



**Academic Affairs Committee**  
**August 27, 2024**  
**1:45 pm**

**Information Item**

AAC –4      Written Update on Research and Engagement

**Update on Research and Engagement**

The Office of Research and Engagement provides support and strategic direction to faculty, staff, and students for research and creative endeavors resulting in scholarship, innovation, and community and economic engagement leading to knowledge, student, and regional transformation.

**External Funding and Trends**

2023-2024 was another successful year for research and engagement breaking \$60 million for only the 2<sup>nd</sup> time in UNCG’s history, with a 53.8% increase over 5 years ago. The table below shows the submissions and awards for 2023-2024 in comparison to 2022-2024.

	7-1-23 to 6-30-24		7-1-22 to 6-30-23	
<b>SUBMISSIONS</b>	Number	Amount	Number	Amount
	409	\$193,097,806	440	\$189,384,440
<b>AWARDS</b>	Number	Amount	Number	Amount
	295	\$ 65,220,903	295	\$ 66,597,124

Although the number of submissions were down, the amount requested was up by \$3,713,366 or 1.9%. This year’s awards total \$65,220,903.48, down only 2.07% from last year’s historic high. The awards are in the following categories:

- Federal grants = 41.16%
- State contracts = 21.67%
- Foundation awards = 11.64%
- Funding from collaborations with other educational/research institutions =10.64%
- NC local governments = 7.34%
- Out of state local governments = 2.98%
- Non-profits, and business and industry = 1.91%

**SELECTED HIGHLIGHTS**

Dr. Moez Farokhnia Hamedani (PI) and Dr. Lakshmi Iyer from the Bryan School of Business received a prestigious grant from the Google Foundation to establish a state-of-the-art *Cybersecurity Clinic*. UNCG will be the first university in the state to set up a clinic funded by Google’s program, which is part of a \$25 million collaboration with the Consortium of Cybersecurity Clinics. Through support from this grant, the Department of Information Systems

and Supply Chain (ISSCM) will strengthen its offering of education in cloud and cybersecurity analytics.

Tara Ward from the Center for Youth, Family and Community Partnerships (CYFCP) received an award in the amount of \$2,225,650 from the North Carolina Department of Health and Human Services Division of Child and Family Well-Being (DCFV). The project is titled '*NC High Fidelity Wraparound Training Program*', and will provide the infrastructure, management, and evaluation support necessary for successful implementation of the NC High Fidelity Wraparound Training Program.

Dr. Shabnam Hematian, Associate Professor in the Department of Chemistry was awarded \$1.5M from the University of North Carolina System for a project titled '*Nature Inspired Collaborative Energy Research (NICER)*.' This is a multi-institution initiative with a research team that includes two other UNCG faculty members, a private-sector researcher, and faculty from NC A&T State University, UNC Charlotte, and UNC-Chapel Hill. The project aims to explore how compounds found in fungi can be used to improve technologies for turning sunlight into electricity, transporting electricity in electronics, and storing energy in batteries.

Dr. Hemali Rathnayake, Professor of Nanoscience, is one of eight inaugural award winners from the NCInnovation, a non-profit organization that helps unlock the innovative potential of North Carolina's world-class public universities. The project has led to the development of a cost-effective and efficient lithium refining process for converting lithium into battery-grade lithium carbonate (LCE). The global demand for lithium is experiencing substantial growth for its primary role in energy storage, electronic bikes, electrification of tools, and other battery-intense applications. North Carolina has a large and growing lithium and battery industry. Dr. Rathnayake's refining technology has the potential to boost a sustainable domestic supply chain for lithium-based products. The award is in the amount of \$ 404,999.00.

## NOTABLE STUDENT RECOGNITIONS

Four students from UNC Greensboro were named fellows in the prestigious *National Science Foundation (NSF) Graduate Research Fellowship Program (GRFP)*. The NSF GRFP is awarded to only 16 percent of applicants. The program supports outstanding graduate students who have demonstrated the potential to be high-achieving scientists and engineers. The coveted award covers three years of graduate school expenses through doctoral studies and includes a \$37,000 annual stipend lifting a huge financial burden for graduate students bound for science research careers. The students are:

- **Garett Barto** is pursuing a PhD in Chemistry and Biochemistry with Dr. Jason Reddick. Garett received a B.S. in Biochemistry from Illinois State University. His research at UNCG involves using bioinformatics and machine learning to identify proteins in highly infectious diseases. These proteins will then be studied and repurposed for new and interesting chemistry.
- **Kalea Nippert** is pursuing a PhD in Environmental Health Science in the Department of Biology with Dr. Sally Koerner. She received a bachelor's degrees in Biology (with an emphasis in evolution and ecology) and Environmental Science from Kansas State University. Her research focuses on Savanna and grassland community ecology, looking at drivers of woody encroachment.

- **Andre Plantinga-Kapteyn** is pursuing a Master of Science in Biology with Dr. Bryan McLean. He received a B.S. in Biology and Biochemistry from Calvin University. Plantinga-Kapteyn is studying the ecology of small mammals and their parasites across a series of mountain ranges in Nevada and Utah.
- **Anna Sheets** is pursuing a PhD in Nanoscience with Dr. Tetyana Ignatova. She received her Bachelor of Science degree in Engineering Physics from Austin Peay State University. Sheets will be working on engineering a two-dimensional biosensing platform utilizing 2D Silver Metal and monolayer graphene to detect specific DNA/RNA strands.

A handwritten signature in black ink, appearing to read "Alan Boyette". The signature is fluid and cursive, with the first name "Alan" and last name "Boyette" clearly distinguishable.

---

Alan Boyette  
Interim Provost & Executive Vice Chancellor