



AUBURN

RESEARCH

2014 ANNUAL REPORT OF RESEARCH ACTIVITY



**THIS IS AUBURN RESEARCH.**

## Leading the Way



**THROUGH AUBURN RESEARCH**, Auburn University is strategically embracing our newly defined role as a driver of economic development for the state of Alabama. Yes, as a land-grant university, our research has always fed our state's economy. Now, though, we are focused on actively translating brilliant research into economic growth. We are joining other universities across the country in bringing together researchers, executives and decision-makers to solve problems, grow business and improve communities.

Already, we are seeing results. Auburn has earned a spot on the global Top 100 list of universities for number of patents. We are partnering with GE Aviation as it brings high-volume additive manufacturing to its local facility. We are launching the Charles D. McCrary Institute to advance energy-grid protection and cybersecurity while conserving natural resources. With initial successes like these, we're excited about what we can achieve as momentum builds.

Until now, Alabama's economic recovery has lagged behind much of the country; Auburn Research is driving us forward. We are pushing our best minds in research and in business to collaborate for the benefit of our knowledge base and our state's bottom line. We are leading the way in placing Alabama at the forefront of vital sectors that will power the future of Alabama, and the world.

Jay Gogue, PhD

*President*

## Real-World Results



**UNIVERSITIES LIKE AUBURN** have traditionally served as the incubator for our collective knowledge and harnessed the power of discovery to fuel the marketplace. Now, as our nation speeds toward a knowledge-based economy, we have united under the Auburn Research umbrella economic-development efforts from across the University so we can maximize the benefits of emerging opportunities. Auburn Research is leading economic development by advancing technology, providing the workforce for our changing economy, and partnering with public and private institutions and companies. Innovation in our six interdisciplinary research hubs is making an impact on Alabama's economy...and we have only just begun.

Under the auspices of the Association of Public and Land-Grant Universities, we have reached out extensively to public and private business and community leaders across Alabama, asking for their perceptions on the University's economic engagement. This information will shape our economic-development priorities and identify areas where we can improve our business engagement and support initiatives. We're not setting our goals in isolation behind the gates of academia; we're combining our expertise and research capabilities with your real-world input to produce the results Alabama wants and needs.

Already, Auburn University positively impacts the economy to the tune of around \$5 billion each year. Together with our business and community partners, Auburn Research will propel our direct and indirect impact to new heights...for the benefit of Alabama's economy and Alabama's citizens. This is Auburn Research.

John M. Mason Jr., PhD, PE

*Vice President for Research and Economic Development*

## Igniting Our Economy



**AUBURN RESEARCH HAS EMBRACED** its critical role in spurring regional economic development through technology transfer, external engagement and the Auburn Research Park. We are moving intellectual property from campus labs into the state and global marketplaces. We are partnering with companies and agencies to conduct research, collect data and test products. Our research park and incubator sites accelerate advances by private innovators and Auburn faculty through the Auburn Research and Technology Foundation.

*LAUNCH: The Fund for Research Innovation at Auburn University* is intended to help bridge the

gap between research funding and commercial investment. Gifts to the endowed LAUNCH Fund will move innovative applied research into the marketplace for meaningful impact on the world.

Although our efforts cross all sectors, we continue to focus on our six interdisciplinary hubs. We are particularly excited about our impact in the areas of transportation, health sciences, energy and the environment, and cybersecurity and systems.

Auburn University is at the forefront of the economic-development continuum. We are connecting diverse interests for the benefit of all. We are the spark igniting Alabama's economy.

**THIS IS DISCOVERY.  
THIS IS PARTNERSHIP.  
THIS IS ECONOMIC GROWTH.  
THIS IS AUBURN RESEARCH.**

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## Focus



## Proof



### MANUFACTURING THE FUTURE

GE Aviation is investing \$50 million in its 300,000-square-foot Auburn facility to prepare for high-volume additive manufacturing (3-D printing) of components for their jet engines—and Auburn University is helping to develop a pipeline of young talent. We're also working with GE Aviation experts to industrialize additive manufacturing technology.



### IMPROVING RURAL HEALTH

The Edward Via College of Osteopathic Medicine (VCOM) plans to provide more primary care physicians to rural and medically underserved areas in Alabama and throughout the Appalachian region, thanks to a new branch campus in the Auburn Research Park. Only 10 percent of Alabama counties have enough providers; VCOM wants to improve that percentage significantly.



### SECURING THE GRID

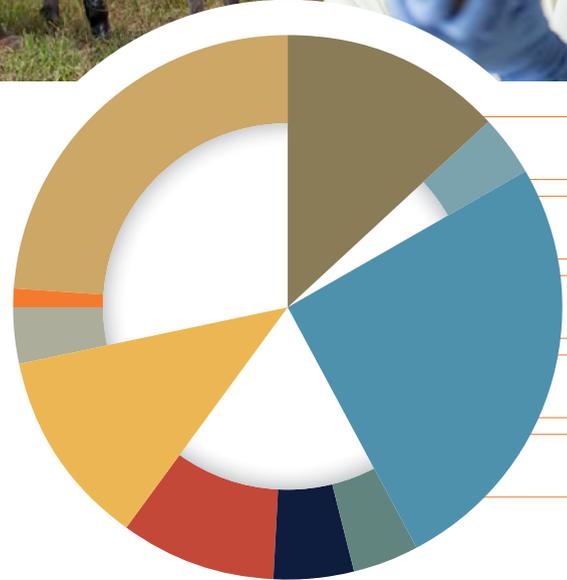
The Charles D. McCrary Institute puts Auburn at the forefront of interdisciplinary research and advances technologies to improve the security of our nation's energy infrastructure. At the same time, the institute—funded by a significant gift from the Alabama Power Foundation—will house research to protect and conserve natural resources.



### BOOSTING CYBERSAFETY

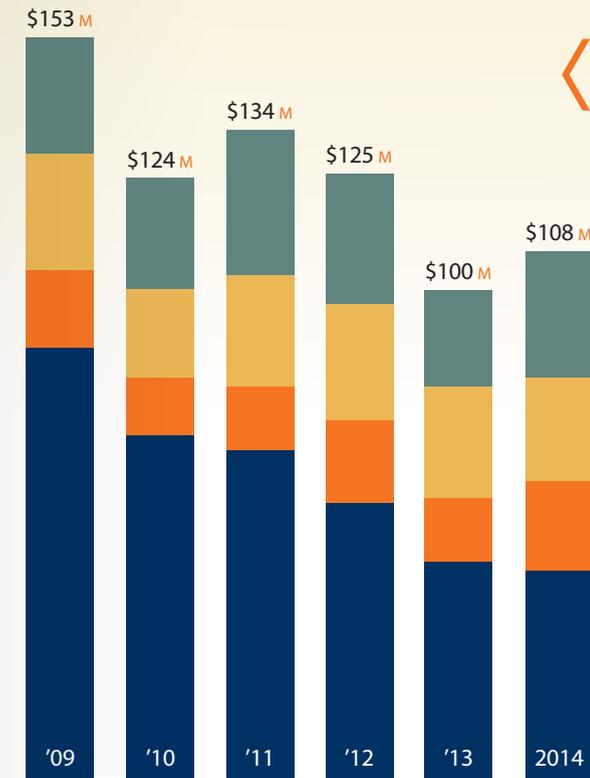
Cybercrime is a big problem—bigger than one institution can attack alone. That's why Auburn joined forces with the state's six other PhD-granting institutions, along with research and industrial affiliates, to form the Alabama Cyber Research Consortium. ALCRC's mission is to create solutions that impact the economy and national security.

## Sponsored Awards by Unit



Agriculture	13.12%	Sciences and Mathematics	9.11%
Education	3.49%	Veterinary Medicine	11.63%
Engineering	25.36%	Forestry	3.19%
Human Sciences	4.00%	Pharmacy	1.22%
Liberal Arts	4.49%	Other units	24.39%

## Sponsored Awards



The value of sponsored awards rose 8 percent over the past year, driven by increases in industry and state research dollars.

Alabama  
Other  
Industry  
Federal

40%

Federal research dollars account for the largest share (40 percent) of our sponsored awards.

### 2014 Awards By Sponsor

State of Alabama	\$25,456,712	Department of Interior	\$598,883
Industry	\$18,515,061	NSF	\$7,266,136
Department of Defense	\$4,211,142	USDA*	\$2,586,175
Department of Education	\$15,494,514	Other Federal	\$4,650,212
Department of Energy	\$1,423,857	Other Sponsors	\$20,814,540
Department of Health and Human Services	\$7,004,028		

\*Does not include federal appropriations for Hatch, Smith Lever or McIntyre Stennis

## Office of Technology Transfer Metrics

Technology transfer remains strong, helping to fuel economic development as well as University income; option and license income has grown by more than 12 percent over the past four years.



54	Invention Disclosures
61	Standard U.S. Patent Applications Filed
12	Provisional U.S. Patent Applications Filed
6	Other U.S. Patent Applications Filed
17	U.S. Patents Granted
18	Licenses/Options Executed
1	Startup Company Formed
\$863,334	Option and License Income

## Economic Impact



\$2.8 billion

Over the past two decades our overall economic contribution has increased by \$2.8 billion.



**AUBURN**  
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**Office of the Vice President for Research and Economic Development**

202 Samford Hall  
Auburn University  
Auburn, Alabama 36830

**phone:** (334) 844-4784  
**e-mail:** [auees@auburn.edu](mailto:auees@auburn.edu)



Auburn University has one of the most successful canine-detection research programs in the country. Through a license to the Auburn Research and Technology Foundation, Auburn's patented Vapor Wake technology has become commercially available so that military, government and private-sector agencies can use specially trained dogs to detect explosives. **Download TigerView by Auburn University to your smartphone or tablet, open the app and scan the image above to view enhanced media.**