



DREXEL UNIVERSITY  
Office of  
Research &  
Innovation

# ANNUAL REPORT

Academic Year '24-'25

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# MESSAGE FROM THE EXECUTIVE VICE PROVOST FOR RESEARCH & INNOVATION

The Office of Research and Innovation continues to advance Drexel University's mission of research, scholarship, and creative activities and the societal impact that they generate. This past year brought significant challenges, including disruptions stemming from changes in federal support for research. Despite these uncertainties, our faculty, students, and partners demonstrated remarkable adaptability and commitment, enabling us to keep pace with prior years' outcomes and maintain momentum across our research enterprise.



Importantly, these changes have also opened new opportunities—prompting us to explore alternative funding sources, strengthen industry partnerships, and accelerate innovation in emerging fields. This report highlights achievements that reflect both resilience and forward-thinking—from groundbreaking research initiatives and interdisciplinary collaborations to sustained levels of sponsored funding and innovation.

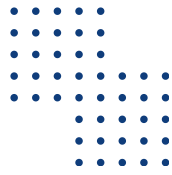
As we look ahead, we remain committed to supporting research excellence, expanding opportunities for collaboration, and ensuring that Drexel continues to lead in addressing the most pressing challenges of our time.

A stylized, handwritten signature in black ink that reads "Aleister J. Saunders".

Aleister J. Saunders  
Executive Vice Provost for Research & Innovation



# MILESTONES



1,031  
Proposals

56  
Invention  
Disclosures

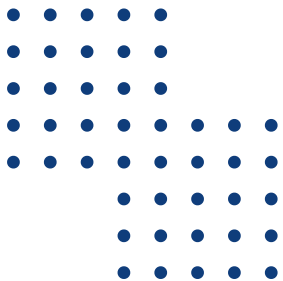
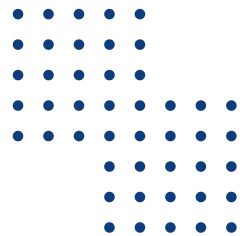
25  
US Patents  
Issued

694  
Awards

14  
License  
Agreements  
Signed

\$170.2M  
Research  
Expenditures

\$384k  
Licensing  
Revenue





# APPLIED INNOVATION

The Applied Innovation unit within ORI provides technology transfer services to expand the impact of Drexel research. FY25 was a year of refocus and renewed partnerships around three key pillars of academic tech transfer. The team focused most of their efforts on Intellectual Property & Agreements and Industry Engagement while pivoting in Entrepreneurial Advancement support toward enhanced partnerships with the Drexel community and local innovation ecosystem.

Despite some challenges this past year with staff reduction and turnover, the Applied Innovation team continued to deliver a high level of service and performance, including the execution of 14 new licenses, 25 issued US patents, support for 56 invention disclosures, and a sixth investment to date in a Drexel-affiliated startup through the Drexel University Innovation Fund.

Protecting Drexel discoveries and developing agreements that support confidentiality, material transfer, licensing, and industry sponsored research is a central focus of the group's work. Intellectual property (IP) protection can be a key part of translating academic innovations into commercial products and services when balanced with the upside potential to the institution to recover those IP investments. The goal is not simply the pursuit or attainment of patents, but timely and appropriate support for promising innovations that have the potential for commercialization and impact. In FY25, the team worked closely with many faculty and students at different phases of their Drexel journey, from different disciplines and across academic units, in protecting their ideas and supporting their engagements with a variety of partner institutions, entrepreneurs, and companies.

The Industry Engagement team continued to promote Drexel research and technologies last year, connecting Drexel faculty to small and large companies as well as to innovation-focused funding platforms. They facilitated the research components of several campus and company visits with industry partners to strengthen their relationships with Drexel and to identify potential opportunities for sponsored research or other enhanced collaboration. They also supported the IP team with the marketing of selected Drexel inventions and IP assets for commercial interest and feedback, and plan to do more of that in the coming year.



Supporting Entrepreneurial Advancement, Drexel Applied Innovation coordinated and managed the third cohort of the Drexel University Innovation Fund (DUIF) this past year. The Fund invests \$150,000 in early-stage student, alumni, and tech transfer startups coming out of Drexel. The team continued to work closely with the Close School for Entrepreneurship and an outside Investment Advisory Committee. Last January, [Drexel announced a single investment in Ultrafix, an orthopedic medical device startup](#). The Fund portfolio now includes a total of six companies, including four startups that grew out of research innovations discovered in Drexel labs.

The Applied Innovation team also continued to work closely with the Coulter-Drexel Translational Research Program, supporting IP development and industry feedback on Coulter-funded projects which have the potential to improve patient care.

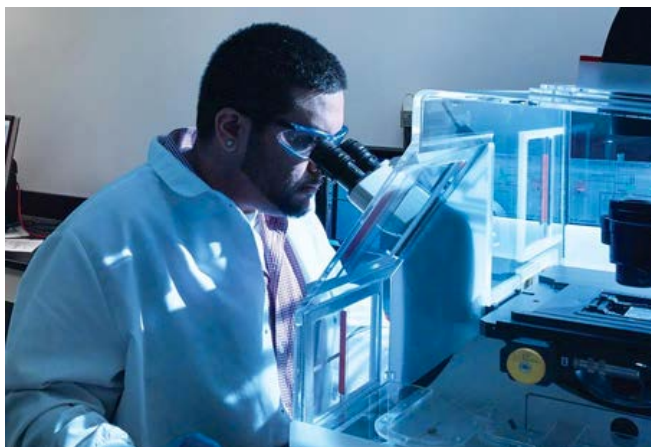
To assist Drexel faculty and graduate students considering new ventures with the customer discovery process, the team also continued to support Drexel's participation in the regional NSF I-Corps Hub. In FY25, they were pleased to collaborate once again with Dr. Caroline Schauer in this important work, and transitioned Drexel's role in the Hub to her leadership with support from the Coulter-Drexel program team.

In FY26, Applied Innovation remains focused on protecting and promoting Drexel research and technologies through Intellectual Property & Agreements and Industry Engagement efforts. The office is revisiting and redefining core processes to (i) better support University Academic Transformation and financial resilience efforts, (ii) engage and serve inventors currently at Drexel, (iii) meet Federal compliance requirements, and (iv) focus limited budget and staff resources on meeting our mission of driving impact.

In this renewed focus, we will pursue or maintain appropriate levels of intellectual property protection for selected Drexel innovations and market those technologies. Our goal is not simply to secure and maintain patents, but to increase the impact of Drexel innovations through licensing. Therefore, we are assessing the age, stage, and commercial relevance of Drexel IP to support and market those assets with real potential for translation, commercialization, and future revenue. We are also reviewing licensing practices and relationships to recover patent costs and generate revenue. Our team is guided in this work by standard practices in university tech transfer and AI-driven tools for technology and market assessment, promotion, and industry engagement. We look forward to continuing to work with Drexel researchers, the innovation community, and external stakeholders in these efforts.

# CORE FACILITIES

**Research Core Facilities** at Drexel University promote discovery, creativity, and impact by providing access to advanced instrumentation and services, expertise on experimental design and data analysis, and technical training to Drexel students, researchers, faculty, and external academic and industry partners. The **Materials Characterization Core, Cell Imaging Center, and University Research Computing Facility** host some of the most cutting-edge instrumental and technical capabilities on campus and are hubs of high-impact research, innovation, collaboration, and learning. This year these centrally-reporting core facilities served over 100 Drexel faculty and hundreds of researchers including undergraduate and graduate students, post-doctoral students, and research scientists from eight of Drexel's Colleges and Schools. **Researchers using the ORI Cores authored over 325 peer-reviewed publications this year - over 12% of Drexel's total research output. Research expenditures for those same investigators topped \$32M - over 19% of Drexel's total research expenditures in FY2024.**



## University Research Computing Facility (URCF)

The URCF provides high-performance scientific computing and secure data storage to the Drexel community and other universities in the Philadelphia area. The URCF's data center houses the Picotte cluster, which comprises over 4,000 CPU cores, 20TB of RAM, 500TB of data storage, and dozens of Nvidia GPUs with over a terabyte of total GPU memory. Picotte was acquired through a combined \$1.2 million investment funded by Drexel and an award from the NSF's Major Research Instrumentation program. Limited Picotte access is available to all Drexel researchers for free, with expanded priority access available at cost.

*In AY 2024-2025, over 100 researchers from 50 groups ran jobs totaling more than 10 million CPU hours on Picotte.*

Additional highlights include:

- In January 2025, James Porter joined the URCF as a Research Computing Specialist. James brings a wealth of experience in research computing and technical education, and has already dramatically improved the Picotte user experience.
- In spring 2025, James initiated a well-received series of introductory workshops on research computing skills including Python programming, Linux and HPC skills. More than 60 people from almost every academic unit attended.
- In fall 2025, Picotte continued to support education at Drexel in addition to research, supported dozens of students in classes from engineering to genomics to physics, as well as undergraduate thesis work.
- The URCF is actively working with several Drexel researchers to build a new shared computing cluster with a focus on GPU compute for AI model training and inference, funded by a \$3.9M Major Research Instrumentation award from the NSF. This system is in its early stages but has already supported the work of over 20 Drexel researchers, resulting in 18 publications and presentations on topics including forgery detection, civil infrastructure monitoring, autonomous vehicles, and gene function prediction.

Please [email James Porter](#) for more information about the URCF.

### **Materials Characterization Core (MCC)**

The MCC is a multi-user facility that provides technical expertise and instrumentation for research in variety of areas including nanoscience and engineering, polymer research, biomedical engineering, and chemistry and physics of solid materials. The MCC occupies a 3,500 square foot laboratory in the Bossone Research Enterprise Building on Drexel's main campus that houses several electron microscopes, X-ray diffractometers, an X-ray photoelectron spectrometer, and a suite of sample preparation tools.

*In AY 2024-2025, 149 MCC users clocked 10,406 instrument hours. Users represented 62 faculty research groups from 4 Drexel Colleges and Schools and several external institutions and companies.*

Additional Highlights include:

- In partnership with Thermo Fisher Scientific, the MCC hosted an Advanced Scanning Electron Microscopy workshop with presentations from Thermo Fisher applications scientists and in-lab demos on our Apreo SEM.
- Drexel Materials Characterization Day was held in partnership with the Materials Science and Engineering department and sponsored by Thermo Fisher Scientific. The event showcased research by Drexel faculty and graduate students, presentations by Thermo Fisher applications scientists and a microscopy art competition and student poster competition.
- MCC staff and users collaborated to provide demos for over 80 incoming freshmen participating in the MSE 2-Day Materials Course.



- The MCC was a feature of a MSE recruiting event that included microscope demonstrations for over 60 high school students.
- MCC provided demos for high school students participating in the Materials Camp hosted by Drexel's Materials Science and Engineering Department in conjunction with the local chapter of ASM International.

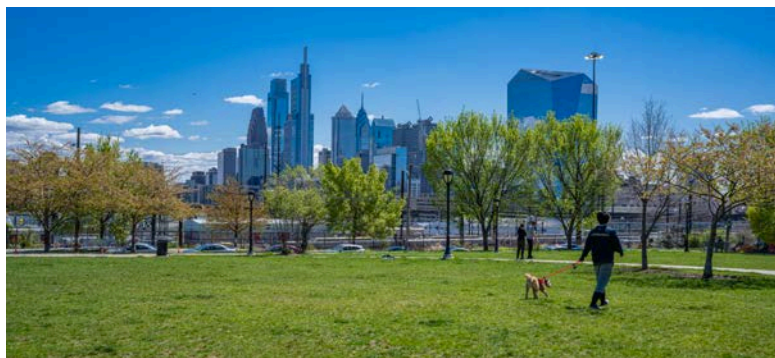
### Cell Imaging Center (CIC)

The CIC is a multi-user facility housed in purpose-built imaging suites in the Papadakis Integrated Sciences Building and in the Bossone Research Center. The CIC serves the light microscopy needs of Drexel researchers from a variety of academic colleges and departments including the College of Arts and Sciences, the College of Engineering, the School of Biomedical Engineering, and the College of Medicine.

*In AY 2024-2025, 80 CIC users clocked 4,285 instrument hours. Users represented 27 faculty research groups from four Drexel Colleges and Schools.*

Additional highlights include:

- Dr. Beatriz Hernaez Estrada, CIC's flow cytometry specialist, has established monthly workshops from September 2025 to educate Drexel researchers on the proper use of the flow cytometer and the high-throughput system, as well as to



provide training in basic flow cytometry principles. These in-person sessions not only help users expand their technical knowledge, but also create an opportunity for researchers to connect, share experiences, and discuss their experiments with other CIC flow users. The workshops also serve as an open forum for users to ask her questions related to flow cytometry, instrument troubleshooting, and experimental design.

- CIC organized lecture, demo and hands - on activity in collaboration with the professors Dr. Kriete and Dr. Gidalevitz for the following classes
  - BMES 421/621: Medical Imaging systems
  - BIO T380: Genetics Research in C Elegans
- CIC organized tours for the biology graduate student recruitment and orientation events.
- CIC hosted the following demonstrations for the Drexel community to learn about the newest imaging methods
  - Nikon AXR Confocal with NSPARC workshop - Apr 15-19, 2024
  - Bruker MuVi SPIM Lightsheet - March 2025

Please [email Harini Sreenivasappa](#) for more information about the CIC.

## University Laboratory Animal Resources (ULAR)

The University Laboratory Animal Resource provides for the care, health and well-being of animals used in research and education programs at Drexel University, provides expertise and resources to researchers, and serves the public by ensuring observance of all legal and ethical standards pertaining to animals in research.

*In AY 2024-2025, University Laboratory Animal Resources (ULAR) provided animal husbandry, medical assistance, research assistance and guidance to 47 PIs and research laboratories at four Drexel campuses, including an average daily census of 2,200 enclosures housing 6,500 mice and rats.*

### Additional Highlights Include:

- Planning has begun to relocate the NCB and QL animal facilities to 3201 Cuthbert St. in University City, with the move scheduled for summer 2027.
- ULAR management is collaborating with the ORI RBOT team and Novelution to develop new software to replace the current per diem billing and animal care modules.
- Dr. Huneke has retired but remains available for consultation as needed.
- Melanie McFadden, DVM, MLAS, now leads Drexel University's Veterinary Services as the Executive Director of Veterinary Services. She brings extensive expertise in laboratory animal medicine and clinical care, and oversees veterinary operations while supporting both the ULAR team and the regulatory compliance team to maintain the highest standards of animal welfare and scientific excellence.
- Shannon Morton has joined the Office of Research & Innovation's ULAR team as the Senior Veterinary Technician. She will work closely with Dr. McFadden to provide veterinary oversight, ensure research protocol compliance, and uphold rigorous animal care standards.
- Andrea McCurry has been promoted to Executive Director of Operations for Drexel's four campuses.
- Luciana Villar has been promoted to Director of Operations, serving all four campuses.
- Faith Witherspoon now manages Salus University and Calhoun, University City.

Please email [Andrea McCurry](#) for more information about ULAR.

To learn more about shared research resources on campus, please visit the [Core Facilities website](#). For information about managing shared research infrastructure or establishing a research core facility, please [email Dr. Craig Johnson](#).

# RESEARCH BUSINESS OPERATIONS & TECHNOLOGY

Throughout the 2024-2025 academic year, the ORI Research Business Operations & Technology (RBOT) team advanced efforts to replace the University's aging research administration systems, including COEUS, which has supported the research community for more than a decade. A new vendor was selected, and implementation officially began in October 2024. Below are key highlights.

## Novelution Implementation Project

Over the past year, the team laid the foundation for a more agile, integrated research infrastructure through the implementation of [Novelution](#), Drexel's new, modern research administration platform. This system will replace COEUS and DragonSPOT, streamlining the entire research lifecycle with intuitive workflows, enhanced reporting, and powerful data tools—all designed to help Drexel researchers achieve greater impact.

Since the project launch in October 2024, significant progress has been made. Both the Sponsored Programs and IRB modules have moved from discovery into configuration, where the platform is being tailored to Drexel's unique business processes. The IRB module is on track to launch in spring 2026, followed by Sponsored Programs shortly thereafter. Planning is also underway for the Conflict of Interest module, which will begin implementation soon after IRB goes live.

The Novelution Implementation Project will modernize and simplify research administration, providing transparency and reducing administrative burden while meeting the evolving needs of principal investigators, administrators, and research support teams.

## About Novelution

Novelution is a web-based SaaS platform offering centralized research administration through integrated modules for sponsored programs, compliance, and animal facilities management. Designed to meet the needs of faculty, staff, and research administrators, Novelution reduces complexity and improves efficiency across the research enterprise.

Modules Slated for Implementation:

- **Sponsored Programs**
  - Grants & Contracts
  - Subawards
  - Current & Pending Management



- **Compliance**
  - IRB (Human Subjects)
  - IACUC (Animal Subjects)
  - IBC (Biosafety/Radiation Safety)
  - Conflict of Interest / Commitment
- **Animal Facilities Management**
- **Reporting & Integrations**
  - Dashboards
  - Banner HRM and Financials
  - CITI (Research, Ethics, Compliance, and Safety Training)



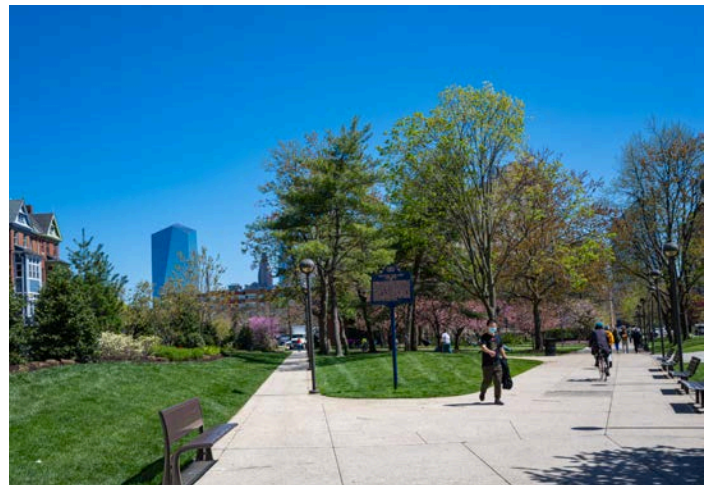
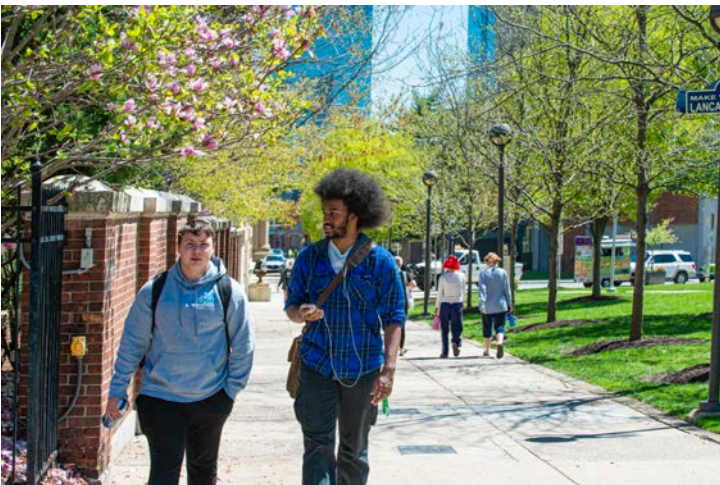
Full implementation is targeted for summer 2027.

## Financial Restructuring

Efforts to improve ORI operations continued throughout the year, reducing administrative burden and enhancing efficiency. The Finance & Operations team successfully leveraged ORI's updated financial structure to drive improved budgeting, reporting, and transparency. Drexel also delivered timely quarterly and ad hoc research metric reports to support performance tracking, strategic planning, and informed decision-making.

## Communications & Training

ORI's website maintained its modernized design, improving usability and accessibility for the Drexel research community. The site now offers streamlined navigation and links to an ORI intranet with training materials and resources for seamless access to operational knowledge. ORI also continued its [LinkedIn](#) presence, sharing research news and announcements and increasing followers by nearly 30%. In 2024, over 100 new posts with more than 50,000 impressions highlighted exciting developments across Drexel's research enterprise. Additionally, ORI published quarterly newsletters featuring timely updates, events, training opportunities, and other important information for the research community.





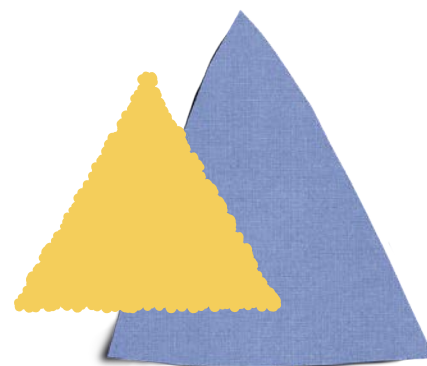
# RESEARCH COMPLIANCE AND REGULATORY AFFAIRS

RCRA's mission continues to be ensuring that all the research conducted at Drexel University adheres to the highest ethical, legal, and regulatory standards, safeguarding the integrity of research and the welfare of our research participants and research models. This year, in addition to our regulatory reviews and day-to-day operations, the team focused on enhancing compliance education and guidance, streamlining regulatory processes, and adapting to evolving federal regulations.

## Procedures and Guidance

The group implemented several new procedures and guidelines this year to help support the upcoming implementation of the new research administration system, Novelution, and address the changing regulatory framework. The latest procedures and guidelines can be found in the new compliance documents [catalog](#):

- ORI-005 Research Education and Training and Training Matrix
- ORI-601 Research Quality Assurance Reviews
- ORI-613 Guidelines for Site Initiation
- ORI-615 Maintenance of Regulatory Files
- ORI-616 Delegation of Authority
- ORI-617 Completion of Form FDA 1572
- ORI-618 Recruitment of Research Participants
- ORI-619 Approval of Participants for Study Participation
- ORI-620 Guidelines for Study Closeout
- ORI-621 Good Documentation Practices
- IBC-001 Institutional Biosafety Committee (IBC) Charter and Procedure Manual, and accompanying forms



They also completed several major revisions to their existing guidelines and implemented website updates to provide additional tools and resources to help support Drexel's research community:

- Completed the revision and release of 24 procedures and guidelines, primarily focused on our IACUC and animal welfare program in preparation for a successful AAALAC site visit.
- The [Research Quality Assurance Program](#) upholds ORI's commitment to maintaining the highest standards of quality and research compliance. The new program webpage includes information on how the program can assist researchers and resources on common audit findings and how to conduct a root cause analysis.
- The [Clinical Research Guidelines and Tools](#) webpage includes pertinent information and resources for clinical research investigators and is being updated with new resources on an ongoing basis.

## Training

RCRA has remained committed to delivering high-quality education and advancing their strategic educational goals. These goals focus on promoting inclusiveness in a safe and positive environment

that is innovative, collaborative and compliant. Over the last year the team has implemented several improvements:

- Developed and implemented an enterprise-wide learning course in collaboration with HR: Drexel University's Research Compliance and Regulatory Affairs.
- In collaboration with the Graduate College and the College of Nursing and Health Professionals, revised and delivered live Responsible Conduct of Research Training to 211 faculty, staff, and students.
- Presented a six-session Clinical Research Training Series with over 195 registrants of faculty, staff, and students covering best practices and regulatory requirements for conducting clinical research.

### **Accreditation, Operations and Metrics**

The Research Compliance and Regulatory Affairs (RCRA) team continues to provide compliance reviews across their different areas (e.g., COI, Export Control, IRB, IACUC, IBC, Radiation Safety) and improve turn-around and completion timelines.

Between July 1, 2024 and June 30, 2025, examples include:

- 1.The IRB reviewed 548 initial, 601 modification, and 58 renewal submissions.
- 2.Research Compliance processed over 1325 annual COI disclosures and over 5925 project-specific disclosures with 10 management plans developed/updated.
- 3.The IACUC, IBC, and Radiation Safety cumulatively reviewed more than 263 submissions.
- 4.Export Control and Research Security reviewed 3262 international travel requests, conducted 6269 restricted party screenings and 65 international visitor reviews, and developed six technology control plans.

The RCRA team is working consistently on the Novelution implementation project, as part of the COEUS replacement system. One of their goals is to provide regular updates on metrics, turn-around times, and transparency to help the research community plan and support their projects.

This past October, they had their AAALAC site visit; AAALAC is a non-profit organization that promotes the human treatment of animals in science through a voluntary accreditation program. The ULAR (University Laboratory Animal Resources) and Animal Welfare Program worked diligently to ensure they had a successful site visit, and they received full reaccreditation. RCRA wants to thank Richard Huneke, Elizabeth Hann, Michael O'Connor, and Andrea McCurry for their leadership, along with the entire ULAR, IACUC, and Animal Welfare Program for their outstanding effort.

### **Conclusion**

The past year presented opportunities and challenges to the Research Compliance and Regulatory Affairs team. Despite a complex regulatory environment and the need to adapt to new working conditions, RCRA has made significant strides in ensuring that research at Drexel University remains compliant, ethical, and innovative. RCRA looks forward to continuing this essential work in the coming year and building on the successes achieved.

# SPONSORED PROGRAMS

The Office of Sponsored Programs (OSP) is responsible for all pre-award and non-financial post-award management of sponsored activities that have resulted from a grant, contract, or cooperative agreement.



**2024-2025 has been a year of significant transition in research administration.** In response to major shifts across higher education—including new federal requirements, evolving sponsor expectations, and strengthened compliance standards—Drexel has undertaken extensive efforts to review and streamline its research support infrastructure. The Office of Research & Innovation, together with Research Compliance and Research Accounting Services, worked to enhance internal controls and increase transparency through clearer guidance and updated procedures via the CLARITY project. These collective initiatives are positioning Drexel to better support faculty, improve service delivery, and maintain strong compliance in an increasingly complex research funding environment.



# INVESTING IN RESEARCH RESOURCES & TOOLS

## Access to Data

### Philadelphia Federal Research Statistical Data Center

FSRDCs are partnerships between federal statistical agencies and leading research institutions that allow qualified researchers to conduct research on a wide range of non-public micro-data from the U.S. Census Bureau, the Agency for Healthcare Research and Quality, the National Center for Health Statistics, and the Bureau of Labor Statistics. The datasets that you can find through FSRDCs are among the greatest and most extensive sources of statistical information in the U.S. for researchers in economics, business, demography, sociology, medicine, statistics, criminology, and many other disciplines. For more information, please [visit FSRDC's website](#) at or email [Dr. André Kurmann](#), Professor of Economics.

### Data Management

Drexel University has an enterprise license for LabArchives electronic research notebook (ERN) services for use by its faculty, researchers, staff, graduate students, and undergraduate students in performing or learning research activities. The LabArchives assists researchers in managing the results of research efforts, record and document research processes and procedures, and manage digital research data in ways that increase reproducibility, efficiency, collaboration, searchability, and security.

[Visit the Electronic Research Notebooks Webpage.](#)







## Memberships and Affiliations

Academic, industry, and government are working together to solve societies most pressing current and future challenges. Through memberships and affiliations, ORI is facilitating collaborative research and development opportunities for faculty and students.

Additional information about the Office of Research & Innovation's Memberships can be found on the [Memberships webpage](#).

### Advanced Technology International (ATI)

Focusing on small and emerging companies that have traditionally not worked with the federal government, Drexel joined the Advanced Technology International (ATI) consortia. As a member, Drexel researchers have access to a host of potential collaborators, support to form technology development teams, and access to federal funding opportunities to support projects. [Visit the ATI website](#).

### Coastal Athletic Association

Office of Research & Innovation leadership participates in the Coastal Athletic Association Academic Alliance-Community of Practice. Dr. Aleister Saunders and Dr. Rose Ann DiMaria-Ghalili represent Drexel as research officers. The goal of the Community of Practice will be to provide a network of research leadership across the Alliance, as well as engage input for the Alliance's ongoing funding efforts to encourage inter-institutional, collaborative research projects. The Alliance's Research Officers gathered virtually over the summer to discuss general research and innovation efforts at their respective campuses, as well as discuss the Alliance's updated research enterprise initiative, launching in late fall 2025. [Visit the CAA website](#).

### Council on Government Relations (COGR)

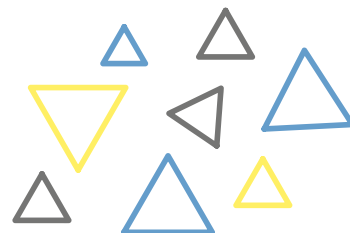
COGR is an association of research universities, affiliated medical centers, and independent research institutes concerned with federal research policies. Create your own account to stay in the know by receiving regular newsletter updates on the impact of the 2025 Administration Transition Information on research. [Create your account](#).



## Hanover Research

The Drexel Research Community has access to weekly and monthly research resources from Hanover Research. Sign up for:

- [Grants Newsletter](#) - Updates on development, training, new resources, and funding calendars
- [Industry Insights](#) - Tips, industry guides, best practices, case studies, and more on important topics in higher education
- [Virtual Events & Webinars](#)
  - Live or on-demand learning opportunities
  - Topics range from proposal development to agency-specific insights



## Manufacturing USA Institutes

Drexel is a member of the Manufacturing USA® network focused on large scale public-private collaboration on technology, supply chain, and workforce development in advanced manufacturing. The national network of diverse manufacturing institutes, sponsored by either the U.S. Department of Commerce, Defense, or Energy, all have the same goal of accelerating U.S. manufacturing in each of their designated fields. Drexel is a member of four of the 16 institutes: AFFOA, MxD, ARM, and America Makes. Advanced Technology International is a consortium management group that is dedicated to solving the most challenging technological problems the world faces today. More specifically, Drexel partners MTEC, which is a biomedical technology consortium that focuses on preventing injuries and speeding up the development of life by changing medical technology. [Learn More about Manufacturing USA.](#)

## Oak Ridge

Drexel is a proud consortium member of Oak Ridge Associated Universities (ORAU). This means the University is part of a prestigious network of 158 universities nationwide collaborating with ORAU, a leading organization in scientific and technical solutions who collaborates with federal, state, local, and commercial entities to advance national priorities. ORAU provides tailored expertise across multiple domains, including workforce solutions, scientific assessment, health, environment, preparedness, response, and research partnerships. Being part of ORAU's University Consortium means access to funding opportunities, avenues for professional growth, and exciting collaborations. ORAU will foster partnerships between Drexel and government and private sectors, aiming to enhance scientific research and education. [Learn More about Oak Ridge Associated Universities.](#)

# SUPPORTING AND RECOGNIZING RESEARCH EXCELLENCE

## Internal Committees

### Social Sciences and Humanities Research Committee

SSHRC scholars engage in activities that support different aspects of the research process, including writing retreats to support grant and publication writing, quarterly social events to support interdisciplinary networking, speaker series to spark dialogue and new research ideas, interdisciplinary meet-ups to support conversations across disciplines that lead to new collaborations, 'how-to' grant writing seminars to gain skills in grant submissions, and participate in SIGS (special interest group) to learn new research methods in partnership with their Drexel colleagues.

The first ever annual SOCRATES event, "The Future of Social Science Research," was held on May 29, 2025. It was a successful hybrid gathering that brought together approx. 60 participants both in person and online. Co-hosted by SOCRATES, the Office of Research and Innovation, the Center for Science, technology and Society, and the Justice Collaborative at the Drexel Center for Public Policy, the event featured a keynote by Dr. Erin McNamara Horvat, a panel discussion with interdisciplinary faculty, and a series of lightning talks showcasing diverse research across Drexel University. The lightning talks covered a wide range of topics including justice system fines and fees, multispecies justice, autism intervention across the life course, transdiagnostic risks in mental health, human rights in UN development planning, diversification in games research, cryptocurrency regulation, and the role of generative artificial intelligence in epistemic welfare.

These presentations reflected the breadth and depth of social science and humanities research at Drexel, with contributors from various colleges and institutes. Notable topics included using network science to combat autism stigma, exploring gender integration in sports, and examining the societal implications of emerging technologies. The event concluded with closing remarks from academic leaders and a well-attended happy hour at Board and Brew, where 20 participants continued networking and discussing future directions for social science research. The collaborative energy and interdisciplinary engagement throughout the event laid a strong foundation for SOCRATES' five-year strategic planning efforts.

[Learn More about the SSHRC.](#)

## Seed Funding

The Office of Research & Innovation financially supports seed funding opportunities that stimulate and support the development of new research projects, the expansion of existing projects, as well as recognition of outstanding research performance.



## Community Driven Research Day

On March 11, Drexel University participated in the 15<sup>th</sup> annual Community Driven Research Day (CDRD), an annual event founded by the Philadelphia Collaborative Violence Prevention Center and The Penn Center for Public Health Initiatives, which provides an opportunity for community-based organizations to discuss their research needs with researchers from six sponsoring academic institutions - Temple University, University of Pennsylvania, The Children's Hospital of Philadelphia, Drexel University, LaSalle University, and Thomas Jefferson University.

Hosted this year by the University of Pennsylvania, the event was the first step in the process to submit an application for funding. Academic researchers and representatives from community-based organizations (CBOs) who attended CDRD were encouraged to make connections with each other at the event. After partnerships were formed, and requirements met, participants were generally invited to develop a full proposal. The full proposal, co-produced by both partners, was sent to the sponsoring institution who made the awards.

This year's competition was focused on the theme of Resilient Communities: Celebrating 15 Years of Advancing Community-Based Research and Partnerships for Health. The Office of Research & Innovation is happy to contribute to this annual competition that supports interdisciplinary, community-based participatory research in health and strengthens Drexel's relationship with the greater Philadelphia community.

After receiving letters of intent following the Community Driven Research Day (CRDR) event, we extended invitations to teams of community members interested in partnering with researchers across Drexel, with five full proposals submitted for internal review. Review was conducted by two independent faculty members of Drexel University and followed a standard set of scoring criteria set by the CDRD organizers.

We are pleased to award Kate Fox at Children FIRST, along with her collaborator Renee Turchi at Saint Christopher's Hospital for Children (Drexel University) for their project, titled "Babies Don't Go to the Doctor Alone - Pennsylvania Dyadic Care Models." The recipient received a \$10,000 grant.



## HBCU-Drexel Health Science and STEM Partnership Pilot Research Awards

During AY '24-25, Drexel University's Office of the President, College of Nursing and Health Professions, Office of the Vice Provost for Diversity, Equity & Inclusion, and Office of Research & Innovation opened the application cycle for the HBCU-Drexel Health Science and STEM Partnership Pilot Research Awards competition.

The HBCU-Drexel Health Science and STEM Partnership Pilot Research Awards competition is a STEM and health science-focused competition designed to foster collaboration between students and faculty from each of five HBCU partners and Drexel University's STEM and health science units, with the goal of supporting partnership-driven research and scholarly or creative activity.

Drexel partnered with five historically Black colleges or universities (HBCUs): Cheyney University, Delaware State University, Hampton University, Lincoln University, and North Carolina Agricultural and Technical State University. The collaboration is designed to foster a lasting connection between the institutions and enhance academic advancement, scholarship, practice, civic engagement, inclusion and diversity among faculty and students in the fields of health sciences and STEM using a reciprocal approach based on mutual trust and respect.

The Pilot Research Awards support a wide range of research, scholarship, and creative activity that align with one or more of Drexel University's 10 Areas of Excellence and Opportunity:

1. **Health Innovation:** health topic focused on innovation of new therapies, technologies, and methods to improve care and support specific needs of individuals across the lifespan, locations, and disease states.
2. **Health Equity and Wellness:** topics related to community health, prevention, and mental wellness, with a focus on improving outcomes, diversifying methods, and expanding access across populations, especially local communities and underserved populations.
3. **Computing, AI, and Cyber Security Frontiers:** topics combining strengths across AI, Information Science and Human-Machine Interaction, Cybersecurity, and Data Science, with a focus on the future of computing, its interactions with society, and the creation, transfer, security, and dissemination of information.
4. **Sustainability and Climate Resilience:** topic focused on the conception, design, and development of processes, materials, and other advancements to support the health of the local and global environment, and resilience of the global climate.
5. **Urban Futures:** topic combining activities and scholarship related to city, regional, and community development; design and innovation; and civic partnership and engagement.
6. **Human-Centered Design:** topic focused on the design of processes, systems, and products developed to be best suited to the human user.
7. **Entertainment and Culture:** topic combining strengths in the development and production of entertainment across disciplines and industries, including Music, Film, Television, Digital Media and Arts, as well as management and business expertise in these fields.

8. **Learning, Leadership, and Organizational Innovation:** the nexus of strengths that support individual and organizational growth, learning, and development, including management, professional development (especially in STEM fields), leadership, motivation, organizational dynamics, development of training programs in areas like DEI, learning innovation efforts focused on individual growth through understanding how students learn.
9. **Advanced Materials and Manufacturing:** topic combining strengths across Materials Science, Biomedical Engineering, Device Development and Advanced Technology focused on the applications, development and use of materials across a broad set of disciplines.
10. **Neuroscience:** topic combining strengths across Neuroscience, including structures and functions of the brain and neurological system.

To be eligible, participants formed teams of at least four members: one undergraduate student and full-time faculty member each from Drexel University and one of the HBCU partners to foster deeper cross-institutional collaborations between students and faculty.

All proposals were peer-reviewed according to significance and relevance to at least one of Drexel's AEOs, scientific merit, potential for the advancement of knowledge in a specific field, feasibility, and qualifications of the team. Grants of up to \$10K were awarded to each of five HBCU-Drexel teams. [Read more about the program.](#) We're delighted to congratulate the following winners!

**Cheyney-Drexel Course Based Undergraduate Research Experience (CURE) in Biomaterials**

**Awarded:** \$10,000

**Submitted by:**

Yolanda Williams-Bey, PhD  
Assistant Professor  
Biology Department

Natural and Applied Sciences, Cheyney University of Pennsylvania

Kara Spiller, PhD  
Professor

Biomedical Engineering Department  
School of Biomedical Engineering, Science, and Health Systems,  
Drexel University

**Assessing minoritized student campus recreation engagement and belonging across Drexel and Lincoln Universities**

**Awarded:** \$10,000

**Submitted by:**

Laura Baehr, DPT, PhD  
Assistant Professor

Physical Therapy and Rehabilitation Sciences Department  
College of Nursing and Health Professions, Drexel University

Serita Porter  
Assistant Professor  
Health Science Department  
Health Sciences, Lincoln University

**Evaluating the Effectiveness and Cultural Relevance of the Older Adults' Mental Health First Aid (OMHFA) Program**

**Awarded:** \$10,000

**Submitted by:**

James Muruthi, PhD  
Assistant Professor

Counseling and Family Therapy Department  
College of Nursing and Health Professions, Drexel University

Tiffany Morris, DNP  
Associate Professor  
Nursing Department  
Nursing School, North Carolina Agricultural  
and Technical State University

**Understanding attitudes, behaviors, and beliefs related to home maintenance to decrease inequities in functional disability among low-income older adults**

**Awarded:** \$9,975

**Submitted by:**

Safiyyah M. Okoye, PhD, MSN, RN  
Assistant Professor

Graduate Nursing Department  
College of Nursing and Health Professions, Drexel University

Michael L. Jones, PhD, MBA/HCM, RN, FAAN  
Adjunct Faculty  
School of Nursing, Hampton University

# 2024-2025 RESEARCH NEWS HIGHLIGHTS

## [Drexel to Lead \\$5 Million Multinational Effort to Produce MXene Materials for Water Desalination and Medical Diagnostics](#)

Drexel University is embarking on a three-year, \$5-million multinational collaboration to produce MXene nanomaterials. The project, which is a collaboration with Kalifa University in the United Arab Emirates, the University of Padua in Italy and the Kyiv, Ukraine-based MXene manufacturing company Carbon-Ukraine, seeks to use the promising nanomaterial, first discovered at Drexel, to provide clean drinking water for arid areas of the world threatened by climate change and improve cell labeling and tracking technology for biomedical analysis.



Exploring MXene applications at a greater scale will certainly expand the capabilities of this family of materials and offer vital opportunities to people in need of more drinking water and address crucial clinical research and medical diagnostics needs. This effort is timely and further emphasizes the importance of the work we are doing with MXenes.”

-Yury Gogotsi, PhD Director, A.J. Drexel Nanomaterials Institute

## Other Features



[Drexel Engineers Want to Make Buildings More Energy Efficient by Making Walls, Floors and Ceilings More Like Elephant Ears](#)



[New Research Highlights Health Benefits of Using Heritage Art Practices in Art Therapy](#)



[Looking at the Student Research Behind Drexel's Move to Organic Turf Management](#)

[View all Drexel Research News](#) | [Visit EXEL: Drexel's Research Magazine](#) | [Check out Drexel College of Engineering's Dragon Discoveries Research Highlights](#)



# DISCOVERY AND INNOVATION

## NSF I-Corps at Drexel

Drexel University is a member of the [NSF I-Corps Hub for the Northeast Region](#). I-Corps helps researchers explore how to transition discoveries into benefits for society.

The NSF I-Corps creates opportunities for members of the Drexel research community to gain insight into industry's unmet needs and innovation challenges which can be incorporated into current and future research. It also supports postdocs and graduate students to explore commercialization and startups. Prior NSF funding is not required.



Participating in I-Corps training can help Drexel researchers answer important customer discovery questions about their innovations.



## Charles D. Close School of Entrepreneurship

As a dedicated school of entrepreneurship, the Close School teaches an entrepreneurial mindset and practice through experiential methods, excellent teaching, thought leadership and creative programming – thus igniting students' careers and personal aspirations.

They push students to start something, to fail, and to start over again. As they coach them through this process, their mission is to foster an entrepreneurial mindset together with acquiring the skill set inherent to the entrepreneurial process.

## Drexel Coulter Translational Research Partnership Program

The Drexel Coulter Translational Research Partnership Program promotes, develops, and supports innovations to improve patient care. The program provides mentoring, project management, and funding to promising translational projects with the goal of moving innovative technologies to clinical application through commercialization. The ultimate goal of this partnership is to develop health care solutions that address unmet or underserved clinical needs and lead to improvements in patient health care.





# ORI TEAM & PARTNERS

## Welcoming New ORI Team Members

The Office of Research & Innovation is thrilled to introduce new team members who will help to support our continued growth as a top research institution. Please join us in welcoming these new colleagues! You can find up-to-date contact information and information about other team members located on the [ORI staff webpage](#).

### Leadership Team

**Rose Ann DiMaria-Ghalili, PhD, RN, FASPEN, FAAN, FGSA,**

**Interim Associate Vice Provost for Research & Innovation.** Rose Ann joined the Office of Research and Innovation on January 1 as the Interim Associate Vice Provost for Research and Innovation. Rose Ann brings a wealth of experience and a deep commitment to fostering a collaborative and innovative research environment. Currently, she serves as the Senior Associate Dean for Research and a Professor of Nursing in the College of Nursing and Health Professions. As a geriatric nurse scientist, her continuously funded interdisciplinary program of research focuses on developing innovative approaches to improve health outcomes and quality of life for older adults with acute and chronic conditions across the care continuum. In her new role, Rose Ann will serve as a vital liaison between our faculty researchers and the various administrative, technical, and operational units that support research at Drexel. Her primary responsibility will be to ensure that our faculty members have the support they need to conduct their research efficiently and effectively within the institution's framework. She will advocate for faculty needs and concerns, facilitate regular dialogue between faculty and research administration, and engage with the Provost's office on research-related matters.



## Applied Innovation Team

**Robin L Stears, PhD MBA, Director of IP and Agreements.** Robin is the new Director of IP and Agreements in the Applied Innovation Office. She has a PhD in cellular and developmental biology, an MBA, and a strong background in both industry and academia. During her graduate work she was honored to be a selected participant in the Woods Hole Cell Physiology course. After her PhD work, she spent several weeks conducting research in Antarctica as a selected participant of the NSF's 'Introduction to Antarctic Biology, International Scientist Training Course'. After that, she did two post-doctoral fellowships, the first at the University of Hawai'i (to warm up!) and Harvard University, the second at Harvard Medical School and Brigham and Women's Hospital. Her life sciences industry experience covers Pharma (at Sanofi), a California Startup as well as Bio Rad Laboratories and Intel Corporation. After consulting for startups and pre-startups, the next stage of her career led her back to academia as a Licensing Manager at UC Davis. Here she worked her way up to Director of Business Development and Licensing. Her prior positions include Senior Director of Business Development and Innovation at Boston Children's Hospital and a Director of Business Development at UMass Chan Medical School. Robin is happy to be at Drexel University where she hopes to contribute to the protection and licensing of Drexel's discoveries and innovations for societal benefit. Robin is a native New Yorker and an unabashed animal lover. She enjoys hiking with her spouse, playing with their two dogs, and painting.



## Research Business Operations & Technology (RBOT) Team

**Kwesi Owusu-Ansah, Associate Director, Finance & Administration.** Kwesi brings experience in financial management, operational strategy, and general administration, with a focus on building efficient processes that support academic and research excellence. He is passionate about streamlining processes and supporting teams to do their best work. As he has just one year in Philly, outside of work he enjoys exploring the city for restaurants, live music, or spending time at home with his rescue pup and lots of houseplants. He is really looking forward to working with everyone and learning more about the great work happening across ORI!

**Yassine Sellami, Director, Research Systems & Analytics.** Yassine joins the Office of Research & Innovation as Director of Research Systems & Analytics, bringing five years of experience supporting Drexel's research enterprise from the Central IT side. With a background in mathematics and global experience spanning the tech and business sectors—including roles at Dell, Apple, and IKEA—he brings a systems-thinking approach shaped by his work across diverse environments. Yassine also holds graduate degrees in strategic technology and innovation and is currently pursuing a doctorate in higher education leadership and administration. In his new role, Yassine is focused on strengthening partnerships across ORI and campus stakeholders to lead the digital transformation of research systems, enhance analytics, and promote more effective communication around research tools and services. He views this work as a collaborative effort—one that supports ORI's mission to enable discovery, creativity, and impact through responsive infrastructure and support. Yassine looks forward to learning from and working with colleagues across the University to help build a research environment that is efficient, data-informed, and adaptable to the evolving needs of researchers and investigators.



## Research Core Facilities Team

**Beatriz Hernaez-Estrada, Flow Cytometry Specialist - Cell Imaging Center.** Bea has been working for about a year part-time in the CIC supporting the management, training and maintenance of a recently acquired flow cytometry instrument. Beginning February 1, Bea reduced her time in the CIC slightly and took on a role in a new Flow Cytometry Core Facility at Drexel's College of Medicine. There she joins Jenna Hope and Elias El Haddad in the commissioning, management and maintain the new Cell Sorting Flow Cytometer being acquired via the NIH S10 program.

**Dr. Melanie McFadden, Executive Director of Veterinary Services - University Lab Animal Resources.** As Executive Director, Dr. McFadden oversees veterinary clinical operations and supports the University Lab Animal Resources (ULAR) team and Regulatory Compliance team to ensure the highest standards of animal welfare and scientific quality across Drexel. She obtained her bachelor's degree in animal science from Penn State, followed by a master's in laboratory animal sciences right here at Drexel. She also earned a Doctorate of Veterinary Medicine from Western University of Health Services and completed a Residency/Fellowship at the University of Southern California. Dr. McFadden brings extensive experience in veterinary clinical care, research support, and leadership. With a proven track record of advancing animal care and fostering collaborative, compliant research environments, she plays a critical role in leading Drexel's veterinary services team and supporting the University's mission of excellence in research and animal welfare. During her free time, she loves to spend time with her family and enjoys going to the beach or being outside!



**Shannon Morton, Senior Veterinary Technician - University Lab Animal Resources.** Originally from Cincinnati, Ohio, Shannon earned her degree in Veterinary Technology from the University of Cincinnati and became a Registered Veterinary Technician. Over the course of her career, she has gained extensive experience across multiple areas of veterinary medicine – including private practice, emergency medicine, and histopathology. However, she has found her true passion in laboratory animal research and brings over 15 years of experience in the field. Shannon holds a Laboratory Animal Technologist (LATG) certification from the American Association for Laboratory Animal Science (AALAS) and offers a wealth of experience in research support and animal care. In her new role, she will work closely with Dr. Melanie McFadden to provide veterinary oversight, ensure compliance with research protocols, and uphold the highest standards of animal welfare. In her free time, Shannon enjoys spending time with her three cats, playing pub trivia with friends, and riding her motorcycle.

**James Porter, Senior Research Computing Specialist - University Research Computing Facility.** James started on January 21 in the URCF role. James brings experience as a developer, administrator and facilitator in both academic and industry research computing environments. He is looking forward to applying that experience in service of our shared research computing clusters in the URCF. His role involves maintaining the Drexel cluster Picotte and interfacing with researchers from across the University to help facilitate and enhance their use of the cluster. James will also be an important part of developing our strategies for expanding and improving shared research computing infrastructure on campus.

## Sponsored Programs Team



**Gia Boersema, CRA, MS, Assistant Vice Provost, Sponsored Programs.** Gia brings over 18 years of experience in research administration across higher education and nonprofit sectors. A Certified Research Administrator and familiar face at Drexel, she returns after serving as Senior Associate Director in the University of Pennsylvania's Office of Research Services. At Penn, Gia oversaw proposal and award management for more than 100 departments, led a team of five, and served as an Authorized Organizational Representative. She implemented tracking systems, streamlined subaward execution, and enhanced training programs to strengthen compliance and efficiency. In her new role at Drexel, Gia will lead the central administration of grants and contracts within the Office of Sponsored Programs. She will focus on ensuring compliance, supporting faculty and staff, and advancing the implementation of Novolution to improve research operations and foster a culture of excellence across the University.

**Rebecca Deeb, Grants Administrator.** Rebecca comes to Drexel with several years of experience working as a Research Administrator at Northwestern University focusing on full lifecycle grants administration within a clinical trials unit. She is a trained archaeologist and has had multiple teaching positions at several institutions of higher education in the Chicago area.



**James Hawkins, Lead Contracts Negotiator.** James originates from Bloomington, Indiana. He is married with two children and two dogs. He has a Bachelor of Science in Biology from Clearwater Christian College and a Masters in Business Administration from TUI University. He worked for 20 years for the Department of Defense and the Department of Energy as a Contracting Officer. He currently serves in the Air Force Reserves as a Lieutenant Colonel.

**Nicole Heard, Grants Administrator.** Nicole originates from Newport News, Virginia. She holds a Bachelor of Arts degree in Liberal Arts from Norfolk State University and a Master of Arts degree in Business Administration with a minor in Accounting from Saint Leo University. She also holds a Doctorate in Christian Business Development from the School of The Great Commission Theological Seminary. Nicole is currently pursuing a Bachelor of Arts degree in Criminal Justice at Saint Leo University. For the past 19 years, Nicole has garnered comprehensive experience in Government Contracting, Grants Management, Budget Analysis, and Contract Administration. She has established herself as a seasoned professional in the field of sponsored program administration, with expertise extending to all facets of grants and contracts, including negotiation, financial oversight, compliance reporting, and pre/post-award administration for a diverse range of funding agencies. In her leisure time, Nicole relishes spending quality time with her family and creating new memories.

**Wanda Peay, Lead Contract Negotiator.** Wanda joined Drexel in May and brings several years of experience in contract negotiation and research administration to the team. Prior to Drexel, Wanda worked at Cigna, Children's Hospital of Philadelphia, and in the pharmaceutical industry. Wanda has experience negotiating various types of contracts and looks forward to applying that experience at Drexel.

**Sheilah Wiley, Lead Subaward Officer.** Sheilah manages the full subaward process from negotiation to closeout. She brings prior experience from Auburn University's subaward team, where she cultivated her expertise in research administration and compliance. At Drexel, Sheilah is dedicated to building strong partnerships and ensuring the University's research collaborations run smoothly and compliantly.



# ADDITIONAL PARTNERS

- [Article XIII, University Advisory Committees](#)
- [Drexel University Libraries](#)
- [Environmental Health & Safety](#)
- [Office of Office for Faculty Excellence and Academic Culture](#)
- [Office of Global Engagement](#)
- [Office of Graduate Studies](#)
- [Research Administration Advisory Committee](#)
- [Senate Committee on Research Scholarship & Creative Activity](#)
- [University Research Council](#)



## One Drexel

Drexel's diverse committees, offices, and colleges work together to support and guide researchers of all levels and expertise. During any step of the research process, our committed partners will be able to assist and advise the researcher on any obstacle they may face. These partners are the University Research Council, Research Administration Advisory Committee (RAAC), University Advisory Committee (UACs), Senate Committee on Research, Scholarship and Creative Activity (SCRSCA), Environmental Health & Safety (EHS), Drexel Libraries, Office of Graduate Studies, Office of Global Engagement, and the Office of Faculty Affairs.



# STAY CONNECTED TO THE ORI!

The Office of Research & Innovation makes it easy to stay up to date with research news, stories, events, and much more! Check out our available resources and find ways to stay connected.

- [Email Announcements](#)

View an archive of ORI's important announcements.

- [Novelution Hub SharePoint](#)

Learn about the COEUS Replacement Project via the new Novelution Hub!

- [Quarterly Newsletter](#)

Use the ORI's newsletter as a great source for key information and updates.

- [Office of Research & Innovation on LinkedIn](#)

Follow the ORI's LinkedIn page for the latest news about research at Drexel!

- [ORI Training Library SharePoint](#)

Access training materials, resources, and recordings of ORI webinars.

- [Upcoming Events](#)

Find a comprehensive list of research-related events.





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