RESEARCH
REPORT

FY22

THE UNIVERSITY OF
MEMPHIS®
Research & Innovation

CARNEGIE R1 STATUS

University of Memphis joins the top-tier of research institutions in the United States.

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THE UNIVERSITY OF
MEMPHIS®
Research & Innovation

SUMMARY
The University ensures continued research success.

As a Carnegie R1 research institution, the University of Memphis is among the most prominent research institutions in the country. With the dedication of our world-class faculty across campus, achieving this designation during the COVID-19 pandemic and in only three years makes the recognition all the more meaningful and bolsters the future of the University.

FY22 saw tremendous change on our campus with the exciting arrival of President Hardgrave, signifying a commitment and investment to the next chapter of success for the University. Additionally, we have experienced consistent award growth across many units, and the same is true for PIs submitting proposals. Research awards remain on an upward trajectory, reinforcing the commitment of our faculty and where they are leading the University. Finally, the Tennessee Governor and state legislature recognized and celebrated UofM's research capabilities by approving a $50M research endowment for the University to be matched, yielding a $100M endowed foundation for future investment in the UofM to grow research more than any other time in the history of the University.

Fiscal Year Totals

Fiscal Year	Total
FY18	$31,862,271
FY19	$36,241,277
FY20	$39,682,744
FY21	$51,049,580
FY22	$49,382,245
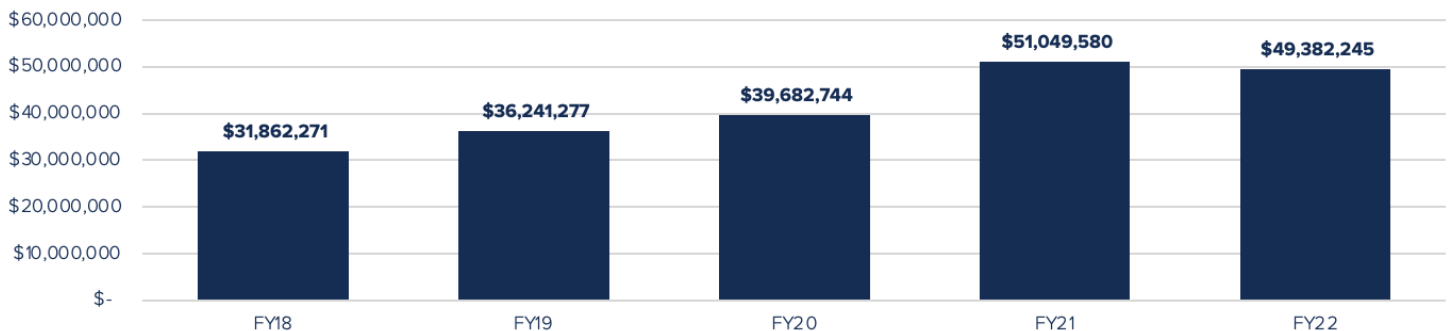
FY22 Total Award Dollars **$49.3M**	PIs with $500K, or More, in Awards *(25% greater than FY21)* **37**
Increase in Private Grant Funding **58%**	First-time Principal Investigators in FY22 *(Largest cohort to date)* **40**
Number of Federal Agencies $1M, or More, in FY22 **8**	Number of Departments with $1M, or More, in Awards **16**
Unique Units Receiving Awards in FY22 **75**	Increase in Federal Research Proposals Between FY18-FY22 **62%**
Increase in Defense Research Awards **84%**	PIs Submitting Research Proposals *(Largest cohort to date)* **213**
Average Award Size **$160,854**	Total Proposal Amount Submitted **$224M**

MAJOR TRENDS

The FY22 results are the result of research that occurred in the midst of the pandemic. Despite the challenges of these unprecedented circumstances, the University of Memphis research community has shown remarkable consistency, which positions us well for future growth. **In FY22, the University set a record for the number of PIs submitting research proposals and the total number of proposals submitted.** Awards received in FY22 held close to FY21 record, the number of federal agencies funding $1M, or more, remains at the same record level as FY21, and the number of PIs winning $500K, or more, continues to grow indicating a more vibrant and active research community that includes more research disciplines than ever before.

MILLIONAIRE PIs

Tracy Collins

Brian Waldron

Susan Neely-Barnes

Dipankar Dasgupta

Jeremy Whittaker

Kan Yang

Santosh Kumar

James Whelan

Richard Irwin

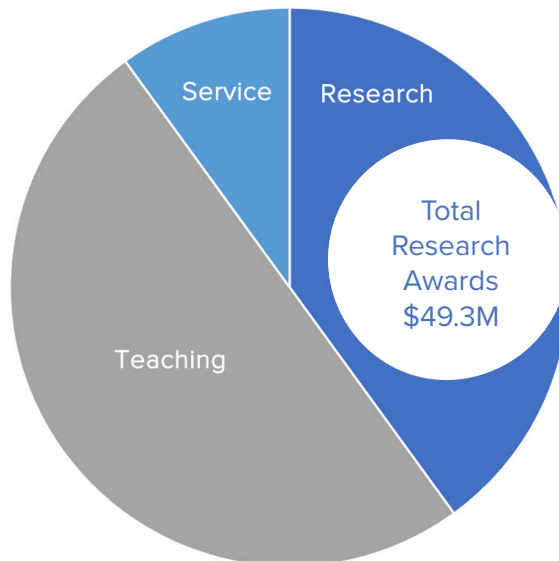**Mitchell Withers**

Eddie Jacobs

Recieved the First National Defense Authorization Act allocation to UofM.

Total Faculty Salary and Benefits: $132M
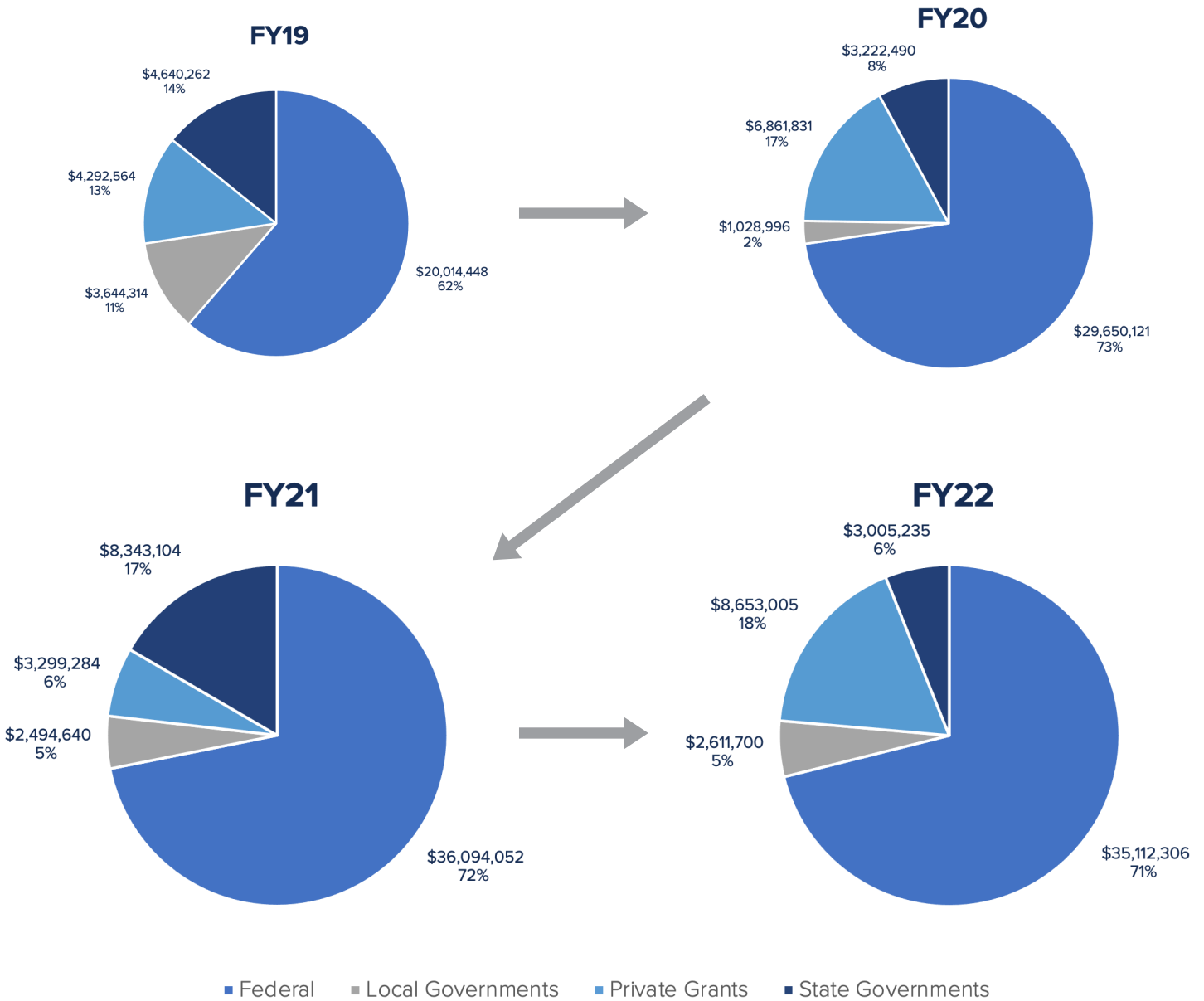
The average faculty contract is divided into three parts:
Research – 40%
Teaching – 50%
Service – 10%

Service

Research

Teaching

Total Research Awards $49.3M

Externally Funded Research Awards Equal 95% of Faculty Research Effort

FISCAL YEAR DATA

FY19

$4,640,262
14%

$4,292,564
13%

$3,644,314
11%

$20,014,448
62%

FY20

$3,222,490
8%

$6,861,831
17%

$1,028,996
2%

$29,650,121
73%

FY21

$8,343,104
17%

$3,299,284
6%

$2,494,640
5%

$36,094,052
72%

FY22

$3,005,235
6%

$8,653,005
18%

$2,611,700
5%

$35,112,306
71%

■ Federal   ■ Local Governments   ■ Private Grants   ■ State Governments

INVESTMENT IN RESEARCH BEGINS TO SHOW AS COVID-19 PANDEMIC SLOWS

The commitment by President Hardgrave to invest $34M in research space and infrastructure improvements marks the first major investment in existing research facilities in nearly a decade and shows the importance of our research for sustaining our designation as one of the top-tier research institutions in the country. This investment will also boost our research capacity. As we begin to move past the pandemic, we are seeing greater numbers of faculty and academic units contributing to our research infrastructure, which continues to strengthen the overall research portfolio. **The number of PIs earning $500K, or more, increased to 37 in FY22; a record number for the University.** Indicating that, despite the pandemic, we did not see a reduction in research effort. Entering into this next chapter will lead to more growth and new avenues for research.

STRATEGIC RESEARCH DEVELOPMENT

University Professorships

As part of the university's push for top-tier Carnegie R1 status, the office of the Provost and the Division of Research & Innovation partnered to celebrate research excellence on campus. As part of that recognition, twenty university professorships were awarded to various UofM faculty.
Those awarded include:

» **Andrew Olney**
CAS, Institute for Intelligent Systems

» **Kathryn Howell**
CAS, Psychology

» **Roger Kreuz**
CAS, Psychology

» **Joy Goldsmith**
CCFA, Communication & Film

» **Andre Johnson**
CCFA. Communication & Film

» **Mary Wilson**
CCFA, School of Music

» **Brandt Pence**
CHS

» **Laura Casey**
COE, Instruction and Curriculum Leadership

» **Gavin Bidelman**
CSD

» **George Deitz**
FCBE, Marketing and Supply Chain Management

» **Mark Gillenson**
FCBE, Business Information and Technology

» **Jamin Speer**
FCBE, Economics

» **Mihalis Gkolias**
HCOE, Civil Engineering

» **Sabya Mishra**
HCOE, Civil Engineering

» **Brian Waldron**
HCOE, Civil Engineering

» **Eddie Jacobs**
HCOE, Electrical Computer Engineering

» **Satish Kedia**
SPH

» **Latrice Pichon**
SPH

» **Matthew Smeltzer**
SPH

» **Hongmei Zhang**
SPH

Ongoing Faculty Support Programs and Key Outcomes

- » **Communities of Research Scholars (CoRS):**
  - » Designed to facilitate collaborations and grow research engagement
  - » 51 CoRS funded, including faculty from over 50 disciplines
  - » FY21 program included a focus on engaging community partners
- » **UofM Research Council**
  - » Advanced two policies to University administration for consideration in FY22
- » **Research Proposal Review Services**
  - » Over 65 proposals reviewed in FY22, leveraging internal and external reviewers from multiple institutions and agencies
- » **Gap Funding Program**
  - » 16 proposals funded to date
  - » The program helps faculty who are between grants or revising and resubmitting to federal agencies to continue their research
  - » Over $15M in revised and resubmitted proposals
  - » Over $5M funded to date
- » **NSF CAREER Academy**
  - » Growing new faculty through professional development and comprehensive review services
  - » Career Stats:
    - » NSF CAREER Awards: 7
    - » DoE CAREER Award: 1
    - » Applications: 60
    - » UofM among top 25% of NSF CAREER winning institutions
- » **Fine Arts, Humanities & Social Sciences Grants**
  - » 16 proposals funded to date
  - » 12 monographs or edited volumes published
  - » One album released
- » **Defense Research Academy**
  - » NDAA support secured for FY21, FY22, FY23
  - » DoD Young Investigator Program: Six submissions in FY21
  - » Defense research networking preparation for faculty
  - » 40+ faculty engaged in defense research initiatives
- » **FedEx Institute of Technology**
  - » FRONTIERS program includes 10 faculty-FedEx partnerships established to support industry engagement
  - » Nine FIT research clusters funding over 90 faculty across campus
  - » 44% of the 97 researchers affiliated with the FedEx Institute of Technology were awarded a total of $22.9M from FY19-21
- » **Carnegie R1 Doctoral Fellowships**
  - » 48 PhD students funded to date
  - » Students included in over 60 grant proposals in two years

- » **Carnegie R1 Postdoc Program**
  - » 50+ postdocs funded to date
  - » 60+ grant proposals submitted with effort included for continued postdoc funding
  - » Provided comprehensive grantsmanship training to all postdoc members
  - » Current number of PhD qualified research staff: 45
  - » Current postdoc count: 37
- » **UMRF Ventures Junior Professorships**
  - » All NSF Career recipients are awarded a junior professorship
  - » 2021 Recipients – Maryam Salehi and Ana Doblas
  - » 2020 Recipients – Ranga Gopalakrishnan, Amber Jennings, Thomas Watson
- » ***The Conversation* Support**
  - » Subscription to *The Conversation* aides faculty in publishing to a general readership audience
  - » 2.5M+ article reads for UofM faculty authors to date
  - » Articles published in *Chicago Tribune, USA Today, CNN, Business Insider*, etc.
- » **First Gen STEM**
  - » Nine PhD students funded to date
- » **RISE Fellowship**
  - » Seventy PhD students funded to date
- » **Research Equipment Database**
  - » Searchable database of all UofM research instrumentation, as reported by departments
- » **Academic Analytics**
  - » A database resource that helps to identify trends in research, build teams in similar research areas both at our university and other institutions, and helps to identify funding opportunities based on publication history
- » **West Cancer Foundation Research Initiative**
  - » Four projects funded to date
  - » Established in the fall of 2020, the West Cancer Foundation Initiative was created to cultivate research across the UofM campus in areas that advance cancer treatment, promote community health and wellness, and/or provide supportive patient care.
- » **INFER**
  - » Innovative Non-profit and Foundation Engaged Research (INFER) founded in 2020
  - » Seeks to bridge the efforts of researchers (in the areas of social science, life science and the humanities) and nonprofits (with social, human and health services-related missions) to ensure that research efforts are relevant and useful to practitioners and that practice is effective and grounded in "best practice."
- » **PECIR**
  - » The University of Memphis and Meharry Medical College partnered to fund six projects that build interdiscplinary partnership between institutions

CELEBRATING CAREER AWARD WINS

Career awards are among the most prestigious junior faculty research awards offered by federal agencies. The University of Memphis has strategically grown participation and support for these programs and we are pleased to celebrate the researchers who have achieved this designation. The success rate is a testament to the quality of the support provided to these PIs and the strength of junior faculty research at the UofM.

**Kensha
Clark ('22)**
Chemistry

**Thomas
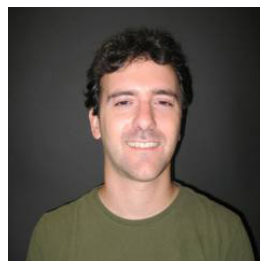Goebel ('22)**
CERI

**Maryam
Salehi ('21)**
Civil

**Ana
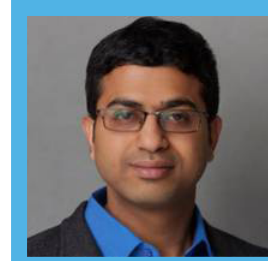Doblas ('21)**
EECE

**DOE
Career**

**Jessica
Jennings ('20)**
Biomedical

**Thomas
Watson ('20)**
Computer Science

**Nate
DeYonker ('19)**
Chemistry

**Ranganathan
Gopalakrishnan ('21)**
Mechanical

BUILDING REGIONAL PARTNERSHIPS

Strengthening regional partnerships and building avenues for funding that support collaborative research in the region is critical to longterm growth. The University of Memphis launched two rounds of funded collaborations with regional institutions in FY22.

ENDEAVOR

ENDEAVOR, which stands for Energy, Defense and AgriTech Innovation Research, will pursue connected multi-discipline research to address shifts in population, the environment and policy in a rapidly evolving and increasingly challenging world.

An early emphasis of ENDEAVOR will be to develop strategic partnerships with other regional research communities in order to focus on issues specific to the Mid-South and Southeast. The objective is to create a regional ecosystem where science and technology are used to address key sector challenges and foster innovation that attracts the best scholars, students, businesses and research infrastructure.

The effort is led by Dr. Lou Qualls, who joined the UofM from Oak Ridge National Laboratory (ORNL) where he served as a distinguished researcher and an adjunct professor in the University of Tennessee Department of Nuclear Engineering.

Program to Enhance Collaborative and Interdisciplinary Research (PECIR)

PECIR was launched with Meharry Medical College in Nashville, TN. Building partnerships with medical schools like Meharry are critical to growing the research capacity of the University and providing research-driven service to our wider community. The effort led to six funded projects:

» Seok Won Jin, PhD (UofM), and Jennifer Cunningham-Erves, PhD, MPH, MAEd, MS and Maureen Sanderson, PhD, MPH (MMC) for the project, "Assessing Vaccine Hesitancy for Flu, HPV and COVID-19 Vaccines in Tennessee"

» Latrice Pichon, PhD (UofM) and L. Lauren Brown, PhD, LCSW (MMC) for the project, "Inform Future Delivery of Trauma Informed Care in Community-Based HIV Service Organizations (CBO), Faith-Based Organizations (FBO), the Local Health Department (HD), and Federally Qualified Health Care Centers (FQHC)"

» Amanda Young, PhD (UofM), and Shyamali Mukherjee, PhD, MS (MMC) for the project, "A Focus Group Study of the Communication and Educational Needs of Parents and Patients with Sickle Cell Disease or Sickle Cell Traits"

» Melissa Puppa, PhD (UofM), and Smita Misra, PhD, MS (MMC) for the project, "Elucidating Mechanisms for the Sexually Dimorphic Response to Diet Induced Obesity and Metabolic Syndrome"

» Yongmei Wang, PhD (UofM), and Zhenbang Chen, PhD, MS (MMC) for the project, "Discovery of Exosome-based Molecular Biomarkers for Predicting Prostate Cancer Impending Metastasis"

» Angela Antipova, PhD (UofM), and Dr. Flora Ukoli, MD, MPH (MMC) for the project, "Eliminating Socially-Driven Infant Obesity Disparities in Minority Communities of Memphis and Nashville: A Community-Based Intervention"

UofM-UTIA Agritech Research Partnership

The University also launched a partnership with University of Tennessee Institute of Agriculture to advance agriculture technology research and regional approaches to innovation as part of the Energy, Defense and AgriTech Innovation Research (ENDEAVOR), led by Dr. Lou Qualls. The effort seeks to capitalize on the unique strengths of both institutions and build collaborative research engagements that strengthen our connection to one of the largest industry sectors in the region. Funded projects include:

» Dr. Debasish Saha (UTIA) and Dr. Shawn Brown (UofM) for the project, "Unraveling the roles of nitrous oxide reducing microbial communities and associated pathways in mitigating nitrous oxide emissions from regenerative agricultural practices"

» Dr. Mi Li (UTIA) and Dr. Charles Garner (UofM), for the project "Design and Engineering of Cellulose-Metal Organic Frameworks (Cello-MOF) for Catalytic Conversions".

CULTIVATING A DYNAMIC RESEARCH ECOSYSTEM

- » UMRF Research Park
- » UMRF Ventures
- » Phi Kappa Phi Innovation in Excellence Award Semifinalist
- » American Association of State Colleges and Universities Award
- » APLU Innovation Award Finalist
- » 21 Licensed Technologies
- » Patents2Products (P2P)
- » Four companies launched

TECHNOLOGY TRANSFER HIGHLIGHTS

Received January 1, 2021-June 30, 2022

» **Systems and Methods for Dispersion of Dry Powders** by Dr. Gopalakrishnan, U.S. Patent 11,358,112

» **Autotaxin Inhibitors** by Dr. Parrill-Baker, U.S. Patent 11,124,490

» **Light Weight Flexible Temperature Sensor Kit** by Dr. Sabri, U.S. Patent 11,047,747

» **Adaptive Multi-Factor Authentication System and Multi-User Permission Strategy to Access Sensitive Information** by Dr. Dasgupta, U.S. Patent 11,038,896

» **Fully Reconfigurable Modular Body-Worn Sensors** by Dr. Morshed, U.S. Patent 10,973,430

» **Chitosan Nanofiber Compositions, Compositions Comprising Modified Chitosan, and Method of Use** by Dr. Bumgardner

» **Multi-Focal Light-Sheet Structured Illumination Fluorescence Microscopy System** by Dr. Preza

» **Si2Te3 Resistive Memory** by Dr. Cui

» **Compositions and Methods for Enhancing Healing and Regeneration of Bone and Soft Tissue** by Dr. Bowlin

Companies Currently Licensing UofM Technologies

PROGRESS OF STEM ACADEMIC UNITS

Engineering Departments

Chart: Cumulative Funding Since FY 20 Start ($) by fiscal year (FY20, FY21, FY22)

Legend:
- BME-Biomedical Engineering
- ET-Engineering Technology
- EECE-Electrical and Computer Engineering
- ME-Mechanical Engineering
- CE-Civil Engineering
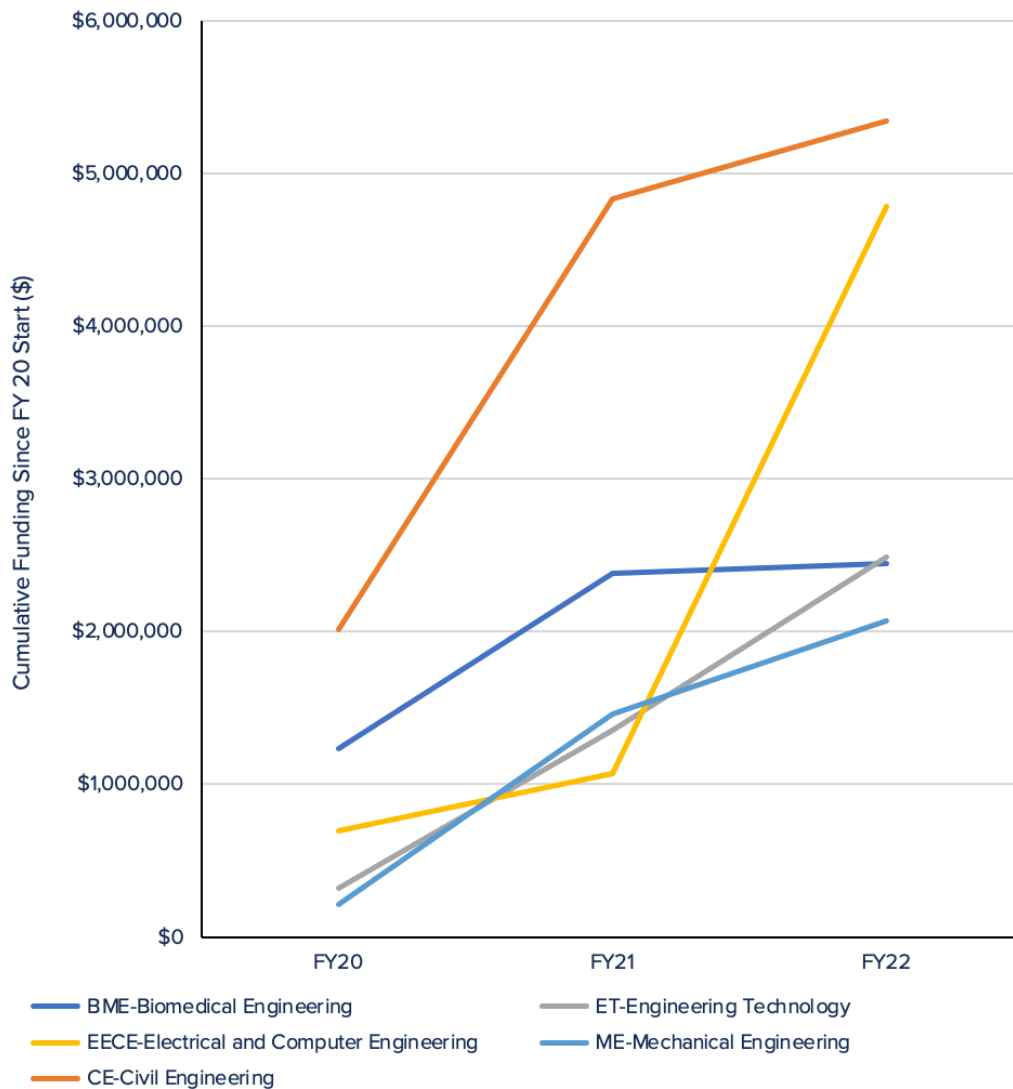
Arts and Sciences Departments

Cumulative Awards since FY20 start ($)
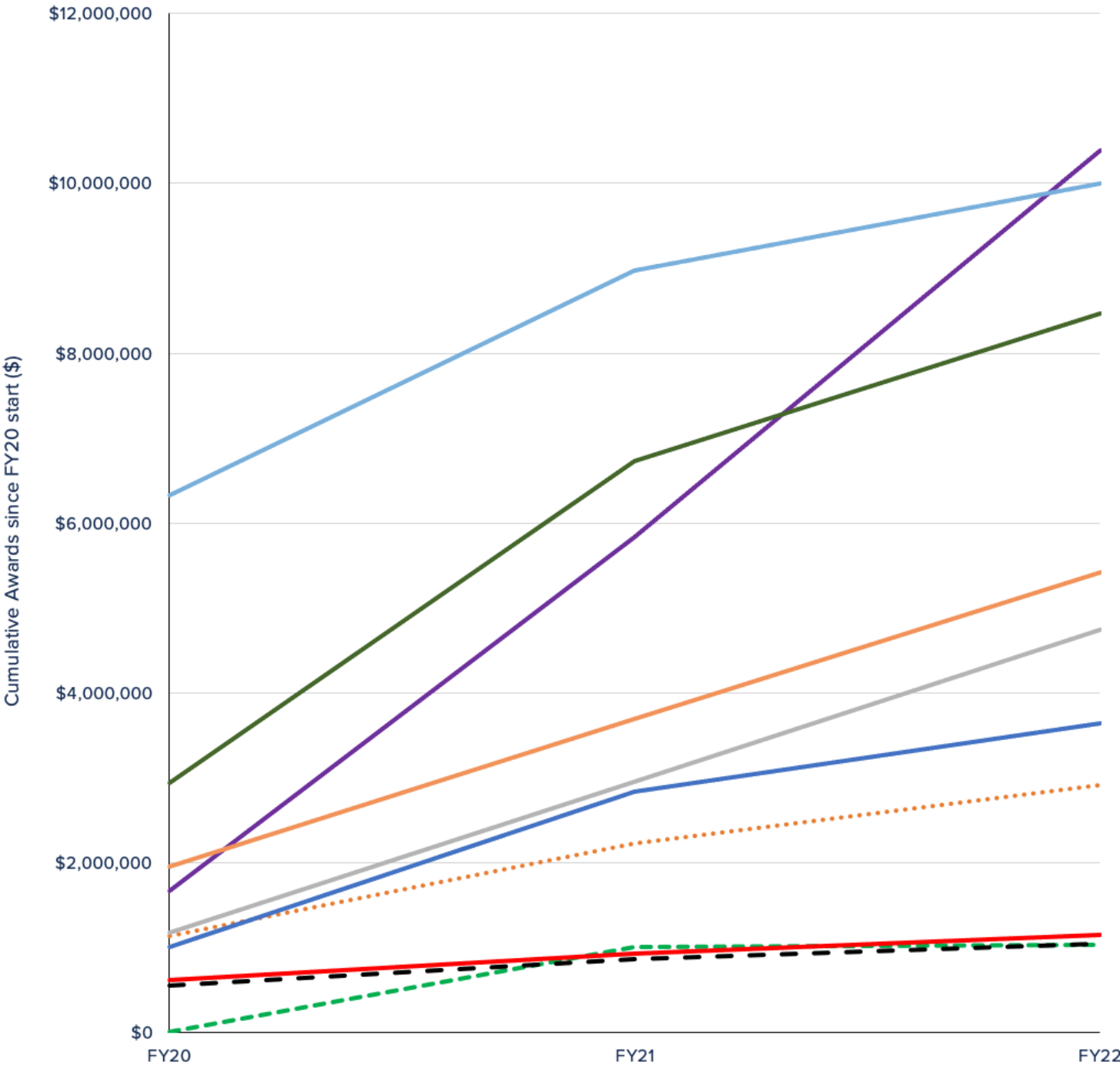
- .... Biology
- —— Chemistry
- —— Computer Science
- – – – Earth Sciences
- —— Mathematical Sciences
- – – – Physics and Materials Science
- —— Psychology
- —— Social Work
- —— CERI
- —— IIS - Institute for Intelligent Systems

Principal Investigators with $500K+ in Awards

Note: $$ obligated amount in FY

FY20 Faculty	
Olney, Andrew	$3,439,035
Kaldon, Carolyn	$1,512,626
Rus, Vasile	$1,239,097
Casey, Laura	$1,220,960
Neely-Barnes, Susan	$1,212,046
Kumar, Santosh	$1,193,319
Waldron, Brian	$869,276
Schiro-Geist, Chrisann	$852,386
Withers, Mitchell	$793,974
Murphy, James	$790,458
Howell, Kathryn	$763,018
Jennings, Jessica	$758,226
James, Wesley	$741,352
Kedia, Satish	$697,100
Bidelman, Gavin	$691,706
Boykins, Anita	$679,355
Bailey, Eric	$648,000
Parrill-Baker, Abby	$634,888
Zhang, Hongmei	$632,938
Karmaus, Wilfried	$614,648
Rudd, Loretta	$597,008
West, Steven	$570,150
Meindl, James	$530,651
Sabatini, John	$525,018
Harding, Melvyn	$518,834
Salehi Esfandarani, Maryam	$507,025
Oller, David	$504,913

FY 21 Faculty	
Marshall, Melissa	$4,919,559
Casey, Laura	$3,140,880
Waldron, Brian	$2,812,461
Kumar, Santosh	$2,398,500
Rus, Vasile	$1,707,863
James, Wesley	$1,486,806
Boykins, Anita	$1,360,830
Gopalakrishnan, Ranganathan	$1,114,477
Neely-Barnes, Susan	$1,095,290
Berisso, Kevin	$1,035,237
Ivey, Stephanie	$1,004,449
Ozdenerol, Esra	$1,000,000
Murphy, James	$889,701
Wang, Lan	$865,000
Salehi Esfandarani, Maryam	$851,597
Withers, Mitchell	$841,311
Fagan, Thomas	$770,364
Hunter, William	$750,000
Zhao, Xuan	$726,990
Rudd, Loretta	$694,845
Parrill-Baker, Abby	$651,741
Karmaus, Wilfried	$589,485
Santo, Charles	$575,537
Harding, Melvyn	$536,993
Smeltzer, Matthew	$532,965
Mishra, Sabyasachee	$519,359
Pichon, Latrice	$505,336
Sutter, Thomas	$502,250

FY 22 Faculty	
Jacobs, Eddie	$3,231,722
Waldron, Brian	**$2,278,614**
Neely-Barnes, Susan	**$1,558,317**
Dasgupta, Dipankar	$1,265,422
Whittaker, Jeremy	$1,264,215
Yang, Kan	$1,261,161
Collins, Tracy	$1,257,855
Kumar, Santosh	**$1,232,151**
Whelan, James	$1,205,000
Irwin, Richard	$1,120,905
Withers, Mitchell	**$1,058,028**
Bekis, Barbara	$945,839
LeDoux, Mark	$911,040
Hirschi, Melissa	$844,097
Zoblotsky, Todd	$823,783
Smeltzer, Matthew	$803,553
Ramsey, Kathryn	$786,870
Levy, Marian	$776,757
Goebel, Thomas	$769,960
Rus, Vasile	**$715,941**
Hunter, William	$700,000
Schauss, Eraina	$700,000
Rudd, Loretta	**$684,209**
Bloomer, Richard	$679,364
Ivey, Stephanie	**$640,028**
Parrill-Baker, Abby	**$628,317**
Pichon, Latrice	$628,285
McGinnis, James	$599,997
Clark, Kensha	$590,000
Muller Sanchez, Francisco	$579,419
West, Steven	$566,365
Sabatini, John	$556,777
Harding, Melvyn	**$536,993**
Berisso, Kevin	$533,971
Kedia, Satish	$518,555
McKenna, Duane	$506,597
Murphy, James	**$501,805**

SINCE 2019:

53 NSF Principal Investigators
26 NIH Principal Investigators

__Bold:__ Received $500K, or more, in FY20, FY21 and FY22 (3 consecutive years)

Units with $1M+ in Awards

Note: $$ is obligated amount in FY

Academic Unit	FY19	FY20	FY21	FY22
Computer Science	$4,558,806	$1,675,828	$4,157,486	$4,280,761
Electrical and Computer Engineering (EECE)				$3,974,650
Psychology	$1,294,557	$2,758,135	$3,611,995	$3,915,705
Loewenberg College of Nursing		$1,499,830	$1,995,433	$3,154,502
Social Work		$1,958,753	$1,738,217	$2,987,173
Center for Applied Earth Science and Engineering Research (CAESER)	$3,639,421		$2,960,579	$2,424,912
Institute for Intelligent Systems (IIS)		$6,332,919	$2,645,793	$2,290,619
Center for Earthquake Research & Information (CERI)	$1,899,837	$1,180,062	$1,782,242	$2,016,646
Counseling Educational Psychology & Research (CEPR)		$1,637,536	$1,173,694	$1,943,669
Social and Behavioral Sciences				$1,547,681
Center for Research in Educational Policy (CREP)		$2,107,158		$1,243,390
Instruction and Curriculum Leadership (ICL)	$1,652,731	$1,884,702	$3,890,880	$1,159,096
Engineering Technology			$1,035,237	$1,133,968
School of Law				$1,101,203
Biological Sciences		$1,137,560	$1,093,838	$1,020,292

COMMUNITIES OF RESEARCH SCHOLARS (CORS)

FY22 Awarded Projects

Socioecological Determinants of Cardiometabolic Health in Memphis: Establishment of a Database, Abu Mohammed Naser Titu, *School of Public Health*

Identifying Opportunities for Renewables and Energy Storage in the Mid-South Alexander, John Headley, *Mechanical Engineering*

Name, Image, and Likeness in Tennessee: A Historic Policy Change for College Athletics, Brennan K. Berg, *Sport Commerce*

University Schools Engaged Scholarship & Research Consortium (USES+RC): Grant Writing Awards, Carolyn Kaldon, *CREP*

Development of Collaborative Hypersonic Research at the Intersection of Aerothermodynamics and Materials Science, Daniel Vincent Foti, *Mechanical Engineering*

Disaster Studies Consortium, Davia Cox Downey, *Public and Non-Profit Administration*

Breaking Through Invisible Barriers to Literacy, Deborah Moncrieff, *School of Communication Sciences and Disorders*

Nursing Workforce Diversity: An Exploration of Minority Nurses Intent to Pursue Doctoral Studies, Deundra Hearne, *Nursing*

Grandparents' Views on Grandparent Caregiving, Gloria Fulton Carr, *Nursing*

Exploring Potential Mediating/Moderating Effects of Negative Emotionality on Outcomes with Hearing Aids for Older Adults, Jani Annette Johnson, *School of Communication Sciences and Disorders*

Conveningminds to Address Youth Justice and Youth Violence in Memphis, TN, Jennifer Turchi, *School of Public Health*

Regional Strategy for Agriculture Innovation, Conservation, and Sustainability, Leah Windsor, *English/Institute for Intelligent Systems*

Memphis Women+'s Mentorship Network, Leigh Harrell-Williams, *English/Institute for Intelligent Systems*

Hiring a Third-Party to Do a Needs Assessment Survey of Faculty, Staff and Students in the Rudi E. Scheidt School of Music and write a Report to be Used for Future Grant Proposals, Lily Afshar, *School of Music*

The University of Memphis/MVP3 Studios Master Class Series, Marty Lang, *Communication and Film*

Developing a Multidimensional and Data-driven Understanding of Sexual Positioning Identity Among Cisgender Men Who Have Sex With Men, Meredith A. Ray, *Biostatistics*

Establishing a data pipeline to decipher the neural basis of risky decision-making, Nicholas W. Simon, *Psychology*

Exploring the Role of Social Determinants of Health on Sepsis Readmissions Among Survivors of Sepsis Within the National Readmission Dataset, Reba Umberger, *Nursing*

Research on Intimate Partner Violence Collaborative, Sarah R. Leat, *Social Work*

Working Group on Diversity and Inclusion, Simranjit Khalsa, *Sociology*

Moral Foundations and Vaccine Hesitancy of Traditional Communities in the Southern US, Xiaolei Huang, *Computer Science*

Examine the Influence of the Ongoing COVID-19 Outbreak to Health Behaviors and Mental Health, Yong Yang, *Social and Behavioral Sciences*

FIRST-TIME PRINCIPAL INVESTIGATORS FOR FY22

The largest cohort to date.

Michael Schmidt, *Art*

Carl Herickhoff, *Biomedical Engineering*

Tammy Haut Donahue, *Biomedical Engineering*

Fawaz Mzayek, *Biostatistics*

Yu Jiang, *Biostatistics*

Huigang Liang, *Business Information and Technology*

Alisha Rose, *Career Services*

Farhad Jazaei, *Civil Engineering*

Ryan Fisher, *College of Communication and Fine Arts*

Josef Hanson, *College of Communication and Fine Arts*

Shelia Moses, *College of Engineering*

Jacquelyn Pence, *College of Health Sciences*

Michelle Stockton, *College of Health Sciences*

Tracy Bruen, *College of Health Sciences*

Chidambaram Ramanathan, *College of Health Sciences*

Kan Yang, *Computer Science*

Weizi Li, *Computer Science*

Myounggyu Won, *Computer Science*

Christos Papadopoulos, *Computer Science*

Xiaolei Huang, *Computer Science*

Timothy McCuddy, *Criminal Justice*

Dorian Burnette, *Earth Sciences*

Youngsang Kwon, *Earth Sciences*

Abu Mohammed Naser Titu, *Epidemiology*

Napoleon Overton, *Finance, Insurance, Real Estate*

Mark Hendricks, *Health Systems Management Policy*

Isaiah Surbrook, *Herff College of Engineering*

Thouraya Al-Nasser, *Instruction and Curriculum Leadership*

Teressa Del Rosso, *Journalism and Strategic Media*

Jeremy Whittaker, *Loewenberg College of Nursing*

Tracy Collins, *Loewenberg College of Nursing*

Larry Slater, *Loewenberg College of Nursing*

Bradley Harrell, *Loewenberg College of Nursing*

Daniel Foti, *Mechanical Engineering*

Shawn Pollard, *Physics and Material Sciences*

Joanne Rhodes, *Physics and Material Sciences*

William Gibbons, *School of Urban Affairs*
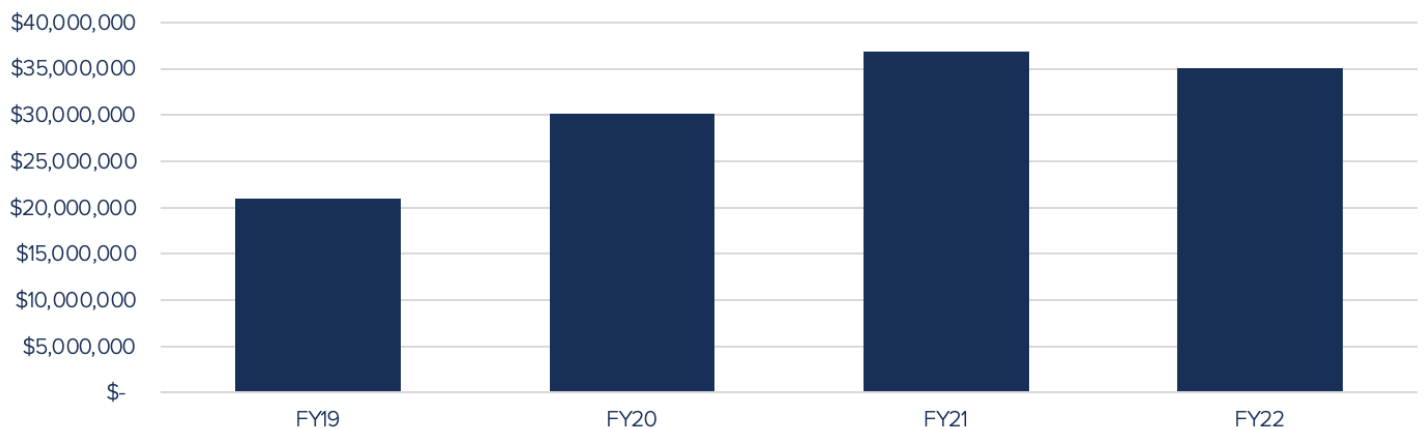
Jennifer Turchi, *Social and Behavioral Sciences*

Ophrah Payne, *Student Services Academics*

Diana Ruggiero, *World Languages and Literatures*

DETAILED VIEW | FEDERAL AWARDS

Note: $$ is obligated amount in FY

Federal Funding By Source

Funding Source	FY19	FY20	FY21	FY22
National Science Foundation (NSF)	$3,728,217	$8,774,516	$8,919,989	$6,453,195
Health Resources and Services Administration (HRSA)		$3,592,226	$3,598,890	$6,356,954
Defense Department (ARO, ONR, AFOSR, DoD, DARPA)	$2,312,102	$2,520,091	$2,669,139	$4,919,795
National Institutes of Health (NIH)	$7,029,329	$6,759,200	$6,573,211	$4,289,048
US Department of Education (US DoEd)	$2,251,692	$4,522,972	$5,168,042	$3,809,096
US Geological Survey (USGS)	$1,772,183	$993,862	$1,190,591	$1,495,911
National Security Agency (NSA)	$9,863			$1,365,186
Centers For Disease Control (CDC)	$18,000	$71,200	$634,917	$1,172,105
US Department of Energy (US DoE)	$315,986	$106,484	$1,239,315	$714,615
Federal Emergency Management Agency (FEMA)				$599,997
US Department of Health and Human Services (US DHHS)	$401,400	$660,321	$3,142,301	$598,901

Top 10 Federally Funded Projects By Fiscal Year

Note: $$ is obligated amount in FY

FY21

UofM CBEI Services **|** Laura Casey
$1,622,400

Learner Data Institute: Harnessing the Data Revolution to Improve the Effectiveness, Efficiency, and Engagement of the Learning Ecosystem **|** Vasile Rus
$1,534,309

Evaluate Impact of Health and Education Programs in the Mississippi Delta **|** Wesley James
$1,471,806

Health, Education, and Access for Rural Tennesseans (HEART) *(multi-year award)* **|** Anita Boykins
$1,360,830

mHealth Center for Discovery, Optimization & Translation of Temporally-Precise Interventions (mDOT) *(multi-year award)* **|** Santosh Kumar
$1,334,467

UofM Home/Community Based Early Intervention (HCBEI) Servicese/Community Based Early Intervention (HCBEI) Services **|** Laura Casey
$1,111,500

Workforce Opportunity for Rural Communities (WORC) / DRA:Automation and Advanced Robotics Center **|** Kevin Berisso
$1,013,896

ASPIRED: Adaptations for Sustainable Policies and Increased Recruitment Excellence in Diversity **|** Esra Ozdenerol
$1,000,000

Operation of the Mid-America Integrated Seismic Network 2020-2024 (CERI) *(multi-year award)* **|** Mitchell Withers
$841,311

CC* Integration-Large: mGuard: A Secure Real-time Data Distribution System with Fine-Grained Access Control for mHealth Research **|** Lan Wang
$825,000

FY22

Multi-UAS Multi-Sensor Intelligence, Surveillance, and Reconnaissance (ISR) **|** Eddie Jacobs
$2,707,364

Supporting the Retention of Next Generation Registered Nurses (STRONG-RNs) **|** Jeremy Whittaker
$1,264,215

CyberCorps: New Scholarships for Service (SFS) Program at the University of Memphis **|** Kan Yang
$1,261,161

Health, Education, and Access for Rural Tennesseans (HEART) *(multi-year award)* **|** Tracy Collins
$1,257,855

mHealth Center for Discovery, Optimization & Translation of Temporally-Precise Interventions (mDOT) *(multi-year award)* **|** Santosh Kumar
$1,154,454

Cybersecurity Education for Critical Infrastructure Protection (in Community Development) through Regional Coalition **|** Dipankar Dasgupta
$1,014,076

INTEGRATE (INterprofessional TEams GRounded in Apprenticeship, Telehealth, and Evidence) **|** Susan Neely-Barnes
$931,153

External Evaluator - ERVA: The Vision for Engineering Leadership -a Multi-sector Alliance (VELMA) **|** Todd Zoblotsky
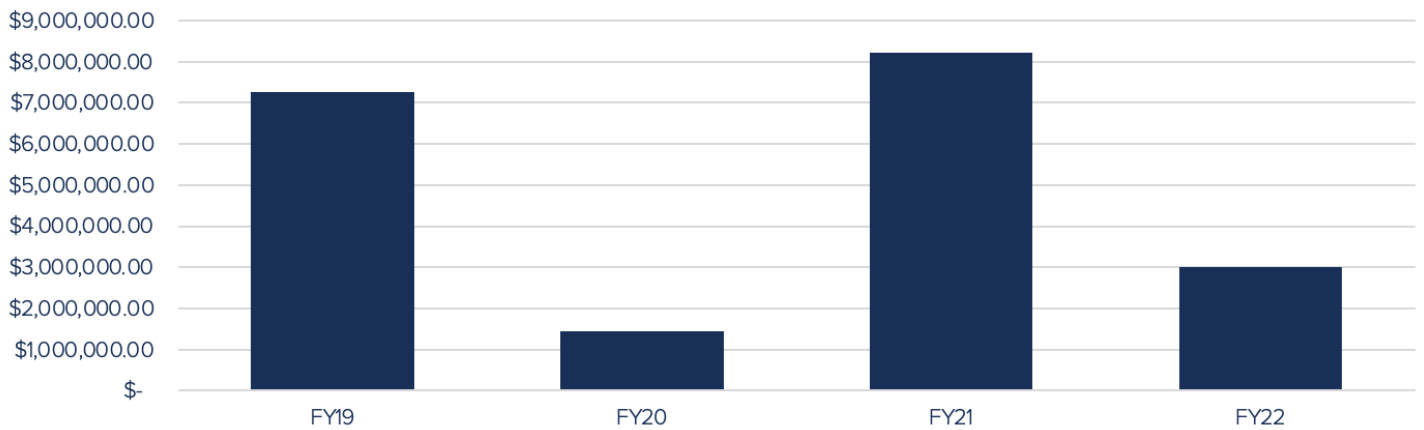$799,798

Operation of the Mid-America Integrated Seismic Network 2020-2024 (CERI) *(multi-year award)* **|** Mitchell Withers
$702,675

iCODE: Investigating and Scaffolding Students' Code Comprehension Processes To Improve Learning, Engagement, and Retention **|** Vasile Rus
$650,600

DETAILED VIEW | STATE AWARDS

Note: $$ is obligated amount in FY

State Funding By Source

Funding Source	FY19	FY20	FY21	FY22
TN Department of Mental Health and Substance Abuse Services	$187,752	$180,000	$360,000	$1,205,000
Tennessee Department of Transportation (TDOT)	$4,150,941	$174,959	$5,621,965	$675,905
Tennessee Department of Education (TDoEd)	$1,738,245	$238,245	$1,012,245	$238,245
Tennessee Higher Educ Commission (THEC)	$138,555	$220,282	$152,300	$217,500
Tennessee Student Assistance Corporation				$205,000
Tennessee Department of Health (TDoH)	$10,000	$148,000	$166,300	$155,300
Tennessee College of Applied Technology (TCAT)				$150,000
Tennessee Department of Health (TDoH)	$10,000	$193,700	$166,300	$148,300
Alaska Department of Fish & Game				$101,465
Virginia Department of Education	$89,495	$89,950	$91,400	$92,308

Top 10 State Funded Projects By Fiscal Year

Note: $$ is obligated amount in FY

FY21

Keep Tennessee Beautiful Program **|**
Melissa Marshall
$4,919,559

West Tennessee PBIS Project - RISE **|**
William Hunter
$750,000

Peak Flow Estimation Urban Areas **|**
Claudio Meier
$253,517

Dept of Ag West TN **|** Brian Waldron
$240,000

Governor's School for International Studies
(multi-year award) **|** Keri Brondo
$238,245

Change the Odds: A Multi Platform Approach to
Gambling Treatment *(multi-year award)* **|**
James Whelan
$360,000

Lone Oaks **|** Brian Waldron
$165,000

Operation and Maintenance of the Arkansas
Seismic Network **|** Stephen Horton
$162,000

Understanding Freight Impacts On Tennessee
Communities **|** Michail Gkolias
$149,994

Connecting Demand Response Transit With
Fixed Service Transit **|** Sabya Mishra
$149,600

FY22

Change the Odds: A Multi Platform Approach to
Gambling Treatment *(multi-year award)* **|**
James Whelan
$1,205,000

University of Memphis, Byway Management
Program **|** Richard Irwin
$675,905

Governor's School for International Studies
(multi-year award) **|** Keri Brondo
$238,245

Administration of the Minority Engineering
Scholarship **|** Isaiah Surbrook
$205,000

GIVE 2.0 **|** Bradley Harrell
$150,000

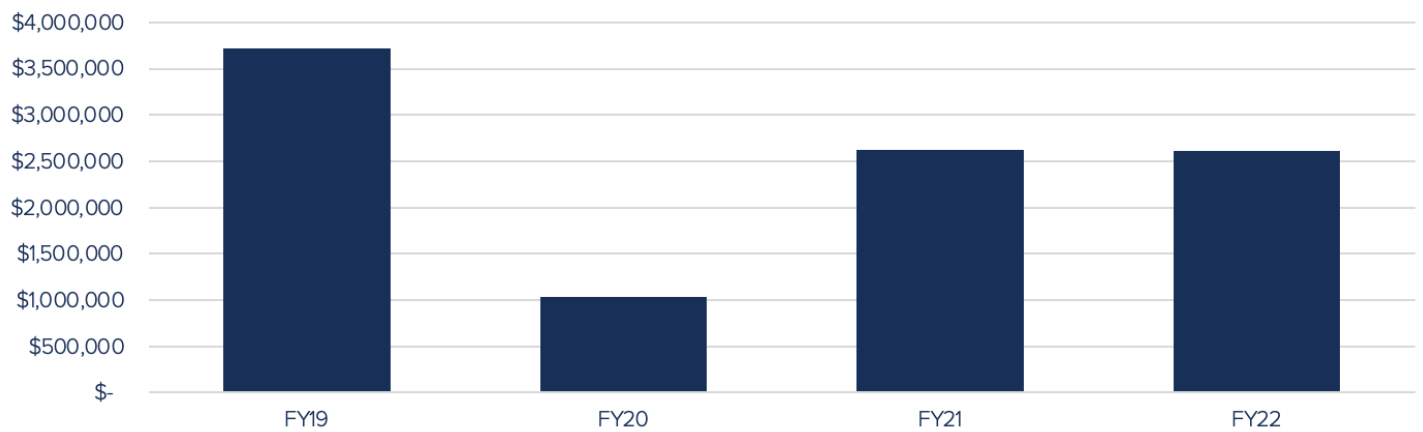Loewenberg College of Nursing - Lactation
Support Program **|** Genae Strong
$148,300

At press, the UofM was awarded $25M from Tennessee Department of Human Services for GROWWTH

Principal Investigator: Dr. Richard Irwin

DETAILED VIEW | LOCAL PUBLIC AWARDS

Note: $$ is obligated amount in FY

Top Local Public Funding Sources for Research

Funding Source	FY19	FY20	FY21	FY22
Memphis Light Gas and Water (MLGW)	$2,235,000		$1,509,000	$1,642,887
City of Memphis	$838,520	$449,755	$174,276	$560,913
Shelby County Schools (SCS)	$374,712	$66,051	$90,898	$133,340
City of Collierville	$9,500	$41,500	$73,500	$73,500
City of Germantown	$45,000	$45,000	$45,000	$45,000
City of Memphis Police Department (CMPD)	$36,000	$36,000	$45,000	$45,000

Top 5 Locally Funded Projects By Fiscal Year

Note: $$ is obligated amount in FY

FY21

MLGW Aquitard Year 3 *(multi-year award)* |
Brian Waldron
$1,509,000

VSA 2020 | Brian Waldron
$447,917

Asset Management Plan for Memphis Transit
Fleet | Sabyasachee Mishra
$120,000

Evaluating Public Compliance with COVID-19
Response Directives | Marian Levy
$75,000

Zoning Phase 2 | Brian Waldron
$55,043

FY22

MLGW Aquitard Year 4 *(multi-year award)* |
Brian Waldron
$1,342,887

City of Memphis Neighborhood Preservation
Clinic | Daniel Schaffzin
$314,333

MLGW General | Brian Waldron
$300,000

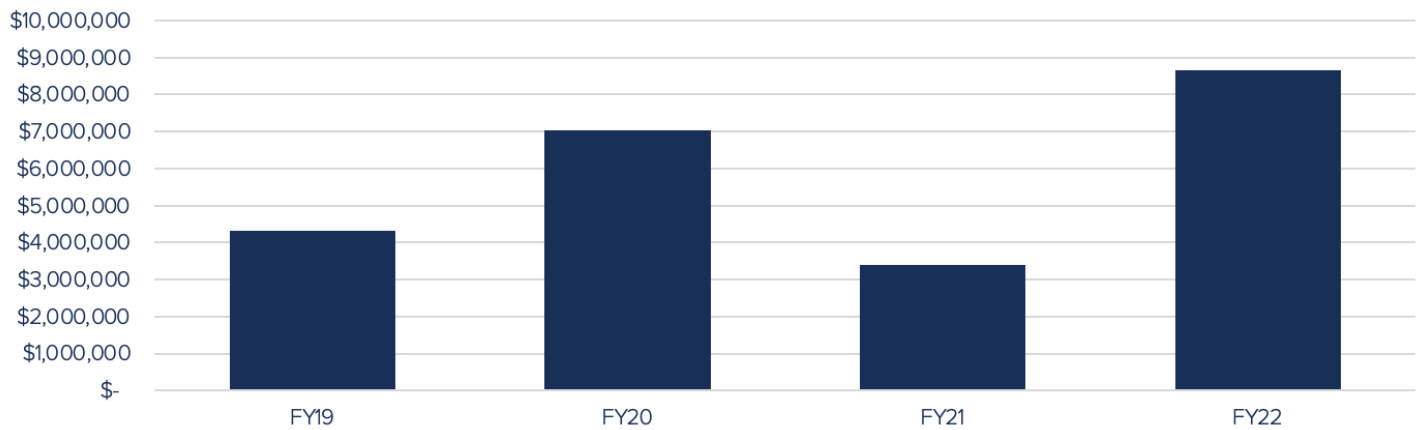CoM Stormwater GIS reintegration |
Brian Waldron
$190,000

SCS Culinary Arts Program at Bolton High |
Radesh Palakurthi
$94,000

Collierville GW Quality Research | Daniel Larsen
$64,000

BCS 2.0 | Brian Waldron
$56,580

DETAILED VIEW | CORPORATE & FOUNDATION AWARDS

Note: $$ is obligated amount in FY

Top Corporate & Foundation Funding Sources for Research

Funding Source	FY19	FY20	FY21	FY22
The Urban Child Institute (TUCI)	$271,119	$2,206,049	$854,845	$2,506,600
Peer Power Foundation Inc	$933,182			$945,839
Vanderbilt University	$34,730	$81,856	$36,675	$762,298
Memphis and Shelby Crime Commission (MSCC)		$525,000	$525,000	$525,000
Mannatech Incorporated				$361,265
Women's Foundation for a Greater Memphis	$44,500	$25,000	$55,000	$347,512
Robert Wood Johnson Foundation				$273,060
Conch Technologies, Incorporated	$656,160	$379,734	$227,272	$269,848
FedEx Corporate Services, Incorporated (FCS)	$199,000			$230,000
Hyundai Motor Company				$157,200

Top Corporate & Foundation Funded Projects By Fiscal Year

Note: $$ is obligated amount in FY

FY21

Public Safety Institute *(multi-year award)* |
Abby Parrill-Baker
$525,000

Community Partnership to Enhance Kindergarten
Readiness Through Quality Caregiver/Parent-
Child Interactions *(multi-year award)* | Loretta Rudd
$404,845

Fostering Resilience and Well-being in the
Pediatric Trauma Population: Counseling
Interventions for an At-Risk Population |
Eraina Schauss
$350,000

Coordinated Effort to Enhance Development |
Loretta Rudd
$290,000

Master - MLGW GSR | Brian Waldron
$227,272

MDIVI-1 as an Immunometabolic Regulator to
Treat Atherosclerosis | Brandt Pence
$200,000

Promoting Health and Well-being in Children
and Families: Evaluating a Prenatal Intervention
Program *(multi-year award)* | Kathryn Howell
$160,000

ETS Sponsored Research Agreement |
Alistair Windsor
$98,242

The Evolution of Civil Rights Enforcement and
Economic Prosperity of Minorities |
Jamein Cunningham
$74,000

ECON CLUB Contract | Damon Fleming
$73,012

FY22

Peer Power Institute | Barbara Bekis
$945,839

MLP/Memphis CHiLD | Kathryn Ramsey
$786,870

Multi-Tiered Systems of Support for Behavior
and Academics | William Hunter
$700,000

Fostering Resilience and Well-being in the
Pediatric Trauma Population: Counseling
Interventions for an At-Risk Population |
Eraina Schauss
$700,000

Community Partnership to Enhance Kindergarten
Readiness Through Quality Caregiver/Parent-
Child Interactions *(multi-year award)* | Loretta Rudd
$553,876

Public Safety Institute *(multi-year award)* |
Abby Parrill-Baker
$525,000

School Mental Health Access to Resources
through Teletherapy (SMART) Research, Training,
and Treatment Center | Susan Elswick
$356,875

University of Memphis: Eradicating Systemic
Racism and Promoting Social Justice through
Academic Public Health | Marian Levy
$273,060

Digital Inclusion in South City-Phase II |
Gregory Washington
$250,757

Improving FedEx Supply Chain Demand
Forecasting in Turbulent Environments |
Huigang Liang
$230,000

HIGH IMPACT SCHOLARS AT THE UOFM

Author Name	Department	Scopus H-Index
Bowlin, Gary L.	Biomedical Engineering	55
Sutter, Tom	Biological Sciences	52
Karmaus, Wilfried Joachim Jurgen	School of Public Health	51
Fatemi, Ali	Mechanical Engineering	50
Lasiecka, Irena	Mathematical Sciences	49
Beck, J. Gayle	Psychology	47
Rudd, Michael David	Psychology	45
Ward, Kenneth D.	School of Public Health	45
Bollobas, Bela	Mathematical Sciences	44
Murphy, James G.	Psychology	43
Lindner, Ernö	Biomedical Engineering	42
Skalli, Omar	Biological Sciences	39
Triggiani, Roberto	Mathematical Sciences	39
Bumgardner, Joel David	Biomedical Engineering	38
Oller, D. Kimbrough	Communication Sciences and Disorders	38
Langston, Charles A.	Center for Earthquake Science and Information (CERI)	37
Mishra, Sanjay R.	Physics	37
Dasgupta, Dipankar	Computer Science	36
Gallagher, Shaun	Philosophy	36
Huang, Xiaohua	Chemistry	36
Bloomer, Richard J.	College of Health Studies	34
Kumar, Santosh	Computer Science	34
Haggard, Warren O.	Biomedical Engineering	33
Lewis, Gladius	Mechanical Engineering	33
Berman, Jeffrey Scott	Psychology	33
Parrill, Abby L.	Chemistry	33
Yang, Kan	Computer Science	33
Bidelman, Gavin	Institute for Intelligent Systems	32
Pierce, Charles A.	Fogelman College of Business and Economics	32
Bayer, Randall James	Biological Sciences	31
Williams, John Leicester	Biological Sciences	31

Faculty Name	Department	Google Scholar Citation Count
Gallagher, Shaun	Philosophy	36539
Huang, Xiaohua	Chemistry	33590
Bowlin, Gary L.	Biomedical Engineering	21606
Dasgupta, Dipankar	Computer Science	19630
Oller, D. Kimbrough	Communication Sciences and Disorders	18732
Lasiecka, Irena	Mathematical Sciences	18460
Fatemi, Ali	Mechanical Engineering	16978
Rudd, Michael David	Psychology	15165
Liang, Huigang	Business Information and Technology	13944
Kraiger, Kurt	Management	13680
Sutter. Thomas	Biological Sciences	11791
Langston, Charles A.	Center for Earthquake Science & Information (CERI)	10670
Murphy, James G.	Psychology	10629
Lindner, Ernö	Biomedical Engineering	9794
Rezaee, Zabihollah	School of Accountancy	9790
Wang, Lan	Computer Science	9642
Kumar, Santosh	Computer Science	9339
Pence, Brandt	School of Public Health	8364
Papadopolous, Christos	Computer Science	8322
McInish, Thomas	Finance	7635
McKenna, Duane	Biological Sciences	7576
Bumgardner, Joel David	Biomedical Engineering	7491
Anastassiou, George	Mathematical Sciences	7443
Zhang, Hongmei	Biostatistics	7174
Yang, Kan	Computer Science	6505

Note on Citations: *Citations in peer reviewed publications are a key metric for impact of research.*

Note on H-index: *H-index is an author-level metric that attempts measures both productivity and citation impact of peer-reviewed scholarship. The h-index is defined as the maximum value of h such that the given author has published at least h papers that have each been cited at least h times. For example, an author with an h-index of 25 has at least 25 papers that were cited 25 times. The data for these h-index calculations was drawn from Scopus on 8/3/22.*

Note on Reporting: *All reported award amounts follow best practices at research institutions, are reported by report date and represent the entire amount reported. If, for example, you are awarded $1M over three years and the report date reports the entire three year amount, then $1M will be reported in the first year and no funds will be reported in subsequent years. If the report date on year one only shows the year one amount, then subsequent years will report their respective amounts. For questions please email research@memphis.edu*

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The activities of the Division of Research & Innovation are guided by the UofM Research Council. Thank you to the FY22 members.

University of Memphis Research Council
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        Kemmons Wilson School of Hospitality
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THANK YOU

Thank you to the research support staff across our campus who help enable the growth of our research enterprise. From Business Officers to Pre-Award Specialists and all those who help in the production of research, we appreciate your work and contributions.