UNC GREENSBORO
Board of Trustees

**Board of Trustees Meeting**
**October 31, 2024**

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**Action Item**

**BOT – 3 Establishment of Innovation Institutes**

3.1 Battery Research Innovation and Green Energy Harvesting Technologies (BRIGHT)
3.2 Institute for the Convergence of Optimizing Methods for Military Advances and National Defense (COMMAND)

**Background Information**

Pursuant to UNC Policy Manual 400.5[R] governing Planning, Establishing, and Reviewing Centers and Institutes, the board of trustees of each constituent campus has the authority to authorize establishment of institutional centers and institutes when the campus administers a center or institute that reports solely to that campus, consistent with the policy regulations and the directions of the president or the Board of Governors. The following proposed Innovation Institutes fall within these parameters.

### 3.1. The Battery Research Innovation and Green Energy Harvesting Technologies (BRIGHT) Institute

**Synopsis**: In the last 5 years, the Piedmont Triad region has seen a rise in the establishment of new technology companies as well as a rise in success of companies that are focused on green energy and microelectronics. Examples include, Toyota Battery Manufacturing, Qorvo, Inc., Guerrilla RF, Volvo, Boom Supersonic, Honda Jet, MACOM, Analog Devices, and RF Microdevices. Yet, the raw materials required to provide the materials to accelerate the manufacturing processes within these companies is limited and currently imported from other countries. Our region is well suited to lead this innovation because of access to some of the largest economically viable domestic deposits of critical materials. The Country's largest hard rock deposit of lithium, a 25-mile-long Tin-Spodumene belt of ore, stretches along the Carolinas. By tapping into these mineral resources, work within the BRIGHT Institute will unlock a vast potential for economic growth and workforce development to foster a thriving innovation ecosystem.

Along the rise of these technology-based companies in North Carolina, is the increase in federal funding being made available for research and workforce development to strengthen the United States as it aims to gain energy independence, technological leadership, economic competitiveness, and national security.

Currently, there is a need to build capacity for research, education, and workforce development to support the needs of these emerging companies as well as national efforts that focus on the production of critical raw materials for the supply chain of these industries. The need is even greater when it comes to preparing a North Carolina workforce equipped for such emerging fields, especially individuals from rural populations who often seek such opportunities. To this end, UNC Greensboro will launch the BRIGHT Institute that will focus on research and development, workforce development, and partnerships that lead to advancing learning opportunities for students.

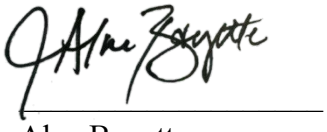
### 3.2 Institute for the Convergence of Optimizing Methods for Military Advances and National Defense (COMMAND)

**Synopsis**: North Carolina has one of the largest military footprints of any state in the country, representing three out of the four branches of service. Military and defense industries are the second largest employers, and the military has an economic impact of over $66 billion annually in North Carolina. The military bases are major drivers in our communities, allowing families and businesses to prosper through the collaborations and partnerships that have developed between government agencies, military and defense sectors, and institutions of higher education. The proposed institute will coordinate and advance research, scholarship, and technologies that lead to innovation and partnerships in critical areas related to the defense sector. The institute will be built on a convergence approach bringing researchers together from all disciplines that have a shared interest in building capacity that advances the wellbeing of military personnel, health, wellness, as well as the science and technologies required for their empowerment while serving our nation. The Institute will also be a place that strengthens partnerships between UNC Greensboro and Department of Defense labs around the country and leads to enabling students to develop skills needed to serve this critical national priority. UNC Greensboro continues to be recognized as a military-friendly institution with an increasing growth in veteran population. The Institute will grow opportunities for our veteran student population to contribute to these research areas within the Institute and be strongly equipped to lead in innovations within this field.

***Attachment:*** PowerPoint Presentation

**Recommended Action**

That the Board of Trustees of the University of North Carolina at Greensboro approve the proposed Innovation Institutes.



Alan Boyette
Interim Provost & Executive Vice Chancellor

# REQUEST TO ESTABLISH AN INSTITUTIONAL INSTITUTE

**CONTACT INFORMATION:**
**Name:** **Sherine O. Obare, PhD**
**Title:** **Vice Chancellor for Research and Engagement**
**Campus Address:** **1111 Spring Garden Street | Greensboro, NC 27412**
**Campus Telephone:** **336-256-0232**
**FAX Number:** **N/A**
**Email Address:** **soobare@uncg.edu**

**OTHER CONTACT NAMES AND EMAIL ADDRESSES:**
**Dr. Hemali Rathnayake**
**Email: hprathna@uncg.edu**

**GENERAL INFORMATION**

**Proposed Name of Institute:** **Battery Research Innovation and Green energy Harvesting Technologies (BRIGHT) Institute**

**Date Approval to Plan Granted:** **July 7, 2024**

**Organizational Structure:** **Institute**

**Proposal Status:** **Institutional**

**Primary Mission:** **Research, Public Service**

**PROPOSED INSTITUTE**

**Vision:** The BRIGHT Institute aims to gain national recognition as a science and technology research and innovation hub for the Triad and beyond on green energy.

**Mission**: BRIGHT will accelerate the innovation, research and education training, and workforce development for energy and microelectronic resilience in the region as well as in U.S., by creating a sustainable smart microelectronics and energy research center, rooted in diversity, equity, focused entrepreneurial growth, workforce development, and rapid translation of innovations to practice, fueling the economic growth in the Triad region.

**Name of the Institute**: Battery Research Innovation and Green energy Harvesting Technologies (BRIGHT) Institute

**Relevance of the mission of the Institute:** The opportunity for U.S. global leadership on green energy is enormous. However, the challenges are also immense for the United States related to: raw material availability; manufacturing capacity; dependence on foreign supplies; worker training; global trade practices; cybersecurity; and research and data analysis needed to create the clean energy economy we need. But the opportunities to address the materials supply chain for semiconductors and energy are also immense for the American people: millions of family-sustaining clean energy jobs spread throughout the country; world-class training and research;

access to clean and lower-cost energy for all Americans, including those who have been historically left behind; a more resilient American economy for the long term; and an energy system that protects our climate.

Our state poises with 25 mines of mineral ores, 43 potential automotive sector projects, $4B estimated lithium operation, 5,000 jobs to be created from the Toyota battery manufacturing facility, and over $50 M state funds allocation to next generation energy research and development through NC Collaboratory and NC Innovation. These attractions place UNCG at the forefront for the Triad to establish the necessary research, innovations, workforce development and educational training certificates to vitalize the region's commercial space and economy. Nonetheless, North Carolina's energy sector moves towards the transition phase for power generation and for vehicle transportation. This transition presents not only many challenges but also opportunities for the development of new technologies and policy changes, importantly representing as a major opportunity for
the state to plan its energy future.

Creating a sustainable center that focuses on energy research, materials supply chain for clean energy transitions in microelectronics, energy harvesting, energy generation, and storage will allow local industries to expand and bring new economic activity to the triad and the state. Specifically, the electric vehicle battery supply chain has developed in the state and brought with it numerous companies and jobs. One part of the supply chain that makes North Carolina attractive is the availability of raw materials.

**Why this mission cannot be achieved within existing institutional or University Structures:**
BRIGHT's shared goal is to capitalize on regional strengths and address regional challenges by bringing together academic institutions, industry partners, and community and government stakeholders from across the region. BRIGHT will unlock significant investment in the segments of the critical materials supply chain, and innovations in smart microelectronics and batteries, impacting clean energy transition and resilience economy. Thus, BRIGHT's objectives are to (1) innovate in climate-smart research and development for battery materials, battery components, semiconductors, sensors, and microelectronics (2) create customize certificate programs to align with industry needs, and (3) revitalize the economies in and provide societal mobility for the most historically disadvantaged communities in the region through training programs. As shown in Figure 1, this will be achieved via: (1) Fostering Disruptive Technology Innovations by investing in climate-smart use-inspired research; (2) Translating Innovations to Practice by building convergent collaborations, spanning research and development to end-product manufacturing, to create a circular economy for energy and microelectronic industries; (3) Creating an Inclusive Technical Workforce by addressing education inequality, unemployment, and distress in disadvantaged communities across our region; and (4) Drive Economic Development, Job Growth, and Social Mobility in the region by creating infrastructure and policy frameworks to harness the estimated $320.4 billion of clean energy transition value chain and to revitalize economic opportunity and societal mobility in our state.

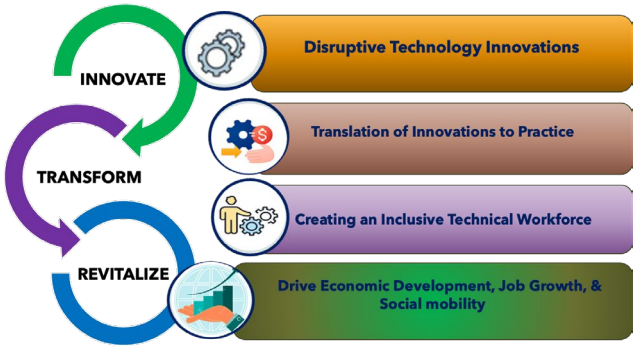



**Figure 1:** BRIGHT Institute's Research Goals

**Five-year list of Specific Goals**

1. Building research and development capacity to launch the technologies needed to produce the raw materials from regional sites in North Carolina as well as the innovative products.
2. Obtain significant funding from federal agencies
3. Enhance research facilities and infrastructure to strengthen research capacity for the BRIGHT researchers.
4. Establishing a workforce development program in partnership with Apprenticeship North Carolina to train students and prepare them for the workforce in the emerging technology companies currently in our region.
5. Strengthen relationships between UNCG and national labs through partnership agreements.

**Anticipated effects on Instructional, research and public service programs:** In the last 5 years, the Piedmont Triad region has seen a rise in the establishment of new technology companies as well as a rise in success of companies that are focused on green energy and microelectronics. Examples include, Toyota Battery Manufacturing, Qorvo, Inc., Guerrilla RF, Volvo, Boom Supersonic, Honda Jet, MACOM, Analog Devices, and RF Microdevices. Yet, the raw materials required to provide the materials to accelerate the manufacturing processes within these companies is limited and currently imported from other countries. Our region is well suited to lead this innovation because of access to some of the largest economically viable domestic deposits of critical materials. The Country's largest hard rock deposit of lithium, a 25-mile-long Tin-Spodumene belt of ore, stretches along the Carolinas. By tapping into these mineral resources, work within the BRIGHT Institute will unlock a vast potential for economic growth and workforce development to foster a thriving innovation ecosystem.

Along the rise of these technology-based companies in North Carolina, is the increase in federal funding being made available for research and workforce development to strengthen the United States as it aims to gain energy independence, technological leadership, economic competitiveness, and national security. *Currently, there is a need to build capacity for research, education, and workforce development to support the needs of these emerging companies as well as national efforts that focus on the production of critical raw materials for the supply chain of these industries. The need is even greater when it comes to preparing a North Carolina workforce equipped for such emerging fields, especially individuals from rural populations who often seek such opportunities*.

**How the proposed institute will be differentiated from other Institutes**: There are no centers or institutes at UNCG that are related to the BRIGHT Institute. Within the UNC System, centers are emerging related to energy and batteries however, none are focused on raw materials that comprehensively support materials and minerals for a broad range of green energy sectors including batteries to microelectronics. This is a unique institute being launched at UNCG.

**Proposed Advisory Boards**: An Advisory board will be built consisting of leaders from the battery/electric vehicle companies, semiconductor industries,

**Proposed Director**: As a University-wide Institute, BRIGHT will be administered by the Office of Research and Engagement at UNCG and will play an integral part in advancing university research. Dr. Hemali Rathnayake will serve as the Director and will be responsible for advancing research and education. ORE will support the Institute by building business partnerships and workforce development.

Dr. Hemali Rathnayake is a full Professor in the Department of Nanoscience at University of North Carolina Greensboro. She obtained her B.S. in Chemistry from the University of Peradeniya in Sri Lanka and her Ph.D. from University of Massachusetts Amherst (UMass).

Her previous research has significantly contributed for the development of organic light emitting diodes and flat panel displays. Dr. Rathnayake's work has published over 50 research articles in highly rated peer-reviewed journals such as *ACS Applied Materials & Interfaces*, *Physical Chemistry Letters*, *Nanoscale*, *Macromolecules*, *Chemistry of Materials*, and *Nanoscale*. She has given more than 80 invited talks to scientific and non-scientific communities, including award winning Innovation Challenge pitch presentations at Defense TechConnect Innovation Summit & Expo and TechConnect World Innovation Conference & Expo.

Dr. Rathnayake's current research focuses on producing novel nanomaterials, and their potential applicability for environmental sustainability, critical mineral reclamation, energy harvesting, conversion, and storage. The most exciting research conducted in recent years was developing environmentally benign nanomaterials for critical mineral recovery, desalination, and water purification. Among three granted international patents and two provisional patents, her invention on the point-of-use direct lithium extraction (DLE) technology to recover lithium from water resources has spurred a UNCG spin-off company, *Minerva Lithium*. She serves as the co-founder and Chief Scientific Advisor for *Minerva Lithium* and has received enormous recognitions and press releases all around the world, including receiving the winner of *Disrupt TechCrunch 2022*, *Defense TechConnect Innovation awards* in 2021 and 2022, and *NSF SBIR Phase I award*, with securing over $1M funding towards commercialization of her point-of-use direct lithium extraction technology.

Her research program has received over $10 million in funding up to date from National Science Foundation, Department of Defense, NASA, Department of Agriculture, NC Collaboratory, and NC Innovation. Moreover, she was able to secure over $1.8M federal funding to acquire state-of-the art High-Resolution Transmission Electron Microscope, Field Emission Scanning Electron Microscope, and Advanced Live Cell Imaging Microscope to the JSNN Electron Microcopy Core Facility. Her research accomplishments have recognized by awarding *UNCG Junior Research*

*Excellence Award in 2022*. Up to date, she has mentored more than forty undergraduates, 13 M.S. and 10 Ph.D. students, and 20 high school juniors (from Gatton Academy and Middle College at UNCG) in her nanomaterials research program.

**Budget**: Recent acquisition of funding from NC Innovation ($400K) and NC Collaboratory ($800K) for the research and development of the work was acquired, and serves as seed funding for this center. Robust work is underway to increase current funding and the acquisition of future funding from external sources to support operations and staffing.

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Submitted by: Sherine Obare

Title: Vice Chancellor for Research and Engagement

Signature: Sherine Obare

Date: 10/25/2024

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**APPROVALS:**

Sherine Obare — 10/25/2024

Vice Chancellor for Research and Engagement — Date

10/25/2024

Provost and Executive Vice Chancellor — Date

10/28/24

Chancellor — Date

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Chair, UNCG Board of Trustees — Date

# REQUEST TO ESTABLISH AN INSTITUTIONAL INSTITUTE

**CONTACT INFORMATION:**

| | |
|---|---|
| **Name:** | **Sherine O. Obare, PhD** |
| **Title:** | **Vice Chancellor for Research and Engagement** |
| **Campus Address:** | **1111 Spring Garden Street \| Greensboro, NC 27412** |
| **Campus Telephone:** | **336-256-0232** |
| **FAX Number:** | **N/A** |
| **Email Address:** | **soobare@uncg.edu** |


**GENERAL INFORMATION**

| | |
|---|---|
| **Proposed Name of Institute:** | **Institute for the Convergence of Optimizing Methods for Military Advances and National Defense (COMMAND)** |
| **Date Approval to Plan Granted:** | **July 7, 2024** |
| **Organizational Structure:** | **Institute** |
| **Proposal Status:** | **Institutional** |
| **Primary Mission:** | **Research, Public Service** |

**PROPOSED INSTITUTE**

**Vision:** The Institute will bring together research scholars to address the social, scientific, and technological needs in support of defense, including the wellbeing of military/veterans and their families.

**Mission**: The Institute will accelerate innovation, research and education, and be a convenor for partnerships that engage the defense sector, while supporting and engaging scholarship that supports military and veteran work.

**Name of the Institute**: Institute for the Convergence of Optimizing Methods for Military Advances and National Defense (COMMAND)

**Why this mission cannot be achieved within existing institutional or University Structures**

North Carolina has one of the largest military footprints of any state in the country, representing three out of the four branches of service. Military and defense industries are the second largest employers, and the military has an economic impact of over $66 billion annually in North Carolina. The military bases are major drivers in our communities, allowing families and businesses to thrive through the synergy and partnerships that have developed between local and state government, military and defense sectors, and local businesses.

Significant technological advances that have emerged during the past two decades have made our world interconnected and productive, yet it is these same advances that have also made the battlefield more complicated and dangerous for our military workers. The goals to be met through research and scholarship work in the Institute will cover various interdisciplinary topics that will develop the knowledge and understanding required to support the future operating environment for military, such as threat trends and military conditions. This work can be used to understand and develop protective measures and technologies that will enable the military to tackle the challenges with the right set of tools. The Institute will be a convenor for UNCG researchers and students whose studies and interests are related to defense. Through collaborations and partnerships, the work can lead to capabilities to develop the technologies and protective measures required for advancing the safety and quality of life of military/veterans and their families.

Currently, there are no academic departments, programs or centers that coordinate campus-wide engagement with the defense sector within UNCG. Establishment of the institute is a mechanism that will allow us to cohesively and seamlessly engage with Department of Defense labs, affiliated innovation manufacturing institutes, companies, and the broader military and veteran communities.The Institute will serve as a place to enhance our understanding of the capabilities available on campus from research to education, and that are required to engage in university–community partnerships that are mutually beneficial, involve co-creation, and lead to transformative change.

**Five-year list of Specific Goals:**

1. Strengthen partnerships and research projects between UNCG faculty and researchers with Department of Defense labs on joint or defense-related projects.
2. Increase opportunities for faculty and researchers to converge on projects that provide significant value to military well-being.
3. Offer programming at UNCG focused on increasing awareness on defense-related needs.
4. Create opportunities to establish state-of-the-art research and education programs in partnership with military bases.
5. Develop the science and technology research to support wellbeing and protection of military personnel and their families.

**Anticipated effects on instructional, research and public service programs:** The proposed Institute will provide UNCG with a structured unit to coordinate activities related to defense programs. Faculty will have the opportunity to work with the Institute to engage in research in a coordinated manner. The Institute will coordinate partnerships, visits, and opportunities for student internships/careers.

**How the proposed institute will be differentiated from other Institutes**: The Institute builds on a convergence approach to support soldiers and veterans through health and well-being for themselves and their families. In addition, the Institute addresses the science and technologies needed for the soldiers. Currently, there are no centers or institutes at UNCG that are related to the proposed Institute. This is a unique institute being launched at UNCG.

**Proposed Advisory Boards**: An advisory board will be built consisting of leaders from the Defense labs as well as related companies and community partners.

**Proposed Director**: As a University-wide Institute, COMMAND will be administered by the Office of Research and Engagement. A Director will be identified in the few months following its establishment.

**Budget**: Recent acquisition of funding from UNC System for the research and development of this work will be foundational to the establishment of this center. Robust work is underway to increase current funding and the acquisition of future funding from external sources to support operations and staffing.

Submitted by: Sherine Obare

Title: Vice Chancellor for Research and Engagement

Signature: Sherine Obare

Date: 10/25/2024

**APPROVALS:**

Sherine Obare — 10/25/2024

Vice Chancellor for Research and Engagement — Date

10/25/2024

Provost and Executive Vice Chancellor — Date

10/28/24

Chancellor — Date

Chair, UNCG Board of Trustees — Date

UNC GREENSBORO

# Institutes of Innovation

## Board of Trustees Meeting

## October 31, 2024

# Research Funding Overview

- Research Funded Awards: Over $65M in new awards in FY2024
- Expenditures: Over $53 M in Expenditures in FY2023

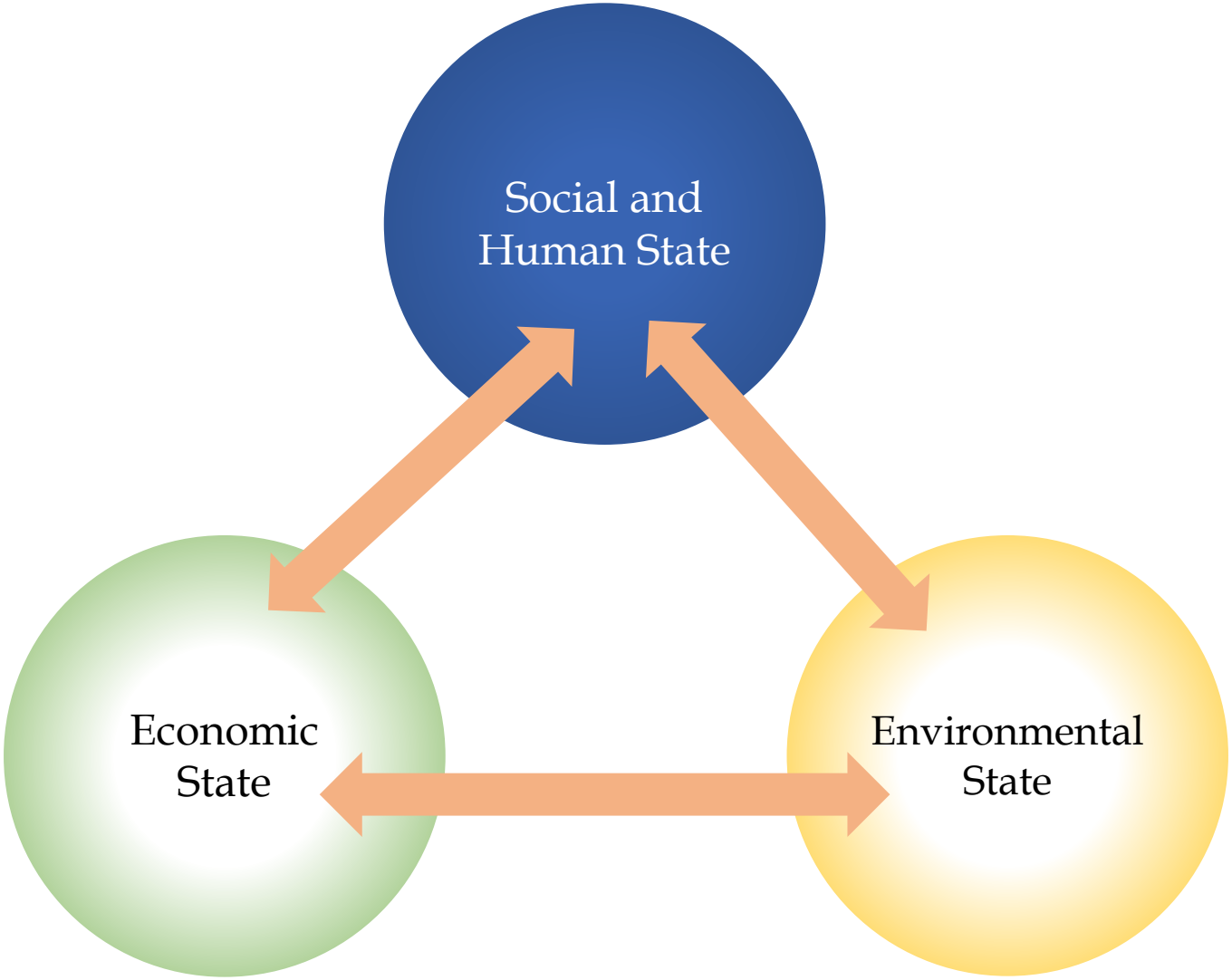
**Based on 2022 National Science Foundation Higher Education Research and Development Data**

- UNCG is ranked #3 in the UNC System (Ranked #89 Nationally) for other federally funded research (non-defense, non-energy, non-commerce, non-HHS).
- UNCG is ranked #4 in the UNC System (Ranked #177 nationally) for federally funded research from the U.S. Department of Human Health Services.
- More than 35 UNCG Researchers are listed by Elsevier in the top 2% in the world, of the most cited in their fields.

# The Importance of Innovation in Institutions of Higher Education

- Faculty Engagement and Success
- Student success
- Community Engagement
- Social Mobility
- Economic Prosperity

# Opportunities for Collaborations on Interdisciplinary and Transdisciplinary Research



# UNCG RESEARCH AND ENGAGEGMENT

## Research

- Strategic Initiatives
- Research Development
- Sponsored Programs
- Research Compliance and Integrity

## Engagement

- Institute for Community and Economic Engagement
- SERVE
- Early College Research Center
- Center for New North Carolinians
- Center for Youth, Family and Community Partnerships
- Center for Housing and Community Studies
- Integrated Community Studies

## Innovation

- Technology Transfer and Commercialization
- eSports
- Center for Entrepreneurship
- Center for Translational Biomedical Research

UNCG Centers and Institutes account for ~40% of the University's research funding

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## Table 1. Federal Research and Development Funding by Agency, FY2022-FY2024

(budget authority, dollar amounts in millions)

| Department/Agency | FY2022 Actual | FY2023 Estimate | FY2024 Request | FY2023-FY2024 Dollar Change | FY2023-FY2024 Percentage Change |
|---|---|---|---|---|---|
| Department of Defense | 78,642 | 92,854 | 95,986 | 3,132 | 3.4% |
| Dept. of Health and Human Services | 45,318 | 48,118 | 50,896 | 2,778 | 5.8% |
| Department of Energy | 22,562 | 23,218 | 24,220 | 1,002 | 4.3% |
| NASA | 12,479 | 13,105 | 14,022 | 917 | 7.0% |
| National Science Foundation | 7,126 | 7,992 | 9,320 | 1,328 | 16.6% |
| Department of Commerce | 7,214 | 5,114 | 4,388 | -726 | -14.2% |
| Department of Agriculture | 3,748 | 3,615 | 3,670 | 55 | 1.5% |
| Department of Veterans Affairs | 1,588 | 1,624 | 1,690 | 66 | 4.1% |
| Department of Transportation | 1,675 | 1,388 | 1,531 | 143 | 10.3% |
| Department of the Interior | 1,140 | 1,264 | 1,478 | 214 | 16.9% |
| Department of Homeland Security | 830 | 634 | 625 | -9 | -1.4% |
| Environmental Protection Agency | 527 | 568 | 614 | 46 | 8.1% |
| Smithsonian Institution | 330 | 341 | 364 | 23 | 6.7% |
| Department of Education | 390 | 349 | 330 | -19 | -5.4% |
| Other | 554 | 626 | 589 | -37 | -5.9% |
| **Total** | 184,123 | 200,810 | 209,723 | 8,913 | 4.4% |

Source: Federal Research and Development (R&D) Funding: FY2024 | Congressional Research Services
https://crsreports.congress.gov/

# Establishing Institutes of Innovation

## North Carolina

**#1**
**Largest Military Base in the World at Fort Liberty**

**20K**
**Active Military become Civilian workers Annually**

**Large number of companies that support defense**

**UNCG**



# Defense Research, Scholarship, and Social Impact

***Partnerships for Research and Engagement***

University Partners

Defense Labs and Installations

Industry Partners

**Army, Air force, Marines**


North Carolina has one of the largest military footprints of any state in the country, representing three out of the four branches of service. Military and defense industries are the second largest employers, and the military has an economic impact of over $66 billion annually in North Carolina. The military bases are major drivers in our communities, allowing families and business to thrive through the synergy and partnerships that have developed between local and state government, military and defense sectors, and local businesses throughout our history.

# Establishing the Institute for the Convergence of Optimizing Methods for Military Advances and National Defense (COMMAND)

**MISSION**: The Institute will accelerate innovation, research and education, and be a convenor for partnerships that engage the defense sector, while supporting and engaging scholarship that supports military and veteran work.

**Vision:** The Institute will bring together research scholars to address the social, scientific, and technological needs in support of defense, including the wellbeing of military/veterans and their families.

Examples of Research areas

- Supporting military families
- Understanding sustainability
- Women's health
- Health and wellness
- Defense management and economics
- Clothing
- Human factors
- Load carriage
- Deployment considerations
- Security
- Technology
- Research in advanced materials

# North Carolina's Leadership in the Energy Sector

ECONOMIC DEVELOPMENT PARTNERSHIP of NORTH CAROLINA

## PARTNERS IN CLEAN ENERGY

North Carolina is home to a rich network of public and private sector organizations that work together to achieve sustainability goals.

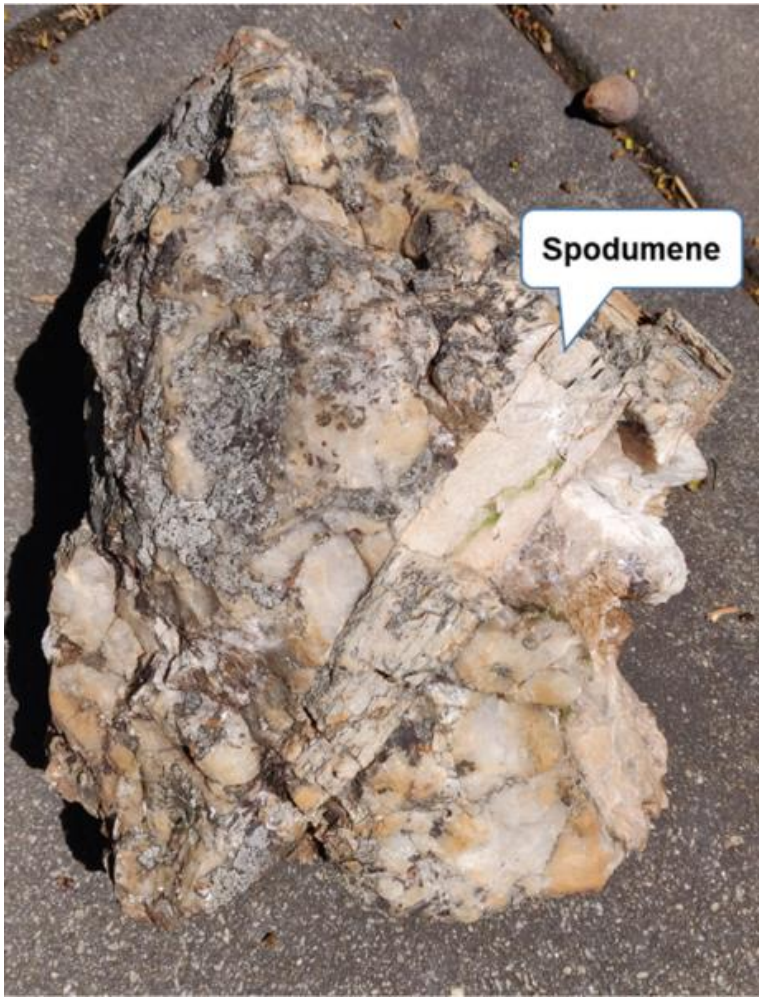
*Source: Economic Development Partnership of North Carolina*

**#1**
State for Renewable Energy Leadership

**#1**
State for Sustainability in South Atlantic

**20%**
Reduction of Carbon dioxide fossil fuel emissions

# North Carolina's Natural Resources




The country's largest hard rock deposit of lithium, a 25-mile-long Tin- Spodumene belt of ore, stretches across the Carolinas.

# Establishing the Battery Research, Innovation, and Green Energy Harvesting Technology (BRIGHT) Institute

**MISSION**: The BRIGHT Institute will capitalize on regional strengths, work with the community, and bring together academic researchers to industry partners, and community and government stakeholders.

**Vision**: Becoming a leading U.S. domestic hub for critical materials circularity, innovation, and education and creating a sustainable and regenerative critical materials engine focused on *entrepreneurial growth*, *workforce development*, and rapid *translation of innovations to practice* from upstream production to midstream refining and processing, to downstream manufacturing of high value products.

## Examples of Research Areas

- Energy access
- Economics and affordability
- Policies
- Social justice
- Health risks and wellbeing
- Recycling materials to create meaningful art
- Sustainability
- Microelectronics
- Semiconductor technology
- Batteries
- Critical materials and minerals
- Recycling technology

# Recent Research Funding Investments made to UNCG in Support of the Institutes of Innovation

North Carolina Biotechnology Center®

collaboratory
science. policy. solutions.

THE UNIVERSITY OF NORTH CAROLINA SYSTEM

DEPARTMENT OF DEFENSE · UNITED STATES OF AMERICA

USDA

DEPARTMENT OF ENERGY · UNITED STATES OF AMERICA

NCINNOVATION

# A Growing Economy Seeking Talent for Upcoming Careers and Jobs

- **Opportunities ahead:**
- Establishment of **Institutes of Innovation** to build Research Capacity at UNCG
- Broadening **student participation** in critical emerging areas of research and scholarship
- Equipping all our students with **skills** necessary to succeed in emerging industries
- Increasing **external funding** and **research/scholarship** in emerging areas
- Engaging **faculty** in research and curriculum development for courses
- **Partnerships** with community and national organizations
- **Research Leadership Academy** to Support growth in these areas

# Research Leadership Academy

The Research Leadership Academy (RLA) Program will provide UNCG Faculty and Research Scholars with intensive grant development and support designed to help participants to successfully apply for research grants from state and federal agencies, foundations and non-profits. This program aims to enhance UNCG's research capacity and institutionalize systemic support for the success of early and mid-career participants by:

- Creating a community of practice aimed at facilitating and promoting the engagement of participants in both disciplinary and interdisciplinary research.
- Providing comprehensive support in grant development.
- Facilitating visits to funding agencies and to key organizations to build collaborations and partnerships.

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# Institutes of Innovation

## Board of Trustees Meeting

## October 31, 2024