



WASHINGTON STATE UNIVERSITY
Office of Research

Enhancing Research Competitiveness

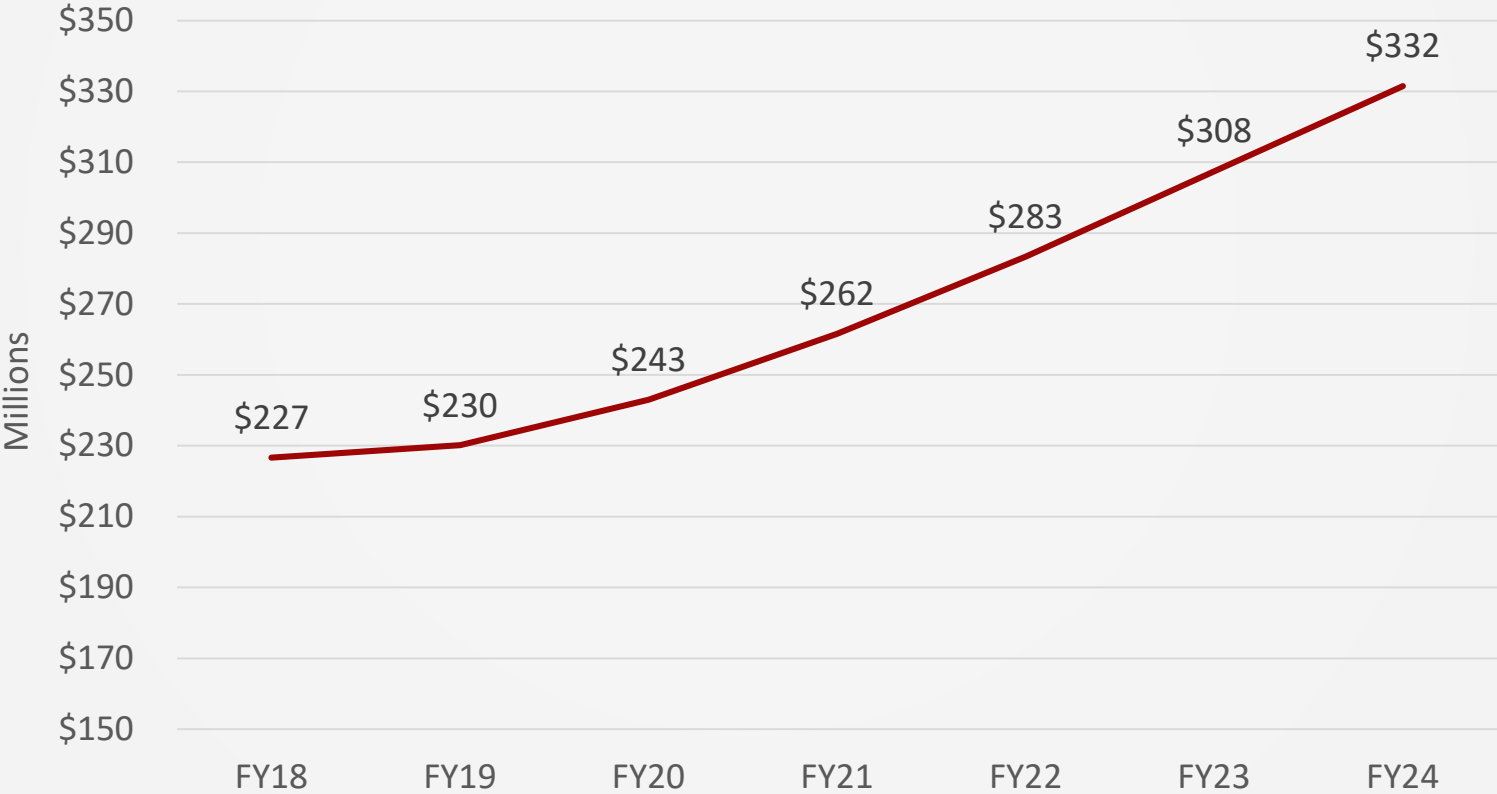
Board of Regents Meeting
September 19, 2024

Research Metrics

	FY2018	FY2024	Change FY18 – 24	Change FY23 – 24
Number of proposals	2,741	2,383	- 13%	+ 1%
Number of awards	1,692	1,552	- 8%	- 1%
Value of awards	\$226.6M	\$331.5M	+ 30%	+ 8%
Number of distinct lead proposal PIs	851	805	- 5%	+ 4%
Number of T/TT faculty	964	904	- 6%	+ 1%
Average award size	\$133.9k	\$213.6k	+ 60%	+ 8%
Value of awards ≥ \$3M	\$30.7M	\$63.1M	+ 105%	+ 12%

- Total value of awards systemwide has **increased** since FY2018
- **Decline in TT/T** faculty is correlated with **fewer submitting proposals and fewer awards.**
- **Large awards have increased** in total value and average size of each award has increased.

Total value of awards systemwide has increased steadily since FY2018



Methodology & Process

Ground up Approach AY 23–24

- **Surveyed** deans/ADRs and chancellors/VCRs
- Held faculty **listening sessions**
- Gathered and analyzed awards data
- Formed **Research Competitiveness Working Group**
- **Research strength indicators:** surveyed chairs, directors, & ADRs/VCRs
- **Priority actions** to enhance research competitiveness

Research Indicators, Strengths, and Actions



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Indicators of Research Strength



Critical Mass of Faculty

- Number of unique PIs
- Number of unique authors of articles, books, etc.



Sustained and Significant Funding

- Total value of sponsored research awards



Community and Societal Benefit

- Total number of publications
- Media visibility

5 Research Strengths

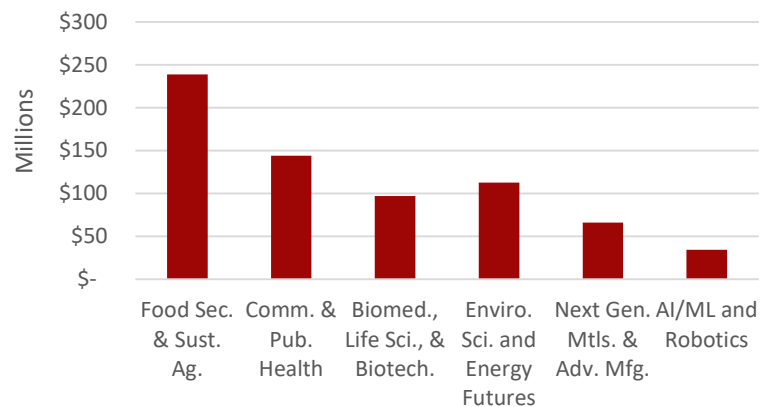
1 Emerging Area

1. Food Security & Sustainable Agriculture
2. Community & Public Health
3. Environmental Sciences & Energy Futures
4. Biomedical, Life Sciences, & Biotechnology
5. Next Generation Materials & Advanced Manufacturing

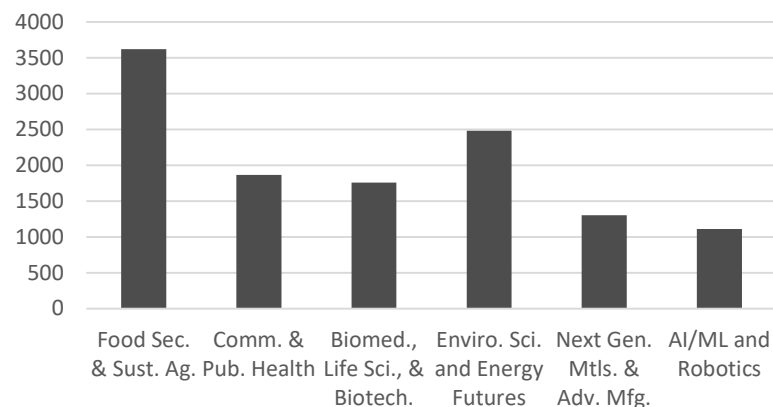
Emerging Area: AI/ML & Robotics

Research Strengths Summary

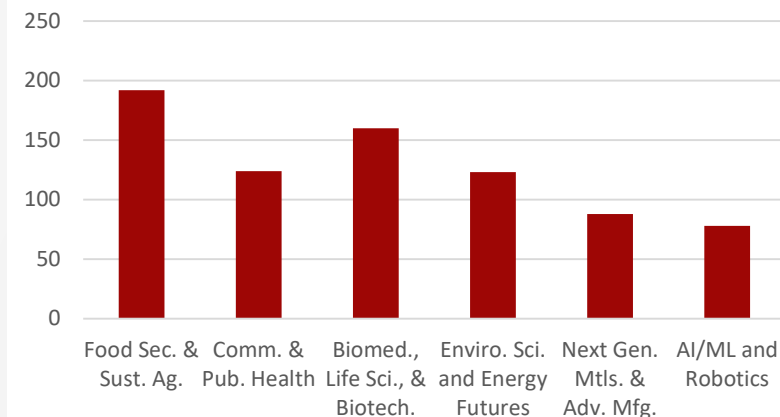
Award Dollars
FY19–23



Publications
CY18–Present



Contributing Researchers



Research Strengths & Indicator Values

Food Security & Sustainable Agriculture

Contributing colleges: CAHNRS, CAS, CVM, ESFCOM

Sub-Strengths

- Crop & livestock improvement
- Integrated pest management & plant pathology
- Soil health & productivity
- Nutrition, food safety, & innovative packaging
- Plant-based products

Research Strengths & Indicator Values

Community and Public Health

Contributing colleges: CAHNRS, CAS, CPPS, CVM, ESFCOM, Murrow

Sub-Strengths

- Health equity
- Epidemiology of zoonotic & vector-borne diseases
- Addiction & substance use
- Sleep & performance
- Mental & behavioral health

Research Strengths & Indicator Values

Environmental Sciences & Energy Futures

Contributing colleges: CAHNRS, CAS, CON, CPPS, VCEA

Sub-Strengths

- Low carbon & renewable energy technology
- Climate science: adaptations to changing ecosystems
- Water resources & hydrology
- Energy storage & delivery systems
- Nuclear chemistry, medicine, & reactors

Research Strengths & Indicator Values

Biomedical, Life Sciences, & Biotechnology

Contributing colleges: CAHNRS, CAS, CPPS, CVM, ESFCOM, VCEA

Sub-Strengths

- Pharmaceutical sciences & molecular medicine
- Immunology & infectious disease
- Cell & developmental biology
- Reproductive biology
- Evolutionary biology
- Genetic engineering & genomics

Research Strengths & Indicator Values

Next Generation Materials & Advanced Mfg.



Contributing colleges: CAHNRS, CAS, VCEA

Sub-Strengths

- Matter under extreme conditions
- Materials for healthy, sustainable, & resilient built environments
- Chip design, electronic materials, & advanced manufacturing
- Advanced Ceramics

Emerging Priority Area

AI/ML and Robotics

Contributing colleges: CAHNRS, CAS, CON, VCEA

Sub-Strengths

- High-tech & precision agriculture
- Smart health systems
- Wearable devices & biosensors
- Cybersecurity
- Electronic design automation & AI

Next Steps

& Recommendations



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Potential use of tool

- **Assessment of needs** in strength & emerging areas
 - OR, RC working group, ADRs, research faculty
- **Align infrastructure & equipment needs** with research strengths
 - OR, Facilities, ADRs, EAGR
- **Strategic hires / retention** in key areas of growth
 - Provost, Deans
- **Investments** in areas of growth, high risk/high reward
 - OR, EAGR, Provost

Recommended Actions

Research Investments.

- Create a recurring **Strategic Research Investment Fund (SRIF)** from uncommitted F&A.
- With Provost's office create a **pool of funds & process for faculty retention & recruitment**

Research Support

- Improve **faculty recognition** of and rewards for research excellence.
- Work with SPS to **enhance communication and efficiencies** between support staff & faculty.

Research Infrastructure

- Form a **Research Infrastructure Committee** to assess and prioritize infrastructure needs.
- Fund **modernization & repair** of infrastructure & equipment aligned with research strengths.

Questions & Discussion



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