Emory Core Day 2026

EMORY UNIVERSITY

Emory Integrated Core Facilities

Innovation is at our core!

Emory University Convocation Hall

Thurs, November 19, 2026

9:00 AM – 4:30 PM

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Core Day Agenda / Schedule

Time	Activity
9:00 AM	**Arrival and check-in**, *continental breakfast available*
9:00 AM	**Poster Exhibit Hall and Industry Sponsor rooms open for the day**
	Morning presentations
10:00 AM	**Dr. John Oshinski** **Interim Asst. Dean for Cores, Emory School of Medicine** *Introduction to Core Day*
10:10 AM	**Dr. Christian P. Larsen** **Chief Scientific Officer, Woodruff Health Sciences and Emory Healthcare** *Welcoming / Opening Remarks*
10:30 AM	**Dr. Candace C. Fleischer** *Brain imaging with the CSIC: what really big magnets can do for you*
10:45 AM	**Dr. David Gorkin** *BICRA, a non-canonical chromatin remodeler, maintains the timing and fidelity of neural differentiation* *Prize drawing: Presentation trivia question*
11:00 AM	**Coffee Break**
11:15 AM	**Dr. Christian Park** *Disturbed flow induces reprogramming of endothelial cells to immune-like and foam cells under hypercholesterolemia during atherogenesis*
11:30 AM	**Dr. Deanna Kaplan** *Fabla: A Voice-First Platform for Real-World Health Research* *Prize drawing: Presentation trivia question*
	Mid-day break
11:50 AM	**Group Photo**
12:00 PM	**Lunch Break**, *box lunch provided* Networking opportunity: Industry Sponsors and Poster Exhibit Hall

Time	Activity
	Afternoon presentations
1:00 PM	**Dr. Carla S. Hadden** *University of Georgia Core Facilities*
1:10 PM	**Dr. D.P. Mohapatra** *Georgia State University Core Facilities*
1:20PM	**Dr. Christopher Neufeldt** *Atlastin-2-mediated endoplasmic reticulum membrane tethering is critical for flavivirus replication*
1:35 PM	**Dr. Charles Bou-Nader** *Decoding the activation of cGAS by distinct immunogenic nucleic acids*
1:50 PM	**Laxminarayanan Krishnan** *Georgia Institute of Technology IBB Cores and capabilities at the Micro-CT and Biomechanics Labs* *Prize drawing: Presentation trivia questions*
	Poster Session, Networking, and Awards
2:00 PM	**Poster Session and Networking**, *refreshments available* Visit Core Services Posters and Industry Sponsors Vote in the ICI Imaging Contest
3:15 PM	**Door Prize drawing** (Presentation room) *Submit completed Door Prize cards to Registration by 3:10pm*
3:30 PM	**ICI Imaging Contest winners announced** Presented by Laura Fox-Goharioon and April Reedy
3:40 PM	**Core Awards Ceremony** **Emory Integrated Core Facilities**, presented by Dean Sandra Wong **Emory + Children's Pediatrics Cores**, presented by Dr. Stacy Heilman **Winship Shared Resources**, presented by Dr. Gregory Lesinski **Emory National Biomedical Research Center – Division of Pathology**, presented by Dr. Ian Moore
4:15 PM	**Dr. Sandra Wong** **Dean, Emory School of Medicine** Closing remarks
4:30 PM	**Core Day ends – Thank you for attending Core Day!**

Core Day Locations

Activity	Location
Catering	Room 203
Check-in, Parking Validation, Door Prizes	Foyer, Registration table
Group Photo	Convocation Hall steps (outside)
ICI Imaging Contest voting	Foyer, ICI table
Industry Sponsor room	Room 204
Poster exhibit hall	Room 210
Oral Presentations and Award Ceremony	Room 208 - live Room 114 - overflow (downstairs)

See **Appendix 1** for a map of Convocation Hall and Core Day

Thank you to our 2026 Core Day Sponsors!

Emory Core Day is only possible because of the support of our sponsors! Please visit the Industry Sponsor room (204) to learn more about the exciting technologies they offer.

Maks sure to pick-up a Door Prize card from the Registration Table and collect a stamp from each Bronze Sponsor you visit. Completed Door Prize cards can be entered to win exciting prizes during our drawing at the end of the day.

Bronze Sponsors ($3,000)*

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- Stratocore
- Ultima Genomics

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- PacBio
- Promega
- Twist Bioscience

*Please note that only Bronze Sponsors have exhibit tables within the Sponsor Room and can provide a Door Prize card stamp!

Oral Presentations

Learn about research conducted by Emory scientists using the Emory Integrated Core Facilities (EICF) and the cutting-edge resources available to Georgia researchers through our research cores. Featured speakers include members of Emory leadership, Emory scientists, and GRA partner core leadership! See the full schedule of talks on the agenda. Presentations take place in room 208 with overflow viewing in room 114 (downstairs). Abstracts in the program are listed in presentation order.

Dr. John Oshinski – Introduction to Core Day



John Oshinski, **PhD,** Professor, Radiology and Imaging Sciences and Biomedical Engineering, Emory University School of Medicine, and Interim Assistant Dean for Cores

Dr. Oshinski was trained as a Mechanical Engineer and MRI physicist. He has spent 25 years using imaging combined with experimental and computational fluid mechanics to study the relationship between hemodynamics and vascular disease in the clinical environment. His research program focuses on developing new imaging and modelling applications that improve the diagnosis of cardiovascular and cerebral vascular disease, influence patient care decisions, and enable a better understanding of basic physiology and pathophysiology.

Dr. Oshinski serves as Interim Assistant Dean for Cores in the Emory School of Medicine and is also the Director of the Emory Center for Systems Imaging (CSI). He previously served as interim Vice-Chair of Radiology for Research and is a Fellow of the American Society of Mechanical Engineers and the International Society for Magnetic Resonance in Medicine.

Dr. Oshinski will kick-off Core Day with an introduction accompanied by an overview of the day and the Emory Integrated Core Facilities (EICF).

Presentation time: 10:00am

Dr. Christian P. Larsen – Welcoming Remarks



Christian P. Larsen, **MD, DPhil,** Chief Scientific Officer, Woodruff Health Sciences and Emory Healthcare; Executive Director, Emory Transplant Center; and Carlos and Marguerite Mason Professor of Transplantation, Emory University School of Medicine

Dr. Christian P. Larsen serves as Chief Scientific Officer for the Woodruff Health Sciences Center and Emory Healthcare, the Carlos and Marguerite Mason Professor of Transplantation, and Executive Director of the Emory Transplant Center. He is a member of the National Academy of Medicine and has served as Deputy Director of the NIH Immune Tolerance Network. He previously served as Chair of the Department of Surgery, Surgeon-in-Chief for Emory Healthcare, Dean of Emory University School of Medicine, and Physician Group President for Emory Healthcare. Throughout these leadership roles, he has maintained an active clinical and research program with a focus on kidney transplantation in adults and children.

Together with his longtime colleague Dr. Thomas Pearson, Dr. Larsen played a leading role in the development of belatacept, a novel anti-rejection therapy designed to preserve kidney transplant function and improve long-term graft survival. His basic, translational, and clinical research has focused on understanding and overcoming alloimmunity and on developing the next generation of safer, more effective approaches to immunosuppression and immune tolerance.

More recently, his group has integrated clinical data science with systems immunology to better understand, track, and ultimately control alloimmune responses while preserving protective immunity in transplant recipients. This work seeks to move transplantation from empiric immunosuppression toward more precise, individualized approaches based on each patient's evolving immune state and risk. His research program has been continuously funded by the NIH since 1993.

Dr. Larsen will provide welcoming remarks related to cores and research at Emory University.

Presentation time: 10:15am

Dr. Candace C. Fleischer - Brain imaging with the CSIC: what really big magnets can do for you



Dr. Candace C. Fleischer, Associate Professor, Radiology and Imaging Sciences, Emory University School of Medicine

Dr. Fleischer is an imaging sciences researcher who primarily uses MRI to study the brain. She is an active Center for System Imaging core user at Emory University with a recent focus on ultrahigh field imaging (Fleischer lab website).

Brain temperature and metabolism are crucial but understudied aspects of brain health. Key challenges in studying the brain with MRI are long scan times, limited spatial and spectral resolution, and the diversity of scanners and software currently used in the clinical setting. My laboratory has developed a suite of tools to facilitate metabolic and thermometric imaging across field strengths, including the first 7 Tesla MRI scanner in the state of Georgia housed at the Center for Systems Imaging. In this presentation, Dr. Fleischer will discuss recent advances in brain imaging and applications to a wide range of diseases including stroke, traumatic brain injury, cancer, and HIV.

Core facilities that supported this research: Center for Systems Imaging Core (CSIC)

Keywords: Biostatistics and/or computation, Clinical Trials, Systems imaging (e.g., MRI, PET)

Presentation time: 10:30am

Dr. David Gorkin - BICRA, a non-canonical chromatin remodeler, maintains the timing and fidelity of neural differentiation



Dr. David Gorkin, Assistant Professor, Biology Department, Emory University

Dr. Gorkin's lab studies chromatin remodeling in mammalian development.

*Authors: Ziben Zhou, Aranis Muniz Perez, Anna Griggs, Elisa Gollatz, Adriana Harbuzariu, David Gorkin**

The BICRA gene encodes a subunit of the BRG1/BRM-associated factor (BAF) family of chromatin remodeling complexes, also known as mammalian SWI/SNF. BICRA is found in a subtype of BAF complexes, called non-canonical BAF (ncBAF). The functions of ncBAF complexes are not well understood, but human genetics points to a critical role for BICRA in brain development. Loss-of-function mutations in BICRA are known to cause a syndromic neurodevelopmental disorder called Coffin Siris Syndrome (OMIM:619325), and BICRA mutations are enriched in patients with diagnoses of Autism and/or developmental delay. To study the mechanisms that link BICRA to brain development and neurodevelopmental disorders, we generated isogenic human induced pluripotent stem cell (iPSC) lines with homozygous and heterozygous null alleles of BICRA (BICRA-/- and BICRA+/-, respectively). We found that BICRA-/- (homozygous) iPSCs maintain pluripotency, but show latent defects of gene regulatory networks involved in pluripotency, and undergo an accelerated course of differentiation upon induction to neural precursor cells (NPCs). Furthermore, we found that NPCs are more sensitive to BICRA gene dosage than iPSCs, as BICRA+/- (heterozygous) cells show defects in gene expression and chromatin accessibility only after induction to NPCs. Together, these findings demonstrate that BICRA is required to stabilize gene regulatory programs which preserve pluripotency and coordinate early stages of neural differentiation. We anticipate that these results will help uncover the mechanisms by which BICRA mutations lead to neurodevelopmental disorders.

Core facilities that supported this research: Emory Integrated Genomics Core (EIGC), Emory Stem Cell and Organoids Core (ESCOC)

Keywords: Behavioral science, Genetics and genomics, Molecular biology, Stem cells

Presentation time: 10:45am

Dr. Christian Park - Disturbed flow induces reprogramming of endothelial cells to immune-like and foam cells under hypercholesterolemia during atherogenesis



Dr. Christian Park is a member of Dr. Hanjoong Jo's lab and a recent graduate from the joint Biomedical Engineering (BME) program, Emory University School of Medicine and Georgia Institute of Technology.

Christian Park, PhD was advised by Dr. Hanjoong Jo whose research focuses on endothelial cell reprogramming under disturbed blood flow and hypercholesterolemia during atherogenesis using state-of-the-art technologies like single cell RNA sequencing.

Authors: Christian Park, Kyung In Baek, Ruei-Chun Hung, Leandro Choi, Kiyoung Jeong, Paul Kim, Andrew Keunho Jahng, Jung Hyun Kim, Yerin Kim, Mostafa Meselhe, Ashwin Kannan, Chien-Ling Chou, Dong Won Kang, Eun Ju Song, Jay Aaron Bowman-Kirigin, Michael David Clark, Sander W van der Laan, Gerard Pasterkamp, Nicolas Villa-Roel, Alyssa Panitch, Hanjoong Jo*

Atherosclerosis preferentially develops in arterial regions exposed to disturbed flow (d-flow). We tested a two-hit hypothesis in which d-flow initiates partial flow-induced reprogramming of endothelial cells (FIRE), while hypercholesterolemia is required for full FIRE and plaque formation.

Mice received AAV-PCSK9 and Western diet to induce hypercholesterolemia and/or partial carotid ligation to generate d-flow. Single-cell RNA sequencing of carotid arteries at 2 and 4 weeks yielded 98,553 cells from 95 mice. Endothelial reprogramming was validated in EC-specific Confetti lineage-tracing mice, human plaque datasets, and human aortic endothelial cells (HAECs). Plaques developed only when d-flow and hypercholesterolemia were combined. D-flow alone induced partial FIRE, including inflammation, endothelial-to-mesenchymal transition (EndMT), and partial endothelial-to-immune-cell-like transition (partial EndIT). Under hypercholesterolemia, d-flow induced full FIRE, including complete EndIT and a novel endothelial-to-foam-cell-like transition (EndFT). EC-derived foam-like cells showed transcriptomic similarity to foam cells derived from smooth muscle cells and macrophages. Lineage tracing, human plaque analyses, and HAEC studies supported EndIT and EndFT. Therefore, d-flow initiates partial FIRE, whereas d-flow combined with hypercholesterolemia drives full FIRE and atherogenesis, providing a framework for identifying flow-sensitive mechanisms and therapeutic targets in atherosclerosis.

Core facilities that supported this research: Emory Integrated Genomics Core (EIGC)

Keywords: Molecular biology, Omics (e.g., glycomics, lipidomics, metabolomics, proteomics)

Presentation time: 11:15am

Dr. Deanna Kaplan - Fabla: A Voice-First Platform for Real-World Health Research



Dr. Deanna Kaplan, Assistant Professor, Family and Preventive Medicine, Emory University School of Medicine

Deanna Kaplan, PhD (she/hers) is a clinical psychologist, Director of Health Technologies for Spiritual Health, and Assistant Professor in the Department of Family and Preventive Medicine. She directs the Human Experience and Ambulatory Technologies (HEAT) lab, which develops and applies digital health technologies to identify mechanisms of change in integrative health interventions. Her NIH-funded work in mental health technology development received a 2026 Rising Star award from the Association of Psychological Science and a 2025 Innovators and Ideas award from Genomics Press.

Authors: Deanna M Kaplan, PhD, Santiago J. Arconada Alvarez, MS*

Health science research has long needed regulatory-compliant tools for capturing spoken reports from participants daily lives. Addressing this need, we developed Fabla (Kaplan et al., 2025), a first-of-its-kind smartphone app for ecological momentary assessment (EMA) that enables researchers to securely collect voice-based, video-based, pictorial, and survey responses from participants as they go about their lives. Using Fabla, participants in research studies provide data about their momentary experiences, symptoms and behaviors as conversationally as trading voice or video messages with a friend. Released by the Georgia CTSA in 2024, Fabla now supports 16 externally funded studies across 4 countries, led by investigators at Emory and beyond, and has earned innovation awards from Genomics Press and the Association for Psychological Science.

This presentation will showcase the Emory AppHatchery's partnership with an Emory clinical psychologist to develop Fabla. The talk will highlight how Fabla is now being used to generate cutting-edge findings across a broad array of fields, such as understanding patient experience during psychedelic-assisted therapy clinical trials (1UG3AG094957), identifying speech biomarkers of mental health disorders (1K01MH140147), and reducing recall bias in social contact tracing (NU38FT000001), among others. The presentation concludes with a preview of what's next: AI-driven adaptive querying of study participants.

Core facilities that supported this research: AppHatchery and the Extended Reality Innovation Center (ICER)

Keywords: AI and machine learning, Behavioral science, Clinical Trials

Presentation time: 11:30am

Dr. Carla S. Hadden - University of Georgia Core Facilities overview



Dr. Carla S. Hadden, Executive Director of Core Facilities, Office of Research, University of Georgia

Carla Hadden is the Executive Director of Core Facilities for the University of Georgia Office of Research, as well as the Director of the UGA Center for Applied Isotope Studies. She works closely with the Vice President for Research, the Associate Vice President for Facilities and Infrastructure, and the unit's Chief Business Officer to advance the strategic management of core facilities and shared scientific resources. She also serves on the Executive Board of the Southeastern Association of Shared Resources (SEASR), supporting collaboration and best practices across the shared research resource community.

University of Georgia Core Facilities provide state-of-the-art equipment and services to researchers at UGA and beyond. While offering the full complement of core research services expected at a leading R1 institution, including cytometry, microscopy, and next-generation sequencing, UGA also hosts several nationally distinctive facilities. These include the Animal Health Research Center, one of the nation's most advanced biocontainment research facilities; the Center for Applied Isotope Studies, home to Georgia's only AMS radiocarbon dating facility and the largest IRMS laboratory in the Southeast; and the state's only university-based scientific glass shop. UGA is also home to the internationally recognized Complex Carbohydrate Research Center, which provides analytical services and hands-on training in glycoscience, glycomics, mass spectrometry, and NMR-based characterization of carbohydrates, proteins, and glycolipids. Additional specialized capabilities include high-performance computing through the Georgia Advanced Computing Resource Center; custom equipment design, fabrication, and repair through the Instrument Design & Fabrication Shop; nanofabrication through the Integrated Bioscience & Nanotechnology Cleanroom; and advanced imaging through Georgia Electron Microscopy lab, including cryo-EM and micro-CT. Thanks to the GRA Core Exchange, Investigators at Emory and other participating institutions can access UGA core facilities at UGA's internal user rates.

Keywords: Analytical chemistry (e.g., HPLC, mass spectrometry, NMR, X-ray diffraction), Animal resources and animal research, Microscopy

Presentation time: 1:00pm

Dr. Durga P. (D.P.) Mohapatra – Georgia State Core Facilities overview



Dr. D.P. Mohapatra, Associate Vice President for Research Operations and Professor of Neuroscience, Office of Research, Georgia State University, Atlanta

DP is the Associate Vice President for Research Operations, for the Georgia State University Office of Research. He works closely with the Vice President for Research and Economic Development to advance the strategic planning, management and operations of core research facilities and shared scientific resources.

Research Core Facilities at the Georgia State University (GSU) provide extensive knowledgebase, state-of-the-art equipment, and analytical services to researchers from multiple disciplines at GSU and beyond. We offer research core services at par with any leading R1 institution, with a spectrum of cores, including Nuclear Magnetic Resonance (NMR), Mass Spectrometry (MS), Imaging, Advanced Brain Imaging, Advanced Translational Imaging, Transgenic and Gene Targeting, High Angular Resolution Astronomy, and Advanced Research Computing and Innovation. In addition, GSU also houses a state-of-the-art High Containment Core, with unique select agent research handling facilities and extensive animal research facilities, including unique primate research center. Several breakthrough studies have been made possible through use of several core facilities at GSU. Thanks to the GRA Core Exchange, investigators at GSU and other participating institutions can access the GSU core facilities.

Keywords: NMR, MS, Imaging, Translational Imaging, Brain Imaging, Transgenic and Gene Targeting, High Angular Resolution Astronomy, Advanced Research Computing and Innovation

Presentation time: 1:10pm

Dr. Christopher Neufeldt - Atlastin-2-mediated endoplasmic reticulum membrane tethering is critical for flavivirus replication



Dr. Christopher Neufeldt, Assistant Professor, Microbiology and immunology, Emory University School of Medicine

Dr. Neufeldt obtained his BSc in Immunology and PhD in Cell Biology from the University of Alberta, where his doctoral research focused on how hepatitis C virus infection alters host nuclear transport pathways. Following his PhD, he moved to the University of Heidelberg in Germany to continue his training in molecular virology in the laboratory of Ralf Bartenschlager. There, his research focused on characterizing interactions between flaviviruses and host membrane proteins. In 2021, Dr. Neufeldt joined the faculty at Emory University as an Assistant Professor in the Department of Microbiology and Immunology. Research in the Neufeldt laboratory combines advanced imaging approaches with molecular virology and cell biology techniques to investigate how positive-strand RNA viruses manipulate cellular membrane systems and how genetic variation in viral genomes influences immune recognition.

*Authors: Jonathan Einterz Owen, Cheyanne Lynn Bemis, Qingyi Wang, Ambarish C. Varadan, Jacob W. Vander Velden, Laura Andačić, Olus Uyar, Mansi Gupta, Christopher D. Scharer, Laurent Chatel-Chaix, Pietro Scaturro, Mehul S. Suthar, Christopher J. Neufeldt**

Flaviviruses (genus Orthoflavivirus) are arthropod-borne viruses that cause an estimated 400 million human infections annually. All known flaviviruses replicate in association with host endoplasmic reticulum (ER) membranes, where viral genome replication occurs within membrane invaginations termed viral replication organelles (vROs). Here, we used complementary confocal and electron microscopy approaches, including correlative light and electron microscopy (CLEM), to demonstrate that the host ER-shaping protein atlastin-2 (ATL2) is required for the proper organization and function of flavivirus vROs. We further show that ATL2-mediated membrane tethering plays a critical and conserved role in flavivirus replication and that this function can be targeted with synthetic peptides to inhibit infection.

Core facilities that supported this research: Emory Integrated Cellular Imaging Core (ICI), the Robert P. Apkarian Integrated Electron Microscopy Core (IEMC), and the Emory Integrated Genomics Core (EIGC)

Keywords: Genetics and genomics, Microscopy, Molecular biology, Omics (e.g., glycomics, lipidomics, metabolomics, proteomics)

Presentation time: 1:20pm

Dr. Charles Bou-Nader - Decoding the activation of cGAS by distinct immunogenic nucleic acids



Dr. Charles Bou-Nader, Assistant Professor, Biochemistry, Emory University School of Medicine

Dr. Bou-Nader's young lab is studying nucleic acid immunogenicity combining structural, biochemical, cell and omic approaches. Dr. Bou-Nader will present our latest work with EGMIC measuring the activation of cGAS, an important innate immune sensor, and what we have learned about its mechanism of activation in the context of autoimmune disorders and immunotherapy.

cGAS is an essential innate immune sensor chiefly in charge of activating the immune response during viral infection and controlling anti-tumor immunity by sensing cellular stress. cGAS is typically activated by dsDNA to produce small molecule, specifically a cyclic dinucleotide, called cGAMP to trigger an interferon response. We recently uncovered the mechanism of cGAS activation by DNA-RNA hybrids produced during cellular stress and in close collaboration with the EGMIC core we have quantified the production of cGAMP by a series of cGAS variants. These quantitative mass spectrometry analyses enabled the discovery of novel cGAS variants not responsive to DNA-RNA hybrids yet fully functional for dsDNA-sensing as new molecular tools to study cGAS-mediated inflammation. This unique MS-pipeline can be leveraged to study other cyclic small molecules produced during bacterial and mammalian immunity.

Core facility that supported this research: Emory Glycomics and Molecular Interactions Core (EGMIC)

Keywords: Analytical chemistry (e.g., HPLC, mass spectrometry, NMR, X-ray diffraction), Molecular biology

Presentation time: 1:35pm

Dr. Laxminarayanan Krishnan - Georgia Institute of Technology IBB Cores and capabilities at the Micro-CT and Biomechanics Labs



Dr. Laxminarayanan Krishnan, Manager, Micro-CT and Biomechanics Core Labs, Institute for Bioengineering and Biosciences (IBB), Georgia Institute of Technology

Laxmi Krishnan manages the Micro-CT and Biomechanics core labs at GT-IBB. He is a Bioengineer and clinician by training, with experience in research operations in regulated environments (FDA 21CFR bio-manufacturing), contract research, and project management across cross-functional units.

Authors: Laxminarayanan Krishnan, Kanami Irie, Steven Woodard

The Georgia Tech Institute for Bioengineering and Bioscience (IBB) administers more than 14 core labs, located across multiple campus spaces, that provide shared access to advanced instrumentation and expertise to enable cutting edge research at Georgia Tech (GT). Access is open to GT faculty, staff and trainees, partner organizations, and industry. Members of the Georgia Core Alliance get easy access to our cores via an existing MoU and enjoy most services and rates at par with GT internal users. Other external entities can utilize specialized service agreements (SSA) to get work done at our core facilities.

This talk will provide a general overview of the IBB Core Research Facilities and highlight some of our core labs including Histology, Microscopy, Cytometry, and Mass spectrometry, among others. The focus will be on the capabilities and examples from the Biomechanics and MicroCT core labs and will cover both instrumentation, and testing and analytical capabilities in these cores.

Presentation time: 1:50pm

Dean Sandra Wong – Core Awards Ceremony and Closing Remarks



Sandra L. Wong, MD MS is the William Patterson Timmie Professor of Surgery and Dean of the Emory University School of Medicine. She also serves as the Chief Academic Officer of Emory Healthcare.

Dean Wong is a surgical oncologist and health services researcher. Dr. Wong has published over 330 manuscripts and book chapters. Her federally funded health services research program has focused on patient reported outcomes and rural disparities in cancer surgery, including serving as co-PI/leader of an NIH-funded Center for Rural Health Care Delivery Science at Dartmouth. She has been honored with numerous medical student and resident teaching awards.

Dean Wong will present the EICF Core Awards and offer closing remarks on the importance of integrated core facilities.

Core Day Closing Remarks: 4:15pm

Core Services Poster Abstracts

Join us in the exhibit hall (room 210) to learn more about core resources at Emory University and our Georgia partners! Posters are grouped based on scientific themes; the abstract list is organized alphabetically by theme and by facility name within each group.

The exhibit hall will be open from 9:00 AM – 4:30 PM. Join us from 2:00-3:15 PM for refreshments and a special networking event with core directors.

AI, Machine Learning, Research Informatics, and Custom Software Development

AI Image Extraction Core (AI^{2}EC)

Aawez Mansuri, Jahanzaib Malik, Judy Gichoya, Hari Trivedi

Emory University, Emory Integrated Core Facilities (EICF); AI2EC website

The mission of the AI Image Extraction Core (AI^{2}EC) is to enable large-scale, secure image extraction and de-identification to empower clinical, translational, and AI research. AI^{2}EC provides radiology image extraction and de identification services to support clinical, translational, and AI research. Utilizing advanced pipelines, the core enables the secure retrieval of de-identified imaging data from the Picture Archiving and Communications System (PACS) across Emory along with Grady Health System (GHS) and Children's Healthcare of Atlanta. These services are crucial for large-scale research projects, especially those involving clinical trials, where vast amounts of imaging data are necessary to train AI models and conduct medical analyses. By centralizing access to imaging data, the core streamlines research workflows, offering services such as cohort identification, image extraction, and compliance with privacy regulations. The expansion to GHS and Children's ensures access to diverse patient populations, including pediatric and underserved demographics, improving the robustness and applicability of AI models developed using the extracted data. The core plays a vital role in advancing medical research and supports collaborations both within Emory and with external research partners, ensuring that researchers have the radiology data they need to drive innovations in healthcare.

Location: Emory University, Atlanta, GA; Woodruff Memorial Research Building

RRID: SCR_026693

Keywords: AI and machine learning; Clinical Trials

Extended Reality Innovation Center (ICER) and the AppHatchery

Santiago Arconada Alvarez

Emory University, Innovation Center; ICER website

AppHatchery is a research software engineering team at the Emory University School of Medicine. We build digital health tools, mobile apps, research platforms, and clinical software to accelerate the generation of new science and bring evidence-based practices to the public. We partner with investigators to understand research needs and requirements and provide a user-centered lens to ensure patient/participant/user compliance.

Location: Emory University, Atlanta, GA; Health Sciences Research Building

Keywords: Custom Software Development

Medical Informatics and AI Core (MIAI)

Michael Proctor, Chad Robichaux, Matthew D. Pagel, Dileep Gunda, Barney Chan, Megan Schwinne, Nita Deshpande, Reza Sameni, Tony Pan

Emory University, School of Medicine; Georgia CTSA, MIAI website

The MIAI Core provides biomedical informatics, artificial intelligence, and research computing services across the full research lifecycle to support Emory researchers and, through the GaCTSA Informatics Core, CTSA investigators. Services include cohort discovery, study planning, grant and protocol development, project management, clinical and external data acquisition, data preparation, integration, and secure data management. Unique capabilities include data de-identification, ontology mapping, multimodal data integration, physiological time-series analysis, and scalable AI infrastructure.

MIAI's AI/ML capabilities span natural language processing (NLP), large language model (LLM) integration, and model development, deployment, and evaluation. The Core also offers software engineering services for custom tools, dashboards, and research applications; natural language–driven data management systems; large-scale data processing pipelines; real-time data capture and analytics platforms; and AI-enabled decision-support applications. MIAI provides HIPAA-compliant compute and storage resources, virtual machine and container hosting, and system administration.

MIAI hosts specialized data repositories such as the MOGO/GOGO OB/GYN dataset, 12-lead ECG and ICU telemetry waveforms, and SDOH-linked Emory Enterprise OMOP data. Through partnerships with OIT, the Department of Medicine DAB Core, CHOA, GaCTSA Network Capacity Core, and the EICF Image Extraction Core, MIAI enables coordinated access to imaging, pediatric data, EPIC COSMOS, and MyChart-based services

Location: Emory University, Atlanta, GA; School of Medicine, Biomedical Informatics

Keywords: Informatics Consulting; Data ETL; AI and machine learning; Software Development and Deployment

Winship Data and Technology Applications (WinDATA) Shared Resource

LePaige Cox, Madhusmita Behera, Ravi Parikh

Emory University, Winship Shared Resources; WinDATA SR website

The mission of the Winship Data and Technology Applications Shared Resource (WinDATA SR) is to provide comprehensive, cutting-edge informatics support to multidisciplinary Winship investigators. WinDATA facilitates collaborative research through the application of advanced technologies and data science methods that centralize the collection, integration, management, analysis, and dissemination of research data for population-based research, translational science, clinical trials, and real-world evidence studies. WinDATA collaborates with investigators throughout the research lifecycle by providing project consultation, protocol development support, feasibility assessments, cohort discovery, summary counts, and tailored informatics solutions that support the planning, conduct, and dissemination of cancer research. The team provides expertise in data management, analytics and reporting, clinical and genomic data management, custom application development, research data integration, and the application of advanced AI, machine learning, and natural language processing techniques to accelerate data-driven research.

WinDATA works closely with Winship research programs, other Winship Shared Resources, Emory Office of Information Technology, and School of Medicine core facilities to deliver integrated, secure, and scalable research solutions that accelerate scientific discovery and precision oncology research.

Location: Emory University, Atlanta GA; Executive Park Campus

Keywords: AI and machine learning; Research informatics; Clinical & genomic gata management; Cohort discovery & study feasibility; Custom research solutions

Analytical Chemistry

Center for Applied Isotope Studies (CAIS)

Carla Hadden

University of Georgia; CAIS website

The Center for Applied Isotope Studies (CAIS) at the University of Georgia provides advanced analytical capabilities in isotope geochemistry, radiocarbon dating, trace element analysis, and environmental chemistry. CAIS is unique in housing seven integrated service cores under one roof, offering researchers access to a diverse suite of instrumentation, technical expertise, and analytical services.

Our core facilities include (1) the Radiocarbon Dating Laboratory, one of the oldest and largest continuously operating university-based radiocarbon laboratories in the United States; (2) the Natural Products Laboratory, a global leader in biobased content verification and food authentication; (3) the Stable Isotope Laboratory for bulk- and compound-

specific stable isotope analyses; (4) the Plasma Chemistry Laboratory for trace element and radiogenic isotope measurements; (5) the Laboratory for Environmental Analysis specializing in organic contaminant analysis, including PFAS and pesticides; (6) the Gamma Analysis Laboratory; and (7) the Scientific Glass Shop, the only remaining scientific glass shop in the University System of Georgia.

These resources support applications in environmental science, agriculture, ecology, geology, archaeology, hydrology, forensics, and biomedical research. CAIS scientists provide expert consultation on experimental design, sample preparation, analytical methods, and data interpretation to help researchers generate high-quality, impactful results.

Location: University of Georgia, Athens, GA; 3 locations across campus

Keywords: Analytical Chemistry (e.g., HPLC, mass spectrometry, NMR, X-ray diffraction); Custom Laboratory Apparatus Design and Fabrication

Complex Carbohydrate Research Center: Analytical Services (AST-CCRC)

Varughese Mulamoottil, Christian Heiss & Parastoo Azadi

University of Georgia; AST-CCRC website

Mission: To advance research and training in the glycosciences

Over the past four decades, the Analytical Services and Training at the Complex Carbohydrate Research Center (AST-CCRC) has evolved into one of the world's premier facilities dedicated to glycoscience analytical services, technology development, and training. Through collaborations with universities, federal agencies, and industry, AST-CCRC serves as a unique resource for the structural characterization of glycoconjugates and complex carbohydrates. The CCRC's extensive expertise encompasses a wide range of analytical methodologies that are essential for advancing glycobiology, biotechnology, biopharmaceutical development, glycomaterials, food and nutrition science, plant biology, microbiology, biofuels, immunology, and biomedical research.

A major strength of AST-CCRC is the development, optimization, validation, and application of innovative analytical methodologies. The center continuously develops and refines workflows for glycomics, glycoproteomics, glycan sequencing, glycopeptide analysis, linkage analysis, quantitative glycomics, glycoinformatics, and integrated multimodal data analysis. These advances support challenging research projects while establishing broadly applicable analytical platforms that drive innovation across academia, government, and industry.

To facilitate the dissemination of these technologies, the CCRC offers four annual hands-on and two virtual training courses covering the structural characterization of glycans from glycoproteins, glycolipids, polysaccharides, and glycosaminoglycans using advanced mass spectrometry, NMR spectroscopy, chromatography, and glycoinformatics. The courses provide participants with practical and theoretical training.

Location: University of Georgia, Athens, GA; Riverbend Rd.

Keywords: Analytical Chemistry (e.g., HPLC, mass spectrometry, NMR, X-ray diffraction)

Emory + Children's Pediatric Metabolomics and Biomarkers Core (PBMC)

Joshua Chandler*, Frank Harris, James Lyles, Genoah Collins

Emory University, Emory + Children's Pediatric Research Cores; PBMC website

The Pediatric Metabolomics & Biomarkers Core provides state-of-the-art analytical technologies and scientific expertise to support basic, translational, and clinical research through comprehensive metabolomics and biomarker analyses. Our mission is to generate high-quality, reproducible, and biologically meaningful data that accelerate discoveries in disease mechanisms, diagnostics, therapeutic development, and personalized medicine. We collaborate with investigators throughout all stages of research, from study design and method development to sample analysis, data interpretation, and publication support. The Core is generously supported by Children's Healthcare of Atlanta and Emory University.

The Core offers a comprehensive suite of services, including untargeted metabolomics, polytargeted and quantitative targeted metabolomics, stable isotope tracing and fluxomics, metabolomic imaging, and custom biomarker assay development across diverse biological specimens. Our experienced team provides scientific consultation and analytical expertise tailored to each project's goals.

Our mass spectrometry instrumentation includes advanced liquid chromatography–high-resolution mass spectrometry (LC-HRMS), tandem mass spectrometry (LC-MS/MS), infrared matrix-assisted laser desorption electrospray ionization (IR-MALDESI) imaging mass spectrometry, and gas chromatography–mass spectrometry (GC-MS). Additionally, we offer high-performance liquid chromatography (HPLC) with fluorescence, ultraviolet, and electrochemical detection. All services are supported by robust sample preparation and bioinformatics workflows. Together, these capabilities enable sensitive, accurate, and reproducible characterization of metabolites and biomarkers, empowering investigators to address complex biological questions. Our integrated analytical platforms enable seamless progression from discovery-based metabolomics to targeted validation and biomarker development.

Location: Emory University, Atlanta, GA; Emory Children's Center

RRID: SCR_025574

Keywords: Analytical Chemistry (e.g., HPLC, mass spectrometry, NMR, X-ray diffraction); Omics (e.g., glycomics, lipidomics, metabolomics, proteomics)

Emory HPLC Bioanalytical Core (EHBC)

Rong Fu

Emory University, Emory Integrated Core Facilities (EICF); EHBC website

The Emory HPLC Bioanalytical Core (EHBC), one of the Emory Integrated Core Facilities (EICF), is supported by the Georgia Clinical & Translational Science Alliance (CTSA) and the Emory University School of Medicine. EHBC routinely measures monoamine, purines, amino acids in biological matrices, such as tissue extracts, cell lysates, plasma, serum, CSF, urine, and microdialysate. We also provide tailored HPLC service in a broad range of research projects including neuroscience research, cancer research, drug development and clinical trial studies. We develop HPLC methods for small molecule drugs, endogenous compounds, peptides, and proteins to meet the specific research requirements.

The core is equipped with four UPLC/UHPLC/HPLC systems, which includes one ACQUITY UPLC H-Class PLUS System, one ACQUITY UHPLC Arc System, one ESA CoulArray detection system, and one Waters HPLC system. Please contact us at HPLC@Emory.edu to discuss your experimental needs.

Location: Emory University, Atlanta, GA; Woodruff Memorial Research Building

RRID: SCR_023531

Keywords: Analytical Chemistry (e.g., HPLC, mass spectrometry, NMR, X-ray diffraction)

Emory Integrated Metabolomics and Lipidomics Core Facility (EIMLC)

Kristal Maner-Smith*, ChihYu Chen, Kavitha Kettimuthu

Emory University, Emory Integrated Core Facilities (EICF); EIMLC website

The Emory Integrated Metabolomics and Lipidomics Core (EIMLC) performs quantitative lipidomics and targeted metabolomics analyses on samples from a wide variety of biological matrices to support clinical and research efforts. These analyses provide enhanced understanding of lipid mediators and soluble metabolites whose abundance may be monitored as biomarkers to predict and follow the progression of a wide range of diseases, such as metabolic disorders (e.g. obesity, Type II diabetes, and NAFLD), neurodegenerative diseases (e.g. Alzheimer's Disease and Parkinson's Disease), and certain cancers (e.g. prostate and breast).

Location: Emory University, Atlanta, GA: Health Sciences Research Building

RRID:SCR_023527
Keywords: Analytical Chemistry (e.g., HPLC, mass spectrometry, NMR, X-ray diffraction); Omics (e.g., glycomics, lipidomics, metabolomics, proteomics)

Animal resources and research, BSL3, Microbiome

Animal Health Research Center (AHRC)

Hannah Walker, Danny Mead

University of Georgia; AHRC website

UGA's Animal Health Research Center (AHRC) is an AAALAC-accredited, Select Agent and Tier 1 registered high-containment research core built to advance collaborative infectious disease research. Spanning 75,000 square feet, it supports safe, compliant studies of infectious microorganisms, parasites, and toxins across diverse animal models, including rodents, ferrets, poultry, swine, non-human primates, and large agricultural species.

The facility includes eleven BSL-3 laboratories, fourteen ABSL-3/ABSL-3Ag spaces, and a dedicated BSL-3 mass spectrometry suite. Through a highly collaborative model, users are partnered with experienced staff who provide end-to-end support in project development, study design, biosafety and biosecurity, and specialized training. This integrated approach accelerates research progress while maintaining the highest standards of safety, compliance, and scientific rigor.

Location: University of Georgia, Athens, GA – UGA College of Veterinary Medicine

RRID: N/A

Keywords: Animal Research; Investigational drugs, Biocontainment

Division of Animal Resources (DAR)

Lindsey Ferguson, Catalina Forero, Crystal Gergye, Rena Greene, Wai Hanson, Karen Strait, and Lorna Waldrop

Emory University, Emory Integrated Core Facilities (EICF); DAR website

The Division of Animal Resources (DAR), one of the Emory Integrated Core Facilities (EICF), is dedicated to promoting health and well-being everywhere by providing support to Emory University scientists through high-quality, comprehensive care of research animals.

The DAR offers a broad range of specialized services to support animal-based research, including Clinical Diagnostic Services, Large Animal Surgical Services, Managed Breeding Services, Aquatics Core Services, Technical Assistance, and access to fully equipped Rodent Surgery Suites. These services are complemented by expert consultation, technical support, and hands-on training that enhance the quality and rigor of research conducted by investigators across campus.

DAR facilities include state-of-the-art clinical diagnostic instrumentation, large and small animal surgical suites, and aquatic life support systems. Through its integrated expertise and specialized services, DAR plays a critical role in enabling high-quality animal research and advancing scientific discovery at Emory.

Location: Emory University, Atlanta, GA; several locations across campus

RRID: SCR_023523

Keywords: Animal Resources, Animal Research

Division of Animal Resources (DAR): Aquatics program

Austin Forbes

Emory University, Emory Integrated Core Facilities (EICF); DAR website

The Division of Animal Resources (DAR) Aquatics team runs two state-of-the-art zebrafish facilities. Our staff handles the development, feeding, and health monitoring of the zebrafish. We also maintain the aquatic life support system and automated feeding robots in the facilities. We take care of the fish so researchers can focus on their experiments. Our husbandry practices are optimized for high survival, even growth rates, and robust fecundity. Zebrafish are a primary vertebrate research model with a wide variety of applications due to fast development, optical clarity for imaging, and genetic malleability.

Location: Emory University, Atlanta, GA; facilities in HSRB and EMSKI

Keywords: Aquatic animal resources and research

Emory + Children's Animal Physiology Core (AP Core)

Rebeccah Wood

Emory University, Emory + Children's Pediatric Research Cores; AP Core website

The Animal Physiology (AP) Core is a centralized resource specializing in procedural, surgical, and imaging services for rats and mice, and assistance with procedures in other species. The Core features an experienced rodent surgeon capable of performing a wide variety of surgical techniques, a Visualsonics VEVO 3100 high-frequency ultrasound, a Sysmex XN-1000V CBC analyzer, Hatteras MMC100 renal metabolism caging, and Columbus Oxymax CLAMS-HC respiratory metabolism caging.

The AP Core provides services to all researchers, but Emory child health researchers have priority access and are eligible for a generous subsidy.

Location: Emory University, Atlanta, GA; Emory Children's Center

RRID: SCR_025835

Keywords: Animal resources and animal research

Emory Gnotobiotic Animal Core (EGAC)

Rheinallt Jones, Caroline Addis*, Amanda Metzger*

Emory University, Emory Integrated Core Facilities (EICF); EGAC website

The Emory Gnotobiotic Animal Core (EGAC) is a state-of-the-art resource that supports microbiome and host-microbe interaction research by providing specialized animal models, technical expertise, and controlled experimental environments. EGAC supplies

germ-free C57BL/6 mice to investigators throughout Emory University and institutions across Georgia. The core also can guide customers through the creation of genetically engineered mouse strains, including knockout and transgenic lines, to germ-free status, allowing researchers to investigate host-microbiome interactions with exceptional precision. To maintain microbial integrity throughout experimental procedures, EGAC utilizes hermetically sealed ISOcageP Bioexclusion systems that preserve microbiome diversity while minimizing contamination risks.

Investigators can colonize germ-free mice with defined microbial communities or complex microbiota obtained from human donors, creating powerful translational models that link human health and disease to microbial function. The facility also supports specialized procedures, including intraperitoneal (IP) injections and studies requiring gnotobiotic ABSL-2 containment. A central mission of EGAC is to enhance scientific rigor and reproducibility using standardized microbiome models, controlled husbandry practices, and validated experimental protocols.

In addition, EGAC offers contract research organization (CRO) services, providing investigators with access to advanced facilities, technical staff, and customized study design. These capabilities allow scientists to conduct complex microbiome experiments under highly controlled environmental conditions.

Location: Emory University, Atlanta, GA; Health Sciences Research Building

RRID:SCR_023526

Keywords: Animal resources and animal research; Microbiome

Emory High Containment Facility (EHCF)

Motiur Rahman, Rafael A Medina

Emory University, Emory Integrated Core Facilities (EICF); EHCF website

The EHCF was established to expand Emory's capacity of high-containment pathogens research and to strengthen epidemic and pandemic preparedness. The EHCF provides a comprehensive program that integrates state-of-the-art infrastructure, technical support, and specialized training to advance research on emerging infectious diseases while ensuring the highest standards of biosafety and biosecurity.

The EHCF is a 5,898 sq. ft. biocontainment research facility comprising six in vitro (BSL3) suites and six animal (ABSL3) laboratory suites, designed to safely support concurrent research involving multiple pathogens and animal models, including mice, rats, guinea pigs, hamsters and ferrets). The facility also houses dedicated procedure suites for: i) Single-cell Omics and Molecular Biology, ii) Flow Cytometry & Cell Sorting, iii) High-Throughput Assay and Advanced Fluorescence and Confocal Microscopy, and iv) histopathology.

The facility is compliant with the Design Requirement Manual, National Institute of Health (NIH), (issuance 1.5 3/5/2020) and operates in accordance with the Biosafety in Microbiological and Biomedical Laboratories (BMBL), 6th edition, and the NIH guidelines

for Research Involving Recombinant or Synthetic Nucleic Acid Molecules (April 2024). Laboratory operations are conducted under a quality management framework that complies with Good Laboratory Practice (GLP; 21 CFR part 58) and Good Clinical Laboratory Practices (GCLP), while adhering to established institutional and federal biosecurity guidelines.

Location: Emory University, Atlanta, GA

RRID: SCR_027347

Keywords: Animal resources and animal research, Biosafety, BSL3, Risk Group 3

Mouse Transgenic and Gene Targeting Core (TMF)

Karolina Nitsche*

Emory University, Emory Integrated Core Facilities (EICF); TMF website

The Mouse Transgenic and Gene Targeting Core (TMF), one of the Emory Integrated Core Facilities (EICF), provides state-of-the-art equipment and expertise for making genetically engineered mouse models, moving alleles on or off-campus, or cryopreserving existing strains of mice.

The TMF is located in a designated high-end SPF animal facility in the Emory Health Sciences Research Building I. The laboratory space includes a fully equipped tissue culture suite dedicated to embryonic stem (ES) cell culture, an embryology laboratory, a microinjection/embryo manipulation space, a surgical suite, a molecular biology space, and a cryopreserved embryo/sperm archival space. The TMF lab is supported by 3 staff members. The Core Director (Dr. Karolina Nitsche) and Scientific Director (Dr. Tamara Caspary) provide grant application support and project consultation.

The core facility is fully equipped to perform all experimental procedures associated with the production of genetically modified mice. In addition, it has research space and equipment to assist laboratories with auxiliary procedures for the production and analysis of genetically modified mice. These include rederivation and cryopreservation services, as well as custom mouse needs. The TMF also has several services available in rats including sperm and embryo cryopreservation and semen evaluation.

Location: Emory University, Atlanta, GA; Health Sciences Research Building

RRID:SCR_023535

Keywords: Animal Research; Transgenic and gene targeting

Rodent Behavioral Core (RBC)

Jason Schroeder*

Emory University, Emory Integrated Core Facilities (EICF); RBC website

The Rodent Behavioral Core (RBC), one of the Emory Integrated Core Facilities (EICF), is supported by the Georgia Clinical & Translational Science Alliance (CTSA) and the Emory University School of Medicine. We plan, execute, and analyze behavioral experiments examining activity, arousal, coordinated movement, learning and memory, anxiety, depression, seizure susceptibility, reward/reinforcement, and aggression in mice and rats.

Location: Emory University, Atlanta, GA – Whitehead Building, Animal Facility

RRID: SCR_012499

Keywords: Animal resources and animal research; Behavioral science

Winship Cancer Models (CaM) Shared Resource

Yuning Hou*, Chunzi Huang, Sungjin Kim, Melissa Gilbert-Ross

Emory University, Winship Shared Resources; CAM website

CaMS supports Emory investigators in developing and analyzing clinically relevant cancer models, offering cutting-edge, non-invasive imaging modalities that help translate research discoveries into potential treatments.

CaMS supports investigators from initial experimental design through IACUC protocol preparation and technical training. Model development services include GEMM colony management (breeding, genotyping, inducible/conditional induction) and cell-line and patient-derived xenograft (CDX/PDX) models via subcutaneous, orthotopic, tail-vein, and intracardiac delivery. Surgical and delivery services include ovariectomy, renal subcapsular, intrafemoral, and intrasplenic implantation, and multiple drug administration routes. Monitoring services include body weight/tumor-burden tracking, necropsy, and tissue collection for downstream analysis.

Core instrumentation includes the IVIS Spectrum for longitudinal bioluminescence/fluorescence imaging, the SmART+ image-guided small-animal irradiator, containing bioluminescence imaging, microCT, and cone-beam CT for precision treatment planning, and the KUBTEC XPERT 80 digital X-ray system for skeletal and bone-metastasis imaging. Services can be selected individually or combined into customized packages tailored to each project's needs.

CaMS' existing consultation services are also expanding in scope to help investigators identify complementary human-relevant validation approaches and articulate scientific justification for animal use in grant applications, in response to evolving NCI guidance. CaMS works closely with sister shared resources to support integrated, multi-modal cancer research across Winship's catchment area.

Location: Emory University, Atlanta GA; Emory Clinic, Bldg. B

Keywords: *Animal resources, animal research, optical imaging*

Biorepository

Emory + Children's Cystic Fibrosis (CF) Discovery Core and CF Biospecimen Repository (CF-BR)

Arlene Stecenko MD[1], Lokesh Guglani MD[1], Joanna Goldberg PhD[1], Randy Hunt MD[2], Colin Swenson MD[2], *Chris Driggers[1], *Kymry Jones PhD[1]

Emory University, Emory + Children's Pediatric Research Cores; CFDC and CF-BR website

A Biorepository and Integrated Data Warehouse Supporting Translational Research in Cystic Fibrosis and Non-CF Bronchiectasis

The Cystic Fibrosis Discovery Core supports the Cystic Fibrosis Biospecimen Repository (CF-BR) and the Cystic Fibrosis Data Exchange and Warehouse (CFDEW), providing an integrated research infrastructure for basic, translational, and clinical research in cystic fibrosis (CF) and non-CF bronchiectasis (NCFBE). The CF-BR houses more than 22,000 biospecimens linked to comprehensive longitudinal clinical data, while CFDEW, scheduled for launch in 2027, will integrate clinical, biospecimen, and research data into a secure, collaborative platform for data-driven discovery.

Central to these resources is a well-characterized cohort of more than 1,000 individuals with CF receiving care at Georgia's two Cystic Fibrosis Foundation-accredited care centers, with active enrollment of individuals with NCFBE and healthy controls. Approximately 70% of the CF population, ranging from 3 months to 81 years of age, has consented to participate in the CF-BR, enabling longitudinal collection of blood, sputum, bronchoalveolar lavage fluid, bacterial isolates, exhaled breath condensate, stool, saliva, and investigator-requested biospecimens.

Together, the CF-BR and CFDEW enable investigators to integrate biospecimens with longitudinal clinical and research data, identify disease mechanisms, discover biomarkers, evaluate therapeutic responses, and accelerate translational research. Access to biobanked samples, prospective biospecimen collection, and associated data is coordinated through the Research Oversight Committee (ROC), which provides scientific consultation, biostatistical support, and facilitates collaboration.

Location: Emory Children's Center 3rd floor

Keywords: Biorepository, Cystic Fibrosis

Emory Integrated Biorepository Core (EIBC)

Mohammad Hossain*, Nael McCarty

Emory University, Emory Integrated Core Facilities (EICF); EIBC website

The Emory Integrated Biorepository Core (EIBC) is a central biobanking resource for the Emory research community; it serves as an essential partner in developing personalized healthcare for patient populations at Emory and affiliated institutions. It is equipped with a highly sophisticated robotic-controlled Hamilton BiOS M7 -80ºC freezer with ~3 million samples of storage capacity. The goal of EIBC is to provide efficient storage and retrieval of biospecimens, a critical need for researchers and clinical investigators.

The EIBC functions through an established bidirectional Laboratory Information Management System (LIMS) generated by merging the OpenSpecimen and Hamilton BiOS software packages. Through this LIMS, all listed investigators can submit their request to store samples in the BiOS and to retrieve their stored samples from the BiOS using their lab computers. The bidirectional LIMS provides efficient service to investigators to store their samples, equipped with multiple levels of alarms and temperature control back-ups, ensuring maximum storage quality without any sample loss. In addition to the Hamilton-based storage for -80°C samples, EIBC can provide short-term Liquid Nitrogen storage for live cells. Most recently we have established a full service for clinical sample processing to support clinical researchers who do not have their own research lab space.

Location: Emory University, Atlanta, GA; Health Sciences Research Building

Keywords: Biorepository; Clinical Trials

Winship Cancer Tissue and Pathology (CTP) Shared Resource

Jennifer Robertson*, Deon Doxie, Burcu Ergonul, Vaunita Parihar, Brian Robinson

Emory University, Winship Shared Resources; CTP website

The Cancer Tissue and Pathology Shared Resource (CTP) is an integrated biobanking, histology, and tissue analysis core that supports basic, translational, and clinical research at Winship Cancer Institute, Emory University, and across Georgia. CTP provides comprehensive biospecimen services, including acquisition, processing, storage, annotation, and distribution of high-quality patient-derived specimens collected from Winship's catchment area, as well as clinical research coordinator support for observational and non-therapeutic studies.

CTP offers a full range of histology and tissue analysis services, including tissue processing, sectioning, tissue microarray construction, automated immunohistochemistry (IHC) and multiplex immunofluorescent IHC (Leica Bond RxM and Ventana Discovery Ultra staining platforms), and whole-slide scanning (Hamamatsu NanoZoomer and Vectra Polaris). Access to CTP's Concentriq image management platform and HALO image analysis software enables quantitative tissue phenotyping, biomarker assessment, and spatial characterization of the tumor microenvironment.

Additional services include high-dimensional immune and cellular profiling using Helios mass cytometry and ImmunoSpot technologies. Through close collaboration with other Shared Resources, CTP supports complex multi-omics and spatial biology projects by integrating biospecimen procurement, pathology, genomics, and bioinformatics workflows, enabling investigators to maximize the scientific impact of tissue-based cancer research.

Location: Emory University, Atlanta GA; Winship Cancer Institute, Clinic B

Keywords: Biorepository; Pathobiology

Biostatistics, Statistics, and Computation

Emory + Children's Pediatric Biostatistics Core

Scott Gillespie*, Zhulin He, Andrew Jergel, Katie Liu, Hui Huang, Laura Johnson, Shen Liu, Adrianna Westbrook, Sophia Drewery, Shweta Srikanth

Emory University, Emory + Children's Pediatric Research Cores; Pediatric Biostatistics Core website

Established in 2009, the Pediatric Biostatistics Core provides collaborative statistical support to investigators at Emory University, Children's Healthcare of Atlanta, and partner institutions across the Atlanta research community. The Core strengthens the rigor and reproducibility of pediatric and child health research by integrating biostatistical expertise throughout the research lifecycle.

The Core's biostatisticians work with research teams on study design, grant and protocol development, sample size and power calculations, statistical analysis plans, advanced data analysis, interpretation, data visualization, manuscript preparation, and statistical education. Services range from focused consultations for individual investigators to long-term partnerships and formal agreements with clinical and research divisions. The team also provides investigator training to help collaborators choose appropriate methods, understand results, and communicate findings clearly.

For investigators with limited or no funding for statistical support, the Core offers the Pediatric Biostatistics Award. The Core reviews applications through three award cycles each year and funds selected studies, each of which receives up to 30 fully subsidized hours of collaboration.

At any given time, Core biostatisticians are engaged in hundreds of projects. Their work contributes to grant applications, clinical and translational research, and manuscripts prepared for peer-reviewed publication. The team-based model gives investigators consistent guidance from early planning through analysis, interpretation, and dissemination. This continuity helps research teams turn complex questions into clear, reproducible evidence that advances child health.

Location: Emory University, Atlanta, GA; Health Sciences Research Building

RRID: SCR_025834

Keywords: Biostatistics/Computation; Clinical Trials

Emory Integrated Computational Core (EICC)

Rich Johnston

Emory University, Emory Integrated Core Facilities (EICF) and Winship Shared Resources; EICC website

The mission of the Emory Integrated Computational Core (EICC) is to provide cutting-edge computational and bioinformatics support to Emory investigators with large genomics datasets. We also provide computational consulting and data storage support for our investigators.

Location: Emory University, Atlanta, GA – Woodruff Memorial Research Building

RRID: SCR_023525

*Keywords**:** Biostatistics/Computation, Genetics and genomics*

Statistical Consulting Center (SCC)

Jinae Lee, Daniel B. Hall

University of Georgia; SCC website

The Statistical Consulting Center (SCC) at the University of Georgia provides collaborative statistical support and training to researchers across disciplines. As a university-wide research core facility, SCC partners with investigators throughout the research lifecycle, from developing research questions and study designs to grant proposal development, data analysis, and dissemination of research findings.
SCC provides comprehensive statistical consulting services, including study design and power analysis, statistical support for grant proposal development, statistical methodology development, data management and visualization, advanced statistical modeling, and interpretation of results. Our consultants have expertise in a wide range of methods, including regression modeling, longitudinal and survival analysis, clinical and biomedical data analysis, and reproducible research practices. Through these services, SCC provides statistical expertise that strengthens research designs, enhances study rigor, and supports successful research outcomes.
SCC is staffed by experienced statistical professionals and graduate-level consultants who work closely with faculty, researchers, and students to provide customized analytical solutions. Through one-on-one consultations, collaborative research projects, and educational workshops, SCC promotes rigorous statistical practices and supports high-quality research across the University of Georgia and beyond.

Location: University of Georgia, Athens, GA; Department of Statistics, Brooks Hall

Keywords: Statistical consulting/Visualization

Winship Biostatistics Shared Resource (BSR)

Jeffrey Switchenko, Yuan Liu, Tarrant McPherson, Subir Goyal, Manali Rupji, Ashley McCook-Veal, Angel Ji

Emory University, Winship Shared Resources; BSR website

The Winship Biostatistics Shared Resource (BSR) provides comprehensive statistical, methodological, and analytical support for basic, translational, clinical, and population science research across the Winship Cancer Institute. The BSR partners with investigators throughout the research lifecycle, from study conception and grant development to protocol design, statistical analysis, interpretation, and dissemination of findings. Resource faculty provide expertise in clinical trial design, sample size and power determination, statistical analysis plans, adaptive and early-phase trial methodologies, longitudinal and survival analyses, causal inference, biomarker evaluation, and real-world evidence generation. The BSR supports research utilizing large-scale cancer data resources, including NCDB, SEER, SEER-Medicare, EPIC Cosmos, MarketScan, and other electronic health record and claims databases. Standardized, reproducible analytical workflows implemented using SAS and R promote methodological rigor, efficiency, and reproducibility across collaborative projects. In addition to direct investigator support, the BSR provides statistical leadership for institutional scientific review and clinical research oversight while delivering education and mentorship in biostatistics and clinical trial methodology. Through multidisciplinary collaborations and innovative quantitative methods, the BSR accelerates high-quality cancer research and facilitates translation of scientific discoveries into improvements in cancer prevention, diagnosis, treatment, survivorship, and health equity.

Location: Emory University, Atlanta, GA; Emory Clinic Building B

Keywords: Biostatistics/Computation; Clinical Trials

Clinical and Research Services

Georgia Clinical and Translational Science Alliance (Georgia CTSA)

Andrew West, Karen Lindsley, Amy Stehlik, Chandler Baltimore

Emory University, Georgia CTSA**;** Georgia CTSA website

Georgia Clinical & Translational Science Alliance (Georgia CTSA), funded through the National Center for Advancing Translational Sciences, part of NIH's Clinical and Translational Science Awards, shares a common vision to translate laboratory discoveries into treatments for patients, engage communities in clinical research efforts, and train the next generation of clinical investigators.

Georgia CTSA supports researchers through education, career development, mentoring, networking, collaboration, and team science. Resources include pilot funding, grant-writing assistance, and expert consultations in biostatistics, epidemiology, informatics, ethics, and regulatory knowledge.

The Georgia CTSA Clinical Research Centers provide comprehensive support for adult and pediatric studies, including dedicated research space, experienced nursing and technical staff, bionutrition, and core laboratory services. Additional resources support multi-site studies, participant recruitment, community engagement, and partnerships.

Georgia CTSA also advances innovation and translation through programs such as AppHatchery, which offers mobile app consulting and development. Researchers can connect through events including the Southeast Regional Clinical and Translational Science Conference and Health Services Research Day.

To submit a request, visit www.GeorgiaCTSA.org. Email GeorgiaCTSA@emory.edu to subscribe to the Georgia CTSA Weekly eRoundup newsletter that contains featured news, funding, education and training, research resources, innovation and translation, community announcements, and events.

Location: Emory University, Atlanta, GA; Woodruff Health Sciences Center

Keywords: Clinical Trials; Research services and training the research workforce

Center for Cancer Research and Therapeutic Development (CCRTD) Core Facilities

Yuheng Qiu, Ana C Millena, Tony Griffin, J'Ana Reed, Geou-Yarh Liou

Clark Atlanta University; CCRTD website

The Center for Cancer Research and Therapeutic Development (CCRTD) Core Facilities at Clark Atlanta University advances cancer research and biomedical discovery by providing state-of-the-art instrumentation, specialized technical services, and comprehensive research training. The CCRTD Core Facilities expands research capacity across the Atlanta University Center (AUC) and the broader scientific community through interdisciplinary collaboration and shared resources.

The CCRTD Core Facilities consists of four specialized core laboratories: Cell and Molecular Biology Core Laboratory (CMBCL), Histology and Imaging Core Laboratory (HICL), Cancer Biostatistics and Bioinformatics Core Laboratory (CBBCL), and Drug Discovery Core Laboratory (DDCL). Together, these laboratories deliver complete research support; including experimental design, molecular and cellular biology analyses, histology, bioinformatics analyses consultation, along with drug discovery support. Additionally, core personnel provide customized instrument training, protocol optimization, and direct consultation to ensure high-quality research outcomes.

The CCRTD Core Facilities host advanced research instrumentation and analytical platforms, including RNA, DNA, and protein imaging and analysis, flow cytometry, spectrophotometry, fluorescent microscopy, confocal microscopy, tissue scanning microscopy, live-cell imaging platforms, mass spectrometry, and bioinformatics software. By combining cutting-edge technologies with dedicated expert scientific support, the CCRTD Core Facilities serve as a centralized hub to accelerate cancer research and train the next generation of biomedical researchers.

Location: Clark Atlanta University, 223 James P. Brawley Dr SW, Atlanta GA 30314

Keywords: Cancer Research, Core Facilities, Biomedical Discoveries, Shared Resources

Emory Investigational Drug Service (IDS)

Sy Tran, Christine Cook

Emory University, Emory Integrated Core Facilities (EICF); IDS website

The Emory Investigational Drug Service (IDS) supports all Emory investigators in the conduct of industry and federally funded drug studies. We provide a wide range of services related to investigational drug therapies. Our primary purpose is to ensure that research drugs are handled safely, accurately, and effectively throughout the Emory system. IDS ensures compliance with regulatory requirements of the FDA, JCAHO, AAHRP, Code of Federal Regulations, Georgia Board of Pharmacy and University policies and procedures.

Location: Emory University, Atlanta, GA – Emory Clinic Building A

Keywords: Clinical Trials; Investigational drugs

Emory + Children's Clinical and Translational Discovery Core (CTDC)

Mimi Le

Emory University, Emory + Children's Pediatric Research Cores; CTDC website

The Emory + Children's Clinical and Translational Discovery Core (CTDC) offers support to investigators conducting basic science, epidemiologic, translational, and clinical pediatric research to promote childhood health. The use of the core is open to investigators at Emory University, Children’s Healthcare of Atlanta, and collaborators within and outside of Emory University. Our mission is to support and complement the research efforts of qualified investigators by providing laboratory research services and access to our biorepository of healthy biospecimen. The Core is located on the second floor of the Emory Health Sciences Research Building (E264).

The CTDC provides clinical trials support that includes study design, kit building, sample processing, and long term storage. Samples that the CTDC process and store include, but are not limited to PBMCs, serum, plasma, urine, stool, tissue, DNA, saliva, and biopsies. Biologic, genetic, demographic and clinical data are collected in association with healthy human specimens available in our Biorepository. All collected biological specimens are tracked electronically via OpenSpecimen, a Laboratory Information Management System (LIMS). The Biorepository can store samples in 4C, -20C, -80C, and -150C freezers. All storage locations are monitored 24/7 to ensure specimen integrity. The CTDC is also able to ship and receive samples to/from external laboratories.

Location: Emory University, Atlanta, GA – Health Sciences Research Building

Keywords: Biorepository; Biobank; Clinical Trials

Winship Intervention Development, Dissemination, and Implementation (IDDI) Shared Resource

Shaheen Rana*, Cam Escoffery, Alexandra Morshed, Yue Guan, Kristi Logue

Emory University, Winship Shared Resources; IDDI website

The Intervention Development, Dissemination, and Implementation (IDDI) Shared Resource's mission is to provide Winship Cancer Institute members with access to expertise in behavioral and implementation science research methods. Our expertise supports Winship members in developing, testing or disseminating behavioral, educational and systems interventions to prevent cancer, detect cancer early and/or improve survivorship among Georgia residents.

We have a track record of helping researchers refine research questions, identify and develop instruments to answer those questions, and collect and analyze behavioral research data using quantitative, qualitative and mixed methods approaches. IDDI contributes to Winship member research by providing direct services, including study coordination, instrument development, qualitative and quantitative data collection of patient and other stakeholder perspectives, mixed methods and qualitative data analysis and interpretation, study summary reports, manuscript/presentation preparation, and training in qualitative research methods for cancer-related investigation. In the current Cancer Center Support Grant cycle, we have supported 69 projects spanning the cancer spectrum, with 63.8% of our users being junior faculty members. Most of our users are CPC members. These services highlight the teams' strengths in formative and implementation research working with diverse populations, and support Winship's goal of addressing Georgia's cancer disparities in the catchment area.

Location: Emory University, Atlanta GA; Rollins School of Public Health

Keywords: Behavioral Science; Implementation Science

Center for Cancer Research and Therapeutic Development (CCRTD): Community Engagement Core (CEC)

Mustapha Alhassan, Betelihem Beshir, Wegene Bezaye

Clark Atlanta University; CCRTD-CEC website

The Community Engagement Core (CEC) at the Clark Atlanta University Center for Cancer Research and Therapeutic Development (CCRTD) serves as the bridge between the Cancer Center and the communities it serves by fostering trusted, collaborative partnerships that strengthen community-engaged research. Guided by the principle of meeting people where they are, the CEC connects researchers with community voices through sustained engagement in trusted settings.

Core services include partnership development with faith-based organizations, community organizations, healthcare systems, advocacy groups, and media partners; Community Advisory Board engagement; community-based educational seminars; health

fairs and outreach events; focus groups; and dissemination of research through culturally relevant communication platforms, including WCLK 91.9 FM. These services create opportunities for bidirectional dialogue, allowing community perspectives to inform research while translating scientific knowledge into accessible, meaningful information.

By building long-term relationships and creating pathways for collaboration, the CEC supports investigators in engaging diverse populations, strengthening community trust, and advancing the translation of cancer research beyond the laboratory into the communities where people live, work, worship, and receive care.

Location: Clark Atlanta University, Atlanta GA; T Cole Building

Keywords: Community Engagement; Behavioral science; Epidemiology

Emory + Children's Pediatric Research Development Core (PRDC)

Julie Hawk*, Megan Vallowe

Emory University, Emory + Children's Pediatric Research Cores; PRDC website

The Pediatric Research Development Core (PRDC) has three overlapping arms of service for the Department of Pediatrics: Education and Training, Proposal Development, and Technical Editing. These three arms provide a support system to optimize a researcher's career at all career stages. Education and Training forms a key component of the PRDC. Services include early career researcher writing consultations, educational workshops and trainings, and training grant development.

Proposal Development within the PRDC primarily focuses on complex, multi-project funding applications. Services include project management, coordination with Emory offices, and copyediting. Our proposal development arm also maintains Emory/Children's specific boilerplates.

Technical Editing includes general copyediting, proofreading, formatting, and referencing checking for fully drafted grants and manuscripts.

This core is one of a very few of its kind, offering Research Development support in a core format, making visible both the labor and the rigor involved in the Research Development field and providing infrastructure, capacity building, and key supports for all faculty. While we are housed in the Emory Department of Pediatrics, we are not necessarily limited to serving only Pediatrics Faculty.

Location: Emory University; Remote access only

Keywords: Science Communication; Science Writing; Grantsmanship; Faculty Development

Investigational Clinical Microbiology Core (ICMC)

Sarah Satola, Gregory Damhorst, Sarah Lohsen

Emory University, School of Medicine; ICMC website

The ICMC is supported by the Department of Medicine and the Division of Infectious Diseases. Our mission is to do what a highly capable clinical microbiology laboratory can do while pushing the boundaries of state-of-the-art microbial identification and resistance testing to discover the next approaches and methods that will change how we diagnose and treat infectious diseases. Our services include a biorepository of clinical isolates and primary clinical specimens that are relevant to clinical diagnostics and infectious diseases research.

We perform customized testing on clinical isolates and specimens, environmental samples, and microbiome samples. We can do sophisticated susceptibility testing procedures not routinely available in clinical laboratories, studies of synergies between combinations of antibiotics, techniques to identify heteroresistance (looking for subpopulations with resistance), qPCR, and whole genomic sequencing and analysis.

We also excel at assay validation testing for infectious diseases. We can support clinical trials and the logistics of specimen processing, testing, and storage. Our work is performed in a research laboratory space, but we also partner closely with the CLIA-compliant laboratories and can help find solutions to the unique needs of investigators.

Location: Emory University, Atlanta GA; Health Sciences Research Building

Keywords: Microbiology; Biorepository; Clinical Trials

Fermentation and Cell Growth

Bioexpression and Fermentation Facility (BFF)

Jeff Rapp

University of Georgia; BFF website

The Bioexpression and Fermentation Facility (BFF) is a large fermentation pilot plant located in Athens, GA at the University of Georgia. Established in 1967, the BFF is one of the largest facilities of its kind in the Southeast. It consists of four divisions, including the Fermentation Research Facility (FRF), the Protein Purification Facility (PPF), the Cell Culture Facility (CCF), and the Monoclonal Antibody Facility (MAF).

Location: University of Georgia, Athens, GA; 120 E. Green St., Athens, GA

Keywords: Fermentation and cell growth

Flow Cytometry

Georgia Cancer Center: Flow Cytometry Shared Resource

Rebekah Tritz, David Hansen

Augusta University; GCC Flow Cytometry website

The mission of the Georgia Cancer Center's Flow Cytometry Shared Resource is to provide access to state-of-the-art flow cytometers, support equipment, and associated software and services. Our instrumentation affords the ability to perform almost every published flow cytometry protocol.

Flow Cytometry Resource is equipped with nine flow cytometers categorized into two types. The first type are analyzer flow cytometers that are typically operated by investigators themselves. The second type are cell sorter flow cytometers that are provided as a service to investigators.

Location: Augusta University, Augusta, GA

RRID: SCR_025747

Keywords: Flow Cytometry

Emory Flow Cytometry Core and Cell Sorting Facility (EFCC)

Kametha Fife*, Sommer Durham, Deidre Daria

Emory University, Emory Integrated Core Facilities (EICF); EFCC website

The Flow Cytometry Core is dedicated to empowering researchers through high-quality analytical and sorting services, robust technical support, and exceptional customer service. Our mission centers on comprehensive user education, guiding clients through hands-on training sessions that cover the core principles of flow cytometry. Users gain a deep understanding of instrument fluidics, optics, and electronics, alongside practical mastery of basic fluorophore compensation and advanced spectral unmixing techniques. To support independent research, we offer full training on our analytical platforms.

Our facility is equipped with state-of-the-art instrumentation designed to meet diverse high-dimensional flow cytometry needs. Our analytical lineup features the high-parameter BD Symphony A3, the BD Symphony A5 SE, and the full-spectrum Cytek Aurora. For cell isolation, our cell sorting capabilities include the high-speed BD Symphony S6 and the innovative BD Discover S8 cell sorter. Whether you require expert-assisted sorting or certified self-service analysis, our core provides the expertise, tools, and personalized guidance to advance your biomedical research.

Location: Emory University, Atlanta, GA; two locations (HSRBII and Clifton Road)

RRID:SCR_023536

Keywords: Flow cytometry; Cell sorting

Emory + Pediatrics/Winship Flow Cytometry Core

Igor Albizua*, Adrianna Norris, Ashley Jones, Aaron Rae, David Archer

Emory University, Emory + Children's Pediatric Research Cores; Pediatrics/Winship Flow Cytometry website

The Pediatrics/Winship Flow Cytometry Core is located on the 3rd floor of the Health Sciences Building and sites in the Winship Cancer Institute (Clinic B and C). The Core has a full-time Director, 3 FTE providing education, cell sorting, training, theory courses, experimental design, clinical specimen processing, and analysis.

Analysis can be performed on ten analyzers, including a BD FACSymphony A5 [6UV 7V 5B 6GY 3R], an identically configured FACSymphony A3, and a FACSymphony A1 [6V, 2B 5YG 3R]. We also have three five-laser Cytek Auroras [355nm, 405nm, 488nm, 561nm, & 640nm], an Identically configured Aurora Evo, and one four-laser Cytek Aurora. An ImageStreamx MkII cytometer also with 4 lasers (405nm, 488nm, 561nm, & 642nm; 10 fluorescent channels) provides the capability for image cytometry.

High throughput screening and plate-based assays can be performed on the iQue3 platform. Cell sorting can be performed on a five laser Cytek Aurora CS or a BD FACSDiscover S8 imaging cell sorter. A BD Biosciences Rhapsody single cell capture system is available to aid multiomic analyses.

Analysis workstations are available for offline data analysis. We also provide data analysis, Legendplex service, clinical trial support along with an extensive training program.

Location: Emory University, Atlanta, GA; 3 locations (HSRBI and Winship B & C)

RRID: SCR_022324

Keywords: Flow cytometry

Genetics and Genomics

Emory Integrated Genomics Core (EIGC)

Lyra Griffiths, Daria Zugic

Emory University, Emory Integrated Core Facilities (EICF) and Winship Shared Resources; EIGC website

The Emory Integrated Genomics Core's (EIGC) central mission is to help Emory investigators effectively use state-of-the-art genomics platforms in pursuit of their research goals. The EIGC is a full-service genomics core, helping investigators to plan genomics-based projects and utilizing cutting-edge genomics technologies in a research and CLIA setting. Our primary platforms use next-generation sequencing technologies to characterize genomes to use these data as tools of discovery.

Services include whole genome/exome sequencing, RNA-seq and preparation/sequencing of other epigenetic libraries (DNA methylation, ATAC-seq, ChIP-seq), single cell RNA-seq

and ATAC-seq, viral genome sequencing, Nanostring nCounter transcriptome profiling, spatial profiling, genome editing validation, droplet digital PCR, 16S rDNA amplification and sequencing for microbiome studies, and custom cloning.

EIGC also maintains CLIA certification, offering assay validation and nucleic acid extraction services from a wide variety of biological sources, including blood, blood products, cells, tissues, etc., to support both basic research and clinical efforts on campus. We perform STR profiling to confirm the identity of human cell lines, which is critical for scientific rigor and reproducibility.

EIGC works closely with the Emory Integrated Computational Core (EICC) to enhance quality data processing and analysis. EIGC is supported by the Winship Cancer Institute and the School of Medicine.

Location: Emory University, Atlanta, GA; Woodruff Memorial Research Building

RRID: SCR_023529

Keywords: Genetics and genomics; Molecular biology

Emory National Biomedical Research Center (ENBRC) Genomics Core

Michelle Lee, Emma Shippee*

Emory University, Emory National Biomedical Research Center (ENBRC); ENBRC website

The ENBRC Genomics Core provides cutting-edge genomic and bioinformatic services to scientists at the Emory National Biomedical Research Center (ENBRC), as well as to researchers at Emory, and across the U.S. The Core has been in continuous operation since 2012. GenCore activities are currently centered on the use of an Illumina NovaSeq X Plus instrument, and we offer the following services:

- Bulk RNA-Seq
- Immune repertoire sequencing
- Single-cell genomics supported by the Chromium X platform: gene expression, immune profiling, cell surface protein, chromatin accessibility, fixed RNA profiling
- Spatial transcriptomics, supported by the Visium CytAssist platform
- Long read sequencing supported by the PacBio Vega platform
- Bioinformatics support

Location: Emory National Biomedical Research Center, Atlanta GA; Neuroscience Building on Gatewood Road NE

RRID: SCR_026418

Keywords: Biostatistics/Computation; Genetics and genomics

Georgia Institute of Technology Molecular Evolution Core (MECL) Oligonucleotide & Peptide Synthesis Services

Noah Setterholm, Anton Bryksin

Georgia Institute of Technology; MECL website

The Georgia Tech Molecular Evolution Core (MECL) provides custom oligonucleotide and peptide synthesis services to support a broad range of research applications. Whether investigators have a fully developed sequence ready for synthesis or require assistance with molecular design, the Core offers flexible services ranging from routine synthesis to in-depth consultation on chemical modifications, synthesis strategies, and experimental applications.

The Core provides rapid production of standard and chemically modified DNA and RNA oligonucleotides, including custom primers, probes, adapters, and indexing oligonucleotides for a variety of life science applications. We also provide scalable automated solid-phase peptide synthesis using standard and modified amino acids, as well as other commonly requested peptide modifications.

By combining modern automated instrumentation with expertise in synthetic chemistry, the Molecular Evolution Core delivers reliable, high-quality synthesis services tailored to each project's scientific objectives. Our mission is to provide investigators with convenient access to custom oligonucleotide and peptide synthesis while serving as a collaborative resource for experimental planning and molecular design.

Location: Georgia Institute of Technology, Atlanta, GA

Keywords: Genetics and genomics; Peptides

Induced Pluripotent Stem Cells (iPSC)

Emory Stem Cell and Organoids Core (ESCOC)

Anna G Griggs, Elisa Gollatz, Adriana Harbuzariu, Gary J Bassell

Emory University, Emory Integrated Core Facilities (EICF); ESCOC website

The Emory Stem Cell and Organoids Core (ESCOC) is part of Emory Integrated Core Facilities (EICF). We provide an advanced research platform for Emory investigators and for those outside of the university.

Our team specializes in reprogramming somatic cells (fibroblasts, peripheral blood mononuclear cells, urine-derived cells, chondrocytes) via non-integrating methods such as Sendai virus and RNA-LNP to induce pluripotent stem cells (iPSCs). The newly generated iPSC lines are authenticated based on International Society for Stem Cells Research (ISSCR) recommendations for genomic integrity (Karyotyping-G-banding and SNP arrays), expression of markers of undifferentiated state (SSEA4, SOX2, TRA-1-60, Oct-4) and capacity to differentiate to all germ lines (endoderm, mesoderm, and ectoderm).

Moreover, we offer iPSC differentiation to various cell types in 2D cell culture (cardiomyocytes, neural progenitor cells, cortical neurons, microglia, direct differentiation of TF neurons etc.) and organoids (cerebral, choroid plexus, ventral, midbrain, lung) as 3D models of disease. Our services also include gene editing (knock-out, knock-in, gene tagging) in iPSCs allowing the study of disease mechanisms, drug effects, and potential regenerative therapies.

Our core also assists investigators, providing letters of support during grant applications and manuscript preparations. In addition, we provide training to staff, graduate students, postdoctoral researchers, and junior investigators with an interest in human stem cells.

Location: Emory University, Atlanta, GA; Whitehead Biomedical Research Building

RRID:SCR_023264

Keywords: Organoids, Induced Pluripotent Stem Cells, Gene editing

Mass Spectrometry, Immunoassays, and Proteomics

Emory Glycomics and Molecular Interactions Core (EGMIC)

Yi Lasanajak*, Golden Chen

Emory University, Emory Integrated Core Facilities (EICF); EGMIC website

The Emory Glycomics and Molecular Interactions Core (EGMIC) provides cutting-edge mass spectrometry instrumentation, glycan microarrays, and molecular interaction technologies to advance biomedical research. Our advanced liquid chromatography-mass spectrometry (LC-MS) suite features high-performance systems, including the Agilent 6560 Ion Mobility Q-TOF, Agilent 6545XT AdvancedBio Q-TOF, Thermo TSQ Altis QQQ, and Thermo Orbitrap ID-X. To further enhance discovery, EGMIC is currently acquiring the Bruker TimsOmni LC-MS platform, which will significantly elevate MS and MS^n sensitivity.

Beyond mass spectrometry, the core delivers state-of-the-art platforms to analyze glycan functions and biomolecular interactions. Key instrumentation includes the Innopsys InnoScan microarray slide scanner for high-density glycan microarray interaction profiling and the Malvern Panalytical MicroCal AutoITC200 for direct, label-free thermodynamic and binding affinity measurements. Additionally, the recently acquired Cytiva Biacore 1K system utilizes a six-flow-cell microfluidic array for automated, high-throughput surface plasmon resonance (SPR) profiling, delivering real-time kinetic evaluations. EGMIC also provides specialized services for N- and O-glycan mass profiling and custom shotgun glycan microarray development.

The core operates in a flexible, user-centric service model, offering both autonomous user training for trainees and fellows, as well as full-service sample analysis by expert staff. We support investigators through comprehensive experimental consultations, technical training, and hands-on operational assistance across all platforms.

Location: Emory University, Atlanta, GA – Whitehead Biomedical Research Building

RRID: SCR_023524

Keywords: Glycomics, liquid chromatography-mass spectrometry (LC-MS), SPR

Emory Integrated Proteomics Core (EIPC)

Duc Duong

Emory University, Emory Integrated Core Facilities (EICF); EIPC website

The Emory Integrated Proteomics Core (EIPC) provides comprehensive protein analytical services using state-of-the-art mass spectrometry (MS) technologies to support a wide range of proteomics research applications. Core services include protein identification from in-gel and in-solution digests, interactome analysis using on-bead digestion, characterization of post-translational modifications (PTMs), and quantitative proteomics through tandem mass tag (TMT)-based isobaric labeling and label-free approaches. Bioinformatic analysis support is also available to facilitate data interpretation and biological insight.

The EIPC proteomics platform is based on high-resolution liquid chromatography-tandem mass spectrometry (LC-MS/MS), enabling sensitive and high-throughput analysis of peptide mixtures derived from individual proteins as well as complex proteomes from cells, tissues, and biofluids. This approach supports comprehensive identification, characterization, and quantification of proteins across diverse biological samples. The facility is equipped with cutting-edge instrumentation, including the Thermo Scientific Q Exactive HF-X and Orbitrap Fusion mass spectrometers, providing robust analytical capabilities for various proteomics applications.

Location: Emory University, Atlanta, GA; Whitehead Biomedical Research Building

RRID: SCR_023530

Keywords: Omics (e.g., glycomics, lipidomics, metabolomics, proteomics)

Emory Multiplexed Immunoassay Core (EMIC)

Jianjun Chang, Sandra Garraway

Emory University, Emory Integrated Core Facilities (EICF); EMIC website

The Emory Multiplexed Immunoassay Core (EMIC), part of the Emory Integrated Core Facilities (EICF), is supported by the Georgia Clinical & Translational Science Alliance (CTSA) and the Emory University School of Medicine. The core's mission is to help investigators use the latest multiplexed immunoassays in their research.

Equipped with a Meso Scale Discovery (MSD) QuickPlex SQ 120, the core provides high-sensitivity, wide-dynamic-range, multiplex immunoassays using minimal sample volume. Our MSD assay services offer a rapid, efficient and accurate way for measuring target molecules within complex biological matrices, such as plasma, cerebrospinal fluid (CSF), and tissue lysates. This platform supports a wide array of research areas, including immunology, neurobiology, oncology, toxicology, and metabolism. To maximize processing

efficiency, MSD assays can be run in single-plex or multi-plex formats using 96-well microtiter plates.

Location: Emory University, Atlanta, GA; Whitehead Biomedical Research Building

RRID: SCR_023528

Keywords: Immunoassays; Molecular biology

Emory National Biomedical Research Center (ENBRC) Biomarkers Core Laboratory

Kelly Ethun, Lori Fralick, Xing Zhang

Emory University, Emory National Biomedical Research Center (ENBRC); ENBRC Biomarkers Core website

The Biomarkers Core Laboratory at the Emory National Biomedical Research Center (ENBRC) provides investigators with specialized hormone assay services and scientific expertise to support high-quality basic, preclinical, and translational research. The Core performs quantitative analysis of nonhuman primate, rodent, and human biological samples for steroid hormones, peptide hormones, protein biomarkers, and other small molecules relevant to neuroendocrinology, psychoneuroimmunology, reproductive biology, and cardiometabolic health.

Core analytical platforms include highly sensitive immunoassays and liquid chromatography–tandem mass spectrometry (LC-MS/MS). In addition to offering established assays, the Core develops, validates, and optimizes new analytical methods tailored to investigators' research needs. Recent additions include an LC-MS/MS assay for the quantification of trace levels of oxytocin and arginine vasopressin in cerebrospinal fluid, plasma, and urine, and an LC-MS/MS estrogen panel for the simultaneous measurement of estradiol, estrone, and estriol in human and nonhuman primate plasma.

These expanding analytical capabilities provide investigators with access to state-of-the-art biomarker measurements that support innovative research across the Emory research community and beyond.
Location: Emory National Biomedical Research Center, Atlanta GA; Gatewood Road NE

Keywords: Analytical Chemistry (e.g., HPLC, mass spectrometry); Immunoassays

Proteomics and Mass Spectrometry Core Facility (unable to attend)

Wenbo Zhi

Augusta University; Proteomics and Mass Spectrometry website

The Proteomics Core is a shared resource facility that provides cutting-edge mass spectrometry, chromatography, and high-throughput immunoassay technologies to the entire Augusta University research community and external investigators.

Mission: To make advanced proteomic and metabolomic tools widely accessible and to foster a multidisciplinary research and educational environment that applies these technologies to complex biological and medical questions.

Services:

- Protein identification and label-free or labeled (TMT/SILAC) comparative proteomics
- PTM characterization (phosphorylation, acetylation, glycosylation, etc.)
- Targeted peptide/metabolite quantification (PRM, SRM/MRM)
- Untargeted and targeted metabolomics (LC-MS)

Instrumentation: Thermo Scientific Orbitrap Ascend Tribrid mass spectrometer coupled to Vanquish Neo UHPLC; TSQ Quantiva and Agilent 6470B triple-quadrupole systems; MassTech AP/MALDI (ng) UHR and Nexera UHPLC

The Core is jointly operated by the Center for Biotechnology and Genomic Medicine and the Georgia Cancer Center.

Location: 1410 Laney-Walker Blvd, CN4162, Augusta, GA 30912

RRID: SCR_027673

Keywords: Mass Spectrometry, HPLC, Proteomics, Metabolomics, AP/MALDI

Systems Mass Spectrometry Proteomics Core (SysMS-P)

Ludyanna Lebon*, Rakesh Singh

Georgia Institute of Technology; SySMS-P website

The Georgia Tech Systems Mass Spectrometry Proteomics Core (SysMS-P) provides comprehensive LC-MS/MS proteomics services, including protein identification and quantitation, post-translational modification characterization, intact mass analysis, and phosphoproteomics. These diverse services require samples to move through multiple stages of preparation, acquisition, analysis, and data delivery, creating a need for efficient sample tracking and transparent communication between core personnel and users.

The SysMS-P facility presents a modular, R-based platform designed to improve sample tracking and workflow transparency without altering existing institutional submission procedures. Sample submissions through the Georgia Tech Shared User Management System (SUMS) are programmatically processed to extract standardized metadata,

generate unique sample identifiers, and create records within a centralized database. Samples are tracked across key workflow stages from receipt and preparation through data acquisition, analysis, and delivery.

The platform integrates R Shiny and Quarto to provide interactive staff-facing and user-facing dashboards, deployed through shinyapps.io, enabling workflow monitoring, queue visibility, and turnaround metrics. By combining existing institutional infrastructure with open-source tools, this framework reduces manual tracking and communication while improving organization, transparency, and scalability within proteomics core operations.

Location: Georgia Institute of Technology, Atlanta, GA – Krone Engineering Biosystem Building (EBB)

Keywords: Analytical Chemistry (e.g., HPLC, mass spectrometry, NMR, X-ray diffraction), Omics (e.g., glycomics, lipidomics, metabolomics, proteomics), Protein Identification, PTM, Peptides, Workflow Organization, LC-MS/MS, ESI-MS

Materials Characterization and New Approach Methodologies (NAMS)

Chemical and Biomolecular Analysis Facility (CBAF)

Siva S. Panda, Ashish Sarker, Angela C. Spencer

Augusta University**;** CBAF website

The Chemical and Biomolecular Analysis Facility (CBAF) at Augusta University is a multidisciplinary research core that provides analytical expertise, collaborative support, and advanced characterization capabilities to investigators across academia, healthcare, government, and industry. CBAF enables high-quality research across the chemical, pharmaceutical, biomedical, and life sciences through comprehensive analytical solutions that support molecular discovery, characterization, and translation. The facility specializes in analyzing small molecules and biomolecules, with particular strengths in medicinal chemistry, metabolomics, lipidomics, and biomarker-focused research.

CBAF supports a broad range of applications, including molecular structure determination, reaction monitoring, chemical purity assessment, protein stability studies, quantitative and qualitative metabolite analysis, trace-element determination, and tissue-based small-molecule investigations. Beyond analytical services, the facility provides consultation on experimental design, method development, data interpretation, and project planning to maximize scientific rigor and research impact.

A distinguishing feature of CBAF is its flexible service model, which combines fee-for-service analysis, collaborative research support, and investigator training. Researchers may access services through staff-assisted analyses or obtain instrument-specific training to operate independently. By integrating analytical technologies with scientific expertise and user education, CBAF serves as a catalyst for innovation, interdisciplinary collaboration, workforce development, and translational discovery across Augusta University and the broader research community.

Location: Augusta University, Augusta, GA; Department of Chemistry and Biochemistry

RRID: SCR_026668

Keywords: Analytical Chemistry; Mass Spectrometry; NMR; Molecular Characterization; Medicinal Chemistry; Drug Discovery; Metabolomics; Lipidomics; Biomarker Analysis

Emory Innovation Center, Biofabrication Innovation Core (ICBF)

Martin Tomov*, David Myers

Emory University, Emory Innovation Center; ICBF website

Emory's Innovation Center is a launchpad for biomedical breakthroughs. 3D printing allows researchers to produce custom anatomical models and medical prototypes in-house. Researchers use these to plan procedures, teach anatomy and test new devices without relying on expensive vendors or long production timelines. 3D bioprinting adds another layer of possibility, enabling the fabrication of tissue-like structures that mimic biological function. Micromachining allows scientists to create ultra-precise features within small models of human-like tissue. These models, known as new approach methodologies (NAMs) scaffolds and organoids, are designed to mimic complex body parts, such as the brain, blood vessels and other organs.

Our services include rapid prototyping, 3D printing, and bioprinting support for biomedical research, anatomical models, medical device prototypes, and custom research tools. Microfluidics, organ-on-chip systems, soft lithography, and microfabrication support for advanced biomedical research and device development.

Location: Emory University, Atlanta, GA; Health Sciences Research Building

Keywords: Organoids; Additive Manufacturing; 3D Printing; Bioprinting; NAMs (new approach methodologies)

Georgia Institute of Technology, Institute for Matter and Systems (IMS) Core Facilities

Billyde Brown

Georgia Institute of Technology; IMS Core website

The Georgia Tech Institute for Matter and Systems advances research from atoms to systems, translating discoveries into sustainable, scalable technologies through collaboration and world-class facilities. This poster will give an overview of the Institute for Matter and Systems (IMS) core facilities and how to access them. It will list IMS state-of-the-art nanofabrication and materials characterization capabilities for activities from basic discovery to prototype realization. Our core facilities are a part of the NSF-funded National Nanotechnology Coordinated Infrastructure (NNCI) and consist of over 23,000 square feet of ISO 5 and ISO 6 cleanroom space, 1000+ users annually, 24/7 user access, and 275+ toolsets that are open to all users, including Georgia Tech faculty/staff and students,

researchers from other universities, government labs, and companies of all sizes. The poster will also highlight ways to engage with IMS in addition to becoming a new external user of shared facilities, such as collaborations with Georgia Tech faculty leading IMS Centers, Programs, and Initiatives or participating in our hands-on short courses.

Location: Georgia Institute of Technology, Atlanta, GA; Marcus Nanotechnology Building

RRID: SCR_011225

Keywords: Mass Spectrometry, X-ray diffraction, X-ray Photoelectron Spectroscopy, Electron Microscopy, Nanotechnology, Nanofabrication, Biocleanroom, Materials Characterization

Microscopy

Emory Integrated Cellular Imaging Core (ICI)

Laura Fox-Goharioon*

Emory University, Emory Integrated Core Facilities (EICF) and Winship Shared Resources; ICI website

The Integrated Cellular Imaging (ICI) core provides state-of-the-art light microscopy and image analysis technology. We offer confocal and live cell imaging, multi-photon animal and tissue imaging, widefield with deconvolution, super resolution, and image analysis. To effectively implement these technologies, we provide consultations, expert training, and support for all our systems.

Location: Emory University, Atlanta, GA; 5 locations across campus (HSRB, Winship C, Clinic B, Whitehead Biomedical Research Building)

RRID:SCR_023534

Keywords: Microscopy; Image Analysis; AI and machine learning

Georgia Electron Microscopy (GEM)

Eric Formo

University of Georgia; GEM website

Georgia Electron Microscopy (GEM) provides the University System of Georgia and the scientific community-at-large with expertise in the use and application of electron, x-ray and optical microscopy methods to a wide variety of problems. The facility also provides training, consultation, workshops and STEM outreach.

Location: University of Georgia, Athens, GA; Interdisciplinary STEM Research Building 1

Keywords: Microscopy, Systems imaging (e.g., MRI, PET)

Imaging Core Facility (GSU)

Kuangcai Chen, Hanh Vu

Georgia State University; Imaging Core Facility website

Imaging Core Facility – Where Science is Visualized

The Imaging Core Facility, located in the Petit Science Center building within Georgia State University's downtown Atlanta campus, offers a range of sophisticated light and electron microscopy imaging-based analytical tools to support advanced research undertaken by Georgia State and its affiliated researchers. Our suite of technologies includes state-of-the-art laser scanning confocal microscopy, widefield microscopy, electron microscopy, and more. It is one of several shared core facilities in the College of Arts and Sciences that support cutting-edge research across the university, including investigations in biology, biomedical sciences, chemistry, geosciences, neurosciences, physics, and other disciplines. It currently houses four Zeiss laser scanning confocal microscopes (LSM510, LSM 700, LSM 780 , an NIH S10 funded LSM980 with Airyscan 2 system), and an DoD funded Andor BC43 Spinning Disk Confocal Microscope (W911NF261A131, PIs: Drs. Debra Bangasser and Kyle Frantz), one Scanning Electron Microscope (TESCAN Vega 3) with microanalysis (EDAX), widefield microscopes, stereo microscopes, and ancillary equipment (e.g., ultramicrotome, freeze fracture system, freeze dryer, critical point dryer) and a list of other shared laboratory equipment for sample preparations. Each major instrument is housed in a separate room with temperature and humidity controls to meet the installation requirements of each specific instrument.

Location: Georgia State University, Atlanta, GA; Petit Science Center building

RRID: SCR_023476

Keywords: Light and Electron Microscopy Imaging

Robert P. Apkarian Integrated Electron Microscopy Core (IEMC)

Ricardo Guerrero-Ferreira*

Emory University, Emory Integrated Core Facilities (EICF); IEMC website

The Robert P. Apkarian Integrated Electron Microscopy Core (IEMC) at Emory University serves as a premier facility offering cutting-edge electron microscopy (EM) instrumentation, expertise, and training. Catering to academic researchers and industrial clients alike, the IEMC delivers high-quality imaging and analysis to support a wide range of research endeavors, from small-scale studies to large, collaborative projects. Investigators are welcome to utilize the facility's services and resources through the shared instrumentation system in Georgia, in the form of the Georgia Core Facilities Partnership (GCFP).

One of our goals as a shared facility is to integrate the electron microscopy user community, combine EM needs, and allow investigators to share ideas, expertise, and cutting-edge instrumentation. The IEMC provides services in all aspects of transmission

and scanning electron microscopy (TEM and SEM) including room temperature and cryo preparation of cells and tissues. Our services include room temperature and cryogenic TEM and SEM, focused ion beam-SEM, preparation of biological samples and materials science specimens, energy-dispersive spectroscopy for elemental analysis, room temperature and cryogenic ultramicrotomy, high-pressure freezing and self-pressurized rapid freezing, cryo/freeze-substitution, ultrathin metal film coating, and immunocytochemistry. Our mission is to assist researchers in leveraging cutting-edge structural research technologies for their projects.

Location: Emory University, Atlanta, GA; Two locations: Cherry Emerson Hall and Biochemistry Connector

RRID: SCR_023537

Keywords: Microscopy, Analytical Chemistry (e.g., HPLC, mass spectrometry, NMR, X-ray diffraction), Immunoassays

Systems Imaging

Advanced Translational Imaging Facility (ATIF)

Dr. Khan Hekmatyar

Georgia State University; ATIF website

The Advanced Translational Imaging Facility (ATIF) at Georgia State University (GSU) is focused on the study of small animal imaging and spectroscopy through the use of a high resolution 7T Bruker 70/20 Biospec 20 cm MRI machine. This state of art core facility is supported by a grant from the National Institute of Health (NIH) with matching funding from GSU. ATIF is located in the Petit Science Center on the GSU main campus (Atlanta, GA).

The ATIF is an MRI and MRS resource for GSU researchers and their collaborators. As part of the GRA Core Exchange, researchers from other institutions across Georgia can house animals at our facility and receive imaging services until the scan is complete. The ATIF provides free training to students, faculty, and staff who prefer to collect the data themselves. Image processing services and data interpretations are also available. We provide Seed grants (up to 6 hrs of magnet time) for the GRA facility users for pilot data acquisition and help in animal user protocol (AUP) assistance for live animal imaging studies.

Location: Georgia State University, Atlanta GA; Petit Science Center

Keywords: AI and machine learning; Animal resources and animal research; Behavioral science; Biostatistics/Computation; Omics (e.g., glycomics, lipidomics, metabolomics, proteomics); Systems imaging (e.g., MRI, MRS, PET)

Center for Systems Imaging Core (CSIC)

Joy Staulcup*, John Oshinski

Emory University, Emory Integrated Core Facilities (EICF); CSIC website

The Center for Systems Imaging Core (CSIC) is an Emory Integrated Core Facilities (EICF) core lab dedicated to providing state-of-the art human and pre-clinical imaging, as well as radiopharmaceutical development to the Emory community. CSIC is the cross-disciplinary scientific, administrative, and educational home for imaging sciences at Emory University. The goals of this center are to: (1) support the advancement of scientific research focused on the development of imaging biomarkers, (2) promote the development and application of biomedical imaging technology particularly magnetic resonance imaging, (3) provide core services for human and animal imaging studies, and (4) to build cross-cutting educational and training programs.

CSIC human imaging service line equipment includes (3) 3.0 T Siemens PrismaFit MRI systems, a Siemens 7.0 Terra MRI system, a Siemens PET/CT Biograph Vision 600 system, and a General Electric 3 Tesla PET/MR system. Pre-clinical imaging service line equipment includes both 9.4T and 11.7T Bruker small animal MRI systems and a Molecubes B-X Cube micro-PET/CT system. Radiopharmacy service line equipment includes a General Electric PETrace 880 Cyclotron and transfer of radioisotopes from the cyclotron to the Radiopharmacy and Radiochemistry Labs is via a Von Gahlen Hot Cells Active Distribution System.

Location: Emory University, Atlanta, GA; several locations across campus

RRID: SCR_023522

*Keywords**:** Systems imaging (e.g., MRI, PET)*

Emory National Biomedical Research Center (ENBRC) Imaging Center

Chunxia Li, Ruth Connelly, Racquel Sampson, Hahnsung Kim, Phillip Zhe Sun

Emory University, Emory National Biomedical Research Center (ENBRC); ENBRC Imaging Center website

The ENBRC Imaging Center, part of the Emory National Biomedical Research Center (ENBRC) at Emory University, advances preclinical and translational research through specialized multimodal imaging infrastructure and collaborative expertise.

Mission: To partner with principal investigators by delivering comprehensive multimodal imaging services and collaborative research support, driving innovation in preclinical and translational science through state-of-the-art in vivo and ex vivo methodologies.

The facility has advanced clinical-grade and high-resolution hardware, including:

- Siemens 3T/90 cm clinical MRI scanner
- Multi-scan LFER 150 PET/CT scanner

- C-arm fluoroscopy system
- Physiological monitoring and recording systems
- Six-node computing cluster dedicated to advanced image processing and analysis

Supported by an expert team of physicists, imaging scientists, veterinarians, technicians, and radiochemists, the center provides end-to-end research support through fully integrated radiochemistry, histology, animal preparation, and in-house veterinary housing facilities. Core imaging capabilities feature extensive multiparametric MRI and MRS data acquisition and data analysis, alongside PET radiotracer development and PET/CT imaging, Specialized MRI modalities include structural, diffusion, perfusion, magnetic resonance spectroscopy (MRS), and both task-based and resting-state fMRI in anesthetized or awake monkeys. It also offers diffusion kurtosis imaging (DKI) and Chemical Exchange Saturation Transfer (CEST) imaging.

Location: Emory National Biomedical Research Center, Atlanta GA; Gatewood Road NE

Keywords: Animal resources and animal research; Systems imaging (e.g., MRI, PET)

Microcomputed Tomography (MicroCT) and Biomechanics Cores

Laxminarayanan Krishnan

Georgia Institute of Technology, Institute for Bioengineering and Bioscience (IBB)**;** MicroCT website and Biomechanics Core website

The Microcomputer Tomography (MicroCT) Core provides high-resolution, nondestructive imaging for musculoskeletal tissues, biomaterials, and more. Equipped with four MicroCT systems and two pre-clinical scanners, it supports 3D visualization, morphometric analysis, and density measurements. Applications include bone regeneration, fracture healing, vascular remodeling, and cartilage assessment using contrast agents.
The Biomechanics Core provides tension, compression, torsion, and rheological testing for specimens from soft hydrogels to metal implants. Services include high-force testing with MTS MiniBionix and TA 3200 platforms, low-force testing down to 1N with TA 3100, and advanced rheology up to 200 °C using Anton Paar MCR302e for fluids, gels, thin films, and small specimens.

Location: Georgia Institute of Technology, Atlanta, GA; IBB (Petit Biotechnology Building)

Keywords: Animal Research; Systems imaging (e.g., MRI, PET)

Awards Ceremony

ICI Imaging Contest

Each Core Day, the Emory Integrated Cellular Imaging Core (ICI) showcases their users' most stunning microscopy images. Images will be displayed during Core Day, and all attendees are invited to vote for their favorite image. Winners in the 1st, 2nd, and 3rd places, along with the top video entry, will earn exciting prizes—and, of course, ultimate bragging rights.

Presented by: Laura Fox-Goharioon and April Reedy

EICF Core Awards

Each year, the EICF leadership team selects one Scientific Director, one Core or Technical Director, and one Staff member to recognize their exceptional contributions to EICF. These awards will be presented live during Core Day. Additionally, each EICF Core and Innovation Center may nominate one staff member to receive a certificate of commendation – these individuals will be asked to stand as a group for recognition.

Presented by: Dr. Sandra Wong, Dean, Emory School of Medicine (approx. 3:35pm)

Scientific Director of the Year: This individual represents excellent leadership qualities in line with the mission and vision of the EICF.

Core or Technical Director of the Year: This individual made significant contributions toward leading their core team and expanded the research capabilities of the EICF cores.

Staff member of the Year: This individual significantly impacted research, teamwork, reliability, work attitude, innovation, and the mission of Emory.

Staff recognition certificates: Each EICF core and Innovation Center had an opportunity to nominate one individual from their facility to receive recognition for an outstanding contribution during the past year. Recognition categories included greatest scientific contribution, development of a new service, and most team-oriented.

Emory + Children's Core Awards

The pediatric cores are accessible to all researchers, with specialized expertise and priority support for child health research. Cores will be recognized for their outstanding contributions to advancing research and improving child health outcomes.

Presented by: Dr. Stacy Heilman, Vice Chair for Research Operations, Department of Pediatrics, Emory School of Medicine (approx. 3:45pm)

Winship Shared Resource Awards

Each year, the Winship leadership team selects one Scientific Director, one Technical Director, and one Staff member to recognize for their exceptional contributions to the Winship Shared Resources (SR). These awards will be presented live during Core Day. Additionally, each Shared Resource may nominate one staff member to receive a certificate of commendation – these individuals will be asked to stand as a group for recognition.

- Scientific Director of the Year: This individual represents excellent leadership qualities in line with the mission and vision of the Winship SRs.
- Technical Director of the Year: This individual made significant contributions toward leading their facility team and expanded the research capabilities of the Winship SRs.
- Staff member of the Year: This individual has significantly impacted research, teamwork, reliability, work attitude, innovation, and the mission of Emory.
- Staff recognition certificates: Each Winship SR could nominate one individual to receive recognition for an outstanding contribution during the past year**.** Recognition categories included greatest scientific contribution, development of a new service, and most team-oriented**.**

Presented by: Dr. Gregory Lesinski, John Kauffman Family Professor for Pancreatic Cancer Research and Professor and Vice Chair for Basic Research Department of Hematology & Medical Oncology, Emory School of Medicine; Associate Director for Basic Research and Shared Resources, Winship Cancer Institute (approx. 3:55pm)

Emory National Biomedical Research Center (ENBRC) – Division of Pathology - Core Awards

The Emory National Biomedical Center (ENBRC) Division of Pathology recognizes team members whose exceptional work strengthens the research support group and advances investigators' research. Presented annually, the awards celebrate outstanding contributions across anatomic pathology and necropsy, histopathology, clinical pathology, and molecular pathology. Through this recognition, ENBRC honors the expertise, dedication, and collaborative spirit that help make high-quality biomedical research possible.

Presented by: Dr. Ian Moore, Director, Division of Pathology Emory National Biomedical Research Center (approx. 4:05 pm)

Door Prizes

There are two ways to win Door Prizes at Core Day 2026! All attendees may participate, only one prize per attendee, and you must be present to win.

How to win a Door Prize:

1) Correctly answer a live trivia question during the presentation sessions (4 trivia questions)
2) Complete a Door Prize card by visiting at least six Core Day sponsors (Room 204) and six poster presenters (Room 210) to enter the random drawing (11 cards drawn)

If you are selected as a winner, you will receive a "Door Prize winner!" ticket and can choose your prize at the Registration Table.

More information about Door Prize cards:

- Door Prize cards will be available at the Registration Table in the lobby throughout Core Day
- Return your completed Door Prize card to the Registration Table by 3:10pm to be entered in the drawing (at least 6 sponsor stamps and 6 poster signatures)
- Around 3:15pm, 11 Door Prize cards will be randomly selected from all submissions in the Presentation room (Room 208)

Appendices

Appendix 1: Convocation Hall and Core Day layout

