



Western Michigan University
Annual Research Report
Fiscal Year 2025
Office of Research and Innovation



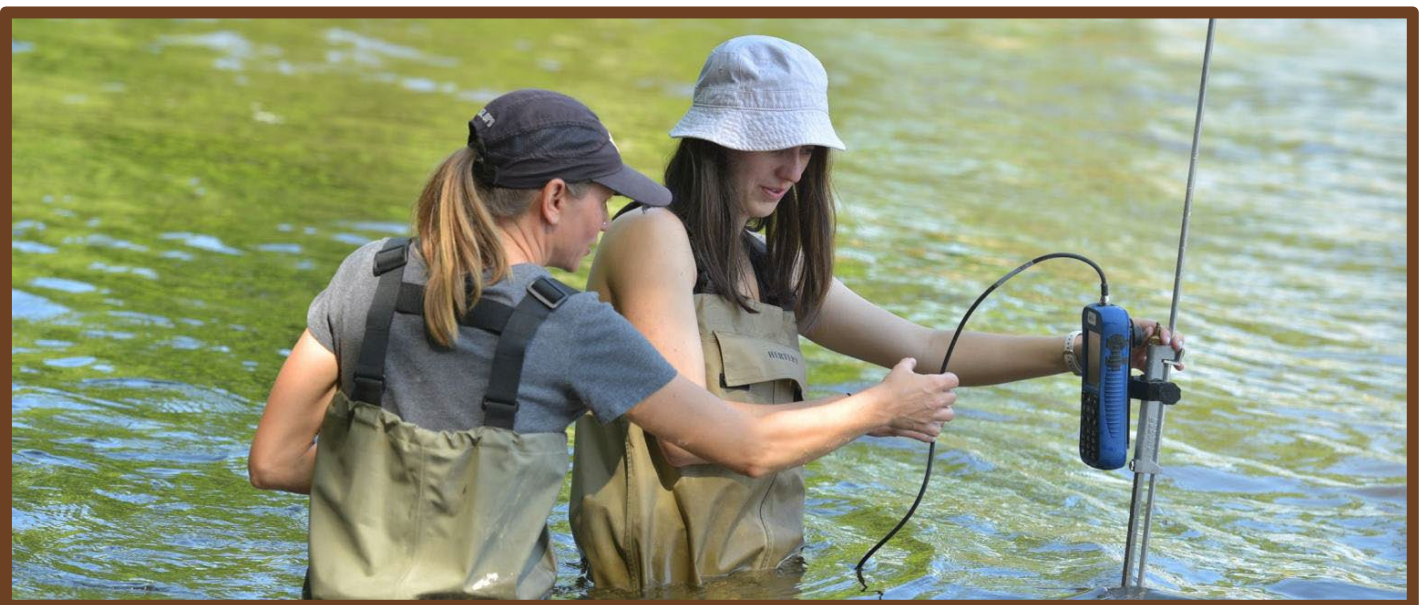
A note from Dr. Seker, Vice President of Research and Innovation

Western Michigan University made record-breaking advances in research, innovation, and community impact during FY 2024–2025, strengthening its role as a regional research institution and a key driver of economic vitality for Southwest Michigan.

WMU achieved record levels of awards and expenditures, with faculty and staff submitting competitive proposals to federal, state, and private sponsors. Our researchers secured \$59.8M in external grants. Our externally funded research expenditures totaled \$51.5M, marking over a 22% increase compared to the last fiscal year.

The University submitted 26 first-stage patent applications and 13 second-stage applications, the highest in WMU history. Of the 26 first-stage patent applications filed during FY 2024-2025, 14 innovations were led by undergraduates, demonstrating the student-centered focus of our research and innovation enterprise. We also had five patents granted, covering areas from superconductors to biodegradable coatings. Licensing activities continue to generate revenue and expand regional influence.

WMU will continue to promote excellence in research and creative scholarship, encourage innovation, and strengthen partnerships with the community and industry. Meanwhile, anticipated federal funding cuts and shifting agency priorities pose significant challenges for the research community nationwide. WMU, like other institutions, has already felt the early impacts of federal program eliminations, highlighting the need to diversify funding sources, build stronger relationships with state and industry partners, and develop innovation-driven revenue streams. Through strategic planning, interdisciplinary collaboration, and investments in both student and non-student researchers, WMU is well-equipped to adapt to these changes while supporting discovery and fostering economic growth throughout Michigan and beyond.



Field research in the Department of Biological Sciences

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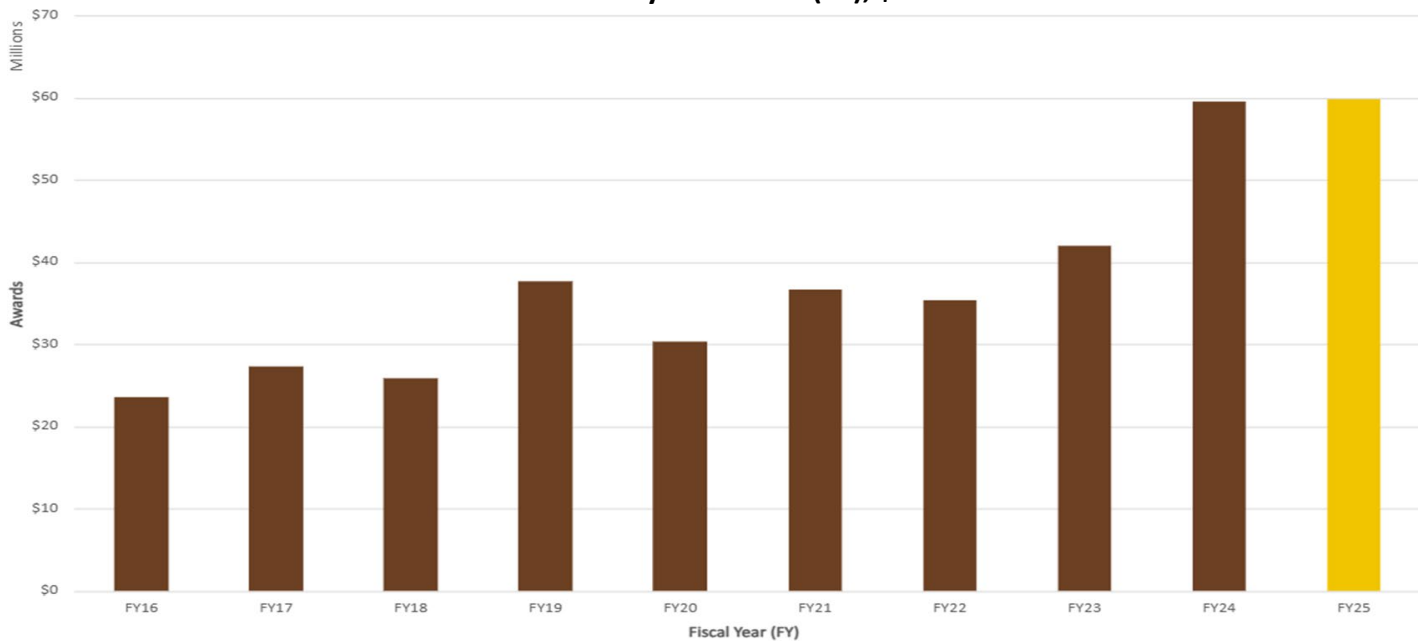


Geological and environmental sciences lab at the College of Arts and Sciences

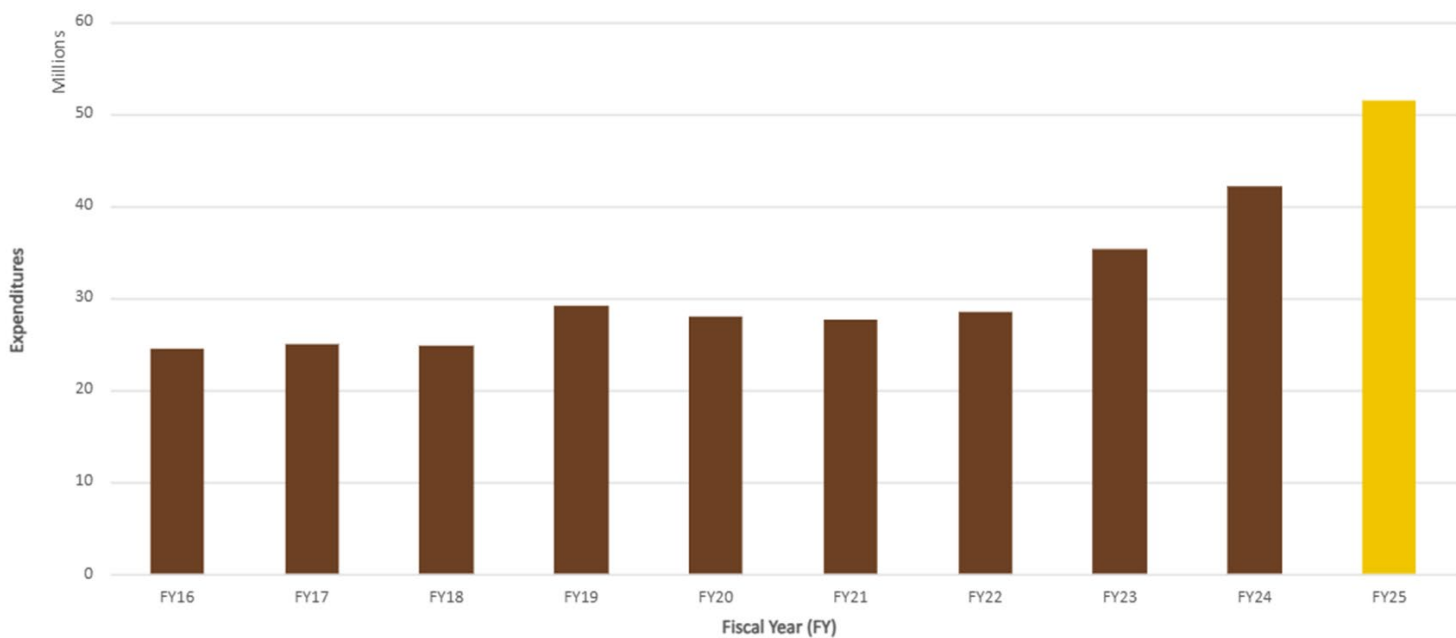
Operational Metrics

		2025		2024	▲ %
Awards	\$	59,762,247.38	\$	59,582,237.00	0.31%
Expenditures	\$	51,495,243.58	\$	42,088,868.16	22.34%
Patents Filed		39		19	205.3%
Patents Issued		5		2	250.0%

Award Totals by Fiscal Year (FY), \$USD

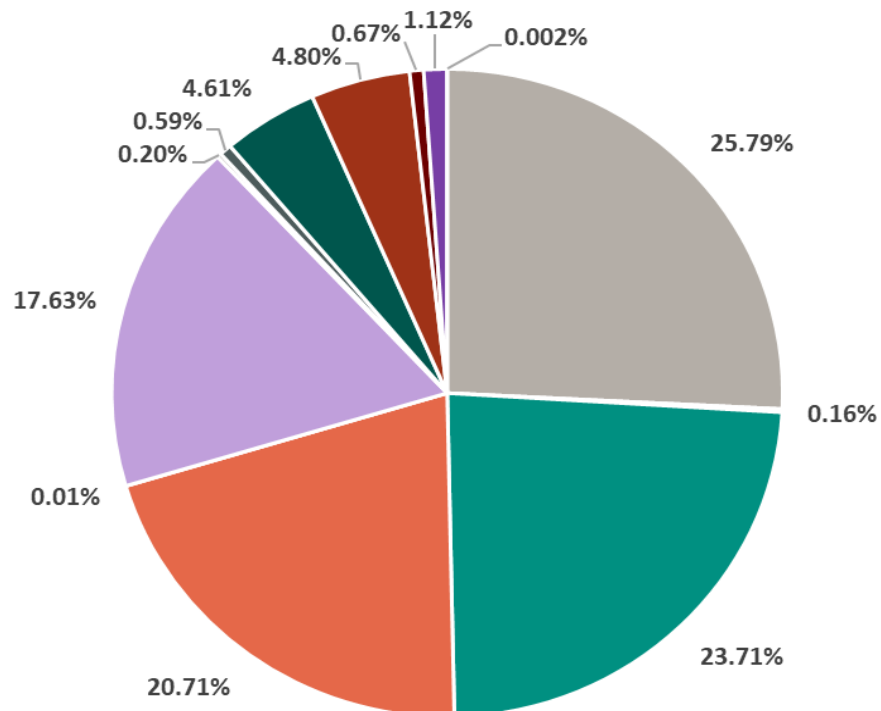


Expenditures by Fiscal Year (FY), \$USD



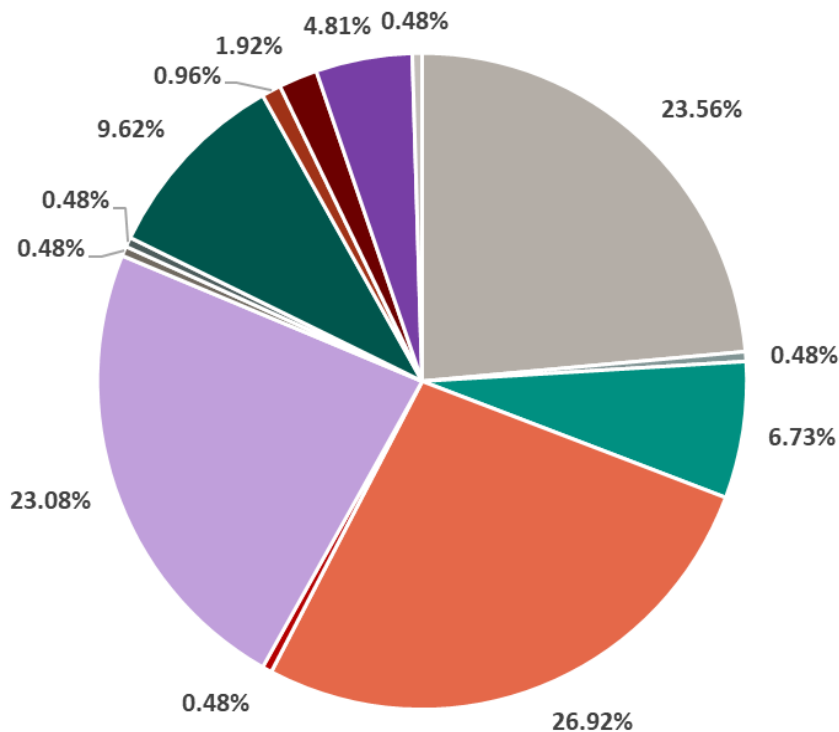
Awards Summary by College and Funding Amount

College/VP Area	Total Awards	% of Total
● College of Arts and Sciences	\$ 15,411,797.22	25.79%
● College of Aviation	\$ 95,000.00	0.16%
● College of Education and Human Development	\$ 14,169,874.00	23.71%
● College of Engineering and Applied Sciences	\$ 12,376,162.01	20.71%
● College of Fine Arts	\$ 4,800.00	0.01%
● College of Health and Human Services	\$ 10,537,066.95	17.63%
● Haworth College of Business	\$ 120,000.00	0.20%
● Merze Tate College	\$ 352,531.00	0.59%
● Provost and Vice President of Academic Affairs	\$ 2,755,817.96	4.61%
● Vice President for Business and Finance	\$ 2,865,960.74	4.80%
● Vice President for Diversity and Inclusion	\$ 400,709.00	0.67%
● Vice President for Research and Innovation	\$ 671,354.00	1.12%
● Vice President for Student Affairs	\$ 1,174.50	0.002%
	\$ 59,762,247.38	



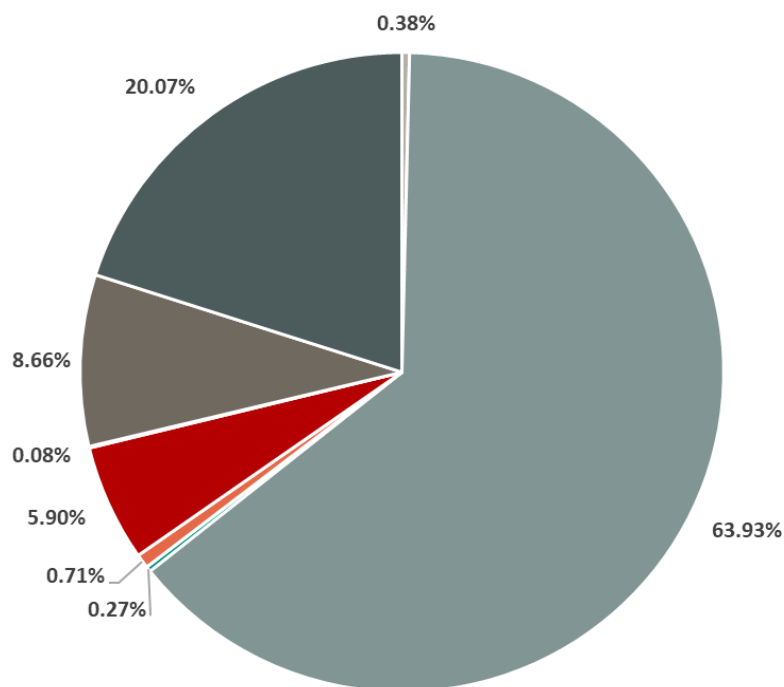
Awards Summary by College and Quantity

<i>College/VP Area</i>	<i># of Awards</i>	<i>% of Total</i>
● College of Arts and Sciences	49	23.56%
● College of Aviation	1	0.48%
● College of Education and Human Development	14	6.73%
● College of Engineering and Applied Sciences	56	26.92%
● College of Fine Arts	1	0.48%
● College of Health and Human Services	48	23.08%
● Haworth College of Business	1	0.48%
● Merze Tate College	1	0.48%
● Provost and Vice President of Academic Affairs	20	9.62%
● Vice President for Business and Finance	2	0.96%
● Vice President for Diversity and Inclusion	4	1.92%
● Vice President for Research and Innovation	10	4.81%
● Vice President for Student Affairs	1	0.48%
208		



Awards Summary by Funding Sources

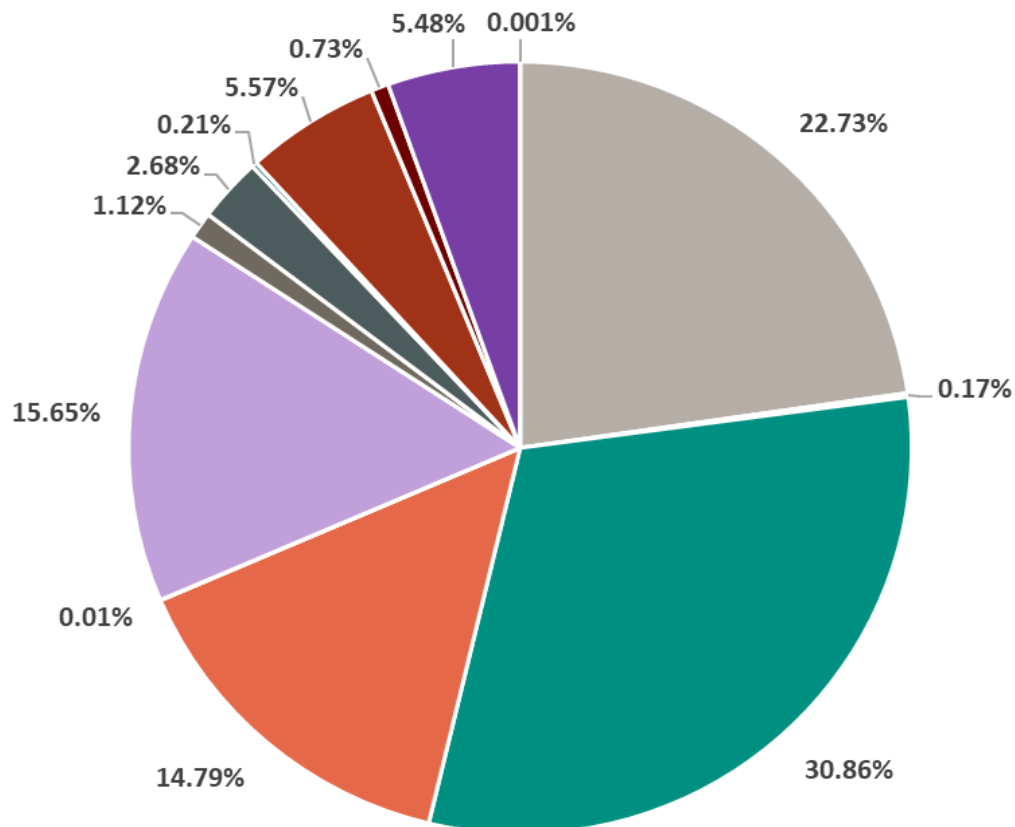
College/VP Area	Amount	% of Total	# of Awards
● Educational Institutions	\$ 228,472.00	0.38%	4
● Federal (including flow-through)	\$ 38,204,595.19	63.93%	138
● Foreign	\$ 160,000.00	0.27%	2
● Foundation	\$ 426,973.46	0.71%	11
● Industry	\$ 3,525,992.74	5.90%	13
● Local	\$ 45,711.00	0.08%	4
● Other	\$ 5,176,374.99	8.66%	24
● State	\$ 11,994,128.00	20.07%	12
	\$ 59,762,247.38		208



Research lab at the College of Arts and Sciences

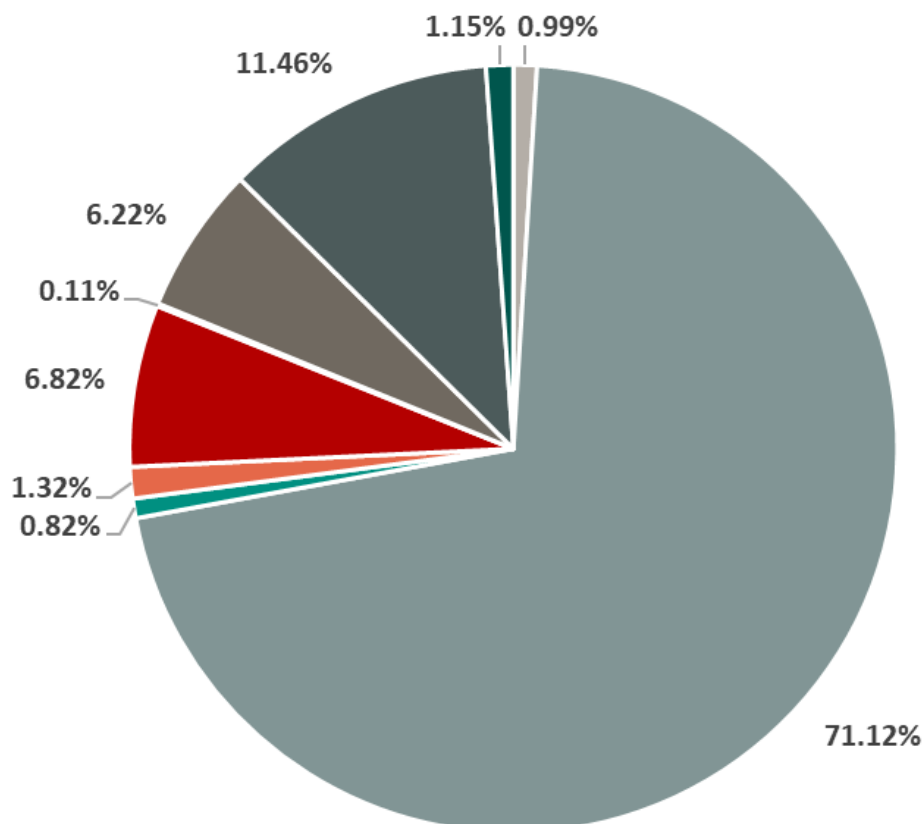
Expenditures Summary by College and Amount

College/VP Area	Amount	% of Total
● College of Arts and Sciences	\$ 11,704,687.21	22.73%
● College of Aviation	\$ 86,060.67	0.17%
● College of Education and Human Development	\$ 15,891,436.90	30.86%
● College of Engineering and Applied Sciences	\$ 7,614,065.52	14.79%
● College of Fine Arts	\$ 4,800.00	0.01%
● College of Health and Human Services	\$ 8,060,921.42	15.65%
● Merze Tate College	\$ 576,667.80	1.12%
● Provost and Vice President of Academic Affairs	\$ 1,382,345.27	2.68%
● The Graduate College	\$ 109,362.47	0.21%
● Vice President for Business and Finance	\$ 2,868,859.95	5.57%
● Vice President for Diversity and Inclusion	\$ 373,433.98	0.73%
● Vice President for Research and Innovation	\$ 2,821,871.59	5.48%
● Vice President for Student Affairs	\$ 730.80	0.001%
	\$ 51,495,243.58	



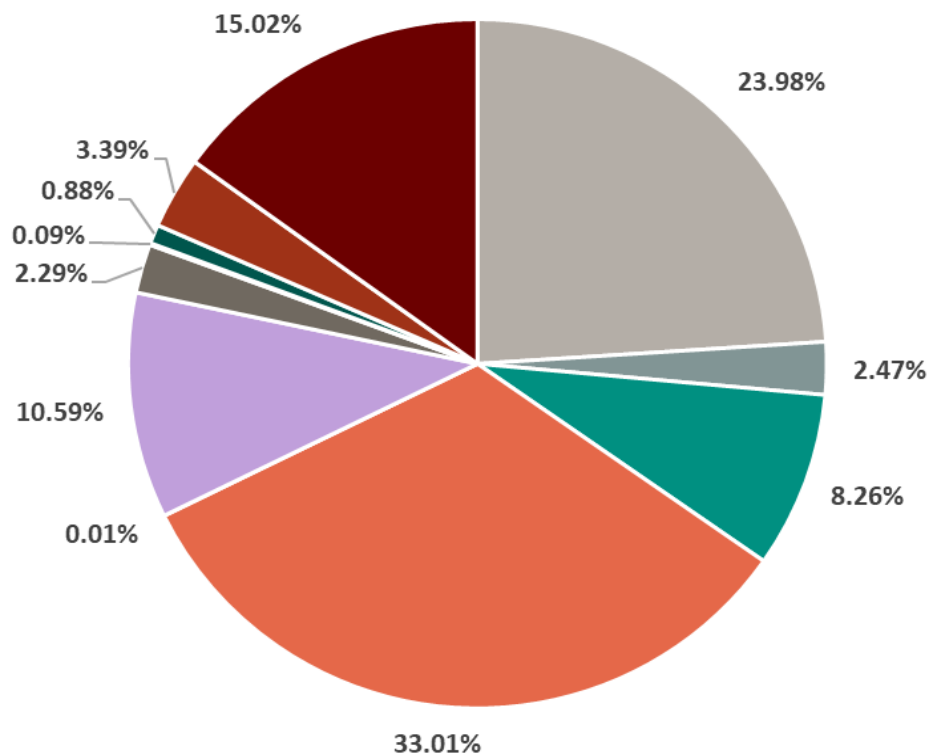
Expenditures Summary by Funding Source

<i>Submission Category</i>	<i>Amount</i>	<i>% of Total</i>
● Educational Institutions	\$ 507,851.73	0.99%
● Federal (including flow-through)	\$ 36,620,883.93	71.12%
● Foreign	\$ 424,650.80	0.82%
● Foundation	\$ 681,465.94	1.32%
● Industry	\$ 3,510,444.34	6.82%
● Local	\$ 55,923.14	0.11%
● Other	\$ 3,201,556.73	6.22%
● State	\$ 5,901,856.72	11.46%
● WMU (Cost Share)	\$ 590,610.25	1.15%
	\$ 51,495,243.58	



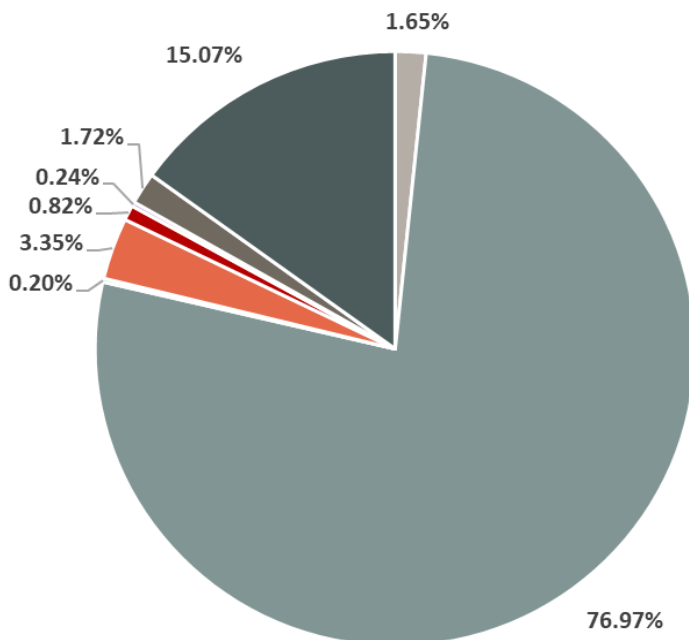
Proposal Submissions Summary by College and Amount

<i>Submissions by College/VP Area</i>	<i>Amount</i>	<i>% of Total</i>	<i># of Submissions</i>
● College of Arts and Sciences	\$ 30,437,228.00	23.98%	94
● College of Aviation	\$ 3,128,947.00	2.47%	5
● College of Education and Human Development	\$ 10,489,332.00	8.26%	25
● College of Engineering and Applied Sciences	\$ 41,902,474.00	33.01%	133
● College of Fine Arts	\$ 13,000.00	0.01%	2
● College of Health and Human Services	\$ 13,444,152.00	10.59%	56
● Vice President for Diversity and Inclusion	\$ 2,906,987.97	2.29%	4
● Graduate College	\$ 110,935.00	0.09%	1
● Haworth College of Business	\$ 1,120,600.00	0.88%	3
● Vice President for Research and Innovation	\$ 4,301,295.00	3.39%	18
● Provost and Vice President for Academic Affairs	\$ 19,070,463.00	15.02%	20
	\$ 126,925,413.97		361



Proposal Submissions Summary by Funding Source

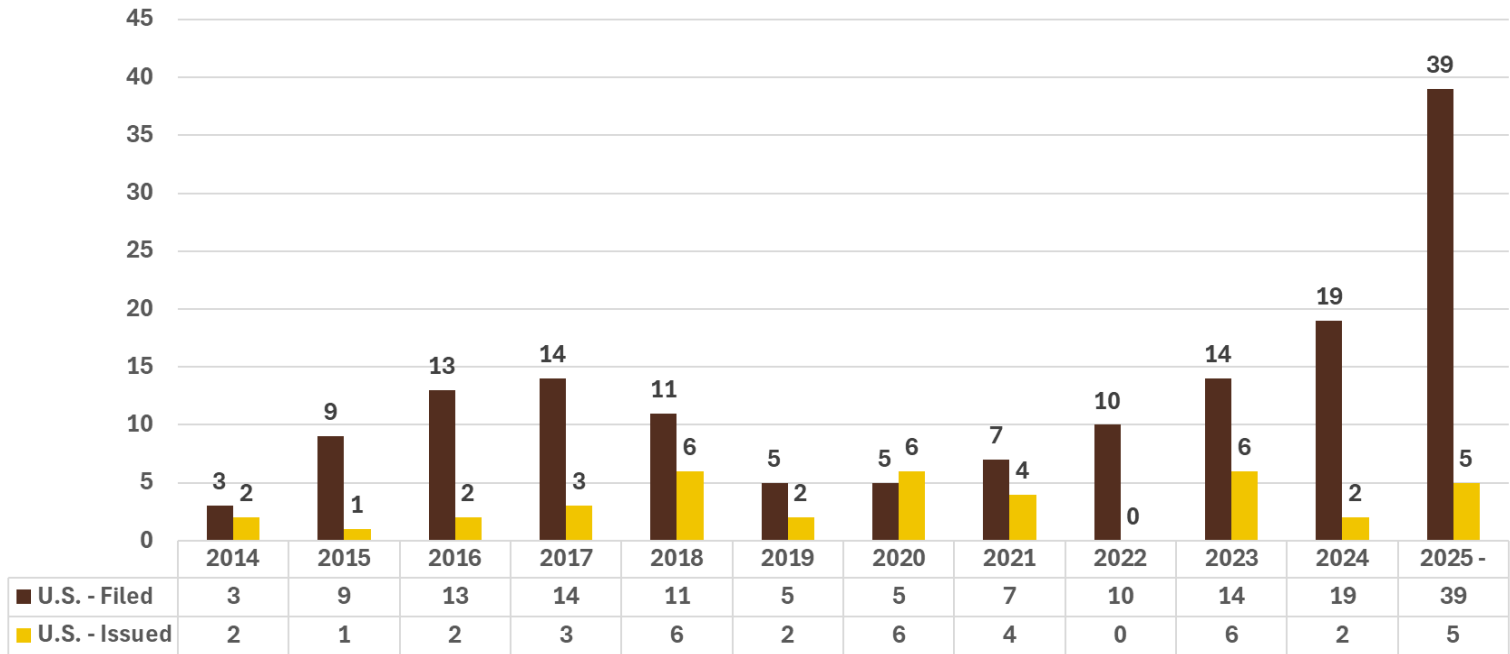
Submission Category	Amount	% of Total	# of Submissions
● Educational Institutions	\$ 2,088,627.00	1.65%	32
● Federal (including flow-through)	\$ 97,692,899.00	76.97%	198
● Foreign	\$ 254,000.00	0.20%	3
● Foundation	\$ 4,246,002.97	3.35%	33
● Industry	\$ 1,039,914.00	0.82%	20
● Local	\$ 298,429.00	0.24%	6
● Other	\$ 2,182,023.00	1.72%	19
● State	\$ 19,123,519.00	15.07%	50
	\$ 126,925,413.97		361



Aerospace engineering lab at the College of Engineering and Applied Sciences

Technology and Innovation Advancement

WMU's U.S. Patents Filed and Issued by Fiscal Year



Technology and Innovation Advancement

WMU filed 26 new first-stage patent applications, and 13 second stage applications in FY 2025, the highest number of new filings in WMU's history. Among the new faculty/staff applications filed included new methods for water purification, diagnosis of melanoma lesions, methods for improving design of underwater turbines, and others. Also, among the 26 first-stage applications were 14 undergraduate-led applications through a collaboration with Richmond Institute for Design and Innovation's Venture Studio, involving product design students developing market-ready consumer products, ranging from a moveable storage basket for wheelchair users to rapid allergen detection.

Five patents were granted this fiscal year, including improved ice pack technology, methods of developing superconductors and improved biodegradable paper coatings. We also currently license several technologies, generating significant income for WMU and faculty and staff inventors, as well as helping to build our local economy.

Departmental Updates

Biosciences Research and Commercialization Center (BRCC)

The Biosciences Research and Commercialization Center (BRCC) at Western Michigan University is a commercially focused investment fund dedicated to utilizing the pharmaceutical-centered expertise and resources available in southwest Michigan. BRCC ensures the growth of the life sciences business sector across the entire state, stimulating the regional and state economy throughout the life sciences industries by supplementing the flow of early-stage capital and support towards commercializing new technology.

After securing a \$5M State grant in January 2024, BRCC applied for and received approval for an additional \$5.3M State grant this past year. We expect to be funded this fall to continue BRCC's successful mission. This will require additional staffing and will allow for increased investments targeting Michigan's Life Sciences community throughout the state. BRCC has been playing a vital role in advancing the state economic ecosystem and helping entrepreneurs thrive since 2004.

During the fiscal year 2024-25, BRCC has successfully completed seven new investments and one follow-on investment, totaling \$1.3M. This includes companies commercializing products such as: contactless imaging, care coordination software, robotic surgical systems, weight loss therapeutics, new breakthrough antibiotics, surgical observation AI, and musculoskeletal system therapeutics.

BRCC also continues to support its active portfolio of investments; including Adlore, which was founded by Daryl Lawson, WMU associate professor of physical therapy. Adlore is developing a therapeutic boot device to improve the healing rates for diabetic foot ulcers, which is being supported by technology developed within WMU's Center for Advanced Smart Sensors and Structures. To date, BRCC has invested over \$20.8M, generated over \$10.7 million in direct returns on its investments and currently maintains a portfolio of 34 companies. There have been 67 companies that have received funding from BRCC since 2004 with over 582 high-skilled jobs created at these companies.

Departmental Updates

Export Control

Export Controls continues to support WMU students, faculty, and staff to safely and compliantly engage in global research, collaboration, and academic advancement. No significant changes to policy or procedures took place during the fiscal year 2024-25. We continue to work alongside multiple departments and units across the University to provide support and guidance to protect all stakeholders.

A total of 487 reviews were conducted between travel authorizations for international travel (280 cases; 217 individuals), research and collaboration with non-U.S. individuals and organizations (102 cases; 144 individuals), contracts with non-U.S. persons (66), and employment/OPT reviews (47 cases; 28 employees and 19 OPT candidates). These reviews involved updated export control forms, open-source investigations to verify information provided by departments and non-U.S. persons, and the use of Visual Compliance to perform restricted party screenings.

Radiation Safety

Radiation Safety has successfully continued to monitor the use of radioactive material and radiation producing machines across WMU. No significant changes to policy or procedures took place during the fiscal year 2024-25. We have provided 11 radiation safety classes to train 18 new machine users and 2 new materials users this year and continue to monitor, update, and support a total of 57 radiation workers across 12 departments and areas including academic research, University athletics, and Sindecuse Health Center.

No issues or outliers were identified during our annual in-house audit, monthly surveys, and a site visit from a Michigan state regulator. A major focus during this fiscal year was the training and upskilling of a new radiation safety officer to allow for a smooth transition during the upcoming fiscal year. Preparations were made to process and remove an estimated 250 pounds of waste from campus which will be sent to permanent storage early in the fiscal year 2025-26.



Students at the College of Health and Human Services

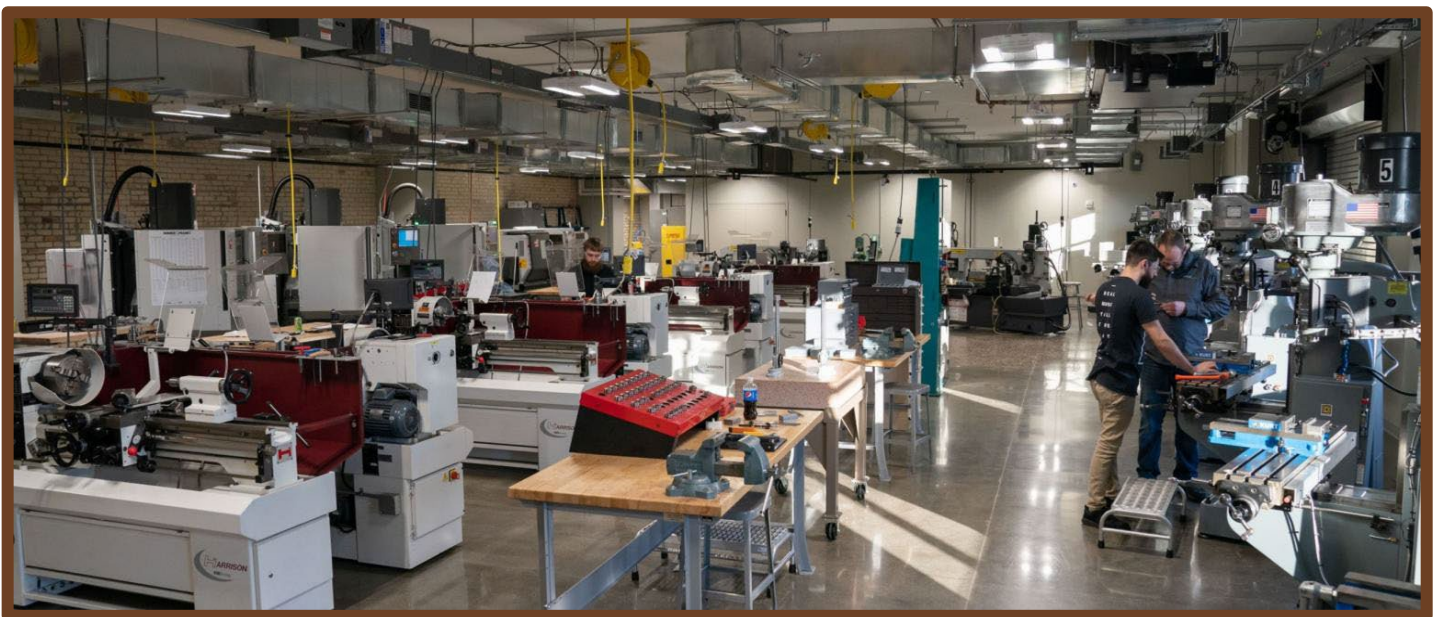
Departmental Updates

Research Compliance

The Office of Research Compliance ensures research and scholarly activities adhere to ethical standards and regulatory requirements. The office provides guidance and oversight of federally mandated trainings, animal care, biosafety, and human subject research.

In fiscal year 2024-25, the Institutional Review Board (IRB) reviewed over 400 protocols; many of which were unfunded and student driven. There are currently 30 active studies which the Institutional Animal Care and Use Committee (IACUC) administer. In addition, there are 18 registered projects overseen by the Institutional Biosafety Committee.

As federal regulations continue to evolve, and new compliance requirements emerge, the Office of Research Compliance has actively collaborated with university departments and units to develop trainings, procedures, policies, and processes to meet guidelines. According to the Council on Government Relations (COGR), federal regulations and policies have increased 62% in the last 10 years so the administrative focus in aligning with these changes continues to increase each year.



AMP Lab at WMU-GR Campus

Departmental Updates

Small Business Development Center (SBDC)

The Michigan Small Business Development Center (SBDC) Southwest Region, hosted by Western Michigan University since 2007, provides no-cost consulting, training, and resources to entrepreneurs across seven counties. In 2024, the center supported over 500 distinct clients and responded to more than 600 consultation requests, a 4% increase over the prior year. Targeted quarterly outreach across counties helped expand awareness of services, grow consultation requests, and strengthen community connections.

To support this growth, the center promoted two team members into Business Consultant Associate roles, added two Spanish-speaking staff members, and welcomed student employees—enhancing both expertise and reach. These efforts directly advance WMU's strategic goals by strengthening community partnerships, fostering economic vitality, and fueling innovation and discovery.

Success stories include **Bogan Developments**, a WMU alumni-led firm revitalizing neighborhoods with affordable housing; **Sticky Spoons Jam**, which scaled from a kitchen startup into a regional retail brand; and **Ada Grace Adult Foster Care Home**, meeting critical care needs in the region. Together, these examples reflect the Michigan SBDC's vision of making Michigan one of the best places to start and grow a business while reinforcing WMU's commitment to community engagement, economic growth, and regional impact.



Midtown Fresh Market, a WMU SBDC client

Departmental Updates

The Evaluation Center

The Evaluation Center's mission is to advance the theory, practice, and use of evaluation through scholarship, education, partnership, leadership, and stewardship. The center is home to a team of multidisciplinary evaluation experts who evaluate programs, projects, or organizations. The Evaluation Center maintained a high level of productivity in fiscal year 2024-2025. The Evaluation Center's 2024-25 annual report is located here: [2024-25 Annual Report](#).

Highlights include the following:

- We marked the one-year anniversary of the Evaluation Lab, which provides local nonprofits and public agencies with evaluation services while delivering experience-driven learning to WMU students. In fiscal year 2024-25, the lab employed twelve students, including ten undergraduates and two graduate students. In June, the lab received a \$90,000 grant from the Kalamazoo Community Foundation to support operations (awarded over three years).
<https://wmich.edu/evaluation-lab/news/2025/02/evaluation-lab-anniversary>
- We celebrated the national recognition of Evaluation Center principal research associate, Dr. Lyssa Becho, who received the American Evaluation Association's prestigious Marcia Guttentag Promising New Evaluator Award.
<https://wmich.edu/evaluation/news/2024/11/becho-award24>
- We updated our mission statement and introduced statements defining our core values and beliefs about evaluation. <https://wmich.edu/evaluation/mvv>
- We published an open-access special issue of [New Directions for Evaluation](#), focused on the evaluation of evaluation capacity-building.
- For the 14th consecutive year, we hosted a visit by the sitting American Evaluation Association president. The various events associated with these visits provide evaluation students, staff, faculty, and members of the local evaluation community an opportunity to network, learn, and grow professionally.
- We continued to support the evaluation profession locally and nationally through the [Journal of MultiDisciplinary Evaluation](#), [Evaluation Café](#), [Evaluation Checklist Project](#), and [Valeo](#). We also maintained our role as host to the Joint Committee on Standards for Educational Evaluation, which held its two-day annual meeting at WMU in November 2024.
- Three senior staff members continued to serve on the evaluation workgroup that provides direction and hands-on data collection, analysis, and interpretation to inform strategic use of WMU's historic Empowering Futures Gift.

We experienced the effects of federal budget cuts that impacted universities nationwide during early 2025. Specifically, we lost three externally funded projects due to the elimination of program areas by Federal agencies. We continued to submit new project proposals to a variety of sponsors, such as the Ewing Marion Kauffman Foundation and the Council of Michigan Foundations and moved forward with two new collaborations with the University of Michigan.