Translational Research Building

Advancing Lifesaving Discoveries

Alumni Engageme<mark>nt</mark>

Imagine a cure for childhood cancer, a treatment to reverse Alzheimer's, or the ability to prevent diabetes.

> There is no greater force for the advancement of the human condition than the modern research university. Augusta University is bringing scientific explorations and pioneering solutions to the forefront by advancing lifesaving discoveries today.

Help us accelerate the timetable and our impact by supporting the construction of a much-needed new **TRANSLATIONAL RESEARCH BUILDING**. The time is now. Raising \$30M in private support will release \$116M in additional funding from the state of Georgia.

Building A Healthier Georgia

An investment in a **new translational research building** at Augusta University is an investment in a healthier Georgia and a healthier future for everyone.

Time is of the essence to seize the moment, leverage resources, and coalesce to make this transformative investment a reality. Augusta University is poised for more growth to improve the future for humankind. We are building for a healthier Georgia.

Our goal is to increase support for and continue to establish dedicated research facilities at Augusta University that match the strengths of our relentless pioneers and the needs of our world, both locally and globally.

AU currently has about 889,000 square feet of research space on the Health Sciences Campus, but it is not nearly enough. Based on recent growth and future projections, an additional 300,000 square feet of dedicated research space will be needed over the next 10 years.

The new research building will provide 150,000 square feet of space to create a physical environment that is centralized, advanced, flexible and conducive to collaborative discovery – particularly fostering clinical and translational research.

Fast Facts

- \$146M cost
- 150,000 SF
- Support top-tier researchers
- Advance existing investigators
- Attract new researchers
- \$1 NIH funding = \$2.60 economic activity



About 70% of research space on the AU Health Sciences Campus is housed in buildings that have reached or are fast approaching their useful lifespan (50 years is average age).

The new research building is estimated to cost \$146 million. Augusta University is looking for philanthropic partners to invest a total of \$30 million with public funding providing the remaining cost.



Supporting Scientific Breakthroughs

From early oral contraceptives to a modern, vibrating capsule for digestion, the **Medical College of Georgia** has been a **leader** in **groundbreaking discoveries** for **200 years**.

While you are reading this, another investigator is testing a theory that could be the next scientific breakthrough to advance Parkinson's, sickle cell or obesity treatments.

Supporting science and research at Augusta University and MCG will benefit infants, children and adults throughout Georgia with innovative breakthrough translational treatments, discoveries and cures.

A new translational research facility will help expand knowledge and attract physician-scientists and researchers to Georgia and the Georgia research ecosystem.

It will serve as a collaborative space, bringing together dozens of basic scientists, clinical investigators and experts from different fields of study and attracting many new researchers to AU. An interdisciplinary approach will foster cooperation, knowledge sharing, and the potential for more groundbreaking discoveries that will positively impact Georgia and beyond. Our groundbreaking research has advanced care or produced benefits related to:

- infant blindness prevention
- reproductive endocrinology
- cancer immunotherapy
- antibiotic resistance
- remote stroke care
- heart and vascular biology
- traumatic injury and PTSD
- diabetes and obesity
- pediatric brain tumors
- digestive health and motility
- kidney transplant efficacy
- fetal and maternity care
- Alzheimer's and cognition
- COVID-19 prevention
- and much more



Unlocking Immune System's Power

Immunology Center of Georgia brings experts together to study immune system

Preparing the body to better defend itself against health threats requires new approaches and unprecedented collaboration. This is what the Immunology Center of Georgia promises to deliver.

In 2022, leaders at the Medical College of Georgia recruited highly acclaimed scientists Klaus Ley, MD, and Catherine "Lynn" Hedrick, PhD, from La Jolla Institute of Immunology to launch and build the Immunology Center of Georgia. Ley and Hedrick, who are also Georgia Research Alliance Eminent Scholars, arrived with with a clear vision and purpose: To improve human health by advancing discovery in immunology and vaccinology.

The IMMCG maintains a sharp focus on how to strengthen the immune system's ability to fight the nation's two leading killers: cancer and cardiovascular disease. In partnership with the best clinicians and scientists, the IMMCG is working to advance exploration, uncover knowledge and prepare the next generation of immunologists — all to benefit people everywhere.



Unlocking the power and potential of the human immune system takes imagination, determination and collaboration. The immune system is essential to our health and well-being but also is a factor in most disease states, from heart disease and cancer to rheumatoid arthritis, multiple sclerosis and COVID-19.

These expanding efforts in immunology will enable the Medical College of Georgia to better address big questions about health and how to keep our immune system protecting us from disease rather than contributing to it, particularly as we age. More research space will attract more top-tier researchers to collaborate for lifesaving discoveries.

Fighting Cardiovascular Disease

Since 1995, the Vascular Biology Center has made strides in its mission to combat heart disease - the nation's No. 1 killer.

With the increasing frequency of obesity and diabetes, especially in Georgia, cardiovascular disease is reaching epidemic proportions.

The Vascular Biology Center at the Medical College of Georgia at Augusta University specializes in research to better understand the causes and to reduce heart attack, heart failure, stroke, hypertension, diabetes and related cardiovascular diseases.

A tight-knit group of clinicians and scientists collaborate with like-minded investigators from other fields of study across campus.

For example, working with the university's Georgia Cancer Center and Georgia Prevention Institute, the Division of Cardiology and Vascular Biology Center are examining gene variants that may help explain why African Americans are at higher risk for certain cardiac and metabolic conditions – but are protected against others – and why their prostate and breast cancer mortality rates are higher.



MCG surpassed other grant applicants including the medical schools at Harvard and Vanderbilt to become one of only four centers to receive initial funding from the American Heart Association to study the link between heart disease and cancer, or cardio-oncology.

Cardiology Chair Dr. Neal Weintraub is on the cusp of moving into clinical studies for a new medical therapy for aortic aneurysm. The research also identified a promising biomarker that may help identify patients at risk for aneurysm, which would mean patients could be treated at earlier stages. This could save many lives because aneurysms have an up to 90% mortality within 48 hours if left untreated or treated improperly.



Inventing New Treatments

Experts in pediatric immunotherapy are giving families hope and improving quality of life for children with cancer.

Immunotherapy is a treatment approach to cancer that harnesses the power of a patient's own immune system to attack cancer.

In the 1990s, Dr. David Munn and his colleague, Dr. Andrew Mellor, discovered the role of IDO (a vital enzyme) in protecting a fetus from being attacked by the mother's immune system during pregnancy. Dr. Ted Johnson was involved as an MD/PhD student at the time. They realized that many tumors use IDO to fool the immune system into tolerating rather than attacking the growing cancer; so, they developed drugs that block IDO.

Over the years, Drs. Munn and Johnson have been able to design regimens that produce an excellent quality of life for children with cancer, with minimal well-tolerated side effects, yet still utilize the tumor-killing power of chemotherapy and radiation.

The ultimate goal is to achieve 10 times the treatment potency at one-tenth of the side effects.

Augusta University is a medical destination campus due to its unique clinical ability to provide innovative treatment in an intimate setting to diagnose and treat the most demanding medical challenges. Our translational research speeds lifesaving solutions from the bench to the bedside.

Our pediatric immunotherapy experts are working to improve quality of life for young cancer patients by limiting ultra-high doses of radiation and chemotherapy, allowing more at-home treatment and care. Their goal is to have children returning to school and other activities with more stamina.



Aspiring To Be The Best

This **new research building** will propel Augusta University toward its aspirational imperative of becoming an R1 research university and earning a top 60 NIH-ranking by 2030.

The prestige and reputation of a medical school is strongly tied to the level of funding it receives from the National Institutes of Health. The Medical College of Georgia ranks 2nd in the U.S. in NIH funding per faculty member with medical schools less than 700 faculty.

In 2023, MCG NIH funding rose over 17% to total funding of \$60.5 million for MCG and \$62.5 million for Augusta University. MCG ranked 68 of 144 U.S. medical schools in research funding in 2023.

To increase in the NIH funding rankings, MCG needs more research faculty and more research space to house the faculty. This new research building will be a catalyst.

Research opportunities are vital part of medical education

- Critical to graduate and undergraduate medical education by offering residents, fellows, and students a rich and robust research experience.
- Makes AU and MCG (Georgia) more attractive to residents and fellows, particularly in specialties beyond primary care.
- Research helps physicians make more informed decisions about patient care.
- Research is a fundamental to modern health sciences education.

Support the new Translational Research Building.

With your partnership, we can more quickly reach the world with exponential advances in science, medicine and innovation.

Make a gift to support a new research building through the MCG Foundation or the AU Foundation by scanning the corresponding QR code below:





AUGUSTA UNIVERSITY





For more information, please email philanthropy@augusta.edu or call 706-721-4001.