

# Research & Innovation: Ohio

# RESEARCH AMERICA

## Ohio Health Facts

- Cancer kills about 25,000 Ohioans per year.<sup>1</sup>
- Heart disease killed about 22,000 Ohioans in 2009.<sup>2</sup>
- Diabetes affects about 900,000 adult Ohioans.<sup>3</sup>

## Cincinnati Children's Hospital Medical Center Depends on National Institutes of Health (NIH) funding

- Developing a gene therapy for treating cancer, which is now in clinical trials.<sup>4</sup>
- Researching detection and preventative strategies for heart disease.<sup>5</sup>

## NIH-Research at University of Cincinnati

- Reengineering a diabetes drug for cancer treatment.<sup>6</sup>
- Finding new drug targets to treat breast cancer.<sup>7</sup>
- Researching novel treatments for diabetes and obesity.<sup>8</sup>

## Miami University of Ohio

- Received NIH funds in 2010 for diabetes, eye degeneration and respiratory research.<sup>9</sup>

## Growth of bioscience in the Cincinnati area

- Devicor Medical builds better systems for breast cancer biopsies.<sup>10</sup>
- AtriCure develops new treatments for heart conditions.<sup>11</sup>

## Ohio State University (OSU)

- Developing a medicated patch to prevent oral cancer.<sup>12</sup>
- Working with Enlyton Corporation, which was founded by OSU scientists, to develop systems for cancer imaging and drug delivery.<sup>13</sup>

## University of Toledo

- Improving a treatment for a chronic low blood pressure condition that affects half a million Americans.<sup>14</sup>

## Northeastern Ohio Medical University (NEOMED)

- Researching heart and liver disease to find better treatments for Ohioans using NIH funding.<sup>15</sup>



National Cancer Institute

## Case Western Reserve University

- Engineering a new form of insulin to treat Ohioans with type 2 diabetes.<sup>16</sup>
- Developing a therapy for Multiple Sclerosis<sup>17</sup> to treat patients in Lorain County, which contains a disease cluster.<sup>18</sup>
- Developing therapies for spinal cord injuries with Athersys, an Ohioan biotech company.<sup>19</sup>

## University Hospitals in Ohio

- Developing better screening methods for prostate cancer with funding from the NIH.<sup>20</sup>
- Conducting NIH-funded patient studies to show the effectiveness of a brain cancer vaccine.<sup>21</sup>

## The Cleveland Clinic

- Investigating new strategies to treat chronic leukemia with NIH funding.<sup>22</sup>
- Using medicated stents to deliver drugs directly to diseased hearts.<sup>23</sup>

## University of Akron, Akron Children's Hospital and Austen BioInnovation

- Collaborating to produce NIH-funded medical devices to aid in healing injuries of Ohioans.<sup>24</sup>

## Biotechnology companies formed

- Arterioocyte, established from research at Case, develops cell therapies for injuries and diseases with NIH funding.<sup>25</sup>
- Fluence Therapeutics, a spinoff company of UH, develops light treatments for psoriasis.<sup>26</sup>



National Institutes of Health

1. CDC - Cancer

2. Ohio.gov - Heart disease

3. Ohio.gov - Diabetes

4. Cincinnati Children's - Gene

5. Cincinnati Children's heart

6. UC - Cancer drug

7. MedCityNews - Cancer

8. UC - Metabolic Disease

9. NIH Report - MU Ohio

10. Devicor/Mammotome

11. AtriCure

12. OSU - Oral cancer

13. Enlyton Corp

14. U Toledo News

15. NEOMED

16. Case - Diabetes

17. Case - MS

18. NRDC - MS

19. Case - Spinal Cord

20. UH - Prostate

21. UH - Cancer Vaccine

22. CC - Leukemia

23. CC - Heart/Stent

24. Austen Bio

25. NIH - Arterioocyte

26. Ohio.com News

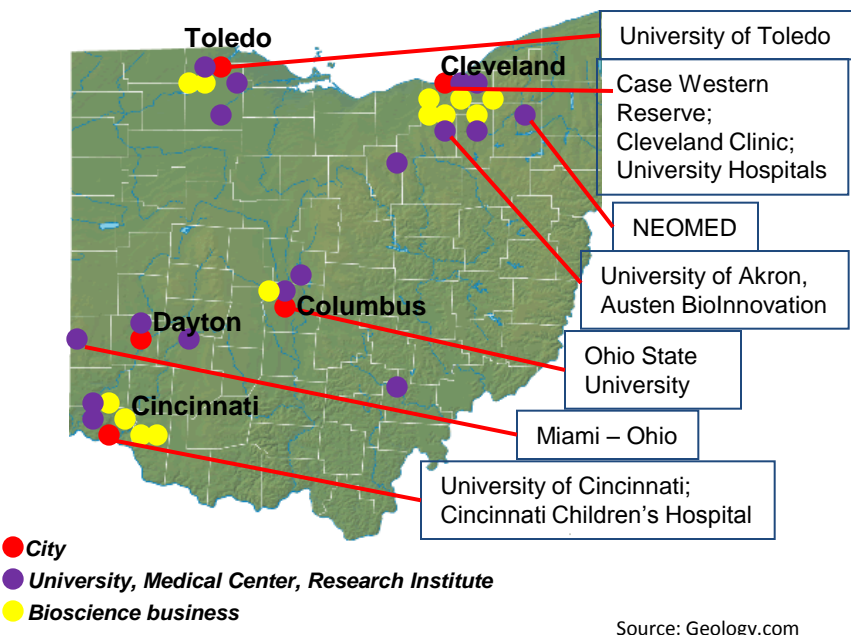
# Why is funding from the National Institutes of Health Important?

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

## Other NIH-funded health research institutions in Ohio:

- Kent State University
- Cleveland State University
- Ohio University at Athens
- Ashland University
- University of Dayton

# NIH-funded Bioscience Centers in Ohio



Source: Geology.com

## Investing in Ohio’s Future

- The Biosciences industry directly supports over 62,000 jobs in Ohio.<sup>1</sup>
- Ohio bioscience employees’ average salary is more than \$68,000.<sup>1</sup> The overall average salary for Ohio workers is about \$41,000.<sup>2</sup>
- The biosciences industry paid employees from 1,800 + locations in Ohio more than \$4.2 billion dollars in 2009.<sup>1</sup>
- \$796 million in NIH-funding supports more than 13,000 in-state jobs.<sup>3</sup>
- Ohio bioscience companies received about \$25 million in NIH small business grants in 2009.<sup>4</sup>
- Ohio’s biomedical research community hosts 17% of the clinical trials in the US.<sup>1</sup>

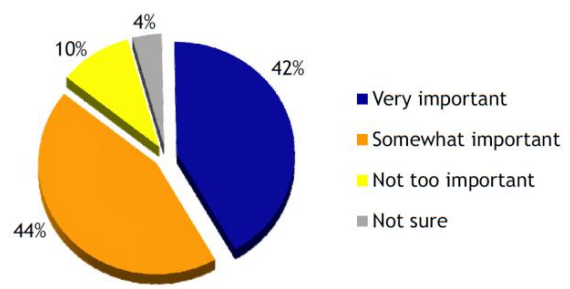
Sources: BioOhio<sup>1</sup>; Department of Labor Stats<sup>2</sup>, 2011 UMR Report<sup>3</sup>, 2011, [NIH grants](#)<sup>4</sup>

*“With more than \$2.5 billion in funding, Ohio is establishing a leadership role in the bioscience industry and we must continue this support. State and federal officials need to increase public funding for bioscience research and training.”*

-William A. Burga, chairman of the Ohio AFL-CIO, The Morning Journal, September 12, 2010

## Most Think Health Research Important to Ohio’s Economy

How important do you think medical and health research is to the economy of Ohio?



Source: Ohio Public Opinion Poll, April 2011  
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