



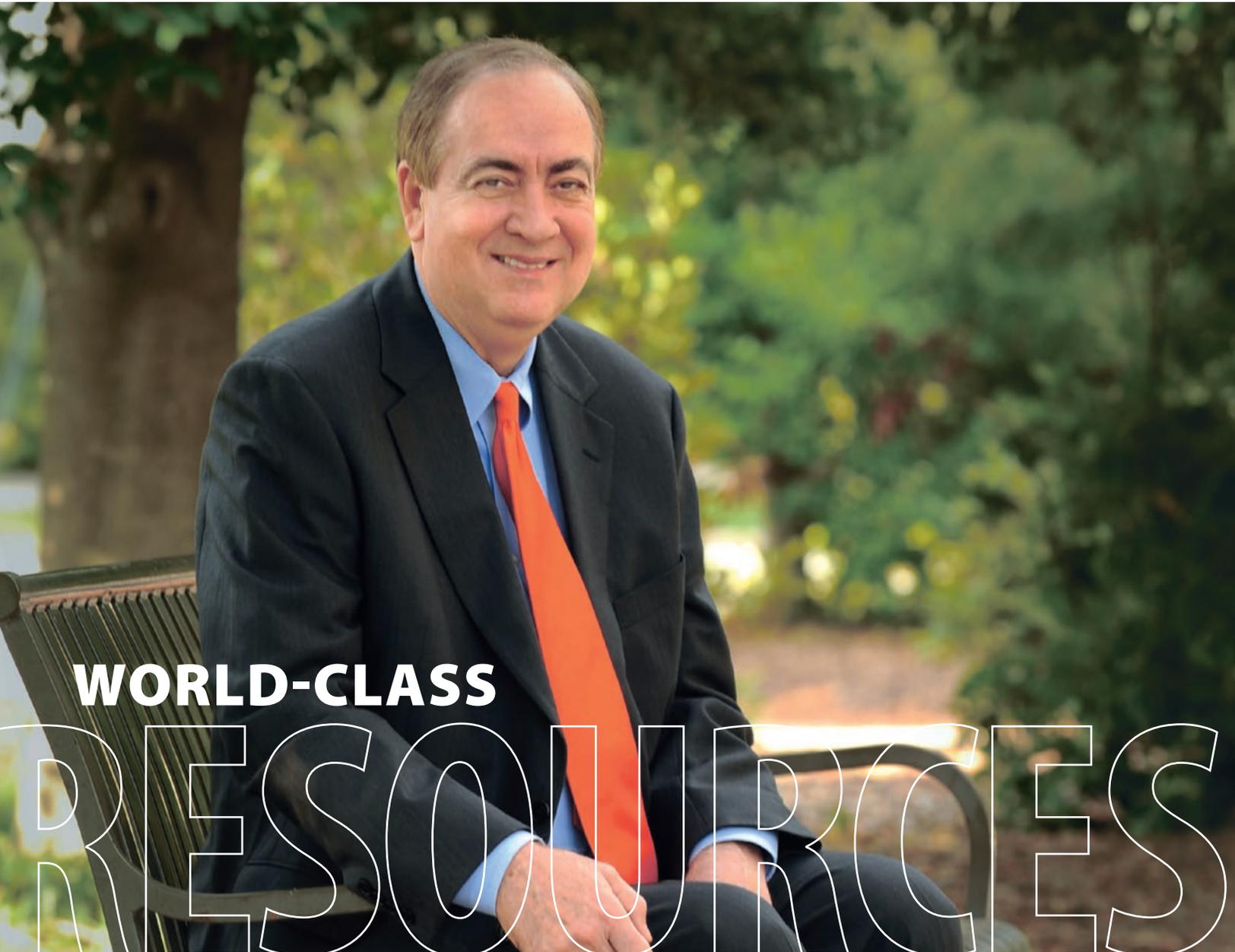
AUBURN UNIVERSITY

OFFICE OF THE VICE PRESIDENT
FOR RESEARCH AND ECONOMIC DEVELOPMENT

2015 ANNUAL REPORT OF RESEARCH AND ECONOMIC DEVELOPMENT ACTIVITY



Partnering for Growth



WORLD-CLASS

RESOURCES

AUBURN IS A COMPLEX UNIVERSITY with a wide range of departments, projects and goals.

Underlying everything we do, though, are three essential truths: We discover new knowledge. We solve problems. We help people achieve their hopes and dreams.

Through these interdisciplinary cornerstones, we drive innovation and economic growth in Alabama and beyond.

In our role as an engine of economic opportunity, Auburn Research is reaching out to entrepreneurs, industry leaders and government officials. For example, expansions by GE Aviation and Touchstone Precision Inc., both in Auburn, as well as Hutchinson Corporation's planned Aerospace Manufacturing Center of Excellence in Mobile, all have recently benefited from our expertise. We provide an educated workforce, advanced technology and the creative ideas that push past boundaries. The evidence is clear: Auburn Research is an essential partner in adding jobs and stimulating growth.

Our research, extension and outreach programs are helping fuel our state's economic development. Moving forward, Auburn will continue to seek new and innovative ways to reach out to the people we serve. Through Auburn Research, we are committed to working with public and private partners to advance the health, education and prosperity of our communities.

Jay Gogue

President

Fueling the Economy



INNOVATIVE

SOLUTIONS

AS A LAND-GRANT INSTITUTION, AUBURN historically has conducted research that impacts Alabama's economy. Now, we're taking that mission to the next level by strategically advancing research that can drive economic development in specific clusters. In these areas, we believe Auburn Research can develop solutions to some of the most pressing challenges for our region, our nation and our world.

Already, we have gained national recognition for our economic development achievements. Last summer, the esteemed Association of Public and Land-Grant Universities (APLU) named Auburn an Innovation and Economic Prosperity University, honoring our strong commitment to economic engagement and our work with public- and private-sector partners across the region. Just a few months later, APLU presented us with its Innovation and Economic Prosperity University Award in the "Place" category for excellence in community, social and cultural development work. The award highlighted three programs that exemplify our commitment to giving communities the tools they need to prosper: the Auburn Shellfish Laboratory, the National Poultry Technology Center at Auburn and the Auburn University Rural Studio.

Thanks to the extensive self-study required for APLU recognition, we emerged from the designation process with a strategic plan for fueling Alabama's engines of innovation and entrepreneurship. We are establishing business and government partnerships, providing key support and fostering entrepreneurship. We are aligning our world-class resources with Alabama's needs to make sure our research propels our economy, fulfilling our land-grant mission with renewed vigor. Together, we will rise to the challenge.

John M. Mason Jr., PhD, PE

Vice President for Research and Economic Development

Targeting Our Approach



OUR FIRST STEP in shaping our economic development priorities was to define interdisciplinary hubs where Auburn Research expertise could have the greatest impact. From transportation to energy and the environment, these hubs have connected diverse projects for the benefit of all.

Now, following a rigorous selection process, we have taken our targeted approach to the next level, designating five strategic research clusters. Within each cluster, we are recruiting top faculty who will advance Auburn's capacity for discovery, innovation and creative endeavors. These new faculty will enhance our research collaboration

with industry and government, creating new economic development opportunities.

This strategic hiring initiative brings together researchers from every Auburn college and school to drive discovery to the marketplace. We will collaborate to tap new energy sources, improve health outcomes and turn big data into biological advances. We will engineer more effective drugs, and we will lead the way in understanding global changes in human-Earth systems.

By aligning our expertise with societal needs, Auburn Research will serve as a catalyst for a new era of growth and prosperity.

Focus

CLIMATE, HUMAN & EARTH SYSTEM SCIENCES

—Global changes in climate, air and water quality, and land use have affected Earth's ability to provide people with food, energy and water. Our interdisciplinary systems approach—supported by five colleges and schools—is critical in understanding, predicting and reacting to changes in human-Earth systems locally and globally.

ENERGY CONVERSION SCIENCE & TECHNOLOGY

—From landfill gas to food wastes to small oil and gas wells, many energy sources are underutilized due to fundamental science and technology barriers, as the energy industry focuses on low-risk prospects and immediate returns on investment. Our goal is to identify ways to economically produce energy from these neglected sources and many others in an environmentally beneficial manner.

OMICS & INFORMATICS

—The human genome project drove a technological revolution—and a flood of data. Our researchers are developing core and platform technologies across disciplines for data-driven applications, such as better utilizing natural resources, advancing precision medicine and detecting pathogens in environmental and food-production settings.

PHARMACEUTICAL ENGINEERING

—We need more effective drugs with fewer adverse side effects. Our interdisciplinary focus is on taking drugs from lab bench to bedside with maximum therapeutic effect, at the lowest cost. We seek to improve efficiency through the insightful integration of discovery, development and manufacturing.

HEALTH DISPARITIES

—Disadvantaged segments of the population often are underserved by health care systems—in Alabama, across the nation and around the world. Our faculty work across disciplines to improve outcomes for obesity, diabetes, dementia and other problems, studying socioecological factors that influence health, including environmental toxins, dietary and exercise choices, and income levels.



Download TigerView by Auburn University to your smartphone or tablet, open the app and scan the image above to view enhanced media.

Proof



THIS IS OUR FLIGHT PLAN

Unmanned aerial vehicles (UAV) hold immense potential for business use, from inspecting construction projects to maximizing crop yields. Auburn is leading the way in unmanned aerial vehicle Systems technology and application, operating the nation's only FAA-certified UAV flight school.



THIS IS THE BLUEPRINT FOR HEALTH

Our rapidly advancing understanding of human genetics can improve health outcomes for individuals, communities and societies. Auburn's partnership with the visionary HudsonAlpha Institute for Biotechnology—the Center for Comparative Genomics and Translational Research—combines genomic knowledge with cutting-edge technology to attack such diseases as cancer and childhood genetic disorders.



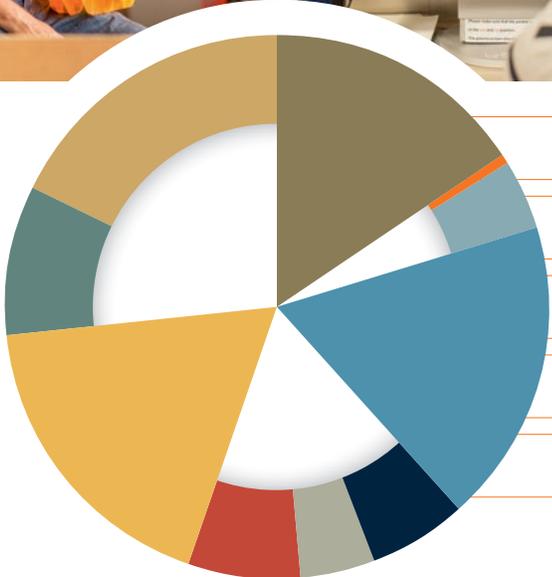
THIS IS MAXIMUM DISTRIBUTION

The Auburn RFID Lab focuses on using tiny computer chips to aid in the wireless tracking of items in retail, supply-chain and manufacturing settings. The lab is working with online mega-retailer Amazon to invent new processes and technologies that will translate to better inventory predictability, faster delivery and lower cost.

The image features three glass bottles in a laboratory setting. The bottles are arranged in a row on a reflective surface. The bottle on the right is labeled 'PYREX' and 'No. 1370'. The background is a warm, orange-toned grid pattern. A blue triangle is positioned on the left side of the image. The text is centered over the bottles.

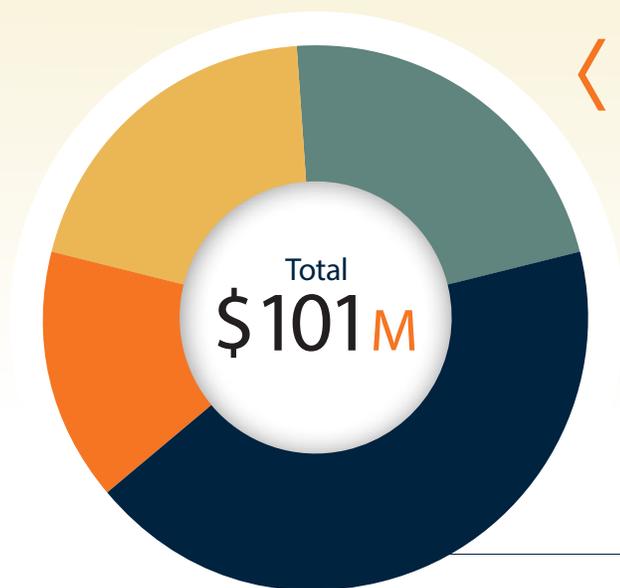
THIS IS DISCOVERY.
THIS IS PARTNERSHIP.
THIS IS ECONOMIC GROWTH.
THIS IS AUBURN RESEARCH.

Sponsored Awards by Unit



Agriculture	15.85%	Liberal Arts	4.38%
Business	0.50%	Sciences and Mathematics	6.74%
Education	4.16%	Veterinary Medicine	17.96%
Engineering	18.08%	Forestry	9.13%
Human Sciences	6.07%	Other units	17.93%

Sponsored Awards



Engineering, veterinary medicine and agriculture are leaders in sponsored research awards, thanks to major federal and state spending.

- Alabama
- Other
- Industry
- Federal

43%

Federal research dollars account for the largest share (43 percent) of our sponsored awards.

2015 Awards By Sponsor

State of Alabama	\$21,942,038	Department of the Interior	\$507,014
Industry	\$15,047,855	NSF	\$8,170,342
Department of Defense	\$1,635,822	USDA*	\$6,094,010
Department of Education	\$9,036,545	Other Federal	\$1,348,976
Department of Energy	\$1,425,832	Other Sponsors	\$20,185,993
Department of Health and Human Services	\$15,222,067		

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

Commercialization Metrics

Option and license income surged by 35 percent over the past year, demonstrating Auburn's growing strength in technology transfer to fuel economic development.



57

Invention Disclosures

8

Standard U.S. Patent Applications Filed

71

Provisional U.S. Patent Applications Filed

6

Other U.S. Patent Applications Filed

17

U.S. Patents Granted

24

Licenses/Options Executed

2

Startup Companies Formed

\$1,170,753

Option and License Income



National Recognition



Our reputation is growing:

June 2015

Association of Public and Land-Grant Universities designation as an **Innovation and Economic Prosperity University**

November 2015

APLU Innovation and Economic Prosperity University Award for excellence in community, social and cultural development work

Auburn University is an equal opportunity educational institution/employer.

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202 Samford Hall, Auburn University, Auburn, AL 36830; Telephone: (334) 844-4784; Email: aees@auburn.edu

