

Arkansas Research Alliance

Understanding the Battelle Study



ArkansasResearchAlliance

Coming together to move Arkansas forward.



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“We know that we have the talent and ambition to bring more 21st-century jobs to Arkansas.”

Governor Mike Beebe

- > Released April 2, 2009 during a press conference held in the Governor’s Conference Room
- > Privately funded by the Arkansas Research Alliance
- > Independent qualitative and quantitative study of Arkansas research university core competencies





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Battelle study

- > **Defines opportunities for advancing job-creating research by analyzing:**
 - Broad trends in research
 - Core research competencies
 - Strategic focus areas that represent multidisciplinary areas with economic development potential



Core research competencies

- > **Core competencies are research areas where Arkansas research universities can bring a critical mass of activity.**
- > **Quantitative analysis and field interviews identified 30 research competencies:**
 - Eighteen broad research competencies based on top- and middle-tier rankings in measures of publications, grants, talent, and institutional focus
 - Twelve niche research competencies

Core research competencies

Broad Research Competencies	Niche Research Competencies
Cancer Control, Detection, and Treatment	Obesity and Diabetes Research
Disease-Related Genomic and Cellular Processes	Animal Research
Plant Sciences	Nephrology Research
Metabolic Studies	Sleep, Auditory, and Memory Research
Infectious Disease Research and Treatment	Physics
Pediatric Research	Medical Technology and Non-Invasive Diagnosis
Nanotechnology	Electronics
Toxicology and Drug Development	Power Electronics and Alternative Energy
Mental Health and Behavior	Sensing and Sensor Networks
Food Science, Food Safety, and Nutrition	Logistics
Musculoskeletal Research	Radiation Biology
Water Quality and Resources	Bioenergy
Poultry Sciences	
Addiction Treatment and Management	
Optics	
Ecology and Environmental Sciences	
Aquaculture	
Informatics and Mathematical Research	



Strategic focus areas

- > Core competencies are grouped into **strategic focus areas** to serve as investment targets. They must accomplish the following:
 - Advance Arkansas in multidisciplinary fields of research; enabling us to leapfrog more traditional universities that have strengths in narrow academic fields.
 - Engage multiple institutions; not limited to individual universities or geography.

Strategic focus areas assessment criteria:

- > **Opportunities drawing upon multiple core competencies and organizations**
 - Transcend multiple core competencies and organizations, ensuring a collaborative research environment rather than a collection of standalone research strengths
- > **Opportunity for external research funding**
 - Relate to pressing issues or needs and be likely to attract R&D funding and investment.
- > **Market potential**
 - Align institutional research strengths with emerging and growing market opportunities
- > **Economic linkages with Arkansas**
 - Offer linkages to existing Arkansas industries

Evaluation of strategic focus areas

Strategic Focus Areas	<div> <div> Breadth of Competencies and Institutions Established based on extensive depth of core research competencies Emerging based on more limited depth of core competencies </div> <div> Opportunity for External Research Funding Significant = ≥\$500 million in federal funding Moderate = \$250 to \$500 million in related federal funding Limited = <\$250 million in federal funding </div> <div> Market Potential Extensive = More than \$10 billion Moderate = \$1 billion to \$10 billion Limited = <\$1 billion Immediate = Established market today Near term = Expect market to unfold in next 3–5 years Long term = Expect market to unfold in more than 5 years </div> <div> Existing or Emerging Industry Connections Extensive = Significant presence of industry Moderate = Some presence of industry Limited = Minimal presence of industry </div> </div>			
Enterprise Systems Computing	Emerging	Moderate	Extensive (immediate)	Extensive
Distributed Energy Network Systems	Emerging	Limited	Extensive (near term)	Extensive
Optics and Photonics	Emerging	Limited	Moderate (immediate)	Limited
Nano-Related Materials and Applications	Established	Significant	Extensive (longer term)	Moderate

Evaluation of strategic focus areas

Strategic Focus Areas	Breadth of Competencies and Institutions	Opportunity for External Research Funding	Market Potential	Existing or Emerging Industry Connections	
	Established based on extensive depth of core research competencies Emerging based on more limited depth of core competencies	Significant = ≥\$500 million in federal funding Moderate = \$250 to \$500 million in related federal funding Limited = <\$250 million in federal funding	Extensive = More than \$10 billion Moderate = \$1 billion to \$10 billion Limited = <\$1 billion Immediate = Established market today Near term = Expect market to unfold in next 3–5 years Long term = Expect market to unfold in more than 5 years	Extensive = Significant presence of industry Moderate = Some presence of industry Limited = Minimal presence of industry	
	Sustainable Agriculture and Bioenergy Management	Established	Limited	Moderate (near term)	Moderate
	Food Processing and Safety	Established	Moderate	Moderate (immediate)	Extensive
	Personalized Health Research Sciences	Emerging	Moderate	Extensive (longer term)	Limited—addresses major public health issues
	Behavioral Research for Chronic Disease	Emerging	Significant	Limited (immediate)	Limited—addresses major public health issues
	Obesity and Nutrition	Emerging	Significant	Extensive	Limited—addresses major public health



ARA scholars

- > **Objective: To recognize and retain existing talent and use state-appropriated funds to recruit world-class researchers in Battelle strategic focus areas.**
- ARA Scholar criteria:
 - > Academic research leader
 - > Entrepreneurial record
 - > Proven collaborator
 - > Broadly-referenced publisher
 - > Strong networking history
 - > Scientific relevance



Research conference pilot

- > **Goal: Increase multi-campus collaboration between research universities which will better position universities to receive federal grants.**
 - Topics // Guided by nine strategic focus areas
 - Focus // Rigor, the economic impact of research and incubation and commercialization of new businesses
 - Attendees // Industry leaders, university researchers and external experts



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