cancer research.¹⁰
- VCU brings innovative businesses to Richmond like Aderis Pharmaceuticals, which develops treatments for Parkinson's disease.¹¹



National Cancer Institute

NIH grants lead to discoveries at the University of Virginia (UVA)

- Novel cancer diagnostics technology for personalized medicine.¹²
- Studies of genetic involvement in conditions such as stroke and heart disease at UVA's Robert M. Berne Cardiovascular Research Center.¹³
- Collaboration with AstraZeneca to find new treatments for heart disease.¹⁴

Biotechnology companies in the Charlottesville area

- Hemosonics, an NIH-funded UVA start-up, developed a technique to effectively analyze blood for infections.
- UVA start-up, Tau Therapeutics, is developing a first-in-class non-toxic drug for solid tumors.
- Indoor Biotechnologies, an NIH-funded start-up, is finding new treatments for allergies and asthma.



National Institutes of Health

Virginia Tech uses NIH dollars for research

- Develops new strategies for the early detection of ovarian cancer.¹⁵
- Improves CT imaging to better diagnose heart problems.¹⁶

Bioscience companies grow with NIH funding

- Luna Innovations, a start-up of Tech, develops technologies for medical diagnostics and therapies.
- TechLab, originating from Tech, innovates non-invasive diagnostics for bowel diseases.
- Each received over \$2 million in NIH funding in 2010.¹⁷ Together, these companies employ about 200 Virginians.¹⁸

[1. Center for Disease Control - Cancer](#)
[2. American Diabetes Association](#)
[3. CDC \(Heart\), Virginia.gov](#)
[4. Asthma and Allergy Foundation of America](#)

[5. America's Health Rankings](#)
[6. VCU News- radiosurgery](#)
[7. VCU News- leukemia](#)
[8. NCI State Cancer Profiles](#)
[9. McGuire Research Institute](#)

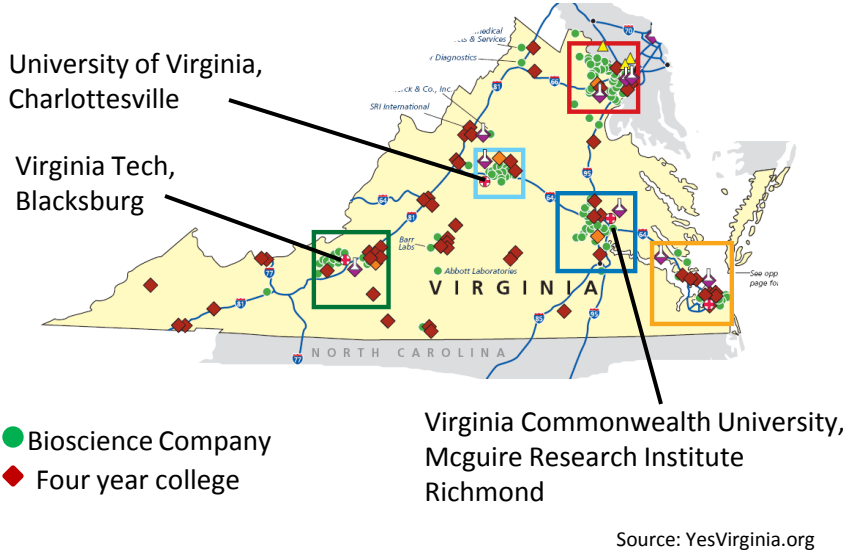
[10. Venture Richmond](#)
[11. Biohealthmatics](#)
[12. UVA Today](#)
[13. UVA Cardiovascular Research](#)
[14. AstraZeneca](#)

[15. Physorg.com News](#)
[16. VTNews](#)
[17. NIH Report](#)
[18. Manta](#)

Why is funding from the National Institutes of Health Important?

- ✓ Supports university, medical center and independent research institute studies
- ✓ Trains new scientists
- ✓ Creates cures, preventative measures and treatments
- ✓ Builds the Biosciences Industry
- ✓ Keeps Central Virginia competitive

Bioscience Centers in Central Virginia



Investing in Virginia's Future

- The Biosciences industry supports 80,000 jobs in Virginia.¹
- Virginia bioscience employees' average salary is more than \$77,000.² The overall average salary for Virginia workers is about \$48,000.³
- The biosciences industry paid employees nearly \$1.8 billion dollars in 2006 that resulted in \$433.3 million dollars in federal revenues.¹
- \$303 million in NIH-funding supports more than 4,000 in-state jobs.⁴
- NIH Small Business grants have provided more than \$28 million to Virginia bioscience companies since 2008.⁵
- Virginia's biomedical research community conducted nearly 1,900 clinical tests of new medicines, including 678 trials for cancer drugs, 102 tests for heart disease medicines, 232 rare disease treatment trials and 80 tests for HIV/AIDS drugs in 2008.¹

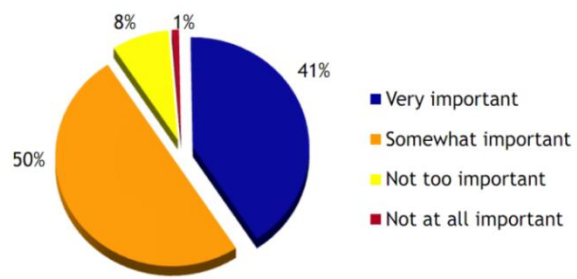
Sources: VaBIO.org¹; Biotech Breakthrough: Industry emerging in central Va., The Daily Progress, June 18, 2011²; Department of Labor Stats³, 2011 UMR Report⁴, 2011, NIH grants⁵

"Biotechnology-derived medicines are saving lives or managing debilitating diseases every day for millions around the world. These are the ideals that animate the commonwealth's 21st century explorers: the ambitious, innovative and driven people who are the face of Virginia's inspiring bioscience community".

- Mark Herzog, Executive Director of VABIO, Richmond Times-Dispatch, July 3, 2011

Most Americans Think R&D is Important to State Economies

How important do you think research and development is to your state's economy?



Source: Your Congress-Your Health Poll, March 2011, Charlton Research Company for Research!America