



Mission Fulfillment Committee

December 2023

December 7, 2023

9:45 a.m.

Boardroom, McNamara Alumni Center

MIS - DEC 2023

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BOARD OF REGENTS DOCKET ITEM SUMMARY

Mission Fulfillment

December 7, 2023

AGENDA ITEM: Annual Report on the State of the University Research Enterprise

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Shashank Priya, Vice President for Research and Innovation

PURPOSE & KEY POINTS

The purpose of this item is for the committee to receive and discuss the Annual Report on the State of the University Research Enterprise.

Key topics of the report include:

- Research Powerhouse: MPact 2025 Systemwide Strategic Plan (MPact 2025) progress report on research goals and measures
- State of the research enterprise: outcomes and impact
- Technology commercialization and corporate engagement
- Strategic Framework: Research 2030 Workshop outcomes
- Efforts to support HBCUs, tribal colleges, and communities
- Facilitating institutional investment in our labs, facilities, enterprise systems, and services

Key messages:

- The state of the University’s research enterprise is strong, with continued R&D expenditures and award funding growth levels exceeding one billion dollars over the past three years.
- Research Powerhouse: MPact 2025 progress report showing strong achievement toward goals.
- Research 2030 Strategic Framework: using the year 2030 as a focal point, 14 high-impact themes were identified that will guide research engagement strategies with federal, foundation, and industrial partners to help the University reach the next tier of research performance. Two initiatives are already underway: the Biotechnology and Biomanufacturing Innovation Center (BBIC) and a global Sustainable Development Goal Geodesign Consortium.
- The University is nationally and globally recognized for technology commercialization and innovation: the University achieved a single-year record for the number of startups launched.
- The newly named Research and Innovation Office (formerly OVPR) is also cultivating and

strengthening engagement with partners beyond our campuses to equitably address complex problems in our state and world, specifically with Tribal Colleges and Universities (TCUs) and tribal nations, and Historically Black Universities (HBCUs) and their communities.

- To secure our place in the top tier of research universities—and certainly if we seek to move up within these leading institutions—we need to make significant institutional investment in our labs, facilities, enterprise systems, and services.
- Research Informs Our Teaching: Student involvement in research benefits the research, faculty researchers, the student, and the community. Research prepares students to be the innovators of tomorrow by training them in the practices of research and discovery.

BACKGROUND INFORMATION

The Annual Report on the State of the University Research Enterprise is required by Board of Regents Policy: *Commercialization of Intellectual Property Rights* and Board of Regents Policy: *Submitting and Accepting Sponsored Projects*.

2023

Annual Report on the State of the University Research Enterprise



Research & Innovation

Shashank Priya
Vice President for Research and Innovation
December 7, 2023

The University of Minnesota’s Vice President for Research and Innovation provides the University’s Board of Regents an annual report on the state of the university research enterprise. Included is the research enterprise’s alignment with the MPact 2025 strategic plan, fiscal year and temporal trends in key metrics, comparative rankings and comparisons, and illustrative examples of University research projects. The Vice President also shares his strategic priorities and concerns.

FY2023 Annual Report Includes:

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Message from the Vice President for Research and Innovation, Shashank Priya

As vice president for research and innovation, I am pleased to report that the **state of the University's research enterprise is strong**, with record expenditures and the 2nd largest research award levels in the University's history in FY2023. We are also seeing increasing success in bringing our researchers' inventions to market, with new milestones and accolades for our Tech Comm team and increasing coordination with the University's corporate engagement efforts.

In November 2023, the Office of the Vice President for Research (OVPR) officially changed its name to the **Research and Innovation Office (RIO)**. This change helps our office and the University to better communicate the innovation and entrepreneurialism that are a growing aspect of our work and our culture at UMN, and that are key to our ability to differentiate ourselves and our impact from that of other higher education and research institutions.

As I told the Board when I joined the University last year, the University is part of what I call the **"billion dollar research club,"** a 24-member group of US research universities with over \$1 billion in research expenditures (see Table 2 below). And we're not standing still; in addition our external research funding coming into the University remains on a strong growth trajectory increasing 30 percent over the last five years.

The University's scale and its breadth allow us to leverage many different disciplines and to combine them in the pursuit of new knowledge in ways that many institutions cannot. To anticipate the trends in research and our society, this past spring we held a **Research 2030 Workshop**, where the University research community, along with invited national leaders in academia, government, industry, and nonprofits had a chance to reflect on what might be the big questions for research in the not-to-distant future—the year 2030 (see **Appendix** for summary).

These discussions have helped us frame our research strategy into 14 high impact research themes for addressing new social, economic, and global challenges before they arise, and allow us to lead rather than follow when it comes to the interests of our research community, as well as potential funders and partners. We have two initiatives underway based on the themes identified at the Research 2030 Workshop, one related to biomanufacturing and biotechnology and the another based on geospatial information science for creating sustainable development goals driven policies.

A new **Biomanufacturing and Biotechnology Innovation Center (BBIC)** will catalyze innovative, cross-disciplinary research, entrepreneurship, and workforce development, building upon current strengths of the University, Minnesota's abundant natural resources, and its well-developed agricultural, biomedical, and food industries, with an additional emphasis on climate resilience. BBIC is kicking off with targeted seed grants to UMN researchers totaling \$600K/year to stimulate research in biofuels, decarbonization and carbon storage/capture solutions, and recycling/upcycling of waste

products. These efforts should strengthen competitiveness for future UMN faculty-led extramural grants, because they align closely with recently articulated federal research directions.

A second initiative aligns well with several of the high impact themes from Research 2030. The University’s global **SDG Geodesign Consortium** will foster global data-informed collaboration for achieving Sustainable Development Goals (SDGs). SDGs are a globally agreed-to framework for achieving a better and more sustainable future for our societies and our planet, and they inform many corporate responsibility programs, including those of 3M, Boston Scientific, Cargill, General Mills, Land O’Lakes, and Target. The University’s MPact 2025 plan includes SDGs as our institution’s key sustainability leadership measure. In partnership with Minnesota, US, and global partners, this new consortium will become a hub for data-informed solutions.

A research initiative we have been working on since I arrived at UMN, the **International Institute for Biosensing (IIB)**, has been established and is creating a collective global effort to identify and overcome technical barriers for advancing biosensing research. Biosensing is a rapidly growing field that has application in key areas, including food safety, agriculture, the environment, healthcare, animal health, national security, and water quality. This UMN-headquartered institute now supports a cohort of UMN PhD students that meets regularly and is connected to national and international peers—potentially at 50 universities in 14 countries—through the IIB. An interim director from our faculty is advancing the IIB’s growth, and a permanent executive director for the institute has been hired. IIB is providing fertile ground for developing collaborative proposals, both nationally and internationally, further enhancing potential future resources. Promising international partnerships are currently underway with Korea and Germany.

Last year I shared with the Board that research in national security areas remained an area of opportunity for the University, as evidenced by the lower level of DoD grants we have traditionally received compared to some peer institutions.

Research Expenditures for Select Institutions by Source - FY2022

	DoD	HHS	NSF	All Fed
Georgia Tech	694.4	56.2	60.6	940.5
Penn State	274.2	169.3	75.3	681.2
U Maryland	130.2	355.7	59.5	750.4
UCLA	55.3	622.8	72.8	848.1
Texas A&M	52.9	133.9	137.2	505.4
UMN - TC	36.2	453.7	72.2	652.4

Amounts in millions of dollars. Department of Defense (DoD), Health and Human Services (HHS), National Science Foundation (NSF), All federal agencies (All Fed) Data are from the FY22 Higher Education Research and Development (HERD) Survey. ORIS Data Services.

This past summer, Vice President for Clinical Affairs Jakub Tolar, CSE Dean Andrew Alleyne, and I co-charged a task force to assess and advance the University of Minnesota’s presence in the national security space. After extensive consultation, the

task force has submitted its findings. Among them were a potential structure for a **new faculty-led national security institute**, seven thrust areas of University strengths that align with the stated needs of national security agencies, and recommendations for future investment in secure facilities and other infrastructure and personnel. Over the coming year, we will work with faculty, UMN leadership, and other constituencies to further explore these recommendations and create this new institute.

RIO is also cultivating and strengthening engagement with partners beyond our campuses in order to equitably address complex problems in our state and world, specifically with **Tribal Colleges and Universities (TCUs)** and tribal nations, and **Historically Black Universities (HBCUs)** and their communities. In the former category, RIO leaders are exploring with tribal partners an initiative to provide paid, on-the-job experience and skills to TCU graduates at UMN in order to increase their access to high-quality jobs, to broaden their professional networks, and support pathways for those interested to pursue bachelor's degree opportunities at UMN. With regard to HBCUs, RIO has helped facilitate discussions to create a broad collaboration between UMN and North Carolina A&T, a research-intensive HBCU. As an initial cooperative venture, UMN is proposing a two-phase research partnership program that would seed collaborations between faculty members at UMN and NC A&T. The hope is that this program will help spark new joint initiatives across education and research at both institutions. RIO is also exploring new partnerships with the University of the District of Columbia, another HBCU.

RIO is also working to take UMN Technology Commercialization's success to a new level by establishing **gap and capital investment funding pools** for UMN-created inventions and companies through philanthropy and other engagement with companies and entrepreneurs.

Other RIO efforts that were launched this past year are the **Faculty Burden Reduction Committee**, which is addressing faculty administrative burden on a number of fronts and has just launched a thoughtfully created survey for a sample of UMN's faculty; and the relaunch of the **Social Justice Impact Grants program**, which this year is funding research aimed at reducing mental health stigma in the Somali community and addressing health disparities in the Hmong community through the use of online apps.

Finally, as I have shared with our leadership, our community, and with the Board last year, I strongly believe that UMN's research infrastructure and support services need to grow in order to support our growing research enterprise and to position our researchers for future funding success. I am pleased to report that we have made progress, securing some initial resources to upgrade our aging infrastructure for pre-clinical research, both in terms of new equipment and IT systems. But, to secure our place in the top tier of research universities—and certainly if we seek to move up within these leading institutions—we need to make significant institutional investment in our labs, facilities, enterprise systems, and services. This underinvestment has created some critical challenges with respect to safety, compliance, and welfare.

Pact 2025 Progress: Research Powerhouse

As part of the University's MPact 2025 Systemwide Strategic Plan, the Board has adopted the following goals for Commitment 2, Discovery, Innovation, and Impact:

- Increase high-impact discovery and scholarship
- Drive creativity, collaboration, and entrepreneurial spirit
- Engage Minnesota

These goals, along with others included in Commitment 3, MNtersections, provide a framework for the research community, leadership, and external partners to align with the overall vision of MPact 2025. RIO has been tasked to annually assess progress and report on the achievement of these research goals through the measures listed in the MPact 2025 Progress Card. The updates to this year's progress card are below.

Commitment 2 – Discovery, Innovation, and Impact		
Driver/Outcome	Baseline	December 2023 Update
Target growth for sponsored awards of 5% per year (stretch 7%) for next five years. Maintain Top 10 Public University expenditure ranking in HERD.	<ul style="list-style-type: none"> •\$876M sponsored research awards, FY2020 •#10 among US publics, HERD Survey, FY2019 	<ul style="list-style-type: none"> ●\$1.13B sponsored research awards, FY2023 ●#12 US publics, HERD Survey, FY2022
Grow to 25 start-ups per year by 2025.	•19 startups, FY2020	●23 startups, FY2023
Increase industry sponsored awards each year. (\$109M by 2025)	•\$81.6M business and industry awards, FY2020	●\$131.4M business and industry awards, FY2023
Increase the number of multidisciplinary grants each year.	1,216 grants FY2021	●1,335 grants FY2023
Increase state-sponsored research.	•\$412M, state-sponsored research awards, FY2016-2020	●\$495.6M, state-sponsored research awards, FY 2019-2023
Elevate USNWR National Public rankings and Shanghai rankings.	<ul style="list-style-type: none"> • #26 USNWR • #40 in world, ARWU (Shanghai) ranking, FY2020 	<ul style="list-style-type: none"> ● #23 USNWR ● #44 in world, #10 among US Publics ARWU (Shanghai) ranking, FY2023

Commitment 3 - MNtersections		
Increase the number of med-tech/health science disclosures each year.	•239 med-tech/health-science disclosures, FY2021	● 210 disclosures, FY2023
Increase the number of food, ag-tech, and natural resource related disclosures each year.	•33 Food, ag-tech, and natural resource-related disclosures, FY2021	● 56 disclosures, FY2023
		● inside targeted range ● outside targeted range

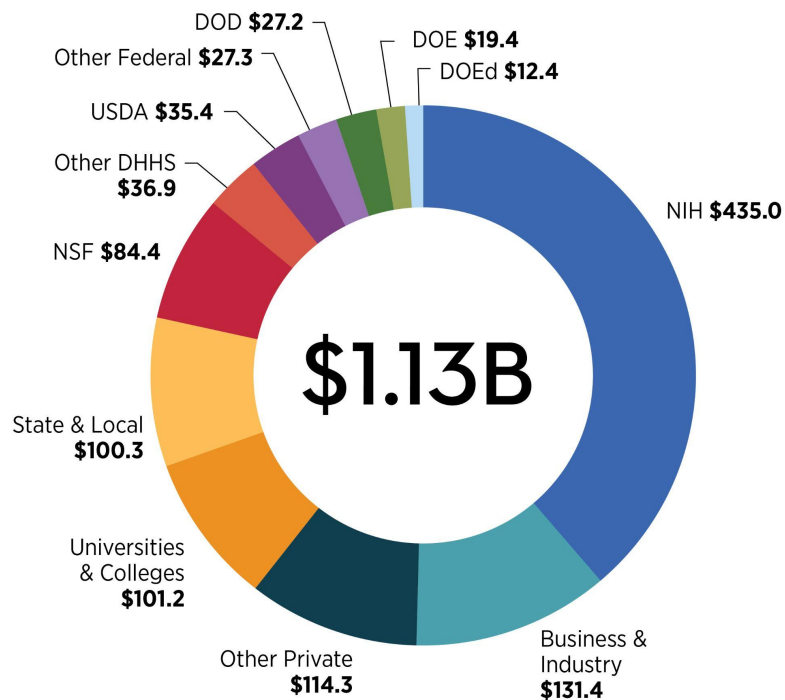
In summary, the University research enterprise is making strong progress on achieving MPact 2025 goals and measures. There are, in addition to these research measures, other progress card goals that involve RIO in partnership with the provost and senior vice president for finance and operations. Where appropriate, we have aligned our efforts with them to ensure success.

Research Statistics and Outcomes: Fiscal Year 2023

University of Minnesota faculty and staff competed successfully for **\$1.13 billion** in sponsored research awards in FY2023. That award level was the **University's second largest ever and an increase of 7.1% from the previous year.**

The University received over half of its sponsored research funding (60%) directly from federal sources. In FY2023, federal awards totaled \$678 million, which was an increase (\$60 million; 9.7%) compared to the prior year. Non-federal sources totaled \$447 million which was an increase (\$15 million; 3.4%) compared to the prior year.

Figure 1: Awards by Major Source (FY2023)



*Dollar amounts in millions
Office of Research and Information Systems Data Services*

Of the \$678 million in federal research support, the National Institutes of Health (NIH) continued to be the University's largest single federal funding source, totaling \$435 million (see Figure 1 above). This amount represents an increase (\$76 million; 21.1%) compared to the previous year.

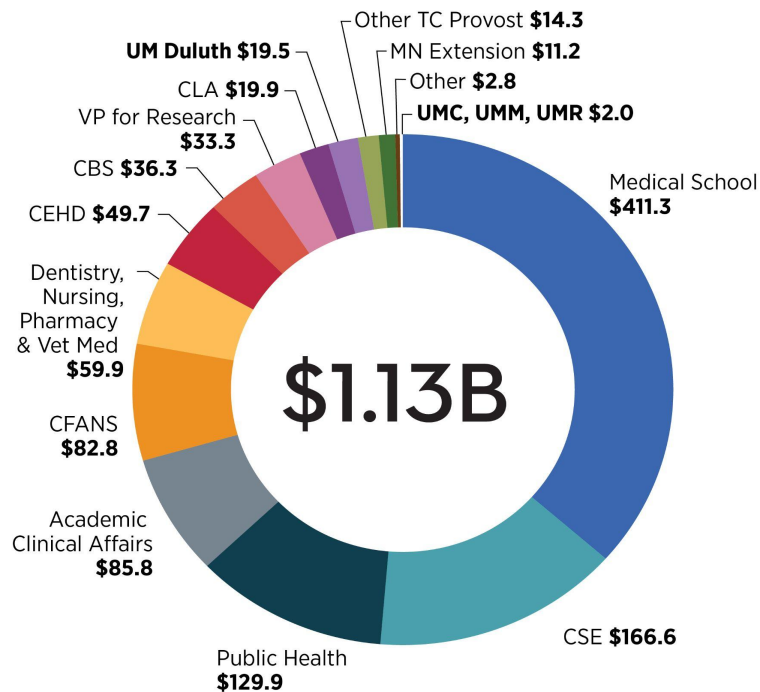
The National Science Foundation (NSF) is the second largest federal sponsor of University research totaling \$84.4 million in FY2023. This total represents a \$19.7 million (or 30.4%) increase from the previous year. According to national sources, the federal government was flat funded through December 23, 2022 but since that date there have been increases for certain federal research agencies. This remains an area of opportunity for our enterprise growth.

The \$131.4 million in business and industry (B&I) funding was up \$38.8 million (41.9%) in FY2023 when compared to the prior year; but similar to last year, this change in B&I funding continues to be driven by the COVID-19 pandemic related funding received in FY2021 through the company Leidos.

The State of Minnesota and Local Government category provided \$100.3 million in funding in FY2023, a decrease (26.0%) from the year prior. The State of Minnesota comprises the majority of this total (\$90.2 million). The decrease in funding reflects the State’s historical pattern of granting more award funding in the first year (FY2022) of its biennial budget cycle than the second (FY2023).

Figure 2 illustrates how the University’s \$1.13 billion of sponsored research funding is distributed within the University’s colleges and campuses. This year, those colleges with the largest annual percentage increases in research funding include: the Medical School, up \$102.3 million to \$411.3 million (33.1%), the College of Science and Engineering (CSENG), up \$13.7 million to \$166.6 million (9.0%), and the School of Public Health, up \$14.5 million to \$129.9 million (12.6%). The amount awarded to medical and health science-related units was \$686.9 million, or 61.0% of total awards.

Figure 2: Research Awards by College & Campus (FY2023)



*Dollar amounts in millions
Office of Research and Information Systems Data Services*

Year-Over-Year Trends

Table 1 and Figure 3 summarize the year-over-year distribution trend of the University’s sponsored research awards for the years FY2014 to FY2023. Over this ten-year period, the University has generally experienced an on average increasing growth trajectory in awards from all categories of research sponsors.

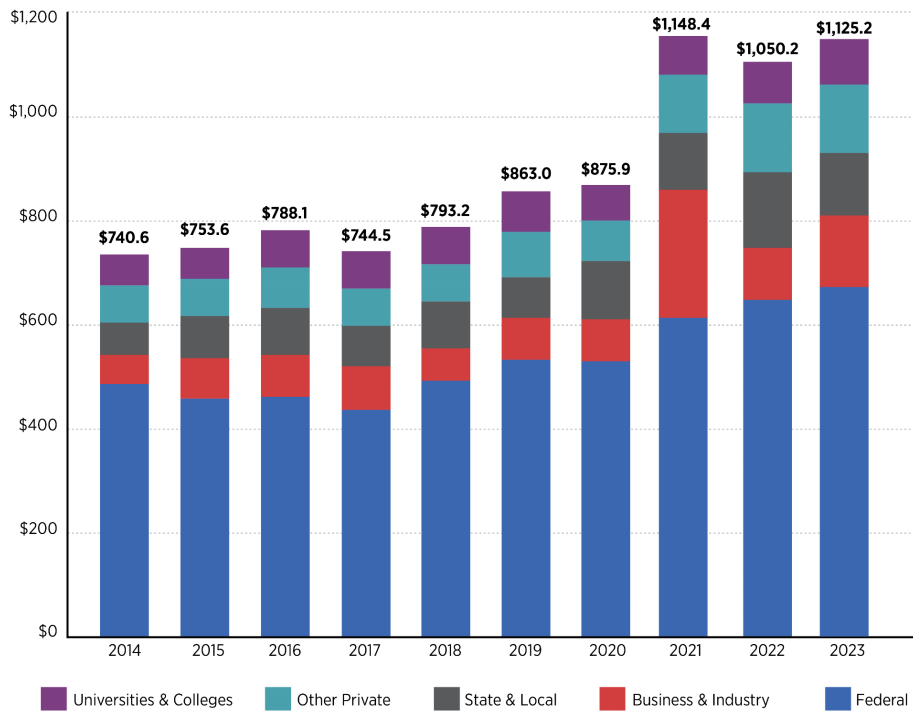
This latest annual **7.1% increase in total research awards continues to meet the goals set forth in the University’s MPact 2025 plan** including: targeting growth for sponsored research awards of 5% per year, increased state-sponsored research (over a rolling five-year period), and increased industry-sponsored awards.

Table 1: Research Awards by Source Category (FY2014-2023)

	Federal	Business & Industry	State & Local	Other Private	Universities & Colleges	TOTAL
2014	\$490.2	\$55.2	\$64.6	\$69.7	\$60.9	\$740.6
2015	\$463.1	\$78.0	\$79.3	\$72.4	\$60.7	\$753.6
2016	\$466.3	\$80.8	\$90.9	\$77.7	\$72.4	\$788.1
2017	\$438.9	\$83.9	\$76.4	\$72.3	\$73.1	\$744.5
2018	\$494.5	\$64.1	\$90.3	\$71.7	\$72.5	\$793.2
2019	\$537.8	\$80.4	\$79.4	\$86.5	\$78.9	\$863.0
2020	\$535.3	\$81.6	\$112.4	\$78.7	\$68.0	\$875.9
2021	\$603.5	\$255.5	\$107.5	\$107.1	\$74.8	\$1,148.4
2022	\$617.9	\$92.6	\$135.5	\$119.4	\$84.9	\$1,050.2
2023	\$678.0	\$131.4	\$100.3	\$114.3	\$101.2	\$1,125.2

*Dollar amounts in millions
Office of Research and Information Systems Data Services*

Figure 3: Sponsored Awards by Source, FY2014-2023



*Dollar amounts in millions
Office of Research and Information Systems Data Services*

Over the last five years coming out of a global pandemic that significantly altered research activities, there has been a 30% growth in new award funding to the University. In addition, the University continues to increase the number of high-dollar awards (>\$1 million) that it receives, which is included in the overall continued growth trajectory of award funding. There was a 25% growth (116 to 145) in the number of higher-dollar awards coming to the University over the past five years.

National and Global Analysis: Peer Comparison

Research and Development (R&D) Expenditures

The National Science Foundation Higher Education Research and Development (NSF HERD) Survey is the primary source of national comparative information on R&D expenditures in US higher education. The NSF HERD survey is completed annually by over 900 higher education institutions. While there is no single indicator or composite number that accurately represents the totality of research impact at an individual institution, the HERD survey data do provide a credible, uniform, and nationally-accepted basis for peer comparisons.

In NSF’s most recent FY2022 survey, the University posted over \$1.20 billion in R&D

expenditures, a 12% increase over FY2021. That expenditure level resulted in the University ranking 12th among US public research universities, up from 14th in FY2021 (See Table 2 below). This #12 ranking gets us closer to achieving the institutional MPact 2025 goal of top ten ranking by 2025.

Owing to HERD survey reporting requirements imposed by NSF, the University’s \$1.20 billion represents only research expenditures for the Twin Cities campus. **When all UMN campuses are reported together, total systemwide R&D expenditures are \$1.227 billion and puts us in a virtual tie with #11 ranked Maryland.**

Table 2: Top 20 US Public Research Institutions, Two Ranking Systems

	NSF / HERD 2022*		ARWU (Shanghai) 2023		
	Public	Expenditures	World	US	US Public
UC San Francisco	1	\$1,805,950	21	16	5
Michigan	2	\$1,770,708	26	18	6
Washington	3	\$1,559,708	18	14	3
UCLA	4	\$1,536,197	13	11	2
UC San Diego	5	\$1,533,357	19	15	4
Wisconsin	6	\$1,523,513	35	23	8
Ohio State	7	\$1,363,388	101-150	39-51	19-24
North Carolina	8	\$1,361,028	31	21	7
Pittsburgh	9	\$1,251,998	83	36	17
Georgia Tech	10	\$1,231,485	151-200	52-61	25-28
Maryland	11	\$1,228,550	50	28	11
Minnesota - Twin Cities	12	\$1,202,084	44	26	10
Univ Texas M.D. Anderson Cancer Ctr	13	\$1,182,536	80	35	16
Texas A&M	14	\$1,152,666	151-200	52-61	25-28
Florida	15	\$1,085,834	101-150	39-51	19-24
Penn State	16	\$1,019,940	101-150	39-51	19-24
UC Berkeley	17	\$981,035	5	4	1
UC Davis	18	\$883,807	101-150	39-51	19-24
Texas	19	\$845,896	43	25	9
Arizona	20	\$824,340	101-150	39-51	19-24

Dollar amounts in thousands.

All UMN Campuses Total: \$1.227B

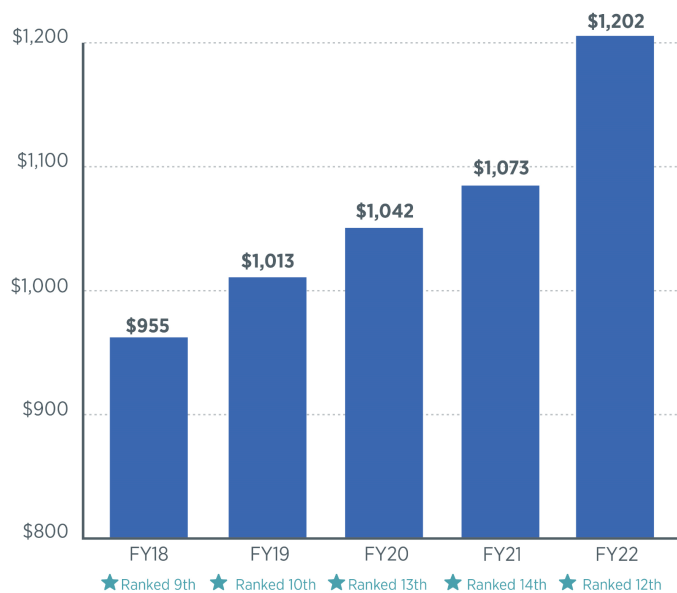
**UC - San Francisco and M.D. Anderson Cancer Center are stand-alone medical schools without undergraduate education programs. Office of Research and Information Systems Data Services Data Services.*

What lessons can be drawn from the University’s data and its ranking in the NSF HERD

ranking? Overall, NSF’s HERD data places the University among an elite group of US public research universities—in the top 2.5% of the more than 900 colleges, universities, and institutes reporting in the survey. Why are rankings important? Because they assist in attracting talented students, faculty, staff, and others to our University. The ranking and increased research expenditure is directly correlated with the retention of the researchers.

This most recent year turns around a trend of decreased rankings coming out of the pandemic, and the University’s decision to significantly reduce research activities during that time (see Figure 4).

Figure 4: Higher Education R&D Expenditures Twin Cities Last Five Years



Dollar amounts in millions.

Source: NSF HERD Survey. Office of Research and Information Systems Data Services.

Academic Ranking of World Universities (ARWU)

Table 2 (above) also reports another widely accepted and cited ranking system—the Academic Ranking of World Universities (ARWU)—sometimes called the Shanghai index. This system relies on a number of indicators that serve as a proxy for accomplishments and strengths relative to the best performing research institutions in the country and the world, respectively. With respect to research, the ARWU relies on the academic impact of peer-reviewed research, number of Nobel laureates, and related research measures. This additional measure ranks the University as highly competitive—#10 among US public research universities and 44th among all world universities, an MPact 2025 measure. The organization also produces a Global Ranking of Academic Subjects, focusing on scholarship within 55 specific academic fields. **Eight subjects at the U of M were ranked in the top 25 globally**, including ecology (ranked No. 3 in the world), library

and information science (No. 4), management (No. 13), communication (No. 17), economics (No. 20), psychology (No. 23), statistics (No. 24) and medical technology (No. 24). Out of the 55 subjects ranked, 34 subjects at the U of M were recognized among the top 100 in the world. Here is the complete list of the top 100:

Global Ranking of Academic Subjects: Top 100		
Ecology (No. 3)	Agricultural Sciences (No. 51-75)	Biological Sciences (No. 76-100)
Library & Information Science (No. 4)	Business Administration (No. 51-75)	Chemical Engineering (No. 76-100)
Management (No. 13)	Dentistry & Oral Sciences (No. 51-75)	Clinical Medicine (No. 76-100)
Communication (No. 17)	Earth Sciences (No. 51-75)	Electrical & Electronic Engineering (No. 76-100)
Economics (No. 20)	Law (No. 51-75)	Environmental Science & Engineering (No. 76-100)
Psychology (No. 23)	Mechanical Engineering (No. 51-75)	Mathematics (No. 76-100)
Medical Technology (No. 24)	Physics (No. 51-75)	Nursing (No. 76-100)
Statistics (No. 24)	Political Sciences (No. 51-75)	Transportation Science & Technology (No. 76-100)
Veterinary Sciences (No. 26)	Public Administration (No. 51-75)	
Sociology (No. 30)	Remote Sensing (No. 51-75)	
Geography (No. 32)	Water Resources (No. 51-75)	
Biotechnology (No. 33)		
Education (No. 36)		
Public Health (No. 43)		
Finance (No. 49)		

Global Ranking of Academic Subjects 2023

Technology Commercialization and Corporate Engagement

As a leading American research university and a land-grant institution, the University of Minnesota is committed to facilitating and accelerating the transfer of knowledge into the world where it can have the most impact and do the most good. UMN Technology Commercialization (Tech Comm), housed within the Research and Innovation Office (RIO), is playing a key role in technology transfer (e.g., licensing and patents), startup companies, and a revitalized corporate engagement effort at the University.

Commercialization Highlights

The University’s efforts to commercialize technology maintained a strong performance in FY2023. The University continued to be innovative in a broad set of technology areas, and Tech Comm played a vital role in bringing those technologies to businesses of all sizes, reflected in the number of licensing deals and a new record number of startups.

The University’s technology transfer work has been recognized for its excellence in national and global performance, and these are a few of the Tech Comm team’s recent accomplishments and recognitions:

- Record number of startups (23) launched in a fiscal year
- FY2023 gross licensing revenue of \$16,640,173, a major portion of which is reinvested in UMN research

- Ranked #18 on the National Academy of Inventors Top 100 US Universities Granted US Utility Patents
- UMN startups XanthosHealth, Carba, and Rehabnetics were named semifinalists in the 2023 MN Cup and Carba won the grand prize.
- UMN startup Phoam Labs (formerly BKB Floral) took first place at the 2022 MN Cup and received \$50,000 in funding. UMN startup Q-rounds was recognized as the life science/health IT division winner.
- UMN’s Discovery Launchpad helped 31 UMN companies develop business and fundraising plans, market-fit analysis, and initial customer discovery.
- UMN’s Discovery Capital program set a new record of six investments totaling \$1.6 million, leveraging an additional \$36 million in external investments.

Technology Licensing, Inventions, and Patents

Table 4 (below) shows FY2023 technology transfer metrics, including the record breaking number of 23 startups created, which aligns with the University's strategic plan, MPact 2025, as Tech Comm works towards a goal of 25 annual startups created by 2025. The University ended the year having created 235 startup companies since 2006, underscoring its strong pipeline of research and substantial impact in the marketplace. Gross revenue remained strong, with the University securing licensing revenue of \$16.64 million—a major portion of this reinvested back into UMN research. In addition, 231 new licensing deals were executed, and 448 revenue generating agreements were created or maintained.

Table 4: Technology Commercialization Statistics (FY 2019-2023)

	2019	2020	2021	2022	2023
LICENSES & REVENUE					
New Licenses	223	235	236	211	231
Current Revenue Generating Agreements	571	601	575	467	448
Gross Revenue	20.7	16.2	17.4	16.1	16.6
STARTUPS					
Startup Companies Formed	19	19	20	22	23
INVENTIONS & PATENTS					
Invention Disclosures	391	397	332	315	360
New Patent Filings	163	152	126	156	146
New Patent Filing Rate*	42%	38%	38%	50%	37%
Issued Patents (US and Foreign)	187	182	181	241	225
MN-IP					
MN-IP Research Agreements	103	73	60	53	44
Companies w/ MN-IP Research Agreements	77	69	51	43	39
Sponsored Research Commitments	22.5	27.9	15.3	13.3	19.8

Technology Commercialization; Wellspring Sophia.

*Starting in FY2019, New Patent Filing Rate is calculated. The formula is New Patent Filings / Disclosures.

Invention disclosures from faculty and other researchers bounced back from 315 to 360 in FY2023, another positive sign that University research has recovered from the pandemic, which kept many UMN researchers from their facilities entirely. A subset of these disclosures in medtech/health science and in food, ag-tech, and natural resource areas are reported as part of the MPact 2025 measures for the University (see the MPact 2025 section above).

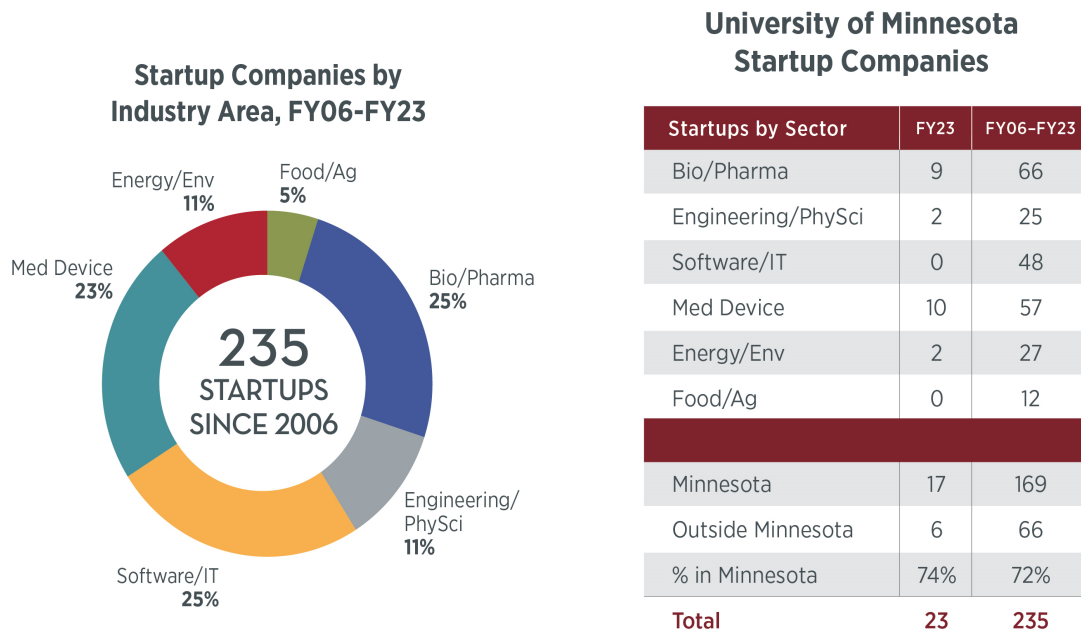
Patent filings were down slightly in FY2023, which is often a reflection of the previous year’s invention disclosures, which were down in FY2022. Disclosures were up in FY2023 in part because of those made by researchers supported by Tech Comm’s new Early Innovation Fund. Overall, Tech Comm also received a larger than normal number of copyrightable and trademarkable inventions versus patentable ones.

Venture Center

Over the last year, Tech Comm’s Venture Center launched a record 23 startup companies based on discoveries and inventions by University researchers. As is typically the case, the University’s new startups spanned many sectors (Figure 5 below).

Since 2006, Tech Comm’s Venture Center has helped launch more than 235 startup companies with 75 percent still active, far above the average for startup success. Overall, UMN startups have raised more than \$1.8 billion in investment capital, IPOs, and acquisitions and 11 UMN startups have been acquired or have gone public since 2017, underscoring the relevance and value of University ideas and technologies.

Figure 5: Startup Companies by Industry Area, FY2006-2023



Technology Commercialization, Wellspring Sophia

Discovery Launchpad

Discovery Launchpad is the University of Minnesota's incubator for coaching and support for companies commercializing technology stemming from University research. During FY 2023, Discovery Launchpad (DLP) guided 31 UMN companies, helping them to develop their business and fundraising plans, market fit analysis, and initial customer discovery.

DLP also provided customized coaching to 14 non-UMN startups through its Discovery Launchpad MN (DLPMN) program which helps accelerate the growth of early-stage Minnesota companies beyond the University. DLPMN, which leverages the knowledge, experience, connections, and success of DLP, is a collaboration between Tech Comm's Venture Center and the state's Launch Minnesota program under the Department of Employment and Economic Development, which provides funding.

Corporate Engagement

As a University priority, the Corporate Engagement Center (CEC) provides two important functions to the University and its system campuses. First, it offers a unified and consistent point of contact for corporations interested in partnering with the University, and faculty looking to engage with the private sector. It connects companies with the resources of the University, including its research enterprise. Second, it manages a portfolio of top corporate prospects to ensure an engagement strategy is implemented with each of the companies in the portfolio.

Figure 6: Peer Benchmarking (VSE) - Corporate Giving

Institution	FY22	Rank	FY21	Rank	FY20	Rank
Northwestern University	\$152,116,190	1	\$140,189,175	3	\$103,587,903	3
Ohio State University	\$76,174,490	2	\$213,675,256	1	\$136,653,488	1
University of Minnesota	\$74,203,315	3	\$90,874,267	4	\$73,832,192	4
University of Wisconsin-Madison	\$64,934,206	4	\$32,573,437	10	\$29,972,962	10
University of Maryland-College Park	\$62,695,180	5	\$40,937,440	7	\$43,459,869	7
Indiana University	\$61,633,888	6	\$156,270,923	2	\$125,974,059	2
Rutgers University	\$55,778,179	7	\$50,939,583	6	\$52,945,704	6
University of Illinois at Urbana-Champaign	\$52,356,350	8	\$66,632,630	5	\$73,693,186	5
University of Nebraska	\$48,700,364	9	\$21,531,540	13	\$25,721,827	13
University of Iowa	\$43,893,571	10	\$26,418,129	12	\$26,686,388	12
University of Michigan	\$28,623,605	11	\$34,980,584	8	\$35,836,440	8
Penn State University	\$26,818,945	12	\$27,781,871	11	\$29,916,785	11
Purdue University	\$24,575,578	13	\$33,877,645	9	\$30,468,231	9
Michigan State University	\$17,821,457	14	\$13,509,479	14	\$13,384,667	14

Source: Council for Advancement and Support of Education: Voluntary Support of Education (VSE) survey.

Includes: cash, stock and in-kind gifts received; present value of irrevocable deferred gifts; research grants received from private sources.

CEC's work arose from a desire to build more corporate partnerships and contribute to economic growth in Minnesota and beyond. The University of Minnesota has a strong

tradition of engaging companies for philanthropy, regularly ranking in the top four of the Big 10 for corporate philanthropy (see figure 6 above).

The CEC seeks to further extend UMN corporate engagement in five key areas:

- Technology and innovation
- Executive and employee engagement
- Workforce Development
- Outreach and Visibility
- Place Based Partnerships

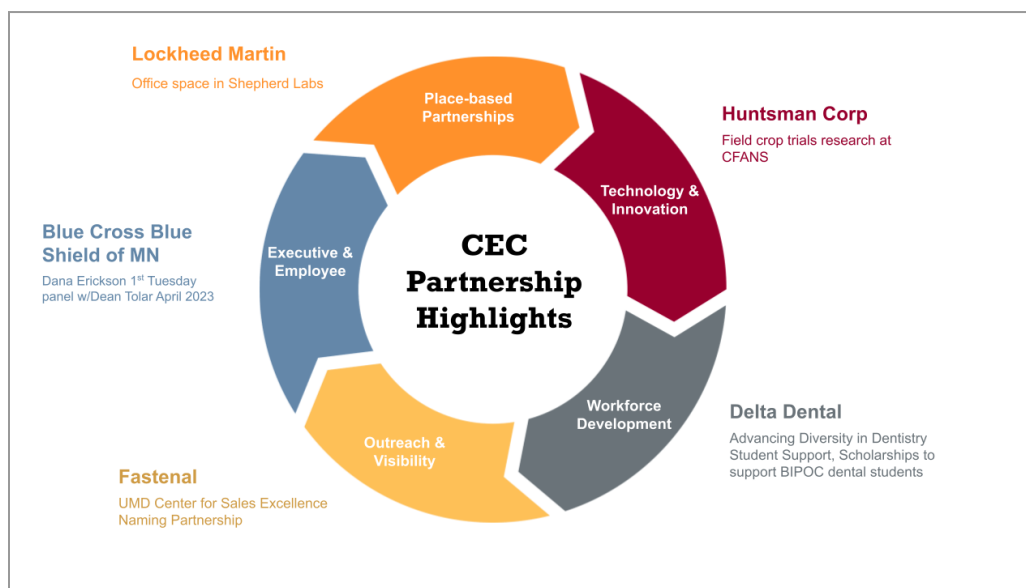
Since it was launched formally in 2022, the CEC has quickly developed a reputation among UMN's peer institutions for being a strong model for how to engage corporations. A number of peer institutions, (Georgia, Pittsburgh, Iowa, Auburn, Wisconsin) have inquired about our model and the unique partnership between OVPR and UMF. The CEC has also received positive feedback from companies about how the center has made it easier to navigate the University of Minnesota.

The vice president for research and innovation plays a key role in the shared leadership of CEC, and has dedicated significant time to advancing corporate partnerships that will benefit the University. With the help of CEC staff, University academic leaders have engaged and built relationships with more than 20 key corporate executives, and hosted well-attended campus visit, including MN Corn Growers reception, pre-event receptions for the Carlson 1st Tuesday speakers (Ecolab, Blue Cross Blue Shield, Huntington Bank, Securian, and Fastenal), a Cargill Thrive Scholars luncheon, the previously mentioned Research 2030 Workshop, and a 3M Executive Luncheon & Poster Session. The latter event attracted more than 150 3M employees and 45 UMN researchers, including many postdocs and students, who were able to discuss possible real world applications for many researchers' projects. The 3M event led to new research funding from 3M.

CEC remains focused on a strategic portfolio of large corporations, including all 15 of Minnesota's Fortune 500 companies, that can engage across the University for different objectives that CEC has outlined. Examples of new partnerships the CEC is leading on are new field crop trials for Huntsman Corporation, co-location space for Lockheed Martin, Executive and employee engagement/education with Blue Cross Blue Shield of Minnesota, a philanthropic naming opportunity for Fastenal at UMD, and partnership with Delta Dental to fund scholarships for dental students help diversify the dental field in Minnesota. (see Figure 7).

CEC staff and partners across the University also helped generate \$88.8 million in corporate gifts, grants and other activities. Of that total, \$39.1 million or 44% were from CEC strategic portfolio companies.

Figure 7: CEC Partnership Highlights



In addition to working to help advance relationships with key corporate partners, RIO is a key partner with UMF’s Foundation’s Engagement team working with major private foundations, including the Research Corporation for Science Advancement, the Science Philanthropy Alliance, and the WM Keck Foundation.

RIO Research Advancement Programs

RIO oversees a number of internal grant programs and initiatives designed to support and nurture the University’s research enterprise. Resources provided by its Research Advancement (RA) office provide a broad range of resource opportunities, from smaller awards provided to jump-start new ideas to larger awards designed to incentivize collaborations across disciplines that address strategic needs. **Over the past five years, RA programs have provided more than \$25.8 million to researchers across all campuses — \$37.8 million when including grant matching funds.**

Ideally, RA awards seed research that has the potential to attract sustaining external support, but they also provide funding for projects important to our state and its communities when other resources are not available. RA funds are also used to leverage external support where internal matching funds are required, to acquire critical infrastructure having the potential to accelerate the progress of multiple researchers, and to catalyze research impact.

Grant-in-Aid

The Grant-in-Aid (GIA) of Research, Artistry, and Scholarship Program provides grants to support scholarly and artistic activities of faculty and their graduate students to foster

excellence. GIA projects represent the breadth and depth of University research in all disciplines and fields. While any faculty can apply for GIA funding, it plays an especially important role in providing new professors and emerging researchers with opportunities to pursue research and scholarship that may not yet have received external funding. In the past five years, \$12.5 million has been awarded through the GIA program. For every dollar invested, \$16.5 in external funding was generated in fiscal years 2017-2021.

Grant Matching Funds

Some external funders require an institution to match funds to a specific grant activity. As grant processes become more competitive, the demand for such institutional matching funds continue to increase, resulting in higher levels of required institutional investment. The University works in partnership with colleges throughout the grant proposal process to coordinate the University's total commitment in matching funds, which averages \$1.22 million annually.

Research Infrastructure Investment Program

The Research Infrastructure Investment Program is one way the University ensures it maintains robust, state-of-the-art equipment to support research and academic endeavors. In FY2023, the \$3.2 million awarded under the program supported 19 projects across 23 departments, units, and centers at 10 colleges on two campuses. Supporting colleges or centers provided one-to-one matching funds for each award, resulting in just over \$6.4 million in total funds awarded. Awards supported research infrastructure, facilities, and support services over a variety of University research areas. Project examples include:

- Purchase of the GreenFeed system to expand research potential for measuring greenhouse gas emissions from cows and heifers;
- Establishment of a Spatial Maker Space to enable geospatial discovery at each stage of the research pipeline;
- Replacement of a 17-year-old confocal Raman microscope used by hundreds of University researchers;
- Expansion and enhancement of the equipment loan program at the University of Minnesota Healthy Weight Research Center;
- Creation of a biodegradation laboratory to screen new bio-based or sustainable materials; and
- Purchase of a new small-animal imaging system.

Social Justice Impact Grants

RIO's Social Justice Impact Grants aim to catalyze rigorous, solution-oriented research on social justice topics, including criminal justice reform, housing segregation/gentrification, systemic racism, achievement gaps, health disparities, and environmental justice. In 2023, RIO awarded a total of \$127,596 to:

- Ji Youn Shin (College of Design), *Co-Design of Mobile Health Technologies for Mitigating Health Disparities: Leveraging Strengths of the Hmong Community*

- Sophia Vinogradov (Medical School), *Promoting a Culture of Health: Exploring Mental Health Stigma and Protective Factors in the Somali American Community*
- Elizabeth Wrigley-Field (College of Liberal Arts), *Identifying the Targets for Overcoming Minnesota's Inequitable COVID-19 Deaths*

All three projects focused on healthcare in marginalized communities.

Innovation Impact Case Award

The Innovation Impact Case Award recognizes research that has led to significant impact outside of academia and has made a meaningful difference in our communities. Impact is a fundamental aspect of almost all University research programs and is more important than ever.

The award celebrates work that solves challenges benefiting individuals, communities, and organizations. Innovation and impact are defined broadly and inclusive of work in all disciplines. Award recipients received \$10,000 per case. The following two awards were given in 2023:

- Devaleena Das, College of Arts, Humanities, and Social Sciences, University of Minnesota Duluth, *Archiving Human Condition to Combat Pandemic-Misinformation*
- Sarah Huebner, School of Physics and Astronomy, University of Minnesota Twin Cities, *Citizen Science and Artificial Intelligence Combined to Conserve Earth's Natural Resources*

To celebrate the many successful cases submitted, one honorable mention award was also given out and the recipient was invited to attend the awards ceremony.

Research Technical Staff Award

Established in spring 2022, the Research Technical Staff Award was created to recognize staff for their distinguished service to the University of Minnesota research community and celebrate exemplary leadership that positively impacted colleagues and advanced the University's research mission. Five staff members from across the University received awards in this second cycle, and each received a \$1,000 personal honorarium:

- Eric Buchanan, Renewable Energy Scientist, West Central Research and Outreach Center (ROC-Morris)
- Alicia Hofelich Mohr, Research Services Coordinator, Liberal Arts Technologies and Innovation Services (CLA)
- Conrad Lindquist, Research Engineer and Lab Manager, Orthopedic Surgery, Rehab Medicine, and Physical Therapy (Med School)
- Julie Mutchler, Researcher, NRRI (NRRI UMD)
- Maria Razzoli, Research Project Specialist, Bartolomucci Lab/Integrative Biology and Physiology (Med School)

Research Informs Our Teaching

American research universities offer unique and essential skills to students of all levels, from undergraduate through doctoral. Student involvement in research benefits the research, faculty researchers, the student, and the community. Research prepares students to be the innovators of tomorrow by training them in the practices of research and discovery. Accordingly, goal and action 2.1 of the University of Minnesota's MPact 2025 plan includes the goal to prioritize research opportunities for all students and in the most recent Student Experience in the Research University (SERU) survey, **41.1% of UMN undergraduate students who responded to the most recent survey reported that they have assisted faculty in conducting research.** The MPact 2025 goal for this measure is 50% by 2025, and the University is positioned to achieve this goal.

UMN programs supporting student research experiences include:

- Undergraduate Research Opportunities Program (UROP)
- Research Experiences for Undergraduates (REU)
- Interdisciplinary Doctoral Fellowship (Graduate School)
- Undergraduate major requirements

Many of these programs are designed to tightly couple curricular offerings with ongoing research in order quickly to translate results from the field/lab/clinic to the classroom, thereby equipping students with the knowledge and expertise most in demand in the marketplace.

There are many touch points for students through the research enterprise, including training in the world-class laboratories comprising cutting-edge tools, internship opportunities at partner industries and tech comm companies, increased opportunity for gaining competitive fellowships, enhanced job opportunities due to exposure to research information through funded projects, and entrepreneurship opportunities.

Appendix

Research 2030 Workshop - Executive Summary

Vision and Goals

To answer the scientific challenges of 2030 and beyond, we must create a strategy and investment plan to make our research and development enterprise nimble, adaptable, and inclusive. Using the year 2030 as a focal point, the University of Minnesota initiated an effort to identify complex challenges and opportunities that are emerging at the intersections of economic, social, and environmental change. These challenges represent concerns for our communities and economies, while also presenting opportunities to grow through innovative new solutions and industries. Additionally, we recognize the need to develop new models for sustainable and equitable growth that provide a platform for all our citizens and institutions to thrive for generations to come.

To this goal, we are identifying research that cuts across the priorities of federal, state, and private sector partners and leads to a research environment that drives regional economic growth, supports ecosystem health, and fosters a just society from the local to global scale. Key to this is a science-based innovation ecosystem that can both understand the challenges and collide new ideas and new partnerships to find the targeted, region-appropriate solutions for long-term, equitable, and sustainable growth. The University of Minnesota is seeking to mobilize the deep science resources of an R1 Research University to be a core partner to drive this transformation in the Upper Midwest and globally. This workshop is the first in a series that will set the stage for innovative large team science efforts.

In April 2023, the University of Minnesota held a workshop to converge research leaders and key partners to identify promising areas for future research and define the core components for diverse and inclusive regional research ecosystems. Using the year 2030 as a focal point, the workshop brought together over 100 researchers and leaders from 30 state and federal government, industry, academia, and nonprofit organizations to identify research directions that cut across the priorities of federal, state and private sector partners and that are likely to lead to a research environment that drives regional economic growth and fosters a just society from the local to global scale. The sessions facilitated conversations on building research infrastructure and collaborations necessary to create systematic change that solves research, innovation, and economic development inequities.

Workshop Objectives

1. Understand government, industry, foundations, and other external partner priorities for future research.
2. Work with peers, leaders, and potential partners across diverse sectors and disciplines to converge ideas on our most pressing social, economic, and scientific challenges.
3. Discuss and debate promising research in priority topical areas to accelerate scientific and societal solutions.

4. Determine essential elements for a diverse and inclusive research ecosystem.
5. Identify a list of actionable research thematic directions for UMN to scale up toward high impact, sustainable, cutting-edge, convergence research to-impact programs.

High Impact Themes

To position the workshop for optimal outcomes, the workshop planning team initiated a process to identify 10-15 topic themes representative of high level areas of research and innovations that are promising for achieving robust and sustainable growth. The team analyzed documents from 13 priority federal government, industry, and foundation funders to identify 14 shared high priority research themes that could be used to focus discussions in the workshop. Interviews with 17 respected and recommended experts from 10 colleges then further informed and refined the themes for discussion.



Note: Themes circled have institutional strategies underway.

Cross-Cutting Topics

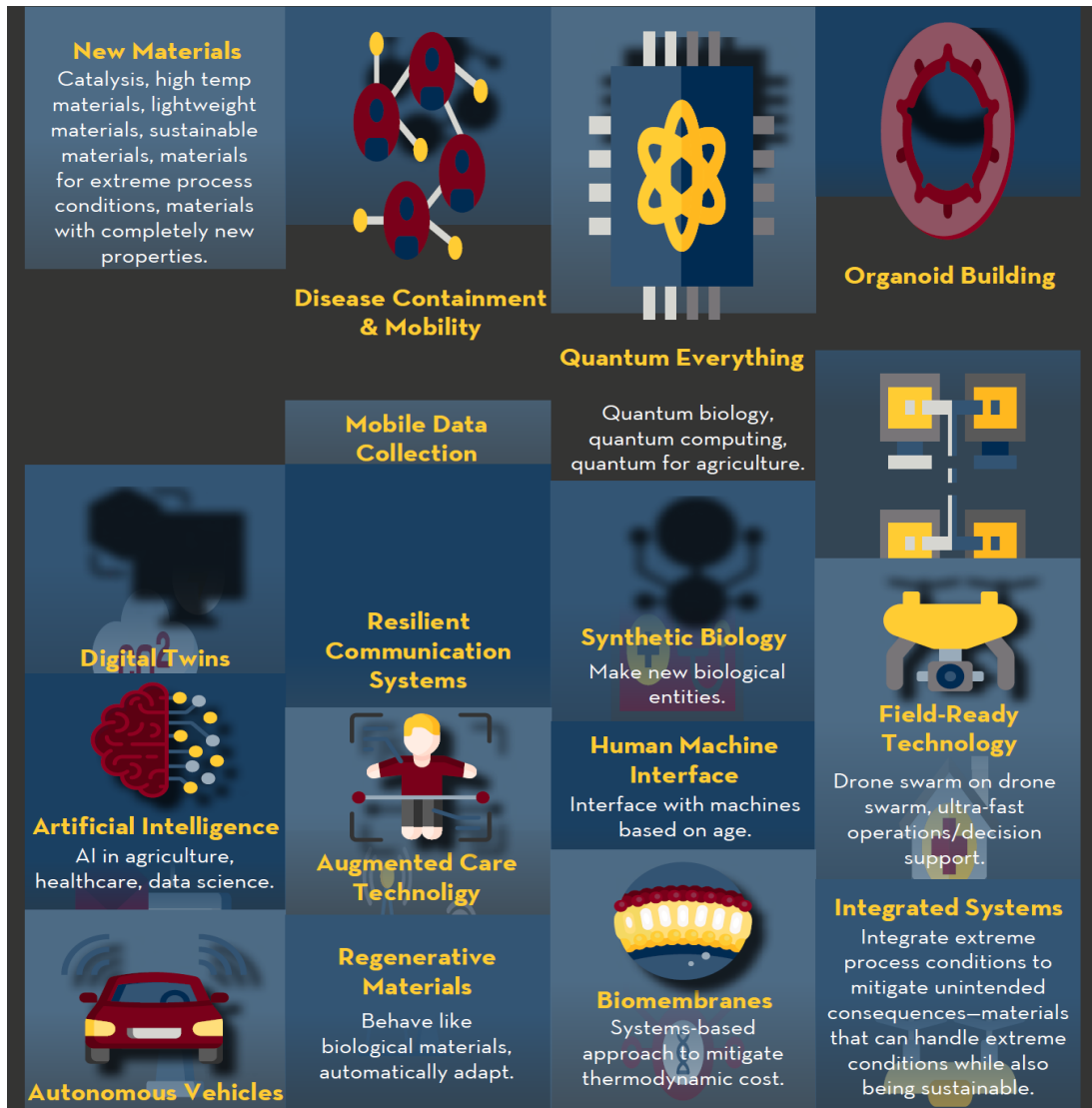
The workshop identified several cross-cutting research topics that are essential for future research directions. **Trust and Empathy** aims to establish trust and trustworthiness in society and science through effective communication, political engagement, education, ethics, and democracy. A **New Innovation and Collaboration Research Enterprise** emphasizes the need for establishing an innovation-collaboration ecosystem, reducing barriers, and fostering public-private-academic-community collaborations for science-based innovation and solutions. The **New STEM Workforce** highlights our need to prioritize industry feedback and inclusivity as we train and educate future generations of STEM workers. **Data** focuses on collecting, analyzing, managing, and sharing data, ensuring data quality and validation, and mining data complexity. The **Science of Inclusion and**

Justice highlights the need for equitable, inclusive, and ethical science that values diversity and empowers BIPOC voices and approaches. **Valuing the Undervalued** aims to value ecosystem services, communities, diversity, and sustainability. Understanding and **Advancing Resilience and Flexibility in a Rapidly Changing, Complex World** focuses on advancing resilience, sustainable development, and managing complex systems. The **Biological Revolution** emphasizes the need for biotechnology, computational biology, gene editing, and other technological advances for sustaining life on earth and human well-being. These themes represent important directions for future research that address contemporary challenges and require interdisciplinary collaboration.



Technologies of Interest

Technology development is an engine for economic growth and critical to advance the research and industry enterprise. Nearly every table and conversation at Research 2030 identified new technologies that are critical areas for investment in our region. To highlight these critical technology horizons, we compiled a list of recommended technology topics for consideration.



Workshop Summary and Next Steps

Themes, research directions, and actions identified by the literature analysis and workshop participants will be used to advance the regional research enterprise in the Upper Midwest. Over the coming year, the University of Minnesota will work with industry, foundation, and government partners to establish institutional programs for 5-10 of the research directions with high potential for impact and funding and provide wrap-around support for partnership development, resource mobilization, interdisciplinary team mobilization, and scaling. For all remaining research directions and actions identified, RIO will work with colleges, faculty, and partners to find the right teams and programs to support smaller scale program development and implementation.

Annual Report on the State of the University Research Enterprise

Board of Regents | Mission Fulfillment Committee | December 7, 2023

Shashank Priya

Vice President for Research and Innovation

Office of the Vice President for Research

Now:

Research & Innovation

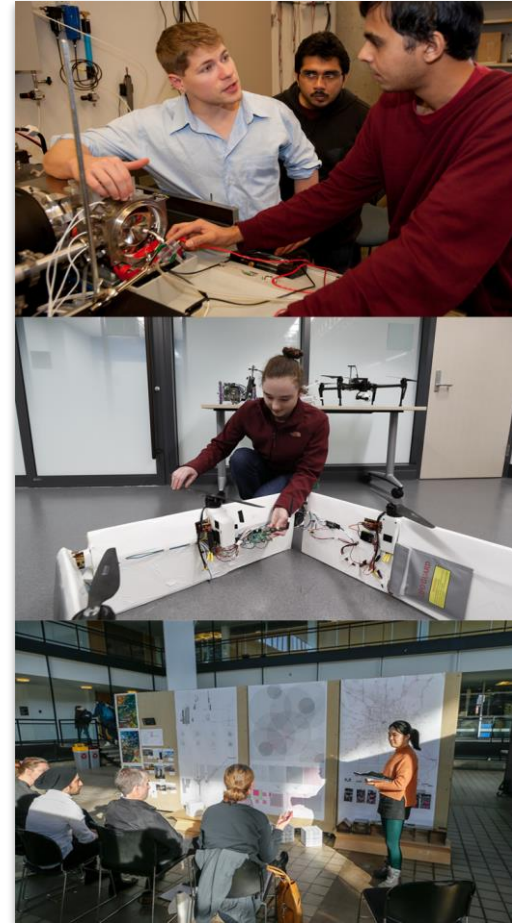
UNIVERSITY OF MINNESOTA

Driven to Discover[®]







The Bottom Line

- The state of the University's research enterprise is strong and having an impact
- MPACT 2025 progress metrics are on target
- U globally recognized for technology commercialization and innovation
- Research 2030 Workshop: provides a strategic framework
- Investing resources to equitably addressing complex problems in our state and world
- UMN's research infrastructure and support services need to grow to support our growing research enterprise
- Research informs our teaching





Commitment 2 – Discovery, Innovation, and Impact

Driver/Outcome	Baseline	December 2023
<p>Target growth for sponsored awards of 5% per year (stretch 7%) for next 5 years.</p> <p>Maintain Top 10 Public University expenditure ranking in HERD.</p>	<ul style="list-style-type: none"> • \$876M sponsored research awards, FY2020 • #10 among US publics, HERD Survey, FY2019 	<ul style="list-style-type: none">  \$1.13B sponsored research awards  # 12 US publics, HERD Survey, FY2022
<p>Grow to 25 startups per year by 2025.</p> <p>Increase industry sponsored awards each year (\$109M by 2025).</p>	<ul style="list-style-type: none"> • 19 startups, FY2020 • \$81.6M business and industry awards, FY2020 	<ul style="list-style-type: none">  23 startups, FY2023  \$131.4M business and industry awards, FY2023

Commitment 2 – Discovery, Innovation, and Impact

Driver/Outcome	Baseline	December 2023
Increase the number of multidisciplinary grants each year.	<ul style="list-style-type: none"> • 1,216 multidisciplinary grants, FY2021 	<ul style="list-style-type: none"> ● 1,335 multidisciplinary grants, FY2023
Increase state-sponsored research total (FY2021-2025)	<ul style="list-style-type: none"> • \$412M, state-sponsored research awards, FY2016-2020 	<ul style="list-style-type: none"> ● \$495.6M, state-sponsored research awards, FY2019-2023
Elevate USNWR National Public rankings and Shanghai rankings.	<ul style="list-style-type: none"> • #26 USNWR • #40 in world, #10 among US Publics ARWU (Shanghai) ranking, FY2020 	<ul style="list-style-type: none"> ● #23 USNWR ● #44 in world, #10 among US Publics ARWU (Shanghai) ranking, FY2023

Commitment 3 – MNtersections

Driver/Outcome	Baseline	December 2023
<p>Increase the number of med-tech/health science disclosures each year.</p>	<ul style="list-style-type: none"> • 239 med-tech/health-science disclosures, FY2021 	<p> 210 disclosures, FY2023</p>
<p>Increase the number of food, ag-tech, and natural resource related disclosures each year.</p>	<ul style="list-style-type: none"> • 33 Food, ag-tech, and natural resource-related disclosures, FY2021 	<p> 56 disclosures, FY2023</p>

State of the Research Enterprise

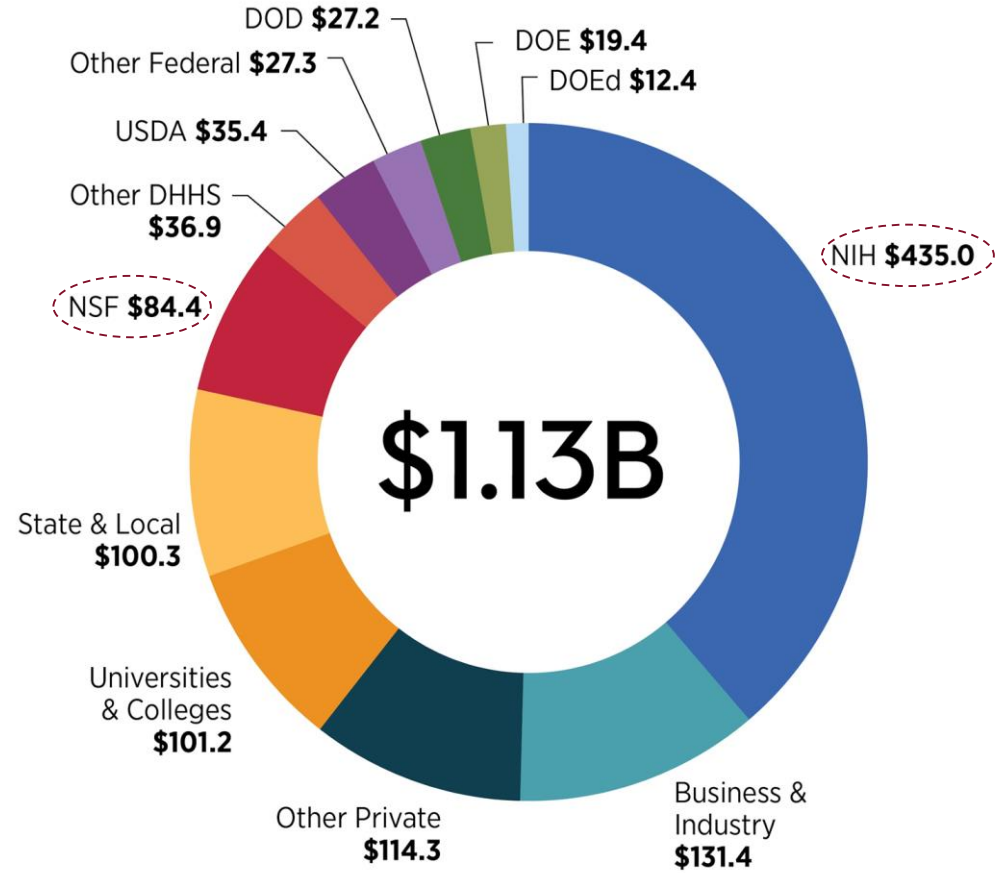
FY 2023 Research Funding Levels



Awards by Source

FY23, \$ in millions

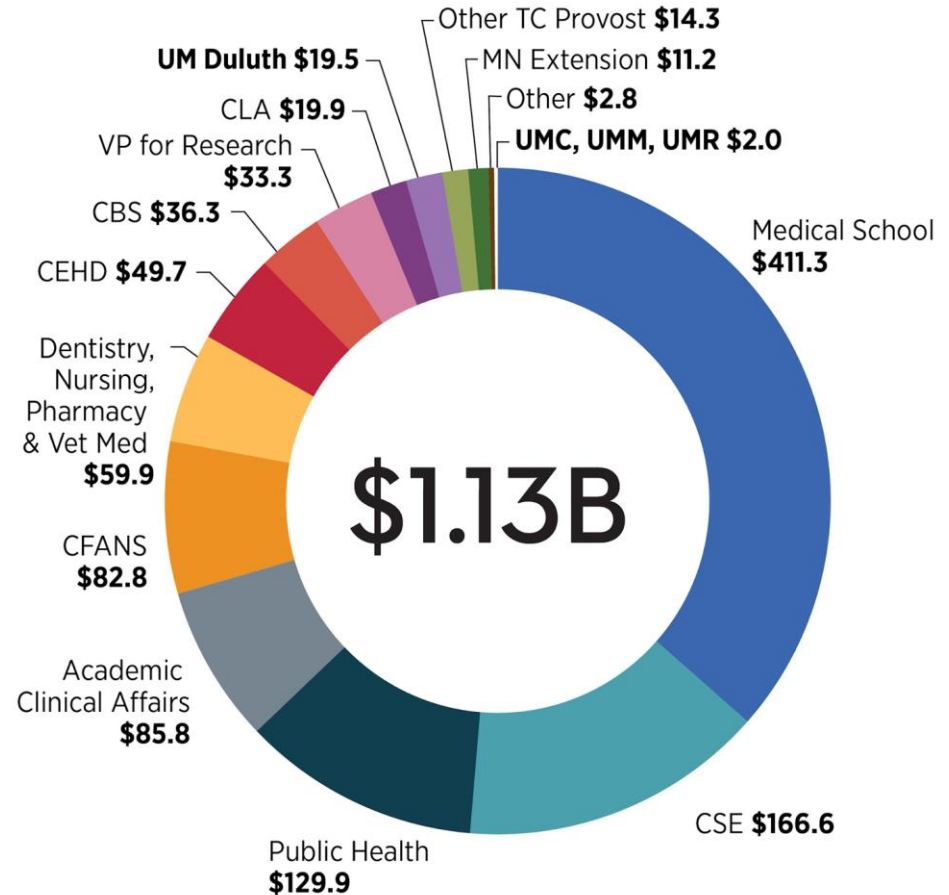
- 60% of awards from direct federal sources
- National Institutes of Health (NIH) remains the largest single funder, is up \$76 million or 21.1% year-to-year
- National Science Foundation (NSF), the 2nd largest federal funder, is up \$19.7 million or 30.4% year-to-year



Awards by College and Campus

FY23, \$ in millions

- 61% of award funding to medical and health-science related depts.
- Units with significant research funding increases included:
 - **Medical School** ↑
\$102.3M (33.1%)
 - **CSE** ↑
\$13.7M (9.0%)
 - **School of Public Health** ↑
\$14.5M (12.6%)



UMN Awarded Center to Develop Drug Treatments for Future Pandemics

- NIH funding (\$66M) to establish a center to develop antiviral drugs for pandemic-level viruses, including COVID-19.
- **Midwest Antiviral Drug Discovery (AViDD) Center** is part of a network of nine national centers established in response to the public health emergency caused by COVID-19.
- To discover effective responses to pandemics, life-threatening infections and antimicrobial resistance through basic, translational and clinical research.
- Explore antivirals for flaviviruses, such as Zika and West Nile, filoviruses, such as Ebola, and Arenaviruses.

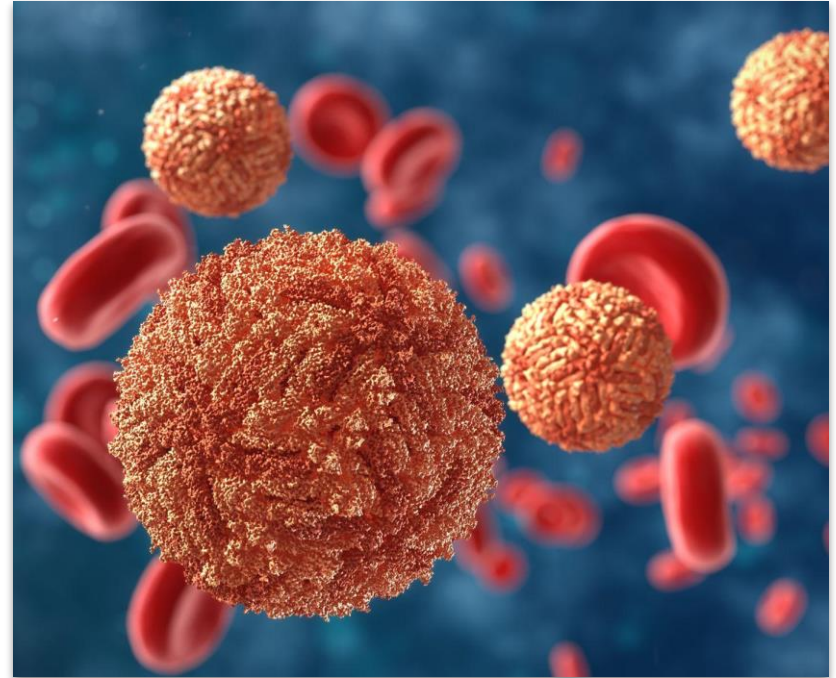


Photo: Zika virus

State of the Research Enterprise

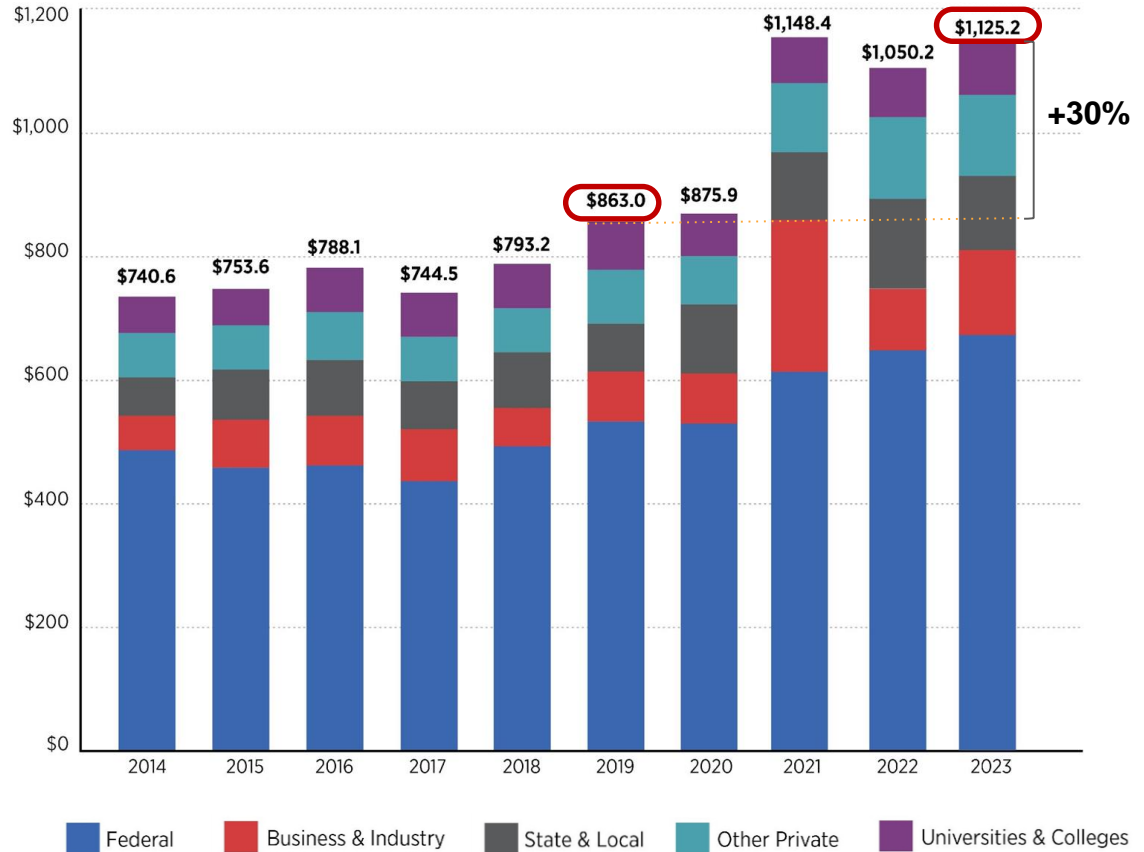
Trending and Growth



Year-Over-Year Awards

FY23, \$ in millions

- **FY23 \$1.13B second largest** sponsored award total in history, and **↑ 7.1%** from the previous year
- **30% growth** in award funding over past five years (FY2019-FY2023)



State of the Research Enterprise

Peer and Global Comparisons



National Ranking: NSF / HERD Research Expenditures

	NSF / HERD 2022	
	Public	Expenditures
UC San Francisco	1	\$1,805,950
Michigan	2	\$1,770,708
Washington	3	\$1,559,708
UCLA	4	\$1,536,197
UC San Diego	5	\$1,533,357
Wisconsin	6	\$1,523,513
Ohio State	7	\$1,363,388
North Carolina	8	\$1,361,028
Pittsburgh	9	\$1,251,998
Georgia Tech	10	\$1,231,485

	NSF / HERD 2022	
	Public	Expenditures
Maryland	11	\$1,228,550
Minnesota - Twin Cities	12	\$1,202,084
Univ Texas M.D. Anderson Cancer Ctr	13	\$1,182,536
Texas A&M	14	\$1,152,666
Florida	15	\$1,085,834
Penn State	16	\$1,019,940
UC Berkeley	17	\$981,035
UC Davis	18	\$883,807
Texas	19	\$845,896
Arizona	20	\$824,340

- All UMN campuses: \$1.227B, a virtual tie with Maryland
- Up two spots from prev year (2021) HERD rankings

Dollar amounts in thousands



National and Global Rankings: ARWU (Shanghai Index)

	NSF / HERD 2022		ARWU (Shanghai) 2023		
	Public	Expenditures	World	US	US Public
UC San Francisco	1	\$1,805,950	21	16	5
Michigan	2	\$1,770,708	26	18	6
Washington	3	\$1,559,708	18	14	3
UCLA	4	\$1,536,197	13	11	2
UC San Diego	5	\$1,533,357	19	15	4
Wisconsin	6	\$1,523,513	35	23	8
Ohio State	7	\$1,363,388	101-150	39-51	19-24
North Carolina	8	\$1,361,028	31	21	7
Pittsburgh	9	\$1,251,998	83	36	17
Georgia Tech	10	\$1,231,485	151-200	52-61	25-28

	NSF / HERD 2022		ARWU (Shanghai) 2023		
	Public	Expenditures	World	US	US Public
Maryland	11	\$1,228,550	50	28	11
Minnesota - Twin Cities	12	\$1,202,084	44	26	10
Univ Texas M.D. Anderson Cancer Ctr	13	\$1,182,536	80	35	16
Texas A&M	14	\$1,152,666	151-200	52-61	25-28
Florida	15	\$1,085,834	101-150	39-51	19-24
Penn State	16	\$1,019,940	101-150	39-51	19-24
UC Berkeley	17	\$981,035	5	4	1
UC Davis	18	\$883,807	101-150	39-51	19-24
Texas	19	\$845,896	43	25	9
Arizona	20	\$824,340	101-150	39-51	19-24

Dollar amounts in thousands



State of the Research Enterprise

Technology Commercialization & Corporate Engagement



Technology Commercialization Statistics

- **Record number of startups (23)** launched, 235+ since 2006
- **Invention disclosure and patent activities** remain strong
- Large startup pipeline but constraints exist
- Student and postdoctoral industry training programs

	2019	2020	2021	2022	2023
LICENSES & REVENUE					
New Licenses	223	235	236	211	231
STARTUPS					
Startup Companies Formed	19	19	20	22	23
INVENTIONS & PATENTS					
Invention Disclosures	391	397	332	315	360
Issued Patents (US & Foreign)	187	182	181	241	225

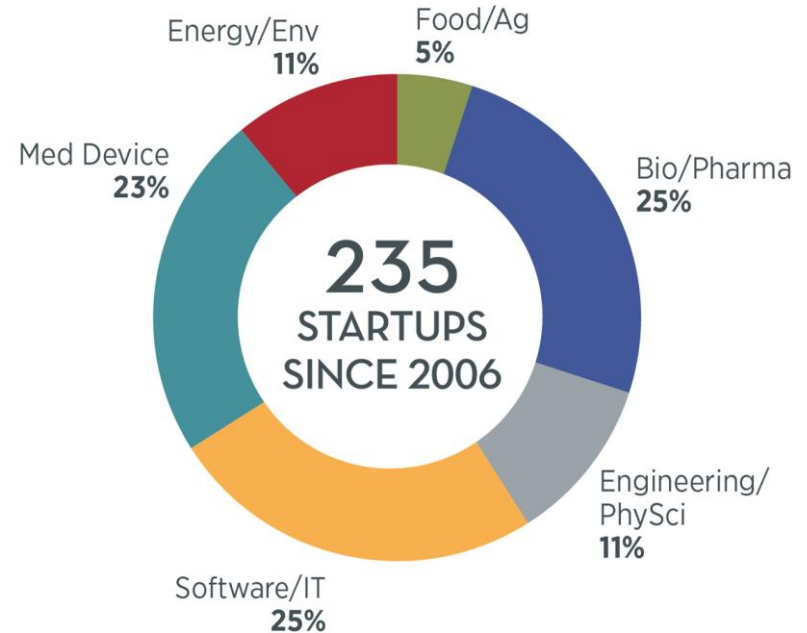


Technology Commercialization: Startups

University of Minnesota Startup Companies

Startups by Sector	FY23	FY06-FY23
Bio/Pharma	9	66
Engineering/PhySci	2	25
Software/IT	0	48
Med Device	10	57
Energy/Env	2	27
Food/Ag	0	12
Minnesota		
Minnesota	17	169
Outside Minnesota	6	66
% in Minnesota	74%	72%
Total	23	235

Startup Companies by Industry Area, FY06-FY23



Tech Comm Highlights

- **Ranked #18 nationally** for US Patents
- UMN startups were finalists and won **MN Cup startup competitions** in 2022 and 2023
- **Discovery Capital** program set a new record: 6 investments totaling \$1.6 million, leveraging add'l \$36 million
- Planning for next level: **Discovery to Impact** program



UMN Commercializes New Fast-Growing Tree Variety

- The [InnovaTree™](#) is a new poplar variety developed by the Natural Resources Research Institute (UMN Duluth), with a patent pending
- Result of nearly 30 years of cross pollination
- Grows 64 percent faster than leading commercial hybrid poplar varieties, with the ability to grow up to an astounding eight feet per year and 35 feet in under five years.
- The tree is now available for purchase with greater availability expected next spring.



Corporate Engagement Center (CEC)

FY23 highlights:

- Managing **portfolio of 60-70 large corporations**, inc. MN's 16 Fortune 500
- **Generated \$39.1M** in philanthropy, grants, & other projects from portfolio
- **41% of portfolio** solicited by more than 1 UMN unit; 133 solicitations total
- **UMN academic leaders** building good relationships with 20+ company execs



Boston Scientific visit



3M Visit



3M Exec Luncheon & Poster Session



Neuromodulation Symposium

CEC Seeks to Extend Strong Legacy of Corporate Giving

Peer Benchmarking (VSE) - Corporate Giving

Institution	FY22	Rank	FY21	Rank	FY20	Rank	FY19	Rank	FY18	Rank
Northwestern University	\$152,116,190	1	\$140,189,175	3	\$103,587,903	3	\$103,890,634	3	\$109,850,882	3
Ohio State University	\$76,174,490	2	\$213,675,256	1	\$136,653,488	1	\$123,219,377	2	\$120,381,573	2
University of Minnesota	\$74,203,315	3	\$90,874,267	4	\$73,832,192	4	\$86,204,503	4	\$90,702,798	4
University of Wisconsin-Madison	\$64,934,206	4	\$32,573,437	10	\$29,972,962	10	\$39,454,296	9	\$37,780,479	9
University of Maryland-College Park	\$62,695,180	5	\$40,937,440	7	\$43,459,869	7	\$41,182,609	8	\$45,416,628	7
Indiana University	\$61,633,888	6	\$156,270,923	2	\$125,974,059	2	\$131,180,332	1	\$185,312,062	1
Rutgers University	\$55,778,179	7	\$50,939,583	6	\$52,945,704	6	\$57,596,586	6	\$57,905,134	6
University of Illinois at Urbana-Champaign	\$52,356,350	8	\$66,632,630	5	\$73,693,186	5	\$67,774,257	5	\$37,210,801	10
University of Nebraska	\$48,700,364	9	\$21,531,540	13	\$25,721,827	13	\$34,014,800	10	\$24,891,474	13
University of Iowa	\$43,893,571	10	\$26,418,129	12	\$26,686,388	12	\$30,608,139	11	\$39,112,593	8
University of Michigan	\$28,623,605	11	\$34,980,584	8	\$35,836,440	8	\$26,437,591	12	\$32,648,619	11
Penn State University	\$26,818,945	12	\$27,781,871	11	\$29,916,785	11	\$42,661,061	7	\$73,155,363	5
Purdue University	\$24,575,578	13	\$33,877,645	9	\$30,468,231	9	\$23,349,361	13	\$26,173,013	12
Michigan State University	\$17,821,457	14	\$13,509,479	14	\$13,384,667	14	\$14,037,323	14	\$15,583,019	14

Source: Council for Advancement and Support of Education Voluntary Support of Education survey.

Includes: cash, stock and in-kind gifts received; present value of irrevocable deferred gifts; research grants received from private sources

Plant Protein Innovation Center Has Real-World Impact

- Consumers and the food industry are interested in **plant-based food**, for both health & sustainability.
- **Plant Protein Innovation Center (PPIC)** in CFANS brings together academia and industry to accelerate meaningful, significant research with real-world impact.
- Emphasizes **strong connection with industry**, offering companies membership based on revenue.
- Has **37 global members**, most of them companies, who help guide the Center's research.
- Has built ties with regional initiatives such as **Mbold**.
- **Microsoft** funding postdoc to gather data to train machine learning models on plant protein structure/function.



Postdoc Samira Feyzi explains protein modification techniques during PPIC's Protein Basics Short Course

New Initiatives

How Can We Become a \$1.5B Institution?



Research 2030 Workshop

Identify complex challenges and opportunities that are emerging at the intersection of economic, social, and environmental change.

Workshop objectives:

- **Understand funding agency priorities** (gov't, industry, foundations)
- Work with partners to **converge ideas** on our most pressing challenges
- Discuss **promising research** in priority areas
- Identify essential elements for **diverse and inclusive research ecosystem**
- Create **concrete, actionable research directions** to scale up high impact, sustainable, cutting-edge convergence research-to-impact programs



Kei Koizumi from
White House OSTP



Industry panel



Table discussion: food, agriculture
and energy



Table discussion: future of education
and work

Research 2030

Fourteen High Impact Research Themes



Sustainable
Technology and
Systems



Society,
Environment and
our Changing
Health



AI-Enabled
Science and
Innovation



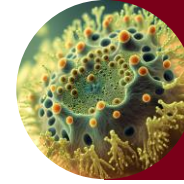
All Hazard
Preparedness,
Resilience and
Recovery



Creating an
Equitable and
Inclusive Society
at all Levels



Biotechnology
and
Biomanufacturing
Innovation



Biological
Interactions
at all Levels



Data, Sensing
and Managing
Complexity



Human-centered
Technology:
Design,
Development,
and Deployment



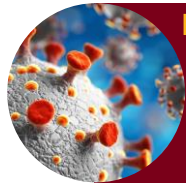
The Future
of Healthcare



The Future of
Education
and Work



Food and
Agriculture at the
Energy-Water-
Society Interface



Health Promotion
and Disease
Prevention,
Treatment and
Cures



Climate
Resilience
and Action

Equitably Address Complex Problems

Develop long term partnerships, supporting DEI partnership values

- **Native American Workforce Opportunities:** exploring with tribal partners opportunity to provide paid, on-the-the-job experience and skills at UMN to Tribal Colleges and Universities (TCUs) graduates
- **Historically Black Colleges and Universities (HBCUs):** developing broad collaborations between UMN and North Carolina A&T, a research-intensive HBCU, and University of DC
- **Social Justice Impact Grant** program: FY23 focus on healthcare in marginalized communities. Funded solution-oriented research, including projects related to Hmong-American and Somali-American communities



National Security: Area of Opportunity

Report on UMN national security research recommendations from faculty committee:

- Create a new faculty-led **National Security Institute**
- Leverage **7 areas of UMN strengths** that align with needs of national security agencies
- Make **future investments** in secure facilities, and other infrastructure and personnel
- Develop long-term **sustainable partnerships** with federal labs and national security related corporations



Army Research Office (ARO) Dir. Barton Halpern gives public lecture & talks with UMN grad students & postdocs



Air Force OSR Biophysics Program Manager Dr. Sofi Bin-Salomon (2nd from left) at UMN



Undersec. of Defense Heidi Shyu (in red) and Rep. Betty McCollum (3rd from left) with UMN hypersonics faculty and Calspan Corp. leaders in St. Paul

Discovery to Impact Program

BENEFIT SOCIETY

by commercializing UMN
innovation

EDUCATE next-generation of
innovators and entrepreneurs

REINVEST returns to sustain
program and advance
Discovery to Impact



Scaling UMN
innovation impact
to the next level



Grow and Strengthen Research Capabilities

- Continue to upgrade **infrastructure for pre-clinical research** — facilities and systems
- Address **research services** gaps
 - Research awards up 30% in 5 years, but 7.6% FTE *decrease* in RIO Support staff
 - Increasing federal compliance and national security mandates
- Find resources for **shared facilities** (e.g. Computing, Genomics) to meet growing needs
- Implement recommendations from **Faculty Burden Reduction Committee**, addressing research-related administrative burden on faculty
- Implement **MN-GEMS**, a new enterprise technology designed to improve and enhance grants management for faculty and staff



Other Focus Areas for the Coming Year

In addition to the initiatives identified earlier:

- Mobilize resources for **Minnesota BioImaging Center**
- Grow **International Partnerships** – Germany, Korea, Australia, Italy
- Continue to build relationships with **federal/national laboratories**
- Address **barriers to research** on all system campuses (Ex., FREF)

NEW RIO HQ

RIO, Planning Space and Real Estate (PSRE), and the Gateway Corp. are creating a RIO operational headquarters in McNamara to bring together 15 units, with ~ 228 employees



Conclusions

How could we better engage corporate and community partners in our research mission?

How can we better communicate the importance of our research mission to the citizens of the state of Minnesota, the legislature and state agencies?





BOARD OF REGENTS DOCKET ITEM SUMMARY

Mission Fulfillment

December 7, 2023

AGENDA ITEM: Introduction to Postdoctoral Scholars

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Rachel Croson, Executive Vice President and Provost
Shashank Priya, Vice President for Research
Scott Lanyon, Vice Provost and Dean of Graduate Education

PURPOSE & KEY POINTS

The committee will learn about the important role that postdoctoral scholars play in the intellectual life of the University, and the activities that we are undertaking to continue to support them.

The presentation will highlight the following key points:

- What is a postdoc and how do they impact the University’s research mission?
- How postdocs are funded.
- Where are our postdoc alumni?
- How do we facilitate professional development of postdocs?
- The President’s Postdoctoral Fellows Program (PPFP).

BACKGROUND INFORMATION

Postdoctoral appointments fall under “professionals-in-training” as defined by [Board of Regents Policy: Employee Group Definitions](#), and are provided by the University to afford individuals holding a doctoral or doctoral-equivalent degree opportunity for further development of career skills within a particular discipline or to learn new or different research and teaching techniques, update knowledge, or retool. Further information and definitions can be found under the University’s [Administrative Policy: Postdoctoral Appointments](#).

OFFICE OF POSTDOCTORAL INITIATIVES

Postdoctoral scholars play a critical role in research universities and make significant contributions to the institution's mission - education, research and outreach. The top research institutions demonstrate a positive correlation between research productivity and postdoc density. For the past five years, the Graduate School used strategic reserves to pilot the idea of an Office of Postdoctoral Initiatives. We concluded that a central office could provide effective discipline-independent professional development opportunities (soft skills) and advocacy for postdocs. The strategic reserves allocated to this pilot by the Graduate School have been expended and starting with FY '24, new recurring resources (\$200K) have been allocated to create a more permanent Office of Postdoctoral Initiatives (OPI). This new office is housed administratively in the Graduate School with a dotted-line reporting relationship to OVPR.

Responsibilities for the new Office of Postdoctoral Initiatives are:

- Implement central oversight of postdoc appointments to ensure that all appointments (new and renewals) have a minimum duration of 1 year and that renewals do not extend beyond the maximum of five years.
- Design and implement postdoc professional training activities to match the career aspirations of postdocs including careers in academia, industry, government, and non-profits.
- Collaborate with campus partners through professional development and skill-building programs
- Advocate for competitive benefits for all postdoc classifications across all campuses and colleges
- Assist in development, implementation and updating of postdoc policies.
- Track commitments to postdoctoral training made in federal grant awards and ensure that those mentoring commitments are met.
- Provide consultation services for postdocs and their mentors and work with the Student Conflict Resolution Center (SCRC) to assist in conflict resolution
- Administer postdocSERU and communicate results
- Maintain The POST, the University's postdoctoral scholar newsletter
- Serve on the BTAA Postdoc directors group
- Attend national meetings regarding postdoctoral scholar training
- Offer training to faculty on effective advising techniques/tools
- Collaborate with ISSS to support international postdocs
- Manage awards to recognize postdoc achievements and excellence in postdoctoral advising

POSTDOCTORAL HANDBOOK



GRADUATE SCHOOL

OFFICE OF POSTDOCTORAL INITIATIVES

UNIVERSITY OF MINNESOTA

Driven to Discover®

OFFICE OF POSTDOCTORAL INITIATIVES
10 Church St.
Room 375
Minneapolis, MN 55455
<https://grad.umn.edu/postdocs>
(612) 625-7084



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Welcome

Greetings!

Postdoctoral scholars are key contributors to the mission of the University of Minnesota. You drive much of the cutting-edge research we do and are vital to our teaching mission, our outreach to the community, and our creation of an exciting and diverse work environment. The Graduate School's Office of Postdoctoral Initiatives (OPI) wants to support your development by providing meaningful opportunities in a broad range of areas including community building, professional and career development, advising and mentoring, and leadership development.

Your postdoctoral experience will be very different from your graduate experience. There will be fewer structures in place to cause you to interact with the campus community beyond your own research group. Therefore, it is important that you be proactive in looking for additional opportunities to interact to build your social and professional network. We encourage you to participate in the vibrant postdoctoral community at the University of Minnesota. Opportunities for engagement are many, and we will communicate with you frequently about how you can get involved. Our goal is to foster an inclusive climate that allows you to do your best work at this stage in your career.

Please come and introduce yourselves at one of the many OPI events. Welcome to the University of Minnesota!

Sincerely,



A handwritten signature in blue ink, appearing to read 'Scott Lanyon'.

Scott Lanyon, PhD
Vice Provost and Dean for Graduate Education



A handwritten signature in black ink, appearing to read 'Rhonda Jones-Webb'.

Rhonda Jones-Webb, DrPH
Graduate School, Assistant Dean for Postdoctoral Initiatives

Office of Postdoctoral Initiatives

The mission of the Office of Postdoctoral Initiatives is to continually work with faculty to create the most positive and supportive climate and culture. Our specific goals are to:

- Build community and give greater visibility to postdoctoral scholars;
- Encourage excellence in postdoctoral mentoring, advising, and professional development;
- Prepare the next generation of scholars to be leaders and change agents in their respective fields.

To achieve our goals, OPI focuses on four priority areas: Community Building, Career and Professional Development, Advising and Mentoring, and Leadership Development.



Being a Postdoc at the University of Minnesota

Postdoctoral scholars are welcomed to the University in several different ways. All postdocs are invited to a welcome event as part of National Postdoctoral Appreciation Week, in September. The event features community-building and professional-development-focused activities. Individual colleges and units also hold various forms of onboarding and orientation activities for postdocs.

University COVID-19 Response

The University is working slowly and thoughtfully to reopen its campuses. The [Sunrise Plan](#) includes information on the up-to-date plans and procedures for faculty, staff, and students to return to campus. Some of the suggestions below may not be applicable at any given time due to the ever-changing nature of the COVID-19 pandemic. You may also speak with your supervisor or administrators to learn about any college or department specific procedures related to COVID-19 response.

New Arrival Checklist

In your first few days on campus, you will need to do the following:

- ✓ Arrange to meet with your Research Advisor. You should also try to meet your colleagues and locate your lab, office, or other work areas relevant to your position. [This guide](#) provides a list of questions you can use as a jumping point for discussions with your supervisor, peers, and others as you settle into your new role.
- ✓ Meet with your unit's Human Resources Administrator to:
 - complete relevant employment paperwork, remembering to bring identification such as your driver's license, passport, or birth certificate; you may also choose to complete the first section of the I-9 on your own by following the directions in [this guide](#)
 - obtain your University of Minnesota (UMN) identification number and your [Internet ID](#), which you will need for University e-mail and other information systems
 - complete forms needed to obtain keycard access to your building
 - ask about other department-specific procedures
- ✓ Select and enroll in the appropriate University benefits plans. The [Office of Human Resources](#) hosts a monthly health benefits workshop for postdocs to learn more about their benefits options and talk with benefits specialists. To learn more and register for the workshop, visit the [Office of Human Resources events webpage](#).
Questions about benefits can also be directed to:

Office of Human Resources
100 Donhowe Building
319 15th Ave. S.E.
Minneapolis, MN 55455
(612) 624-8647

- ✓ International Postdocs Only: all immigration-related issues for the University of Minnesota employees and students are handled by the International Students and Scholars Services (ISSS). Their office is located at:

ISSS
190 Hubert H. Humphrey School
301 19th Avenue South
Minneapolis, MN 55455
iss@umn.edu | (612) 626-7100

- ✓ Obtain your U Card. You will retrieve your first U Card at the U Card Office in Coffman Memorial Union. You will need to present one of the following forms of picture ID:

- US Passport
- US Passport Card
- Foreign Passport
- US State or Territory Driver's License
- US or State Agency ID Card
- US Military ID Card
- Tribal Card



- ✓ Explore the wider campus beyond your department/lab/unit/building.

Postdoc Job Classifications and Funding Mechanisms

Postdoctoral scholars at the University are classified as either *Postdoctoral Associates* or *Postdoctoral Fellows*

Postdoctoral Associates

Postdoctoral Associates are *University employees* who are receiving additional training while also performing service for the University, for which they are compensated. Postdoctoral Associates conduct research, teach, or provide service that enhances career skills or allows for opportunities to learn new research or teaching techniques. Funding is provided through the collegiate budget.

Postdoctoral Fellows

Postdoctoral Fellows receive an outside supported fellowship or training award that allows for advanced study or research. Individuals appointed as Postdoctoral Fellows are not considered employees of the University and therefore their responsibilities are defined by the parameters of the fellowship or traineeship.

Compensation and Benefits

The University has organized its employee roles into broad job families with clearly defined career paths and transparent pay structures. The job families represent similar types of roles and duties across the University. More information on the job classification system can be found on the Office of Human Resources website. Postdocs are classified according to these job codes:

Postdoctoral Associate	9546
Postdoctoral Fellow	9560

Your job code defines level of pay and eligibility for benefits. If you want to find which job code you are classified as, go to the [UMN People Search](#) webpage and search for your name or Internet ID (x500).



Information on benefits options and enrollment can be found on the [Benefits](#) website. For questions related to benefits email benefits@umn.edu or call 612-624-8647 and select option 1. Postdoctoral Fellows can enroll for Health Benefits through the [Graduate Assistant Health Plan](#).

Masonic Cancer Center

Summary of Benefits for Postdoctoral Associates and Fellows

Classification Title	Postdoctoral Associate	Postdoctoral Fellow
Minimum Salary (FY20)	\$48,426	N/A
Appointment Length	Contract, maximum 3-5 years (depending on department)	Determined by funding agency
UPlan Medical Insurance	Eligible	Not eligible
Graduate Assistant Health Plan	Not eligible	Eligible
Disability Insurance	Academic Disability Program	Not eligible
Faculty Retirement	Not eligible	Not eligible
Vacation Leave	Eligible	Determined by funding agency
Paid Sick Leave	Eligible	Determined by funding agency
Paid Parental Leave	Eligible	Eligible

Insurance while Traveling

UnitedHealthcare Global is an emergency medical assistance program that is provided to you and your covered family members with your enrollment in a UPlan medical option.

UnitedHealthcare Global provides 24-hour access to multilingual assistance coordinators. They can help with any type of travel-related emergency when you are 100 or more miles away from home or in a foreign country. More information is available on the Benefits website.

Filing Taxes

Postdoctoral Associates are considered employees of the University and are paid via a conventional, W-2, payroll-withholding arrangement.

Postdoctoral Fellows must report taxable fellowship payments to the Internal Revenue Service (IRS). Neither the grantor nor the University files a return of information (W-2 or 1099-M) to the IRS with respect to such grant. For additional information on the income taxability of non-qualified fellowships, please see IRS Publication 970 (pdf), “**Tax Benefits for Education.**” Postdoctoral Fellows have the option of filing estimated taxes with the IRS and with the Minnesota Department of Revenue. The IRS Estimated Taxes site has information on how to figure your estimated tax payment. You can use the worksheet in **Form 1040-ES** (pdf) to calculate your payment(s). You should complete this worksheet to assist you in also making Minnesota estimated payments.

Equity and Inclusion

The University is committed to creating a diverse, supportive community for all its members. To that end, the following resources exist to promote equity and inclusivity across campus:

- The Graduate School's **Diversity Directory** informs new and current students, staff, postdocs, and faculty about diversity-related resources and services within the Twin Cities area. You can view the directory by major category, or the primary community served. The descriptions and contact information provided are from the original organization's website.
- **The Graduate School Diversity Office** leads and coordinates the University's initiatives in the recruitment, funding, retention, and graduation of a diverse graduate student body and postdoc community. Additionally, this office works closely with other organizations connected to diversity, underrepresented populations, and multiculturalism.
- The University's **Office for Equity and Diversity** leverages the transformative power of equity and diversity to advance excellence in teaching, research and community engagement. The Office focuses on initiatives clustered around access and inclusion, community, education and learning, sustainable transformation, and accountability.



International Postdocs

International Student and Scholar Services (ISSS) is dedicated to serving the University of Minnesota's international community. ISSS supports the University's internationalization efforts by helping departments bring new foreign nationals into the community; by providing intercultural training for students, staff, and faculty; and by offering events that build links between the U.S. and international communities on campus.

ISSS advisors/counselors are professionally trained to provide information about non-immigrant visa issues for students and scholars holding F, J, H, and O visas. Advisers/counselors are also trained to provide **counseling** to international students and scholars about academic, personal, and family matters, as well as issues of cross-cultural adjustment and professional integration upon returning home. In addition, ISSS offers training and **programs** that enhance the awareness and understanding of cross-cultural and international issues across campus and consults with University faculty and staff on issues related to international students and scholars in their departments.

ISSS is located on the Twin Cities campus, but many of its responsibilities – especially those concerning international faculty and staff – also serve the Crookston, Duluth, Morris, and Rochester campuses. ISSS is part of the **Global Programs and Strategy Alliance**, in the purview of the University's Academic Administration, a part of the University of Minnesota System.

The Office also directs several programs intended to help international scholars make connections throughout their time at UMN. These include:

- **Cross-cultural discussion groups** that bring together small groups of international and domestic students/scholars in an intimate atmosphere to explore their cross-cultural experiences and perspectives.
- **Small-world Coffee Hour**, a recurring event open to all international and domestic students, postdocs, faculty, and staff to gather in a relaxing social environment. Each interactive event has the flavoring of a specific cultural region's activities, foods and traditions.



Announcements for upcoming events are often shared through the ISSS Weekly Update. If you are not already receiving the email newsletter, you can subscribe to it [here](#).

Community Building

A supportive, inclusive community for postdoctoral scholars makes for stronger research collaborations, more meaningful networking, and deeper connections. To that end, the Office of Postdoctoral Initiatives supports activities aimed at developing our postdoctoral community. These include:

- a monthly e-newsletter, the *Post*, informing postdocs about upcoming events and relevant, timely resources;
- regularly scheduled writing events hosted online and at our offices in 10 Church St.;
- on-campus events related to National Postdoctoral Appreciation Week;
- awards recognizing outstanding advising of postdocs;
- support for the Postdoctoral Association and their events;
- policy initiatives and ongoing advocacy in support of postdoctoral scholars

Professional Skills and Career Development

One of the primary purposes of postdoctoral education is to provide the scholar with advanced training and professional development. By professional and career development, we do not mean the research that you will be doing as your primary activity during the term of the postdoc. We mean the workshops, courses, and online activities that you will select and in which you will participate throughout your time at the University of Minnesota in addition to your formal research. OPI is dedicated to increasing opportunities for such professional and career development among postdoctoral scholars and ensuring they have adequate time for these opportunities outside of their home departments or labs.

Academic and career development is not one workshop or one course; it is something a postdoc will do throughout their time at the University of Minnesota. The Graduate School and OPI connects postdocs with **programs, resources, and events** to help you identify potential career paths both inside and outside of academia, compete for in-demand positions, and manage your career.

- The Graduate School offers **academic and career support** workshops as a gateway for graduate students and postdocs to programming and resources across campus, partnering with several University offices to provide opportunities to acquire transferable skills. Additionally, **The New Faculty Program (NFP)**, in the Office of Faculty and Academic Affairs (a division of the Provost's Office), offers multiple online opportunities for faculty and postdocs to jumpstart their careers.
- The University provides institutional memberships to **Beyond the Professoriate**, an online professional development training for graduate students, postdocs, and faculty, and the **National Center for Faculty Diversity and Development (NCFDD)**, which provide webinars, trainings and mentoring opportunities on topics including strategies for increasing research productivity, developing a daily writing plan, managing time more effectively, and many others that fit the life course of academic professionals.

- **University Career Services** offers many online resources — to help you with many of your career-related needs. The Office can also help attend to the unique career needs of specifically identified populations: students with disabilities, international students, LGBTQIA students, multicultural students, women, or veterans.

Advising and Mentoring

The University is committed to fostering meaningful mentoring and advising services for postdoctoral scholars. The Office of Postdoctoral Initiatives co-sponsors professional development workshops and connects faculty and postdocs with mentoring resources. Additionally, the OPI promotes excellence in mentoring and advising by publicly recognizing outstanding faculty mentors in an annual awards ceremony during National Postdoctoral Appreciation Week.

We encourage all postdocs to develop an **Individual Development Plan (IDP)**. A well-crafted IDP serves both as a planning and communications tool, so you can identify research and career goals, and communicate them to mentors, advisors, and future employers.

The IDP helps to:

- Assess and develop **transferable skills** for different career paths.
- Effectively communicate academic and professional goals to your mentors.
- Build a solid support network during graduate school and beyond.

For an example of a postdoctoral IDP, click [here](#).

Leadership Opportunities

Postdoctoral trainees are typically well trained in the technical aspects of their discipline, but few receive formal training in leadership or access to leadership opportunities. Developing leadership skills (e.g., vision setting, empathy, team building, networking) is important to advancing high-stakes and cutting-edge

research, and improving the climate surrounding research at the University. OPI is currently piloting five competitive travel grants for postdoctoral scholars to participate in Summer Research Institutes/training programs related to leadership development and advanced training.



Accessibility

The University has resources to help postdoctoral scholars get the most out of their time here and receive the support they might need. These needs can take many forms and the University is committed to making sure that all postdocs feel supported throughout their time at UMN.

The **Disability Resource Center** ensures that students, faculty, postdocs, and staff have access to all the University has to offer and equal opportunities to participate in the many interesting activities on campus. DRC's goal is to ensure that you have access to all the learning opportunities you choose, whether in class or at work, or participating in the wide range of social and cultural experiences the University offers.

Health and Wellness

Health and wellness are critical to achieving the kind of balance that leads to strong, creative work and healthy boundaries around work/life balance. The University makes available to postdocs the services and resources they need to attend to a holistic range of health and wellness needs.

Boynton Health offers a comprehensive range of clinics available to postdocs with participating health plans. With locations on the East Bank and St. Paul campuses, Boynton is a convenient option that can meet many of your health needs (though postdocs may of course opt to receive health services off campus). Boynton offers the following services through its clinics: primary care, women's health, sexual health, STI testing, dental clinic, eye clinic, HIV testing/counseling, immunizations, physical therapy, nutritional support, transgender health, pharmacy, travel, and tobacco cessation coaching. Appointments can be made by phone or via the Patient Portal. **Boynton Mental Health Clinic**, with locations on both the East Bank and St. Paul campuses, offers supportive services to postdocs. These include individual psychotherapy, couples therapy, group therapy, crisis consultation, medication assessment and management, social work help, eating disorder services, alcohol and chemical health services, and ADD/ADHD treatment. Please be sure to check with your provider about insurance coverage when making an appointment.

University Recreation and Wellness serves the greater University community by enriching the campus experience and encouraging lifelong wellbeing. URW is driven to developing leaders, fostering supportive relationships, and inspiring active living through recreation and wellness. It models a welcoming and supportive environment by promoting a culture of inclusion, respect, and wellbeing through education and shared experiences. This office runs the various campus gyms



(RecWell Center, Cooke Hall, St. Paul Campus Gym, Pool, Field House, Climbing Wall, etc.) available to postdocs for a fee, and it also hosts several fitness classes and organized health and wellness events.

The **Earl E. Bakken Center for Spirituality and Healing** enriches health and wellbeing by providing exemplary interprofessional education, conducting rigorous research, delivering innovative engagement programs, and advancing innovative models of care. The Center's mission is to advance the health and wellbeing of individuals, organizations, and communities through integrative health and healing. Founded in 1995, the Center is an interdisciplinary unit within the University's **Academic Health Center** alongside the School of Nursing, the **Medical School**, **College of Veterinary Medicine**, the **College of Pharmacy**, the **School of Public Health**, and the **School of Dentistry**. Faculty associated with the Center—nearly 80 in number—are leaders from diverse academic backgrounds and are passionate experts in their fields. Thousands of University community members participate annually in the Center's programs and workshops. Postdocs can take advantage of the free workshops, retreats, and seminars the Center offers.

The University's **Employee Assistance Program (EAP)** provides confidential professional consultation and referral services to address any personal or work concern that may be affecting your wellbeing. You can receive up to eight sessions per issue at no cost. The EAP is here to support postdocs on a range of work or personal concerns, including: job concerns and work productivity; personal, interpersonal, and work relationships; conflict resolution; adjustment to grief/loss or change; coping with stress; mental and chemical health issues.

Research-related Resources

Conducting cutting-edge research is the primary reason that most postdocs come to the University of Minnesota. The University is committed to providing students, postdocs, faculty, and research staff with the resources they need to conduct high quality, ethical, and rigorous research. The following is a list of offices, organizations, and resource sites where postdocs can get the information and support that they need to be successful.

University Research Offices

- The **Office of Vice President for Research** is a central resource for faculty, postdocs, staff, students, and external partners to conduct, manage, and sponsor research at the University. The Office sponsors several collaborative initiatives that advance the research mission and engage interdisciplinary partners from across the University and beyond, and operates a page dedicated to **University Funding Listservs**. These include a list of grant programs open to all campuses supported by funds from a variety of sources, including technology commercialization revenue. It also links to PIVOT, a database of external funding sources.
- The **Human Research Protection Program** is a system of interdependent groups and individuals interacting to achieve a common aim to protect research participants in the conduct of human research. The program's most basic function is to develop and implement

policies and practices that ensure the adequate protection of research participants. The group within the HRPP that carries out each function may vary according to the specifics of the research protocol:

- o comprehensive review of protocols
 - o ethically sound participant-investigator interactions
 - o ongoing (and risk-appropriate) safety monitoring
 - o quality improvement (QI) and compliance activities
- **Technology Commercialization**, housed within the Office of the Vice President for Research, facilitates the transfer of University technology and ideas to licensee companies—both established and startup—for the development of new products and services that benefit the public good, foster economic growth, and generate revenue to support the University's mission.
 - The University's **Center for Educational Innovation** collaborates across the University system to advance effective teaching and engaged learning. CEI is a centrally funded, systemwide resource that partners with central and academic units at each campus to support the University of Minnesota's teaching mission.
 - **UMN Libraries** is home to expert librarians who can connect you with the resources you need — from the millions of volumes held in our general collections to the treasures of our archives and special collections to programs and services to help you expand the reach of your research.



Wilson Library Lobby



Rarig Center

- The **Office of Information Technology** is where you can:
 - o obtain and manage an Internet account;
 - o access research networks;
 - o set up your UMN email account;
 - o find and use hardware/software;
 - o collect, store, and analyze data;
 - o create websites;
 - o manage research projects

Professional Resources for Postdocs

- The **UMN Postdoctoral Association** exists to improve the quality of the postdoctoral experience and to facilitate the long-term success of University postdocs. The Association's volunteer members meet regularly to discuss issues relevant to the postdoc community and to organize community-building events. The PDA provides postdocs with a unique opportunity to build leadership and organizing skills, and it funds several career development awards and travel grants. Membership in the PDA is free to all postdocs, and throughout your time at the University you're encouraged to get involved with the important work they do for the postdoc community.



- The **National Postdoctoral Association** aims to improve the postdoctoral experience by supporting a culture of enhanced professional growth. At the individual, organizational, and national levels, the NPA facilitates connections, raise awareness, and collaborate with stakeholders in the postdoctoral community.
- The **Office of Conflict Resolution** serves University of Minnesota faculty, postdocs, staff and student employees who are not represented by a union. We encourage you to contact their office if you have a problem, concern, or issue and don't know where to go for help.

622 Heller Hall
 271-19th Avenue South
 Minneapolis, MN 55455
 Email: ocr@umn.edu
 Tel: (612) 624-1030

University Policies

The following University policies relevant to postdoctoral research can be found in their entirety at the links provided below:

- Discrimination and Harassment
- Conflicts of Interest
- Commercialization of Intellectual Property
- Reporting Inventions Arising from Research
- Research Misconduct



Living in the Twin Cities

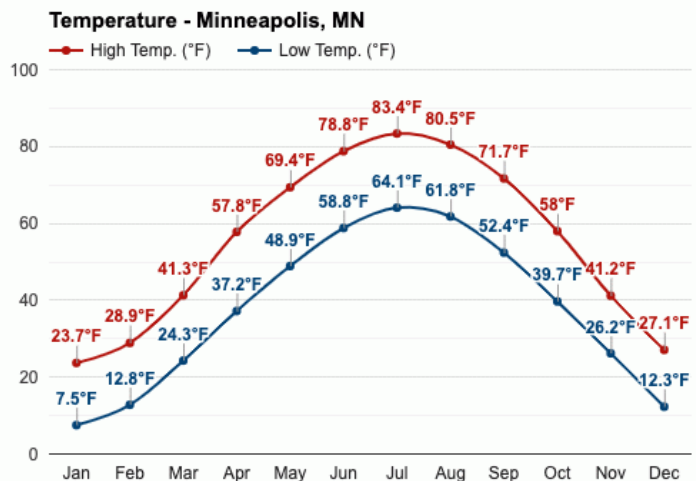
Minnesota's appeal lies in both its abundant natural scenery and in its vibrant cities. The Minneapolis-St. Paul area is nationally recognized for its high quality of life, with amenities that make it an extremely livable place. The Cities have garnered attention for their dynamic music scene, creative chefs, bike trails, exciting theaters and excellent art museums.

Families are drawn to the Twin Cities for the kid-friendly museums, zoos and amusement parks. The hometown sports teams have a large fan base. The area is also noteworthy for its many lakes, parks and greenways, offering urban and nature experiences. Beyond the Twin Cities, miles of lakes and woods draw outdoor enthusiasts to Voyageurs National Park and the Boundary Waters Canoe Area, both along the state's northern border. The North Shore of Lake Superior is a scenic drive along the world's largest freshwater lake. The iconic Mississippi River begins as a small stream at Itasca State Park in northwest Minnesota, winds its way across the state and through the Twin Cities, and widens as it flows below the beautiful bluffs of southeastern Minnesota.

Fun fact: The Twin Cities has a network of emergency sirens that are tested at 1:00pm on the first Wednesday of each month. No need to be alarmed if you hear the sirens at this time—they are just wishing you a happy Wednesday!

Climate

Winters in Minnesota can be cold, summer is warm to hot, and frequently humid. Snowfall is common in the winter and thunderstorms with heavy rainfall can sometimes occur during the spring, summer and autumn months. Though winter can be cold, the area receives more sunlight hours in mid-winter than many other warmer parts of the country, including all the Great Lakes states, the Pacific Northwest, parts of the South, and almost all the Northeast.



Housing

While the University does not offer on-campus housing options for postdocs, [Housing & Residential Life](#) contracts with two student-owned cooperatives to provide housing for University of Minnesota graduate students and postdocs. Both properties are owned by the University but are independently managed as cooperatives. Space is limited, so postdocs are encouraged to explore a range of options. **Currently, only postdoctoral fellows and associates who have job code designations (9560 or 9546) are eligible to live in the cooperatives.**

Commonwealth Terrace Cooperative (CTC)

Located south of the University of Minnesota's St. Paul campus, CTC is only a few blocks from the UMN bus line and has easy access to the freeway system.

Como Student Community Cooperative (CSCC)

The CSCC is approximately halfway between the St. Paul and Minneapolis campuses and is located on the Metro Transit bus line.



The University also hosts a [database](#) of privately-managed off-campus housing near the University.

Childcare

Postdocs with childcare needs have many options available to them. [Child Care Aware](#) offers a free, online child care search engine, while [Think Small](#) offers services, resources, and advocacy for early childhood education in Minnesota. In addition, there are several on-campus childcare resources, as well as a rich offering of services close to the University. For a list of off-campus childcare services and information on private and public school options for K-12 children, visit the [Childcare and Education Resources](#) page of the Human Resources website.

On-campus Child Care Resources

- The [Community Child Care Center](#) in the Commonwealth Terrace Student Family Housing Cooperative near the St. Paul campus offers flexible scheduling for children ages 16 months to 5 years old, from 7:15 a.m. to 6 p.m.
- The [Como Early Learning Center](#), located in the Como Student Community Cooperative, a student family housing complex near the University, offers care for 50 children ages 16 months through 5 years old.
- The [YMCA Early Childhood Center](#) is located on the East Bank Campus. The center provides full-day childcare for children ages 6 weeks to 5 years old.

- The **University of Minnesota Child Development Laboratory School** was launched in Fall 2021 as a strategic unification of two University childcare centers with long histories. It is located on the East Bank campus and offers a full-day, year-round early childhood education program for children of U of M students, staff, and faculty between the ages of 3 months to 5 ½ years old.

Parking and Transportation

The University of Minnesota offers several parking options on campus. Three main categories of parking include public; contract; and specialty programs. Public parking is available to anyone at any time. Contract parking involves a commitment with a guaranteed parking space. Specialty programs include groups such as disability, vendors or construction staging requests. For more information, visit the [Parking and Transportation Services](#) website.

Public transit can save time and money for University students, staff and faculty. The **Metropass** is a discounted transit pass available to staff and faculty that grants unlimited use of **Metro Transit**, the Twin Cities’ public transportation network, which includes the bus and light rail systems.

The University provides free bus service between (**Campus Connectors**) and within (**Campus Circulators**) the Saint Paul and Minneapolis campuses. Route maps and real time tracking is available through the **GopherTrip** app.

Bicycling to the University is a healthy, cost-effective, and environmentally friendly way to get around campus. With over 9,000 racks/hoops located around campus, stashing your wheels is a breeze. Bicyclists will find free racks and hoops near almost every building. Specific **campus maps for bikers** are available with path and rack information.



The **Gopher Way** is a system of tunnels and skyways that connect many of the buildings on campus. The **Campus Walking Guide** provides a map of the campus marked with tunnel and skyway routes.

Faith-based Communities

Residents throughout the Twin Cities live out diverse faith traditions, making it an ideal place to practice your spirituality. The area is home to congregations representing dozens of faith traditions including but not limited to: Baha'i centers, Buddhist temples, Christian churches (Protestant, Catholic, Non-denominational), Hindu temples, Islamic mosques, Jewish synagogues, Quaker Meeting Houses, and Unitarian Universalist churches.



Contact Information

Office of Postdoctoral Initiatives

10 Church St.

Room 375

Minneapolis, MN 55455

<https://grad.umn.edu/postdocs>

opi@umn.edu

(612) 625-7084

Rhonda Jones-Webb, DrPH

Graduate School, Assistant Dean

Room 390

jones010@umn.edu

(612) 626-8866

Jiwon Kim

Graduate Assistant

Room 392

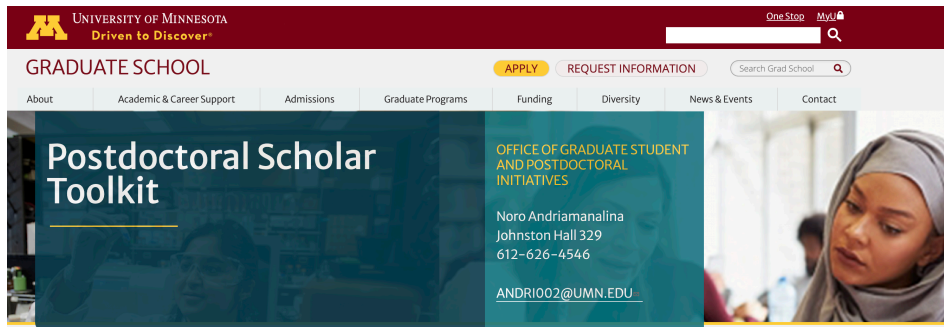
kim00738@umn.edu

Welcome to the University of Minnesota community!

We look forward to supporting you throughout your time here and hope to meet you soon!

Postdoctoral Scholars Links

- **Postdoctoral Scholar Toolkit**



Make the most of the postdoc experience.

The Office of Graduate Student and Postdoctoral Initiatives, located within the Graduate School, advocates for postdoctoral fellows and researchers. We collaborate with faculty, administrators and departments across the University to provide the support and resources our postdoctoral scholars need as they prepare for their future careers.

- **President's Postdoctoral Fellowship Program**



- **National Postdoctoral Association**



Postdoctoral Scholars

Board of Regents | Mission Fulfillment Committee | December 7, 2023

Rachel Croson

Executive Vice President and Provost

Shashank Priya

Vice President for Research

Scott Lanyon

Vice Provost and Dean of Graduate Education

MPact 2025

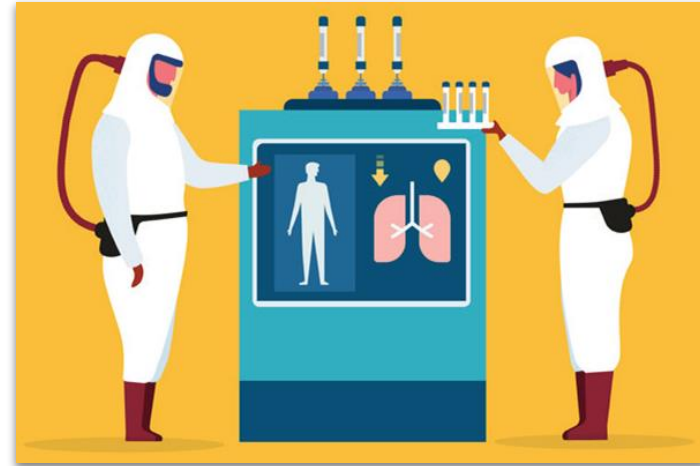
Commitment 2: Discovery, Innovation and Impact

Goal 1

Increase high-impact discovery and scholarship.

Action

Advance career outcomes for graduate students and postdocs.



What is a postdoc?

- Recent recipient of a Ph.D. working with an established researcher for 1 to 5 years to acquire additional technical skills and training in order to compete successfully for a permanent position
- Common/expected in STEM fields, less common in other areas
- Both an employee and a trainee



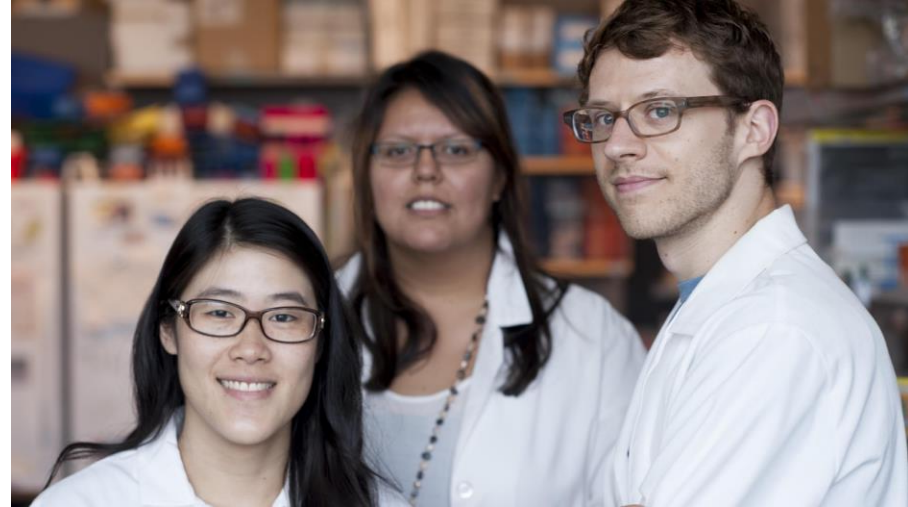
What do postdocs do?

- Higher degree of freedom in determining the direction of their research than a Ph.D. student
- Often expected to secure grants (as lead principal investigators or collaborators) and teach courses in addition to completing research and publishing results
- Emerging from the world of students to the broader world of professional research



What do postdocs do?

- Design, organize and conduct highly specialized and advanced research experiments
- Mentor Ph.D. students and undergraduates
- Supervise and guide junior technicians, students, and researchers in the lab



University of Minnesota Postdoctoral Scholars (Nov 2023)

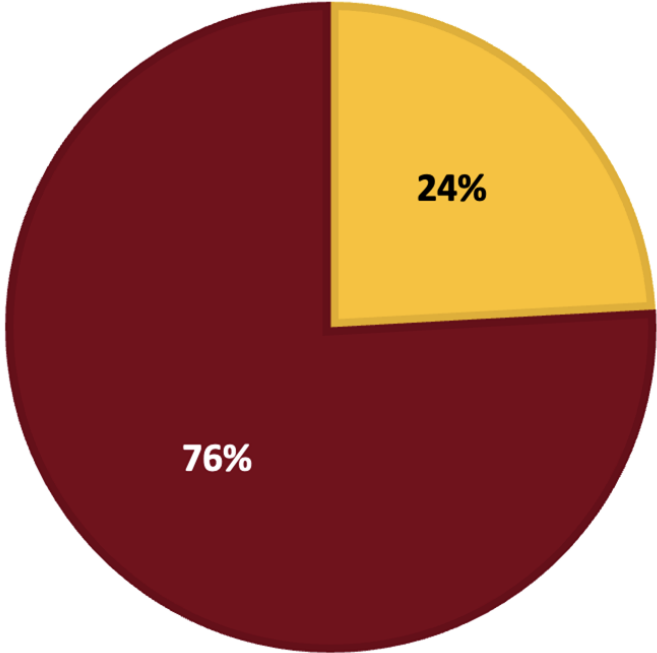
College/Campus	Number of Postdoctoral Scholars
CSE	221
Medical School	203
CFANS	88
CBS	68
Remaining TC colleges	217
UMN-TC Subtotal	712
UMD	13
UMN System TOTAL	725



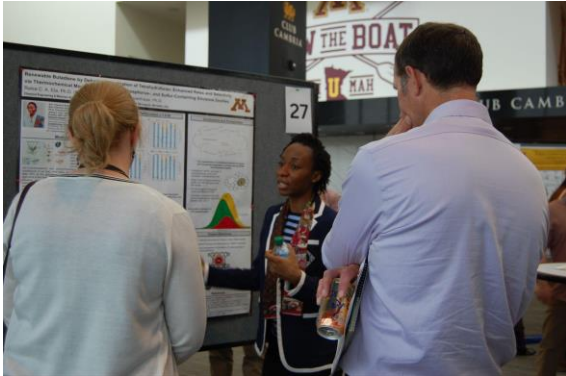
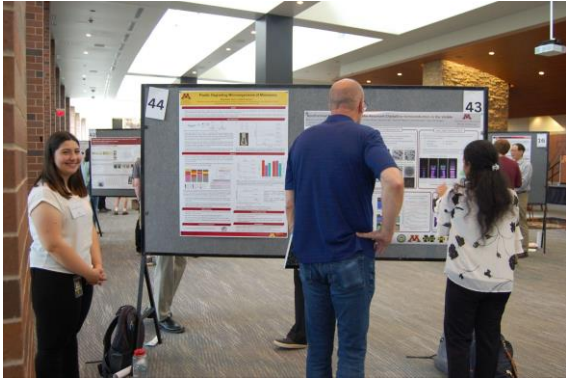
Demographics of postdocs

UMN DOMESTIC POSTDOCTORAL SCHOLAR RACE/ETHNICITY

■ BIPOC ■ WHITE

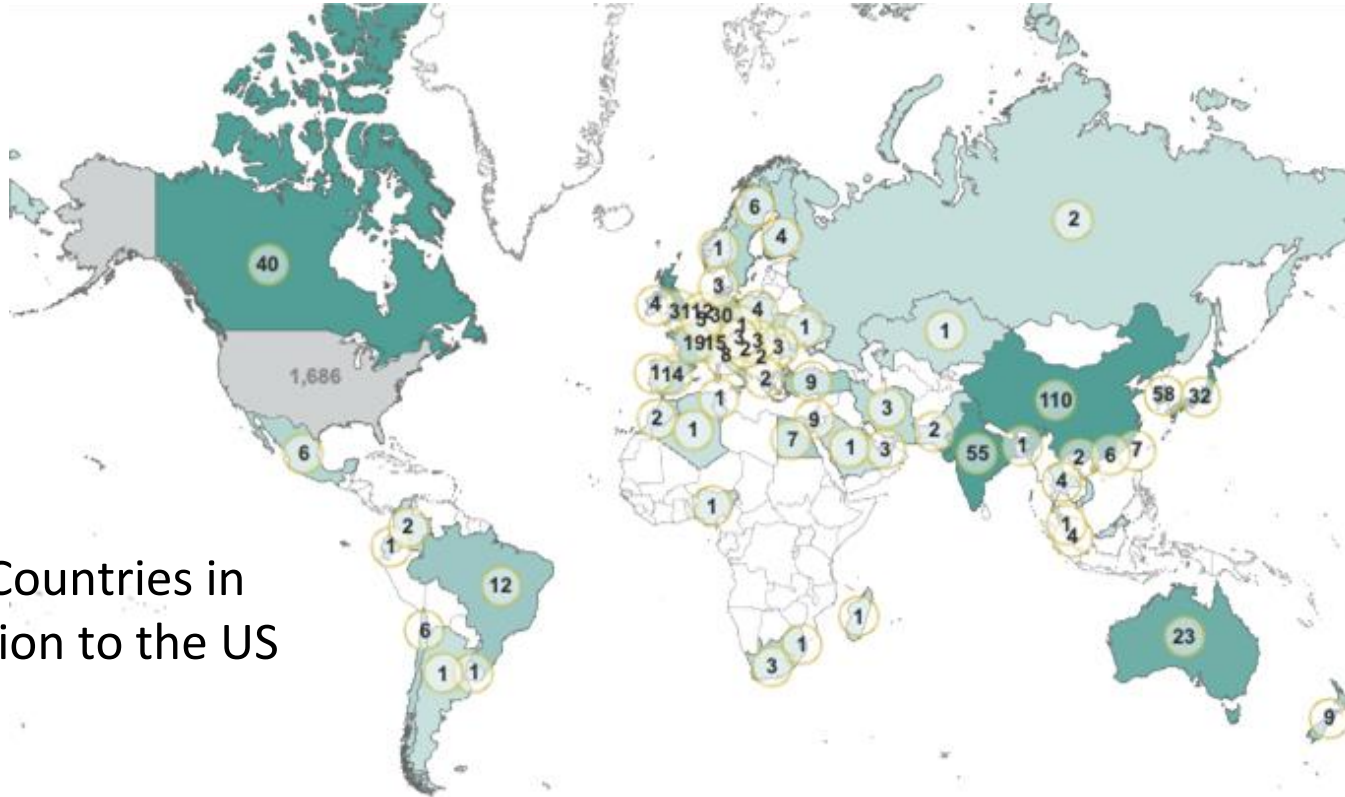


How are postdocs funded?



- Majority are funded on external research grants of their advisor
- 65 postdocs were directly awarded postdoctoral fellowships from external sources (e.g., NIH and NSF)
- Some postdocs are funded as part of the start-up package for new faculty members
- Some are funded by the President's Postdoctoral Fellows program (PPFP)

~26% of UMN Postdoc Alumni (2012-2022) are employed outside of the US

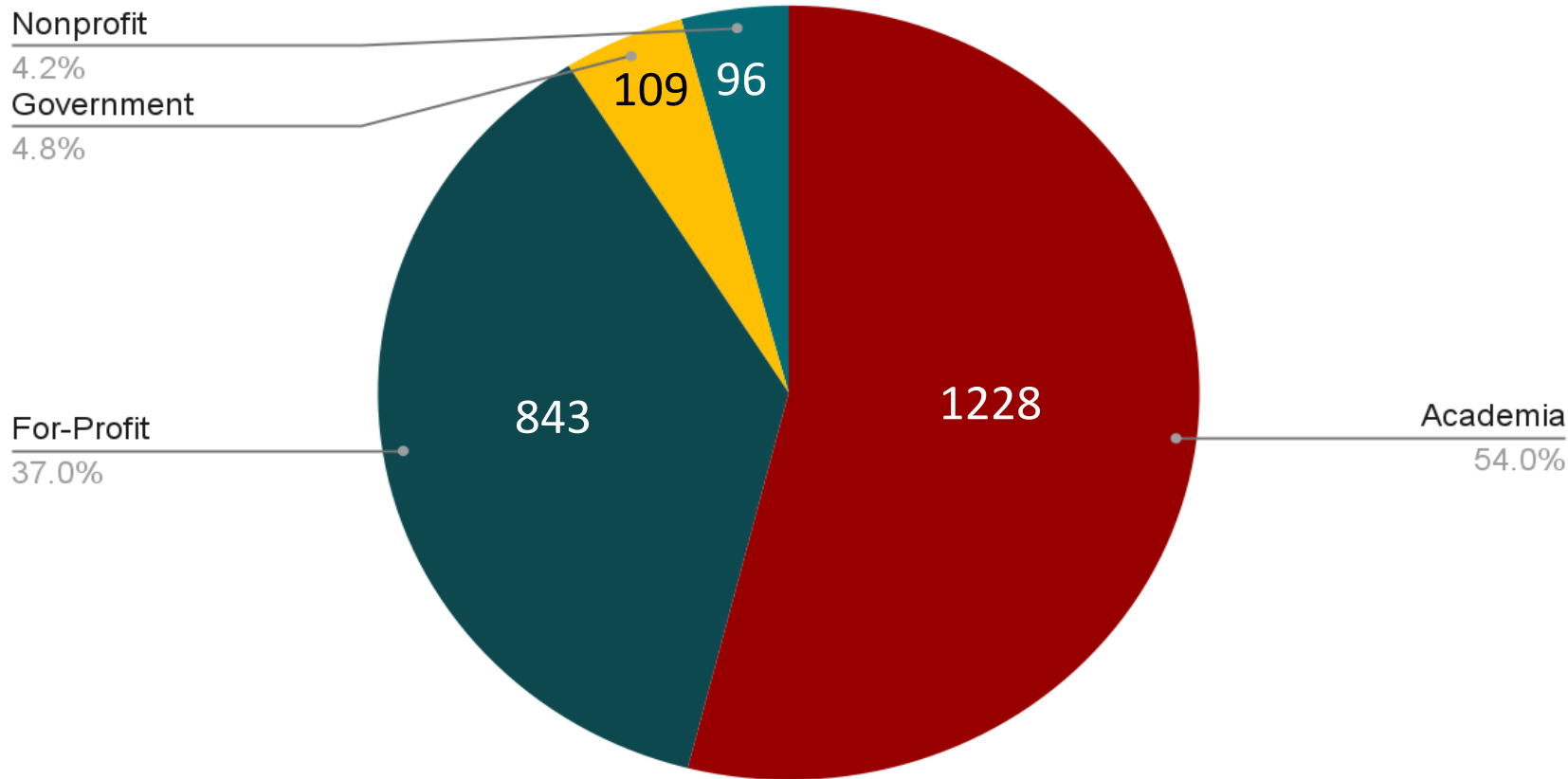


54 Countries in addition to the US

24% of UMN Postdoc Alumni (2012-2022) employed in Minnesota



UMN Postdoc Alumni (2012-2022) Industries of Employment



Postdoctoral Scholars as Trainees

- Primary focus is on gaining additional technical skills and knowledge
- More than 85% of UMN postdoc survey respondents were satisfied or very satisfied with:
 - Quality of mentoring
 - Knowledge gained
 - Quality of facilities
 - Quality of support staff
 - Academic department climate



Source: PostdocSERU Survey



Preparing for the workforce

It is essential that, in addition to conducting research, postdocs focus on developing their “soft” skills.

- Communication
- Leadership
- Management
- Multiculturalism



Assessing Postdoc's Needs

40% or more of postdoc survey respondents felt that they had NOT developed their ability to:

- build relationships with and involve local communities in research
- navigate the various cultures within diverse communities
- engage in civic affairs
- share their work with nonacademic audiences
- lead, influence and inspire individuals and groups
- engage in difficult conversations with confidence
- move a group from discord to shared goals
- interview effectively in different settings

Source: PostdocSERU Survey



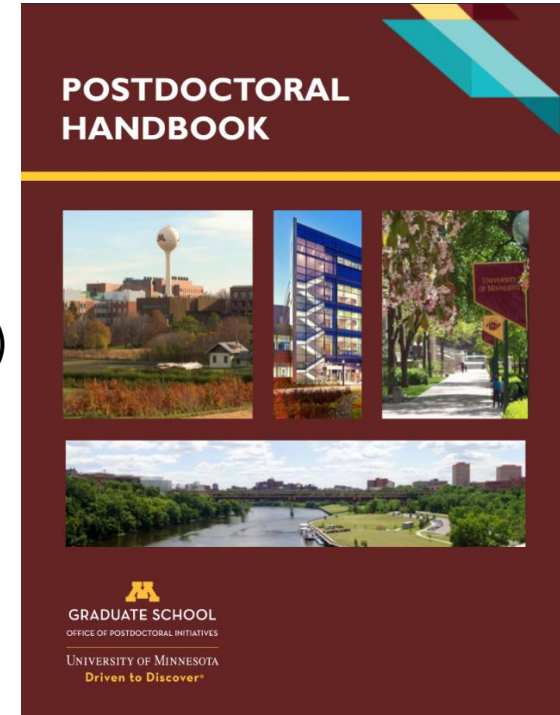
Current Professional Development Support for Postdocs

- New Postdoc Orientation
- Monthly Newsletter
- Alumni Career Path Data
- Workshops (for example):
 - Interviewing Skills
 - Industry - The Organization of Business
 - Career Exploration Series
 - Consulting Careers
 - Research Careers in Industry
 - Research Careers at a Start-up



Office of Postdoctoral Initiatives

- Continue existing programming plus
 - Summer Bootcamp on innovation and business
 - Training on entrepreneurship and intellectual property (Tech Comm, TLI, MIN-Corps)
 - Communication Initiative (partnering with UMN retirees)
 - Expansion of the number and kinds of professional development workshops based on demand
 - Individual consultations on job search processes



Increasing Preparation for Industry



- Convene industry contacts to identify gaps in postdoc preparation
- Connect postdocs to industry mentors
 - Speaker/seminar series with recent postdocs who have moved to industry
- Consider opportunities (funded) for postdocs to join UMN startups, especially when they are part of team that created intellectual property



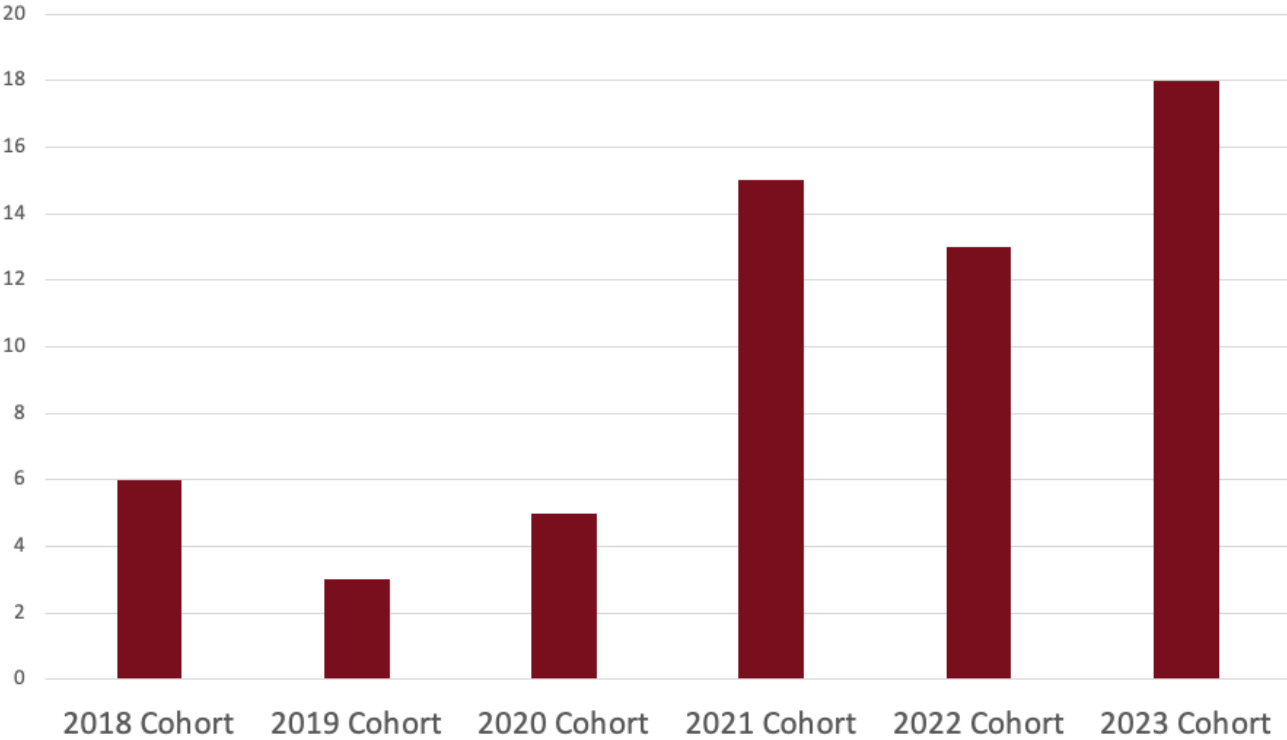
President's Postdoctoral Fellowship Program (PPFP)

- Two-year fellowship program
- Offered by the Office of Equity and Diversity and focuses on recruiting recent Ph.D.s from underserved communities
- Emphasis on mentorship and community-building for transforming members into faculty; ideally at UMN

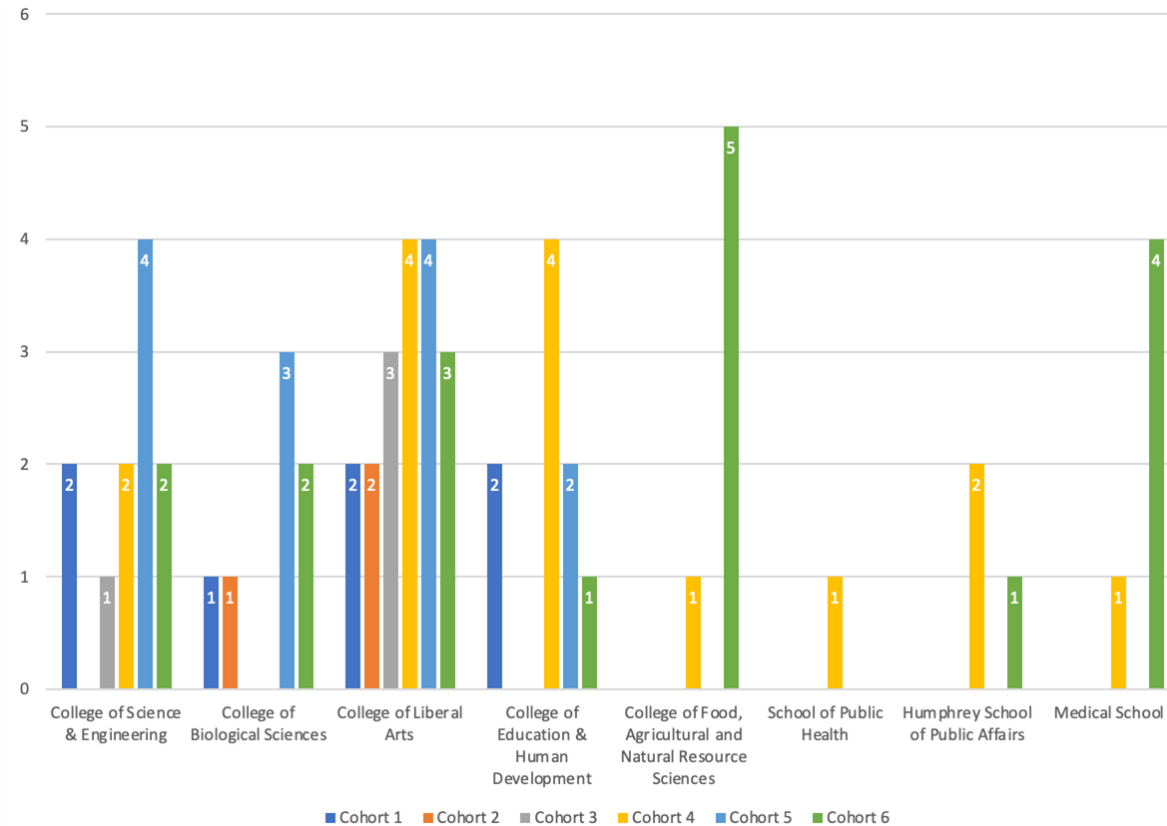


Number of Postdocs

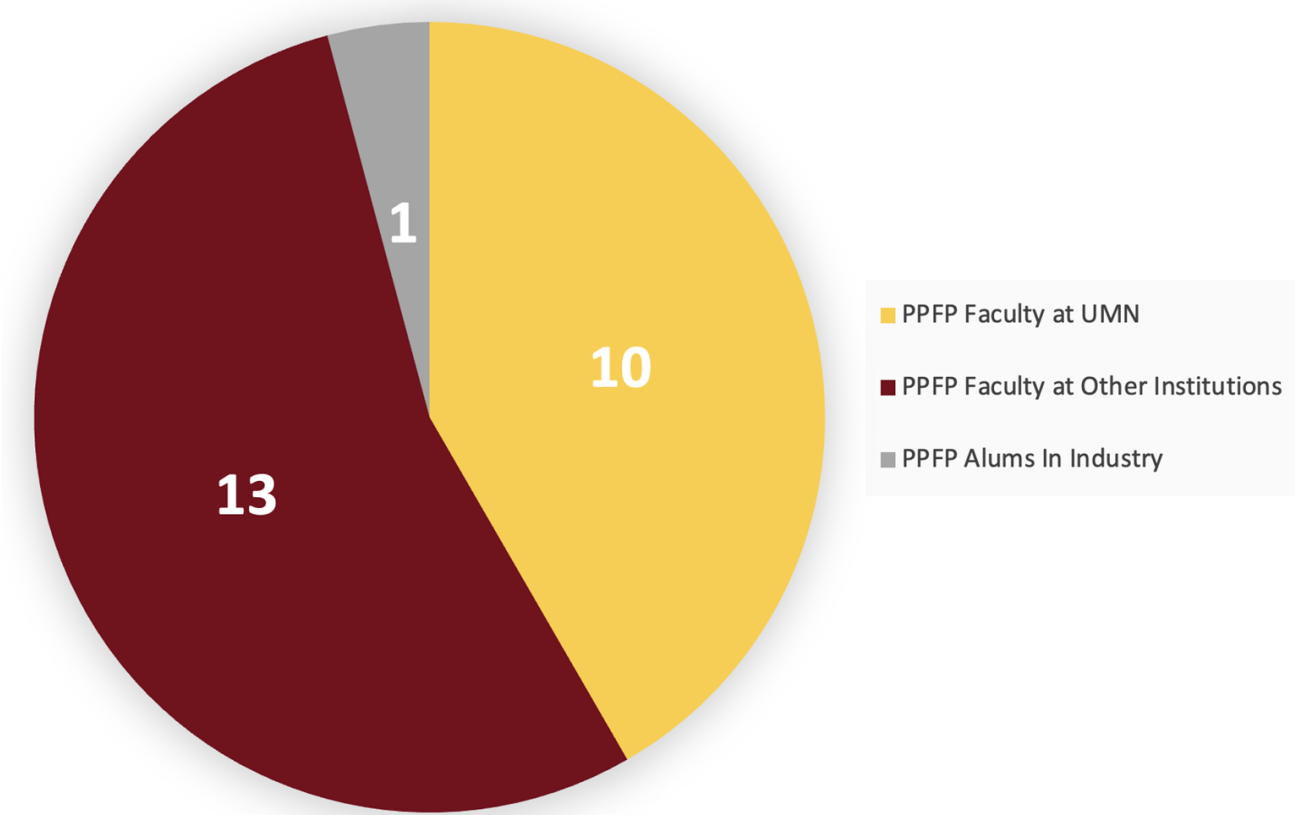
Presidents' Postdoctoral Fellows 2018-2023



Distribution of Colleges



Transitions to Faculty and Industry



Summary

- How can we better identify opportunities for postdocs, especially in industry?
- How can we engage industry to further support postdocs? (mentors, internships, welcoming, etc.)





BOARD OF REGENTS DOCKET ITEM SUMMARY

Mission Fulfillment

December 7, 2023

AGENDA ITEM: Board of Regents Policy: *Equity, Diversity, Equal Opportunity, and Affirmative Action*

Review **Review + Action** **Action** **Discussion**

This is a report required by Board policy.

PRESENTERS: Tina Marisam, Associate Vice President, Office for Equity and Diversity

PURPOSE & KEY POINTS

The purpose of this item is to act on the proposed amendments to Board of Regents Policy: *Equity, Diversity, Equal Opportunity, and Affirmative Action*. The proposed amendments are the result of a comprehensive review of the policy and consultation with the University community.

The proposed amendments include:

- updates to the policy’s title and text to better align them with current practice and terminology;
- the addition of guiding principles related to 1) fostering an environment that promotes belonging, 2) providing accessibility in all programs and activities; and 3) community members’ shared responsibility for achieving the University’s equity, diversity, and inclusion goals; and
- the inclusion of “sex” in the policy’s list of protected characteristics.

At the October 2023 meeting, the committee suggested the following two additional amendments to the policy, which have been incorporated into the updated policy draft:

- the addition of a guiding principle related to providing accessibility in University programs and activities; and
- reordering the terms “equity, diversity, inclusion and equal opportunity” to “diversity, equity, inclusion, and equal opportunity”

BACKGROUND INFORMATION

Board of Regents Policy: *Equity, Diversity, Equal Opportunity, and Affirmative Action* was adopted in 1995 and last amended in June 2018.

INTERIM PRESIDENT'S RECOMMENDATION

The Interim President recommends adoption of the proposed amendments to Board of Regents Policy: *Equity, Diversity, Equal Opportunity, and Affirmative Action*.



BOARD OF REGENTS POLICY:
-Equity, Diversity, Equity, Inclusion, and Equal Opportunity, and Affirmative Action

SECTION I. GUIDING PRINCIPLES.

The following principles shall guide the commitment of the University of Minnesota (University) to ~~equity, diversity, equity, inclusion, and~~ equal opportunity, ~~and affirmative action~~:

- (a) Consistent with its academic mission and standards, the University is committed to achieving excellence through ~~equity and diversity~~diversity, equity, inclusion, and equal opportunity in research, scholarship, teaching and learning, and all of its other programs and activities.
- (b) ~~A diverse student body enhances~~Diverse students, staff, and faculty enhance the academic and social environment for all ~~students and prepares~~members of the University community and prepare students to thrive in an increasingly diverse workforce and society.
- (c) Equal educational access is critical to preparing students for the responsibilities of citizenship and civic leadership in a heterogeneous society.
- (d) ~~As a community of faculty, staff, and students engaged in research, scholarship, artistic activity, teaching and learning, or the activities that support them, the University seeks~~The University strives to foster an environment that is diverse, humane, and hospitable, and that promotes a sense of belonging for all members of the University community.
- (e) The University aims to provide accessibility in all of its programs and activities so that members of the University community have an equal opportunity to fully participate.
- (f) Diversity, equity, inclusion, and equal opportunity are fundamental to the University's mission, and the University's faculty, staff, and students share responsibility for the collective achievement of these goals.
- ~~(e)~~(g) In partnership with community groups, the University is committed to serving the state, the nation, and the world through its outreach and public service.

SECTION II. IMPLEMENTATION.

The University shall:

- (a) provide equal access to and opportunity in its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, gender, age, marital status, familial status, disability, public assistance status, membership or activity in a local commission created for the purpose of dealing with discrimination, veteran status, sexual orientation, gender identity, or gender expression;
- ~~(b) advocate and practice affirmative action consistent with law, including the use of recruiting and search processes to enhance participation of racial minorities, women, persons with disabilities, and protected veterans;~~
- ~~(e)(b)~~ establish and nurture an environment for faculty, staff, students, and visitors that actively acknowledges and values diversity, equity, and diversity inclusion, and is free from ~~racism, sexism, ageism, homophobia, and other forms of identity-based~~ prejudice, intolerance, or harassment; and
- ~~(d) provide equal educational access to members of underrepresented groups and develop affirmative action admissions programs, where appropriate, to achieve the University's educational mission; and~~
- ~~(e)(c)~~ promote and support equity and diversity, equity, inclusion, and equal opportunity through its hiring and admissions processes, academic programs, ~~its~~ employment policies and practices, ~~its~~ the delivery of services, and the purchase of goods, materials, and services ~~for its programs and facilities~~ from businesses of the diverse communities it serves, and all of its other programs and activities.

SECTION III. MONITORING.

The president or delegate shall set performance goals consistent with this policy and law; and remedy any discriminatory practice that deviates from this policy; ~~and assess and reward the performance of individuals and units using the University's critical measures for the equity and diversity performance goals as part of the University's planning and budget process.~~

REVISION HISTORY

Adopted: September 7, 1995

Amended: July 8, 2009; June 8, 2018

Supersedes: Policy Statement on Women Academic Employees dated July 13, 1990; Equal Educational Access and Opportunity dated November 8, 1991; Equal Opportunity: Facilities dated July 9, 1993; Equal Opportunity in Employment dated July 9, 1993; Diversity dated July 9, 1993; and Equal Opportunity dated July 9, 1993.

Board of Regents Policy: *Equity, Diversity, Equal Opportunity, and Affirmative Action - Action*

Board of Regents | Mission Fulfillment Committee | December 7, 2023

Tina Marisam

Associate Vice President

Office for Equity and Diversity



UNIVERSITY OF MINNESOTA

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Key Policy Updates

- Updated the policy's title and text to better align them with current practice and terminology.
- Added guiding principles related to belonging and community members' shared responsibility for achieving the University's diversity, equity, and inclusion goals.
- Added "sex" to the policy's list of protected characteristics.



Policy Updates Since The October Meeting

- Changed the order of terms in the policy title and text to: *Diversity, Equity, Inclusion, and Equal Opportunity*.
- Added the following text to the section on Guiding Principles:

“The University aims to provide accessibility in all of its programs and activities so that members of the University community have an equal opportunity to fully participate.”



OFFICE FOR
EQUITY AND DIVERSITY

UNIVERSITY OF MINNESOTA

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BOARD OF REGENTS DOCKET ITEM SUMMARY

Mission Fulfillment

December 7, 2023

AGENDA ITEM: Consent Report

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Rachel Croson, Executive Vice President and Provost

PURPOSE & KEY POINTS

The purpose of this item is to seek approval of new academic programs and program additions, program deletions and discontinuations, and/or program changes; and conferral of tenure for new hires, as outlined below.

I. Request for Approval of New Academic Programs

- College of Education and Human Development (Twin Cities campus)—requests approval to create a new Esports Management undergraduate minor, effective fall 2024.
- College of Science and Engineering (Twin Cities campus)—requests approval to create a Master of Science in Data Science in Operations Research (MSDSOR), effective fall 2024.
- Carlson School of Management (Twin Cities campus)—requests approval to create a Master of Global Management, effective summer 2024.
- Medical School (Twin Cities campus)—requests approval to create a Healthcare Administration, Leadership, and Management Fellowship program, effective summer 2024.

II. Request for Approval of Changed Academic Plans

- College of Education and Human Development (Twin Cities campus)—requests approval to change the name of the Emotional and Behavioral Disabilities Residency-Based Track (EBD RES BS) subplan in the Master of Education in Special Education Initial License to EBD, effective summer 2024.
- College of Food, Agricultural and Natural Resource Sciences (Twin Cities campus)—requests approval to merge two subplans in the Bachelor of Science in Sustainable Agricultural and Food Systems, effective fall 2024.
- College of Food, Agricultural and Natural Resource Sciences (Twin Cities campus)—requests approval to change the name of the Consumers and Markets subplan in the Bachelor of Science in Sustainable Agricultural and Food Systems to Food Marketing and Supply Chains, effective fall 2024.

- School of Public Health (Twin Cities campus)—requests approval to change the names of two subplans in the Master of Public Health in Public Health Nutrition, effective fall 2024.
- School of Public Health (Twin Cities campus)—requests approval to change the modality of the Public Health Preparedness, Response, and Recovery postbaccalaureate certificate, effective fall 2024.

III. Request for Approval of Discontinued Academic Plans

- College of Food, Agricultural and Natural Resource Sciences (Twin Cities campus)—requests approval to discontinue the Sustainable Agriculture Systems graduate minor, effective fall 2024.
- College of Science and Engineering (Twin Cities campus)—requests approval to discontinue the Master of Civil Engineering (MCE), effective spring 2024.
- College of Science and Engineering (Twin Cities campus)—requests approval to discontinue the Master of Geoengineering (MGeoE), effective spring 2024.
- College of Science and Engineering (Twin Cities campus)—requests approval to discontinue the Quaternary Paleocology graduate minor, effective spring 2024.

IV. Request for Conferral of Tenure for New Hires

- Susan McKernan, associate professor with tenure, Department of Primary Dental Care, School of Dentistry, Twin Cities campus
- Melinda Pettigrew, professor with tenure, Division of Environmental Health Sciences, School of Public Health, Twin Cities campus
- Francis Shen, professor with tenure, Law School, Twin Cities campus
- George Veletsianos, professor with tenure, Department of Curriculum & Instruction, College of Education and Human Development, Twin Cities campus

V. Request for Approval of Human Fetal Tissue Research Report to the Minnesota Legislature

- The complete report is provided in the docket materials.

VI. Request for Approval of Amended Weisman Art Museum Collections Management Policy

- Amendments to the accessioning and deaccessioning policies are included in the docket materials.

BACKGROUND INFORMATION

Approvals are sought in compliance with Board of Regents Policy: *Reservation and Delegation of Authority* as follows:

- Academic program changes: Article I, Section V, Subd. 2.
- Tenure and/or promotion recommendations: Article I, Section V, Subd. 1.

- Approval of any report to the State of Minnesota that impacts the University's autonomy or addresses the performance of the University and/or its major initiatives: Article I, Section I, Subd. 7.

Board of Regents Policy: [Accessioning and Deaccessioning Museum Collections](#) requires each museum or gallery to develop and maintain policies for accessioning and deaccessioning their permanent collections. Amendments to those policies require Board approval. Accessioning and deaccessioning policies are often part of larger museum policies, but only the sections related to accessioning and deaccession are reserved for Board approval. The sections included in the docket are excerpts of the museum's policy; the complete policy is available upon request.

INTERIM PRESIDENT'S RECOMMENDATION

The Interim President recommends approval of the Consent Report.

**University of Minnesota Board of Regents
Mission Fulfillment Committee
December 7, 2023
Consent Report: Academic Program Changes**

I. Request for Approval of New Academic Programs

College of Education and Human Development (Twin Cities campus)—requests approval to create a new Esports Management undergraduate minor, effective fall 2024. This minor will allow students to learn the fundamental competencies of successful sport managers while exploring the rapidly changing esports context. Competitive video gaming has disrupted the sport industry, resulting in technological demands that combine traditional sport management competencies with emerging digital technologies. Through project-based learning, students will connect with leading esports organizations so they can leverage their skills and knowledge to help identify and solve problems facing the industry. The minor will contribute to the School of Kinesiology’s mission to promote physical activity, health, and wellness, and is open to all undergraduate students. The program will be offered in a majority face-to-face/classroom modality. Two new courses will be developed for the minor, which otherwise makes use of existing courses and resources.

College of Science and Engineering (Twin Cities campus)—requests approval to create a Master of Science in Data Science in Operations Research (MSDSOR), effective fall 2024. The MSDSOR degree emphasizes an integrated approach to data-driven decision making. The curriculum includes core coursework from Industrial and Systems Engineering, Statistics, and Computer Science, and engages students about content at the intersection of data science and operations research. There are numerous application areas, including healthcare, energy, transportation and logistics, retail pricing, supply chain management, manufacturing, military planning, service operations management, and many others. There is substantial growth projected over the next decade in the hundreds of related professions. The program will be offered in a majority face-to-face/classroom modality and makes use of existing courses and resources.

Carlson School of Management (Twin Cities campus)—requests approval to create a Master of Global Management, effective summer 2024. The Master of Global Management (MGM) will be an additional or alternative terminal master’s degree restricted to students in the Global Doctor of Business Administration PhD program. This degree is for students who either do not intend to complete the doctoral degree, or who wish to complete an additional credential. The GDBA and MGM programs are both focused on students interested in strengthening their critical thinking capabilities and broadening their strategic views for successful administration of large Chinese corporations, as well as United States corporations with major operations in China. The program will be offered in both majority face-to-face/classroom and hybrid modalities and makes use of existing courses and resources.

Medical School (Twin Cities campus)—requests approval to create a Healthcare Administration, Leadership, and Management Fellowship program, effective summer 2024. The Medical School’s Department of Emergency Medicine requests approval to establish a Healthcare Administration, Leadership, and Management (HALM) Fellowship program. The HALM Fellowship program duration will be one year if completed without an accompanying business degree, or two years if completed with a concurrent Master of Business Administration (MBA). The curriculum provides an opportunity for hands-on experience with departmental and hospital leaders in operational and quality meetings, didactic experiences, journal clubs, project management, and executive meetings. Within the Department of Emergency Medicine, this fellowship will train internal physician leadership for future faculty roles in a growing department at UMMC. This program will have a direct source of financial support via clinical revenue.

II. Request for Approval of Changed Academic Plans

College of Education and Human Development (Twin Cities campus)—requests approval to change the name of the Emotional and Behavioral Disabilities Residency-Based Track (EBD RES BS) subplan in the Master of Education in Special Education Initial License to EBD, effective summer 2024. The subplan name is being updated to reflect the removal of the residency requirement. This subplan will align with all other subplans in this degree program, and will offer more accessibility to communities in greater Minnesota.

College of Food, Agricultural and Natural Resource Sciences (Twin Cities campus)—requests approval to merge two subplans in the Bachelor of Science in Sustainable Agricultural and Food Systems, effective fall 2024. This proposal combines two similar subplans, Agroecology and Organic and Local Food Production, into a new subplan titled Sustainable Food Production. This streamlines the curriculum and reduces confusion with the existing subplans. This will also expand course elective offerings for students.

College of Food, Agricultural and Natural Resource Sciences (Twin Cities campus)—requests approval to change the name of the Consumers and Markets subplan in the Bachelor of Science in Sustainable Agricultural and Food Systems to Food Marketing and Supply Chains, effective fall 2024. This language better reflects the curriculum in this subplan, and better aligns this subplan with disciplinary fields of study. The changes will make it easier for students to choose specialized areas of study while simultaneously gaining general knowledge of sustainable agriculture and food system complexity with the integrated core.

School of Public Health (Twin Cities campus)—requests approval to change the names of two subplans in the Master of Public Health in Public Health Nutrition, effective fall 2024. The “standard track” subplan will change to “traditional track,” and the “coordinated master’s program” subplan will change to “coordinated program.” These subplan names are being updated to reflect current professional language and comply with standards of the accreditation body, the Accreditation Council for Nutrition and Dietetics (ACEND).

School of Public Health (Twin Cities campus)—requests approval to change the modality of the Public Health Preparedness, Response, and Recovery postbaccalaureate certificate, effective fall 2024. This program will be offered in multiple modalities, including in-person, hybrid, and completely online, in order to reach the widest audience possible. This certificate program helps to prepare public health workers and others responding to incidents of bioterrorism, infectious disease outbreaks, and other emerging public health issues.

III. Request for Approval of Discontinued Academic Plans

College of Food, Agricultural and Natural Resource Sciences (Twin Cities campus)—requests approval to discontinue the Sustainable Agriculture Systems graduate minor, effective fall 2024. The minor is being discontinued due to low enrollment over the past several years. There is currently one student enrolled in the minor who will complete by the end of fall 2023.

College of Science and Engineering (Twin Cities campus)—requests approval to discontinue the Master of Civil Engineering (MCE), effective spring 2024. The MCE degree in Civil Engineering has the same admission and degree requirements as the Master of Science in Civil Engineering, which is duplicative and confusing to students. The MCE was created originally for working professionals; however, the MS Plan C offers the same option. The decision was made to streamline the program and retire this degree. There are two students currently enrolled in the MCE degree program, both scheduled to complete in spring 2024. They have the option to complete the current MCE or switch to the MS Plan C.

College of Science and Engineering (Twin Cities campus)—requests approval to discontinue the Master of Geoengineering (MGeoE), effective spring 2024. The MGeoE degree in Geoengineering has the same admission and degree requirements as the Master of Science in Geoengineering, which is duplicative and confusing to students. The MGeoE was created originally for working professionals; however, the MS Plan C offers the same option. The decision was made to streamline the program and retire this degree. There are no students currently enrolled in the MGeoE degree program.

College of Science and Engineering (Twin Cities campus)—requests approval to discontinue the Quaternary Paleoecology graduate minor, effective spring 2024. The minor is being discontinued due to low enrollment over the past several years. There is currently one student enrolled in the minor who will be allowed to complete by the end of 2024.

University of Minnesota Board of Regents
Mission Fulfillment Committee
December 8, 2023

Consent Report: Recommendation to Grant Tenure to New Hires

The Executive Vice President and Provost recommends four external hires for tenure and faculty rank as outlined below. The decision of the Board of Regents to confer tenure and rank for any individual faculty hire with tenure becomes effective on the first day of that faculty member's academic appointment at the University.

Susan McKernan, associate professor with tenure, Department of Primary Dental Care, School of Dentistry, Twin Cities campus

Professor McKernan's long-term research focus is to identify and alleviate barriers to dental care associated with the dental workforce, and to conduct health services research that targets access to dental care for health disparity populations. She earned her Ph.D. in 2012 from the University of Iowa where she is currently a tenured associate professor.

Melinda Pettigrew, professor with tenure, Division of Environmental Health Sciences, School of Public Health, Twin Cities campus

Professor Pettigrew's scholarly work is primarily related to the epidemiology of some specific pathogens that cause respiratory and gastrointestinal diseases, the microbiome of the respiratory system and gastrointestinal tracts, and the growing threat of antibiotic resistance. She earned her Ph.D. in 1999 from Yale University where she is currently a tenured professor. Dr. Pettigrew is the incoming dean in the School of Public Health.

Francis Shen, professor with tenure, Law School, Twin Cities campus

Dr. Shen conducts empirical and legal research at the intersection of law, ethics, neuroscience, and artificial intelligence to examine how insights from neuroscience can make the legal system more just and effective. He earned his Ph.D. in 2008 from Harvard University where he is currently an associate professor.

George Veletsianos, professor with tenure, Department of Curriculum & Instruction, College of Education and Human Development, Twin Cities campus

Professor Veletsianos studies learners' and faculty experiences with online learning, flexible learning, networked scholarship, open education and emerging pedagogical practices. He earned his Ph.D. from the University of Minnesota in 2008. Dr. Veletsianos currently serves as a tenured professor at Royal Roads University in Canada.

University of Minnesota

Human Fetal Tissue Research

**Report to the Minnesota Legislature
2023**

University of Minnesota Human Fetal Tissue Research

Report of the Minnesota Legislature

As required by Minnesota Statute 137.47 which went into effect on July 1, 2017.

Submitted by:

Board of Regents

Prepared by:

The report was prepared by staff in the Office of Academic Clinical Affairs with the assistance of staff in the Office of the Vice President for Research at the University of Minnesota.

Report Preparation Costs:

Per the requirements set forth in Minnesota Statute 3.197, the cost to prepare this report was \$300.

Purpose:

During the 2017 Minnesota legislative session, a law was passed requiring the Board of Regents of the University of Minnesota to submit an annual report to the chairs and ranking minority members of the higher education policy and finance, health and human services, and human services policy and finance committees. The report is required to disclose specific information regarding university research projects which access donated human fetal tissue (reporting requirements noted below).

Background:

In February 2016, the University of Minnesota instituted new requirements for researchers accessing donated human fetal tissue. Oversight of human fetal tissue research became administered jointly by the Office of the Vice President of Research and the Vice President of the Academic Health Center (since renamed the ‘Office of Academic Clinical Affairs’).

Per the new requirements, researchers requesting to access human fetal tissue were required to apply for permission to conduct research using human fetal tissue from the Fetal Tissue Research Committee (FTR) prior to commencing their studies. Approval from the Institutional Review Board (IRB) continued to be required if the research project met the criteria established under federal law.

The Anatomy Bequest Program, a university anatomical donation program, became responsible for the acquisition, tracking and final disposition of the tissue.

In January 2018, the University of Minnesota updated the fetal tissue policies to reflect the new requirements associated with the enactment of Minnesota Statute 137.47. The revisions also broadened the scope of the policies to include educational uses, clarified the responsibilities of researchers, delineated newly required duties among the administrative units, and provided an opportunity to make housekeeping changes.

Additionally, the January 2018 revisions specifically exempted from review “the use of cell lines derived from human fetal tissue that historically have been available and are widely used and distributed on a national basis.” In 2018, the University’s fetal tissue research policies in place at the time underwent a comprehensive review by the Office of the Legislative Auditor.

Report Requirements:

Per the requirements of Minnesota Statute 137.47, the following information must be included in this report: all fetal tissue research proposals submitted to the FTR or IRB, including any written narrative required under 137.47, subd.2; whether the research proposal involved aborted fetal tissue; action by the FTR or IRB on all fetal tissue research proposals, including whether the proposal was approved by the FTR or IRB; and a list of all new or ongoing fetal tissue research projects at the university. The list must include the date the project was approved by the FTR or

IRB, the source of funding for the project, the goal or purpose of the project, whether the fetal tissue used is aborted fetal tissue or non-aborted fetal tissue, the source of the fetal tissue used, references to any publicly available information about the project, and references to any publications resulting from the project.

New Fetal Tissue Research Requests Submitted to the Fetal Tissue Research Committee and/or the Institutional Review Board:

There were no new research requests involving access to donated human fetal tissue submitted to the FTR or IRB in 2023.

Previously Reported Research Update:

All other previously reported research projects were either never initiated or were discontinued prior to 2023.

Area of Policy	Previous Policy	New Policy
<p>Acquisition and Deaccession/disposal authority structure</p>	<p>Acquisition The Weisman Art Museum director reserves the sole right to authorize acceptance of gifts, bequests, transfers, and exchanges upon recommendation of a curator, other staff members, University faculty, donor, University attorney or a representative of an estate.</p> <p>The accessions committee must approve gifts, bequests, transfers, and exchanges considered to be valued at more than \$20,000 by a two-thirds majority.</p> <p>The accessions committee must approve, by a two-thirds majority, the purchase of a work of art that is offered for sale at a price over \$20,000.</p> <p>Deaccession/disposal Only the director of the Weisman Art Museum initiates proposals to the deaccessioning committee with respect to the deaccessioning of objects.</p>	<p>All acquisitions and disposal requests must be approved by the Director prior to being presented to the Collections Committee. Acquisitions will be initiated by Curatorial staff. Curatorial staff is required to prepare a proposal identifying the artwork and explaining the justification for the acquisition in accordance with the criteria outlined in this policy. Registration staff is required to review and prepare a report addressing present condition, conservation needs and storage requirements. The Director will review and evaluate proposed acquisitions taking into account both curatorial justification and registration condition evaluation and storage requirements.</p> <p>Deaccessions/disposals can be initiated by the Curator or Director.</p> <p>The Collections Committee must review all acquisition and disposal requests.</p> <p>All acquisitions and disposals will be reported to the Executive Vice President and Provost on an annual basis.</p>

<p>Acquisition evaluation criteria</p>	<p>In considering a recommendation for accession, the accessions committee should take into account the following factors:</p> <ul style="list-style-type: none"> -Whether a work falls within the collection focus of the museum; -Whether the work possesses potential for research, teaching, and scholarship or is likely to be displayed by the museum; -Whether the work's condition is such that it can be properly preserved by the museum; -Whether the museum has adequate space for safely storing or displaying the work; -Whether the price asked is a fair market value and comparable to the prices asked for similar works; and -Whether the provenance of the work is well established, particularly with respect to objects covered by the UNESCO Convention and the Cultural Property Act, such that the museum can obtain clear legal title to the work. 	<p>In determining whether to acquire an object, the following criteria should be considered:</p> <ul style="list-style-type: none"> ● Consistency with the mission, vision and beliefs and programmatic goals ● Consistency with the collecting plan and collections stewardship plan ● Ability and resources to provide appropriate management, care, and accessibility, including documentation, long-term preservation, conservation, digitization, and storage for the proposed acquisition. ● Whether the proposed acquisition fits within the existing storage space. ● Whether the proposed acquisition will require substantial care that would place undue hardship on WAM. ● Documentation of legal title and satisfactory establishment of ownership such that clear title can be safely conveyed. ● Evidence of provenance and documentation that the object was legally exported from its country of origin and legally imported into the United States. ● The collections have not been acquired under circumstances that would support
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		<p>or encourage irresponsible damage to, or destruction of, biota, collecting sites, cultural monuments, or human burial places.</p> <ul style="list-style-type: none"> • The owner or donor has legal authority to donate or sell the object (in making this determination, WAM may consider, among other things, the circumstances of the transaction, the reputation of the owner or donor, and the available knowledge of the object’s origins). <p>The Committee may only approve the acquisition of collections after considering the obligations of long-term stewardship to determine that WAM can responsibly anticipate the ability to meet such responsibilities with existing and projected resources over the life cycle of the collection.</p>
<p>Collections Committee-structure, selection process, terms, voting</p>	<p>The accessions committee shall consist of no fewer than six persons, and no more than twelve, at least three of whom must be regular members of the Weisman Art Museum staff, and at least three of whom must be from outside the staff of the museum.</p>	<p>The Committee consists of a representative of the Colleagues Advisory Board, appointed University staff or faculty (limited to 2 and does not include museum staff) and appointed community members external to the University (limit to 3). Non-voting members consist of the</p>

	<p>The committee must include the museum director, who will serve as the chair of the committee, a registrar, and a curator so long as those staff positions exist and are filled.</p> <p>The director shall appoint the staff members and the nonstaff members to serve on the committee. Of the committee members from outside the staff of the museum, some must represent the University community of faculty, students, or staff, and some must be from outside the University. Usually, the proportion of University faculty and staff and community members shall be equal. The non-University affiliated members generally will be current or former Colleagues Advisory Board members, although the accessioning committee is a committee of the University and not of the Colleagues Advisory Board.</p> <p>The terms of the appointed members of the accessions committee shall be three years. Members may be reappointed. The terms of the appointed members shall be staggered.</p> <p>A secretary shall be appointed to keep the minutes of the meetings of the accessions committee. The secretary is not a member of the accessions committee.</p>	<p>Director, Registrar, Curator, and a WAM staff member recording meeting minutes.</p> <p>The Collections Committee shall approve or deny motions with a simple majority of a quorum of the committee. A quorum is the minimum number of voting members who must be present at a meeting in order to conduct business. The minimum number is one greater than half the number of voting members. Suggested Collections Committee member appointments will be reviewed by the WAM senior leadership team and appointed by the Director. Members can serve two-year terms with an option for one reappointment.</p>
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	<p>Voting:</p> <p>Acquisitions require a two-thirds majority</p> <p>All deaccessioning actions with regard to the permanent collection must be approved by unanimous vote.</p>	
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Frederick R. Weisman Art Museum University of Minnesota Collections Management Policy



Acquisition and Accessioning

Acquisition is the process of accepting collections as assets for use in the Museum through donation, purchase, or transfer. The care of collections is fundamental to the mission, purpose, and programmatic goals of WAM.

Accession is the legal acquisition of objects where title is transferred to the Museum with expectations for permanence. WAM requires responsible, disciplined acquisitions of collections and observes the highest legal and ethical standards in acquiring collections.

Authority

Authority to approve acquisitions is vested in the Director (FN09a Delegation) and delegated to the Collections Committee. Collections are acquired only in accordance with established authority and only in compliance with applicable laws, regulations, and professional ethics.

The Director is the only staff member authorized to sign national or international agreements and permits regarding collections acquisitions on behalf of WAM. In the absence of the Director, the Executive Vice President and Provost is authorized to sign on behalf of WAM. The University of Minnesota Tax Director is the only individual authorized to sign IRS Form 8283/8282.

All acquisitions and disposal requests must be approved by the Director prior to being presented to the Collections Committee. Acquisitions will be initiated by Curatorial staff. Curatorial staff is required to prepare a proposal identifying the artwork and explaining the justification for the acquisition in accordance with the criteria outlined in this policy. Registration staff is required to review and prepare a report addressing present condition, conservation needs and storage requirements. The Director will review and evaluate proposed acquisitions taking into account both curatorial justification and registration condition evaluation and storage requirements.

The Collections Committee must review all acquisition and disposal requests. The Committee consists of a representative of the Colleagues Advisory Board, appointed University staff or faculty (limited to 2 and does not include museum staff) and appointed community members external to the University (limit to 3). Non-voting members consist of the Director, Registrar, Curator, and a WAM staff member recording meeting minutes.

The Collections Committee shall approve or deny motions with a simple majority of a quorum of the committee. A quorum is the minimum number of voting members who must be present at a meeting in order to conduct business. The minimum number is one greater than half the number of voting members. Suggested Collections Committee member appointments will be reviewed by the WAM senior leadership team and appointed by the Director. Members can serve two year terms with an option for one reappointment.

The Committee may only approve the acquisition of collections after considering the obligations of long-term stewardship to determine that WAM can responsibly anticipate the ability to meet such responsibilities with existing and projected resources over the life cycle of the collection.

All acquisitions and disposals will be reported to the Executive Vice President and Provost on an annual basis.

Policy

Collections will be acquired only in accordance with established authority and only in compliance with applicable laws, regulations, and professional ethics. WAM staff must exercise due diligence in complying with all applicable federal, state, local, and international laws, treaties, regulations, and conventions.

WAM adheres to the [UNESCO 1970 Convention on the Means of Prohibiting and Preventing the Illicit Import, Export, and Transfer of Ownership of Cultural Property](#) and any subsequent revisions thereto, which affirms WAM's support for efforts of local, state, national, and international authorities to protect art, antiquities, national treasures, and ethnographic material from destructive exploitation, sets forth the rules for the acquisition and borrowing of art, antiquities, and other items, and provides provenance standards for acquisitions.

Before acquiring or borrowing a collection item, WAM staff must ascertain, from the circumstances surrounding the transaction or knowledge of the item's provenance, that the collection item was not stolen or wrongfully converted and is not present in the United States illegally. WAM must also ascertain that the object was not unethically acquired from its source, unscientifically excavated, or illegally removed from its country of origin after 1970.

Locality records and related information may be reasonably protected from non-approved access if there is reason to fear any breach of privacy or confidentiality, site vandalism, or theft. Items related to named individuals or extant cultural groups shall be managed in a sensitive, respectful manner.

Objects will not be accessioned into WAM's collection with the sole intention of later selling or disposing of the object in any way. Objects may be acquired for sale if agreed upon with a donor and documented in a legal contract stipulating use of proceeds.

Evaluation Criteria

In determining whether to acquire an object, the following criteria should be considered:

- Consistency with the mission, vision and beliefs and programmatic goals

- Consistency with the collecting plan and collections stewardship plan
- Ability and resources to provide appropriate management, care, and accessibility, including documentation, long-term preservation, conservation, digitization, and storage for the proposed acquisition.
- Whether the proposed acquisition fits within the existing storage space.
- Whether the proposed acquisition will require substantial care that would place undue hardship on WAM.
- Documentation of legal title and satisfactory establishment of ownership such that clear title can be safely conveyed.
- Evidence of provenance and documentation that the object was legally exported from its country of origin and legally imported into the United States.
- The collections have not been acquired under circumstances that would support or encourage irresponsible damage to, or destruction of, biota, collecting sites, cultural monuments, or human burial places.
- The owner or donor has legal authority to donate or sell the object (in making this determination, WAM may consider, among other things, the circumstances of the transaction, the reputation of the owner or donor, and the available knowledge of the object's origins).

Methods of Acquisition

WAM acquires collections by a variety of methods, including gifts, bequests, purchases, transfers, and exchanges. All additions to collections and methods of acquisition must be approved by the Collections Committee.

- **Gift.** Gifts to WAM must be documented in writing by a deed of gift or gift agreement to establish transfer of legal title to WAM. WAM must comply with applicable IRS regulations concerning acknowledgement of gifts to donors.
- **Bequest.** WAM reserves the right to accept or decline any bequest, or a portion of a bequest, at its discretion, or to negotiate with executors to obtain bequests of a clear and unrestricted nature. All aspects of the bequests must be documented with release and receipt from the bequest's estate.
- **Purchase.** Wherever possible, purchases must be documented by use of standard purchase order or, if the terms of the purchase are complex, negotiated contracts written in consultation with the Office of the General Counsel. Purchases by petty cash or credit card must be documented by a standard invoice or bill of sale. All purchases must document the transfer of title and, if applicable, transfer of associated rights such as intellectual property rights. WAM will ensure that the transaction complies with University policy requiring a determination that the proposed purchase price is fair and

reasonable and such purchases as well as related decisions are appropriately documented.

- **Transfer.** Transfers are documented by a transfer agreement between WAM and the transferring entity.
- **Exchange.** WAM may engage in exchanges with other non-profit and educational organizations documented by an exchange agreement as long as the general criteria for acquisitions are adhered to for the proposed acquisition and the criteria governing disposals are adhered to for a collections item selected for removal and exchange.

Processing

For acquisitions, WAM must maintain records documenting the decision-making processes, including project proposal, review, approval, and required authorized agent acknowledgement. Records must include all necessary documents associated with the acquisition, such as Deed of Gifts, legal agreements, purchase receipts, import/export licenses, transportation permits and manifests, and intellectual property rights when applicable. Records are managed by the Registration Department. The numbering system for records is noted in the accompanying Collections Management Procedure Manual.

Receipt and processing of acquisitions (transactions) is managed by the Registrar in conjunction with WAM staff.

- Each transaction should be entered into the WAM collections management system, TMS, before use by WAM staff, regardless of the type of transaction.
- Unsolicited objects received by WAM will not be insured and will be returned promptly to the owner at the owner's expense. If any objects are delivered to WAM without notification or identification of the sender, and if WAM is unsuccessful in identifying or contacting the owner, WAM may dispose of the objects in an appropriate manner, following consultation with the Director and the Office of the General Counsel, and as provided by Minnesota Statutes § 345.75.

Disposal and Deaccessioning

Disposal is the act of physically removing a collections object from the collection through an approved method as outlined in this policy.

Deaccession is the legal removal of an object and its title from under the ownership of the Museum. Deaccessions can be disposed of in only pre-approved methods as outlined in this policy.

Disposal may occur for a variety of reasons. When reviewing past acquisitions, the best method for disposal needs to be determined following any title restrictions and consultation with staff

on best ethical practices. This includes the dispersal of abandoned, unclaimed, or found in collection objects.

Authority

Collections may be deaccessioned and disposed of only with the review of the Collections Committee under the recommendations from the Curator or Director but only in compliance with all applicable laws and professional ethics. All applicable federal, state, local, and international laws, treaties, and regulations as well as any other applicable restrictions will be observed and documented.

Disposals may proceed only after establishing unrestricted title to an object. In cases where title is in question, the Collections Committee must first seek guidance from the Registrar, Director, and the Office of the General Counsel.

All disposals will be documented in permanent files maintained by the Registrar.

Policy

When WAM temporarily acquires collections from Museums or individuals for loan, the collections will be returned to their rightful owner. However, if the rightful owner refuses to accept return, then the property will be considered abandoned following the [Chapter 345 Unclaimed Property; 345.70-74 Minnesota Museum Property Act](#).

The Museum will not deaccession artwork to cover operating expenses including payroll, maintenance, or utilities. Deaccession funds may only be used for new acquisitions that are consistent with the current acquisition mode and criteria, efforts to provide access to objects, and direct care of the collection, including housing, preservation and conservation treatment. This is in compliance with AAM's [Direct Care of Collections: Ethics, Guidelines, and Recommendations, 2019](#). The Board of Regents, President and Executive Vice President and Provost, as well as the Advisory Board, Collections Committee and WAM staff may not purchase any deaccessioned collections during a sale. Disposal of a collection item by destruction must be witnessed and documented.

Evaluation Criteria

To be deaccessioned, the objects must meet a minimum of one of the following criteria:

- Object has deteriorated beyond usefulness and cannot be conserved or restored.
- Duplication or redundancy of object within the Museum.
- Insufficient relation of the object to the Museum's mission, vision, and beliefs.
- Outside of scope of collection and collecting plan.
- Repatriation or ethical return to appropriate parties.

Deaccessions may not be selected based on any committee or staff member's:

- Political or religious views or beliefs
- Personal preference or aesthetic
- Private collector's request
- Monetary value

Methods of Disposal

WAM may dispose of collections by a variety of methods, including donation, return, educational use, sale, and destruction. The methods of disposal are listed from preferred (low risk) to least preferred (high risk).

- **Educational Use:** WAM may dispose of collection items by utilizing the objects for educational or school programs.
- **Donation:** WAM may donate collection items to another non-profit or educational institution. The donation is executed through the receiving institution's Deed of Gift.
- **Return to Rightful Owner:** When WAM disposes of accessioned material acquired with return/disposal restrictions, then it must honor these Restricted Gifts.
- **Sale:** WAM may dispose of collections items through public sale.
- **Destruction:** Deliberate destruction of a collection item may be considered when the object is not of use for educational purposes or when an object's historical and monetary value make it undesirable by any institution.

Disposal of Hazardous Material

Disposal of hazardous collection items shall comply with all applicable local, state, or federal laws and regulatory requirements concerning the disposal of hazardous or regulated material. Compliance with those regulations will be documented.

Processing

All deaccessions must be:

- documented using a deaccession memo including justification and recommended method of disposal;
- deaccession memo must be signed by the Director within 14 days of Collections Committee approval;
- disposed of within 1 year of Collection Committee's approval; and
- noted in files and on computer systems within 2 weeks of deaccession decision and updated within 2 weeks of the disposal.



BOARD OF REGENTS DOCKET ITEM SUMMARY

Mission Fulfillment

December 7, 2023

AGENDA ITEM: Information Items

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Rachel Croson, Executive Vice President and Provost

PURPOSE & KEY POINTS

University, Student, Faculty, and Staff Activities and Awards

A report of select activities among faculty, staff, and students at the local, regional, national, and global level in the areas of teaching, research, outreach, and other academic achievements at the University is included in the docket materials.

**University of Minnesota Board of Regents
Mission Fulfillment Committee
December 7, 2023**

**Information Report: Report of University Faculty, Staff, and
Student Activities and Awards**

University Highlights

The University of Minnesota's [Clinical and Translational Science Institute \(CTSI\)](#) received [\\$53.9 million](#) in National Institutes of Health funding to find better, faster ways to bring scientific advances to real-world use. The seven-year award is one of the largest federal research grants the University has ever received and the University's third Clinical and Translational Science Award (CTSA).

The University of Minnesota-based team leading the 10,000 Families Study recently [received a \\$12M grant from the National Cancer Institute \(NCI\) that funds continued investigation of environmental exposures and cancer risk in Minnesota.](#)

For the eighth consecutive year, the University of Minnesota [School of Nursing received the Health Professions Higher Education Excellence in Diversity \(HEED\) Award from INSIGHT Into Diversity magazine.](#) The school was one of only 15 nursing schools to receive the HEED Award, which honors U.S. nursing, public health, medical, dental, pharmacy, osteopathic, veterinary, and other health schools and centers that demonstrate an outstanding commitment to diversity and inclusion.

The [University of Minnesota has received a \\$16 million grant from the National Institutes of Health \(NIH\) Brain Research Through Advancing Innovative Neurotechnologies® \(BRAIN\) Initiative](#) to support the groundbreaking project of unraveling the mysteries of the brain's 'wiring diagram.' Using cutting-edge techniques, this research aims to discover how the brain's neurons are connected and communicate with each other. The project, led by the University of Minnesota Medical School, aims to better understand how complex neural pathways generate human behaviors.

The University of Minnesota School of Public Health, Medical School, Institute for Health Informatics, Minnesota Electronic Health Records Consortium, and Minnesota Department of Health (MDH) were [awarded \\$17.5 million to help establish an outbreak response network to support decision makers during public health emergencies.](#) As one of 13 funded partners across the U.S., researchers at the U of M and MDH will work alongside the CDC's Center for Forecasting and Outbreak Analytics to support the new national network—the Outbreak Analytics and Disease Modeling Network.

The University of Minnesota Crookston has been [ranked one of the best schools for online healthcare degree programs](#), according to EduMed.org. U of M Crookston's online programs in the

medical field earned top honors for their overall quality, affordability, and commitment to student success. Just six percent of regionally accredited colleges and universities earned a ranking position.

Niche recently announced its 2024 rankings and has chosen the [University of Minnesota Crookston as No. 1 Best Value College in Minnesota](#). U of M Crookston ranked above 36 other Minnesota colleges in value. Niche also named the Crookston campus No. 2 Top Public University in Minnesota, No. 3 Best College Dorms in Minnesota, No. 3 Best Colleges for Business in Minnesota, and No. 3 Best Colleges for Accounting and Finance in Minnesota.

[The National Science Foundation has awarded almost \\$240,000 over two years for a collaborative proposal between the Minnesota Institute for Astrophysics and the University of Minnesota Morris](#). The “Minnesota Partnership to Foster Native American Participation in Astrophysics” was developed by UMN Twin Cities faculty Vuk Mandic, Patrick Kelly, Lindsay Glesener, Claudia Scarlata and Michael Coughlin, and Sylke Boyd and Peter Dolan from the Morris campus. The goal is to provide a pathway for Native American students into graduate school in STEM disciplines, in particular astrophysics.

The [Rodney A. Briggs Library at the University of Minnesota Morris has been awarded a Preservation Assistance Grant from the National Endowment for the Humanities \(NEH\)](#). The grant will support a general preservation assessment of the materials held in the Archives & Special Collections, which share a space in Briggs Library.

The [U.S. News and World Report ranks the University of Minnesota Duluth No. 21 overall and No. 4 among public schools](#). This success comes one year after Duluth ascended eight spots in the overall rankings, meaning UMD has leapfrogged 20 institutions in the past two years to claim its current spot.

Faculty and Staff Awards and Activities

Dr. Andrew Alleyne, Dean of the College of Science and Engineering, has been [inducted into the National Academy of Engineering](#).

Dr. Boris Shklovskii [SHKLAHV-skee], from the School of Physics and Astronomy, has been [inducted into the National Academy of Sciences](#).

Claudia Schmidt-Dannert, BioTechnology Institute Director; A [\\$2 million National Science Foundation award will support efforts to design a bacterial system to extract critical minerals using biofilms](#).

Zan Gao, PhD, professor in the School of Kinesiology and director of the Physical Activity Epidemiology Laboratory (PAEL), [was recently selected as a Fellow in the National Academy of Kinesiology \(NAK\)](#). Becoming a Fellow in NAK is the highest recognition achieved by a scholar in

the field of Kinesiology. To be selected, an individual must meet rigorous criteria for scientific research, professional scholarship, leadership experience, and service to the field.

Stephanie Carlson, Distinguished McKnight University Professor in the Institute of Child Development, has been [awarded \\$2.8 million by the National Institute of Child Health and Human Development](#) (NICHD).

Margaret Moss, professor and associate dean for Nursing and Health Policy and Katherine R. & C. Walton Lillehei Chair in Nursing Leadership, [has been inducted into the National Academy of Medicine](#), considered one of the highest honors in the fields of health and medicine.

Kirsten Newell, assistant professor of school psychology in the Department of Educational Psychology, has been [awarded \\$1.25 million by the U.S. Department of Education](#). The grant is to develop and administer a personnel preparation program to build capacity for culturally and linguistically responsive research-based school psychological services for multilingual learners with, and at-risk for, learning disabilities. Project leadership also includes co-PI and co-director Amanda L. Sullivan, Birkmaier Educational Leadership Professor, and Indigenous specialist, Lisa Aguilar, assistant professor of school psychology.

Emily Kringle, assistant professor of physical activity and health promotion in the School of Kinesiology and director of the Disability and WELLness Laboratory (DWELL), [was selected to receive the 2023 American Congress of Rehabilitation Medicine Young Investigator Award in Post-Acute Stroke Rehabilitation](#). This prestigious award lectureship recognizes outstanding clinical, intellectual, and service contributions in the area of stroke by individuals in the first five years of their research career.

Nathan Kuncel [has been awarded a \\$158,434 grant for his study, "Making Medical Resident Matching Decisions: A Systematic Review" by the National Board of Medical Examiners](#) (NBME).

Douglas Kearney's, associate professor of English, book *Optic Subwoof* has [won the \\$10,000 Pegasus Award for Poetry Criticism from the Poetry Foundation](#). *Optic Subwoof* also won the 2023 Firecracker Award for Creative Nonfiction, from the Community of Literary Magazines and Presses. *Optic Subwoof* collects the talks that Professor Kearney presented for the Bagley Wright Lecture Series in 2020 and 2021.

The Loft Literary Center has announced the [recipients of the 2023 McKnight Artist Fellowships for Writers](#), Loft Awards in Creative Prose, and Loft Award in Children's Literature. This year's recipients include [creative prose writer Hilal Isler](#), School of Social Work communications and marketing manager. Since 1982, the Loft has partnered with the McKnight Foundation to offer substantial fellowships to Minnesota writers. The fellowships are judged by prominent American authors and editors, and the winners, all from Minnesota, are awarded \$25,000 each.

Paul Hanstedt, Vice Chancellor for Academic Affairs at the University of Minnesota Rochester, has been named the [2023 recipient of the Association for General Liberal Studies \(AGLS\) National Leadership in General and Liberal Education Award](#). This award recognizes Dr. Hanstedt's significant contributions to the practice of general education and liberal studies as a national leader.

Lin Yee Chen, University of Minnesota Medical School professor, [receives \\$4.39 million grant to study heart condition linked to dementia](#).

Kristen Mark of the Medical School received a [\\$3.5 million grant](#) from the National Institutes of Health to enhance the quality of life for individuals with disabilities in Tanzania through a new project.

Sarah Huebner, School of Physics and Astronomy (Twin Cities), received the 2023 Innovation Impact Case Award, which recognizes UMN research with a significant impact outside of academia. Huebner led the development of Snapshot Safari that [engages thousands of citizen scientists to help large African mammals](#).

Student Awards & Activities

University of Minnesota [Morris student teams placed first and fifth overall out of 19 teams at the 2023 Digi-Key Collegiate Computing Competition](#). Team Phantom members Linnea Gilbertson, Ash Plasek, and John Walbran took first by a 32-point margin with 263 points, scoring the most points by a large margin (over 2:1) on the short programming problem part of the competition. Team GPT-4 Pro, with members Dongting Cai, Harry Lyu, Yubo Mao, and Chenfei Peng, took fifth with 173 points and the highest number of points on the long programming problem part of the competition.