Our mission is to provide the best possible support for our faculty, staff and students to pursue funding and resources to conduct their program of research and engage in scholarly and creative activities. We view this as an essential component of their academic development at Temple University.

The key to research excellence is outstanding faculty. We are leading, not following, thanks to a new generation of researchers and scholars who are elevating Temple to new heights. They drive research, discovery and innovation, and lead grants in a way that is unprecedented in our history.

Our focus on research excellence reflects this mission. Temple’s 17 outstanding schools and colleges, nine campuses, hundreds of degree programs and over 40,000 students combine to create one of the nation’s most diverse and comprehensive public research and learning environments. Research is now woven into the fabric of Temple in a way that is unprecedented in our history. Temple faculty are leading the university to address the grand challenges of our society through their innovative discoveries, technologies, strategies and works. They have secured nearly $50 million in funding to support student training, new educational programs, community engagement and relevant research across all disciplines. Our office is enormously proud to champion the research efforts of the faculty through an efficient and streamlined infrastructure designed to ensure that the conduct of research is managed with integrity, efficiency, and quality.

Our aim is to encourage faculty so that they can focus on what matters most – for their work to make meaningful contributions towards the goals of creating knowledge, providing societal benefits, and presenting the educational training and experiences our students need to thrive in their future endeavors. Whatever path they wish to take, we have a platform to support it – whether it be developing a sequential trajectory or creating a new research project or study.

We strive to help faculty develop a strategic focus on their contributions to Temple’s research enterprise and community. This guidebook is offered to reinforce faculty endeavors to develop and manage their sponsored research projects and associated obligations for conducting research in a responsible manner. It presents an overview of the administrative structure connected with the research enterprise of the university. It introduces our newest researchers to the many resources available to support the implementation of their program of research.

The guide also outlines the internal and external sources of support for research, training opportunities to learn the basics for competing for funding, and the requirements that faculty must follow as part of the guidelines for responsibly conducting research.

Faculty are encouraged to seek out and participate in the Office of Research’s myriad opportunities to develop and refine grantsmanship expertise, engage in cross-cutting, multi-disciplinary research initiatives, and create innovative technologies for the commercial marketplace. This resource will help frame the essential components for every faculty member’s program of research at Temple.

Michele Masucci, Ph.D., Vice President for Research
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**TEMPLE’S RESEARCH ENTERPRISE**

**Temple University** is one of the nation’s premier urban public research universities. Its research enterprise is designed to provide outstanding service for research investigators and to support Temple University in its efforts to increase funding, drive research expenditures, manage research integrity and compliance, and commercialize research results. An ongoing university investment in research – emphasizing collaborative research activities across disciplines and building state-of-the-art research facilities – has spurred phenomenal momentum in the expansion and growth of the research enterprise.

Temple research stands for excellence in basic discovery but is also noted for applied programs that translate these results into tangible outcomes for society. Over $50 million of the university’s research funding supports education, meeting community needs, and economic development. A central goal for the research enterprise is to continue to foster internal connections and external partnerships to be able to engage with large scale, programmatic research activities. What distinguishes Temple’s approach is that we have embedded commercialization in this strategy. This leads to a diversification of research outcomes that includes both basic science accomplishments and applied research, resulting in protecting more intellectual property, developing spin-off company opportunities, engaging in nationally significant research discourse, and developing state-of-the-art replicable programs that can be adapted broadly in the U.S. and beyond.

### Temple University Research Expenditures 2013-2017

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As research at Temple has sustained significant growth, it has also diversified considerably. The university maintains a strong biomedical focus across the grants portfolio, with 65% of funding awarded by the federal government, notably the National Institutes of Health, the National Science Foundation, and the Department of Defense. Temple’s extramural awards support areas where the institution is growing rapidly in strength and expertise, including a new program in materials research, continued excellence in computer and information sciences, a rising surge in educational research, and the 2017 designation of a newly-established College of Public Health, which boasts state-of-the-art clinical education spaces for physical and occupational therapy and athletic training programs, among other clinical disciplines.

**Temple faculty are global leaders in their fields of study. Recent achievements exemplify trends for faculty research excellence.**

- In one of the largest cooperative agreements for research in Temple University history, an interdisciplinary team of faculty is participating in a $20 million project with other universities and the U.S. Army Research Laboratory (ARL). An interdisciplinary team will work with ARL to perform research in three major areas: understanding and improving the performance of materials using computational modeling; understanding the mechanisms and thresholds of traumatic brain injury by reviewing clinical, behavioral and biochemical changes related to traumatic brain injuries and concussions; and exploring new ways to improve protection against ballistics impacts.

- Temple University’s Lewis Katz School of Medicine (LKSOM) and Hunter College of the City of New York were awarded a five-year, $13.5 million U54 center grant from the National Institutes of Health to investigate effective approaches to reduce cancer health disparities. Dr. Grace Ma, associate dean for health disparities and director of the Center for Asian Health at LKSOM, will serve as principal investigator for Temple. The grant will create the Temple University/Fox Chase Cancer Center and Hunter College Regional Comprehensive Cancer Health Disparities Partnership. Dr. Ma, along with her colleagues at Temple and the Fox Chase Comprehensive Cancer Center, will work with Hunter College to establish a cross-regional infrastructure to tackle the disproportionate...
cancer burden affecting underserved and diverse communities. This regional partnership, spanning Pennsylvania, New Jersey and New York City, will explore ways to reduce cancer health disparities in African American, Asian-Pacific American and Hispanic American communities. It is the first such grant awarded to any institution in Pennsylvania or New Jersey, and more than 70 investigators across both organizations are involved.

- Pushing the frontiers of scientific discovery, Dr. Erik Cordes, associate professor of biology in the College of Science and Technology (CST), recently discovered 85-linear-mile coral reef 160 miles off the coast of Charleston, South Carolina. The existence of the reef was confirmed during a pair of submersible dives that were part of an expedition to explore uncharted canyons, gas seeps and coral ecosystems off the Atlantic coast. The goal of the expedition, funded by the National Oceanic and Atmospheric Administration’s Office of Ocean Exploration and Research, the Bureau of Ocean Energy Management, and the US Geological Survey, is to identify and ultimately safeguard sensitive habitats in a swath of ocean that remains largely unexplored. This discovery builds upon Dr. Cordes’s work with a multidisciplinary team of scientists, technicians and engineers to conduct undersea mapping and remotely operated vehicle explorations of the geological, biological, archaeological, and chemical features of the US Gulf of Mexico and the North Atlantic. Data collected during the expedition will inform future management decisions and help the scientific community communicate the importance of these diverse environments.

- Temple recently announced the establishment of a Center of Excellence for opioid addiction in pregnant women. Funded by a $500,000 grant from the Commonwealth of Pennsylvania, the Temple/Wedge Center of Excellence offers evaluation from experts in high-risk pregnancy and psychiatry, and offers much-needed access to drug treatment, counseling, and specialized prenatal consultation. Rather than simply treating the addiction, the Center will treat the entire person, integrating behavioral health, primary care and, when needed, evidence-based, medication-assisted treatment.

- Physicist Jeffrey Martoff is the first Temple winner of the prestigious William M. Keck Foundation award. The foundation, which sponsors pioneering research in medicine, science, engineering, and undergraduate education, awarded a $1.2 million grant to Martoff for the study of the origins of dark matter – the substance that comprises more than two-thirds of the universe’s mass. Though invisible to the human eye, dark matter shows its existence by its gravitational effects on objects and particles in space. Its presence is also betrayed by the bending of light passing by distant galaxies, an effect predicted by Einstein’s general theory of relativity and confirmed in our own solar system using the sun. Martoff will test a new, highly interdisciplinary technique to find dark matter through the development of a 12-foot-long tabletop spectrometer to search for as-yet undiscovered particles that theorists say should also exist, and if detected, would constitute the first visible evidence of a good candidate for dark matter particles. Overall, Martoff’s work is expected to lead to a deeper understanding of particle physics and help explain why dark matter exists.

With this significant growth in research activity, the number of large-scale programs has also increased dramatically, now including university-wide initiatives in materials science, traumatic brain injury (TBI), STEM education, substance abuse, neuroscience, obesity, bioinformatics and big data, cancer, genomic medicine and energy frontiers. Temple researchers currently hold NIH program project grants studying cardiovascular health, neuroscience, Asian health and substance abuse. These cross-cutting teams leverage the collective knowledge of researchers throughout Temple to analyze complex issues from a variety of perspectives and develop solutions to overarching global problems.

None of these accomplishments would be possible without the dedication of Temple’s faculty and the university’s efforts to hire and retain high performing research faculty. In addition to their work in the classroom, for the last two years Temple faculty investigators requested more than one billion dollars in research funding—the first time this has happened in Temple’s history. Of Temple’s 2,253 full-time faculty members, 98 have at least one award of $1 million or more, and close to 500 faculty hold active grant funding at any given time.
World class investigators enhance and reinforce Temple’s robust research enterprise, but research funding and requests do not fully explain the role Temple’s researchers have in their respective fields. When it comes to scholarly authority, Temple is decidedly a leader. The Webometrics ranking of Google Scholar citations of faculty work from universities around the world placed Temple at No. 18, with the top citations going to faculty in physics, biology, psychology, chemistry, the Fels Institute for Cancer Research and Molecular Biology in the Lewis Katz School of Medicine, and the Fox Chase Comprehensive Cancer Center. The rankings, compiled by the Cybermetrics Lab, show research produced by the top 10 Temple faculty member profiles yielded nearly 895,000 citations—which is one definitive way to measure the impact and influence of published research.

Because of Temple’s continuous research growth, the university has been elevated to the top tier of the Carnegie Classification of Institutions of Higher Education. In 2016 Temple rose from the “high research activity,” or R2 category, to “very high research activity,” or R1, placing it among the top 4% of all four-year institutions in the nation including the following Pennsylvania institutions: Carnegie Mellon University, Drexel University, The Pennsylvania State University, the University of Pennsylvania and the University of Pittsburgh. Additionally, Temple has placed in the top 100 universities for research productivity as reported to NSF via the Higher Education Survey for Research and Development for the last three years. The most recent rankings based on FY 2017 data indicated that Temple is 90th in total research expenditures, and 83th for federal expenditures. It is in the top 5 for research expenditures in Pennsylvania and ranks 61st among public institutions.

Other outstanding achievements and national recognition include:

- Ranked 106 overall among national universities in U.S. News and World Report
- 6 National Academies Members
- 6 American Academy of the Arts and Sciences Fellows
- 15 Guggenheim Fellows
- 2 MacArthur Fellows
- 2017 Keck Award
- 2017 Alfred E. Sloan Foundation Research Fellow Award
- 2018 Carnegie Fellowship Award.
Research Administration provides a comprehensive, coordinated proposal development and award management platform for the Temple University research community. An integrated infrastructure connects critical pre- and post-award functions in a service-oriented unit focused on quality of effort, streamlined processes, and reduced administrative burden. This enhanced outreach guarantees faculty the flexibility and support they need to focus on their research.

**Building Blocks For Success – Life Cycle of Your Award**

Successful sponsored research follows a trajectory from initial concept and development of a competitive proposal, to negotiating and setting up the award in Temple business systems, through administrative and financial management of the award, and submission of final reports to the sponsor.

The Research Administration division acts as the institutional representative for grants, contracts, and other types of agreements that establish partnerships, provide services, and sponsor research activities with external entities. Pre- and Post-Award teams anchor these building blocks for research excellence at Temple.

The division’s pre- and post-award teams deliver start to finish support and consultation over the life cycle of an award. Team members work closely with school/college/department business administrators to review and submit proposals, as well as provide financial oversight of sponsored awards from inception to closeout. While maintaining a collaborative model of stewardship among all Temple University faculty and staff, the division’s primary goal is to support sponsored research by providing exceptional service, expertise, and education to university stakeholders.
Support for the Life Cycle of Your Award – PRE-AWARD
https://research.temple.edu/research-administration/pre-award-management

The pre-award team has oversight and coordination of the proposal preparation, review, and submission process, working to ensure success and compliance throughout all phases of a sponsored project. In addition to the Vice President for Research, this team serves as key resources for faculty, school/college/department business administrators, and associate deans for research.

Experienced grants and contracts specialists:
- provide information on specific funding entities
- review and interpret external sponsor guidelines
- advise on budget development/modification
- execute electronic proposal submission
- process award notifications
- review contracts
- facilitate account set up.

They also develop and offer training on new sponsor requirements and processes for faculty, technical and administrative staff, and research personnel.

Guidelines and Resources: What You Need To Know
https://research.temple.edu/research-administration/pre-award-management/key-guidelines-resources

Preparing your research proposal involves knowledge of university procedures, coordination of administrative information and familiarity with agency guidelines, regulations, and application forms. The link above will help you effectively navigate these areas to obtain current and essential information. Here you will find university policies on principal investigator eligibility, approved University rates used for budgeting, as well as a best practices guide and updates for the proposal submission process.

Policy and application guides for major federal agencies such as the National Institutes of Health and the National Science Foundation are also available at this site.

Funding For Your Project
https://research.temple.edu/grants/key-guidelines-resources/funding-your-project

As a Temple researcher, you have a vast array of funding portals to support and augment your research. Many funding portals can be found at the above link. Temple subscribes to national databases such as:

- PIVOT/COS: https://www.cos.com/
- SPIN: https://era.temple.edu/tu_login/login.asp. SPIN is accessed by logging into the ERA platform with your Temple credentials (AccessNet ID and password). After you are in ERA, you will click on the Find Funding link in the dashboard. This will take you to the main SPIN search platform.

Temple supports access to free government sites, including:

Proposal Development: Preparation, Review and Submission

All proposals for sponsored research must be prepared within Temple’s interactive research portal called Electronic Research Administration era@temple.edu. Principal investigators cannot submit applications directly.

Questions about the following issues may be directed to your grants and contracts specialist:

- PI Eligibility
- LOI submission processes
- White paper submission processes
- Institutional limits for responding to a specific call for proposals or grant program
- How to apply for fellowship opportunities
- Grant submission documentation and certification requirements
- Information about how to involve a collaborating institution on a grant
- Information on how to develop a subcontract or consultant agreement for a grant submission
- Requests for waivers related to grant elements that must be approved by the Vice President for Research.

The current listing of grants and contracts specialists, along with their portfolio assignments, can be found here.

Quick Reference Guide for Proposal Development

This Quick Reference Guide, plus the 10 Easy Steps chart, will help you start the proposal development process.

1 Prepare to Apply

Find funding opportunity
- Register for Pivot/COS: https://www.cos.com/
- Identify an opportunity: https://research.temple.edu/grants/key-guidelines-resources/funding-your-project

Create or update profiles in electronic systems
Update profiles in NIH eRA Commons, NSF Fast lane, NASA NSPIREs, Temple ERA: https://research.temple.edu/grants-forms-and-templates

Update training
Temple ERA trainings and webinars are offered periodically, and system-specific trainings can be provided as needed: https://era.temple.edu/tu_login/login.asp

2 Develop Proposal

Prepare proposal
- Log-in to Temple ERA: https://era.temple.edu/tu_login/login.asp.
- Refer to sponsor’s guidelines for content and formatting
- Notify department administrator and grants and contract specialist. Provide a link to RFP or program requirements.
• Plan accordingly to comply with Temple’s internal 5-day and 2-day submission deadlines.
• Notify Corporate and Foundation Relations if sponsor/agency is an industrial or foundation entity:

Acquire and complete required forms
• Download the funding opportunity in Temple ERA Proposal Development Module.
• Complete all required elements for the proposal submission.

Questions? Contact your grants and contracts specialist:
https://research.temple.edu/grants/contact

3 Acquire Approvals

Complete the Electronic Compliance and Commitments Approval Form (eSPAF: electronic Sponsored Programs Approval Form)
https://era.temple.edu/tu_login/login.asp

Obtain signatures on eSPAF through approval routing in Temple ERA
The eSPAF will electronically route to responsible parties for review and approval: PI, co-investigator, department administrator, department chair or center director, dean’s office, corporate and foundation relations, and research administration.

Complete all required administrative forms for approval routing, along with the eSPAF.

4 Route to Research Administration

Route signed proposal to Research Administration for review and approval
• Research Administration provides the final University-authorized signature.
• Be sure to allow enough time for review. Complex proposals, proposals involving multiple departments or institutions, certain Requests For Proposals (RFP) or proposals that involve cost sharing may take longer to review.

Routing Proposals for Electronic Submission
• Complete, final and electronically signed administrative portions of all grant and contract proposals must be uploaded in Temple ERA and routed to Research Administration by noon no less than 5 full business days before the sponsor’s deadline.
• Complete and final scientific narrative portion of all proposals must be uploaded in Temple ERA and routed to Research Administration by noon no less than 2 full business days before the sponsor’s deadline. Exceptions are based on a waiver request from the Dean to the Vice President for Research.

5 Submit to Sponsor

Electronic proposals: Research Administration will submit to sponsor.

Hard copy proposals: Research Administration will notify the department for pickup; department will mail to sponsor.
For assistance with proposal development, contact your Grants and Contracts Specialist; for technical assistance with the electronic submission platform, contact era@temple.edu.

**Collaboration With Corporate and Foundation Relations**

Research-related activities that involve corporate grants and contracts also come under the purview of Research Administration. The Office of Corporate and Foundation Relations (CFR) is responsible for the solicitation of private sector development funds from corporations, foundations, associations, and individuals. Therefore, all proposals for sponsored projects to private foundations and corporations must be coordinated with and receive approval from both Research Administration and Corporate and Foundations Relations.

**Support for the Life Cycle of Your Award – POST-AWARD**

https://research.temple.edu/post-award-management

Receiving an award for your research or scholarship is exciting and a wonderful validation of your hard work. What comes next? Temple has designated the Research Administration post-award team with responsibility for the financial management of externally sponsored awards through policies and procedures that promote integrity, transparency, and accountability. Faculty, as principal investigators, along with their school/college/department research business managers, join the post-award team in a coordinated effort to stand up grants, contracts, clinical agreements, and other sponsored activities. The post-award team monitors each award as it moves through its life cycle, while the principal investigator and department business staff administer and monitor daily operational transactions.

**What Happens When Your Award Arrives**

https://research.temple.edu/grants/processing-awards

Post-award grant and contract administration begins when the university receives notification of the award. The pre-award team executes award negotiation, acceptance, and review of compliance terms, then turns the project over to the post-award team which continues the process through required award set-up, reporting, financial reconciliation, and closeout functions.

Skilled grant analysts and financial and accounts receivable managers conduct these core functions:

- award set-up
- draw down of federal funds
- financial reporting
- cash management
- effort reporting oversight
- subrecipient monitoring
- invoicing
- cost studies and rate negotiation
- award closeout
- audits.

**Award Set-Up**

The post-award team sets up award accounts for all sponsored awards in Temple's institutional financial system (Banner). This includes determining the appropriate Facilities and Administrative (F&A) rate and base for system calculations and confirming a detailed budget to ensure costs are allocated and monitored per sponsor terms and conditions. The Principal Investigator and respective administrative department are responsible for charging expenditures to the account in accordance with the award budget and sponsor terms and conditions. The post-award grant analyst assigned to an award assists both the faculty researcher and business manager with navigating the university's financial systems and answering expenditure-related questions.

Award Set-Up Steps:
• Research Administration receives official notice of award and sends copy to principal investigator
• Grants and contracts specialist reviews terms and conditions, including any conditional restrictions
• Grants and contracts specialist reviews for internal compliance with all regulatory requirements, such as conflict of interest certification, human subject or animal research protocols
• Grants and contracts specialist develops and executes any contracts or subcontracts, as necessary
• Pre-award team approves entire award package for post-award team issuance of account number - called a FOAPAL
• Principal investigator and department business staff receive the FOAPAL; work on the project can officially begin
• Post-award monitoring and management continues throughout the award life cycle.

Post Award Process

Financial Monitoring and Management For Your Project

During the course of the award grant analysts and financial managers review and approve financial transactions such as purchase orders, equipment purchases, check requests, travel expenditures, faculty summer pay, and journal entries. In addition, post-award responsibility extends to effort reporting (ERS), a process mandated by the federal government to verify direct labor charges are accurate, timely and reflect the actual level of work performed.
Starting Your Research Program

Other functions include the negotiation of the F&A rate proposal, which involves organizing and preparing documentation on expenditure and space utilization analyses; the Employee Fringe Benefit proposal; calculation of internal service centers; and the Single Audit Report. Auditable records in support of the direct and indirect charges to grants, contracts, and other sponsored agreement also are maintained.

Financial compliance with all external regulations and university policies and procedures is a key component for all sponsored awards. All expenses charged to a project must be:

- **Allowable** – those costs that are necessary and reasonable; conform to any limitations or exclusions in the terms of the award; are consistently treated and adequately documented.
- **Allocable** – A cost is allocable if the goods or services are chargeable or assignable in accordance with relative benefits received.
- **Reasonable** – a cost is reasonable if, in its nature and amount, it does not exceed that which would be incurred by a prudent person under the circumstances prevailing at the time the decision was made to incur the cost.

**Invoices and Reports**

Invoices are generated and submitted to sponsor agencies on a schedule verified in the terms and conditions of each award. Cost reimbursable invoices are generated from the financial system and reflect the allowable expenses posted in the invoicing period. Fixed price invoices are manually generated when the associated milestone is achieved and reflect the amount required to be invoiced. The associated accounts receivable amount is generated in the system when the invoice is processed.

Financial reports are completed by the grant analyst team per the terms and conditions of each award. Reports are based on the allowable expenses posted in the financial system for the reporting period. Unless otherwise required by the terms of the award, a cursory review of F&A, fringe, and unallowable expenses are performed for interim invoices and reports and an in-depth reconciliation is performed for the final invoice or report at the time of closeout.

**Accounts Receivable**

Receivables are tracked per award. Receivables under 90 days are reviewed by the grant analyst when subsequent invoices are generated. The Accounts Receivable analyst reviews all receivables that have aged more than 90 days. Collection letters are sent to sponsors with an outstanding payment greater than 120 days and continue until there is resolution. Payments outstanding by more than 180 days are evaluated for write-off.

**Cash Management**

Letter of Credit (LOC) draws are completed for federal sponsors on a scheduled basis. For Temple’s highest expenditure portfolio of federal sponsors, draws are completed on a weekly basis. For the remaining portfolio of sponsors, draws are completed monthly. Cash is drawn per award and applied to each project. LOC draws are tracked on a central spreadsheet that is reconciled to the general ledger and are managed by the financial managers.

For non-LOC payments, checks are received through a central lockbox and are applied to each award; wire payments are deposited into a clearing account.

**Subrecipient Monitoring**

All outgoing subawards and associated audit information are recorded in a central database. Subaward invoices are collected from the subrecipient by the award’s associated department administrators. The post-award financial managers review and approve all invoices for payment.

**Closeout**

The closeout process begins 90 days before the award end date. At 30, 60, and 90 days before the award is set to end, the grant analyst sends notifications to the associated department administrator and principal investigator regarding preparation for reconciliation of final expenditures. After the award end date, the grant analyst completes a final reconciliation in coordination with the department administrator and principal investigator to determine final expenses that must be reported. Reconciliation includes the removal of all unallowable costs, overdrafts, or residual balances from the account. After submission of the final report or invoice to the sponsor and sign off from management, the account is closed in Temple’s financial system. No further activity is permitted on the account.
Facilities and Administrative Rates and Costs
https://research.temple.edu/research-administration/post-award-management/university-negotiated-rates

What are Facilities and Administrative Rates?
Facilities and Administrative (F&A) rates, also known as indirect costs or overhead, support claims for infrastructure costs that are not directly related to a funded grant or contract but are required to conduct the research and are essential to the success of the project.

The F&A rate agreement is the mechanism used to recover these infrastructure costs. Temple's post-award team negotiates all F&A cost rates with the federal Department of Health and Human Services, the agency designated to negotiate indirect cost recovery rates for most federal grants and contracts. Temple supplies federal auditors with information on its actual expenditures for research, instruction, and public service as part of the rate negotiation process. The agreement also includes negotiated fringe benefit rates to be applied to sponsored projects. To collect F&A, the post-award team adds the negotiated F&A rate to invoices or other billing instruments submitted to sponsors.

Temple’s current rate for externally funded, organized research on-campus is 58.5%. There are several other negotiated F&A rates, depending on the type of project. They are: instruction (58.5% on-campus, 26% off-campus) and other sponsored research (public service and other) (39.4% on-campus, 26% off-campus). These percentages change periodically; check with Research Administration to obtain the current rate. Requests to waive the negotiated F&A rate must be approved by the Vice President for Research.

Off-campus rates cover projects located in facilities not owned by the university. These rates are lower than on-campus rates because the average off-campus investigator will not use campus lab space, heat, lights, and other university resources. Off-campus rates also cover those awards where more than 50% of the research is being completed off-campus.

What kinds of expenditures are included in the F&A computation? There are six classes of expenditures that go into the computation of the F&A or indirect cost rate. They are:

- General administrative costs (Provost’s Office, personnel, payroll, accounting; etc.)
- Departmental administrative costs (staff time, Dean’s office, faculty time in administration, and fringe benefits on those personnel costs)
- Sponsored programs administration
- Operation and maintenance of physical plant (security, custodial care, utilities, building depreciation, et al)
- Library services
- Student services

What are Facilities and Administrative Costs?
F&A costs are broad categories of costs. They are typically incurred for common or joint objectives and cannot be readily and specifically identified with a particular sponsored project, instructional activity, or any other institutional activity. Facilities operation and maintenance costs, depreciation, and administrative expenses are examples of standard F&A costs.

F&A costs are defined in 2-CFR-200 Section §200.420 as costs that are "incurred for common or joint objectives and therefore cannot be identified readily and specifically with a particular sponsored project, an instructional activity, or any other institutional activity."

For sponsored research award budgets, indirect costs are typically calculated as a fraction of Modified Total Direct Costs (MTDC). This includes nearly all research expenditures except equipment over $5,000 and large subcontracts over $25,000. Therefore, using Temple’s current F&A rate of 58.5%, if a research project has a direct cost budget of $150,000 of which $50,000 is for equipment, the MTDC would be $100,000 ($150,000 - $50,000) and the indirect cost would be $58,500 ($100,000 x 58.5%).

Effort Reporting System
Federal and University Requirements
Federal government regulations require that institutions receiving federal funds for sponsored projects maintain an effort reporting system that complies with the requirements set forth in the Office of Management and Budget (OMB) Uniform Guidance 2 CFR Part 200. Effort is defined as the time faculty and staff spend conducting institutional business and is expressed as a percentage of an employee’s total time worked.

Under OMB 2-CFR-200 Section §200.430 compensation for personal services includes all remuneration, paid currently or accrued, for services of employees rendered during the period of performance under the federal award, including but not necessarily limited to wages and salaries as well as be supported by a system of internal control which provides reasonable assurance that the charges are accurate, allowable, and properly allocated.

Effort reporting is used to establish Temple’s process to determine and document faculty and staff effort expended on sponsored projects during regular reporting periods. Individuals whose compensation is directly charged, in whole or in part, to a sponsored project or whose compensation is cost-shared on a sponsored project must confirm or certify their effort allocation on each federal award to provide reasonable assurance of its accuracy.

Effort reports must account for 100% of an employee’s total university effort. This includes research, teaching, administration, clinical activity and any other activity for which an individual receives compensation of salary, wages, supplementary salaries and overloads (but not bonuses) from the university.

Activity that is not contained in the total university effort, such as outside consulting, is not included in the university’s effort reporting process. Activity shown in effort reports must be reasonable, allowable and allocable in order to be properly charged and verified to a sponsored project. Effort on sponsored projects is expressed as a percentage distribution of the individual’s total university effort. Each percentage must reasonably agree with the actual effort devoted to each activity. The verified effort report documents the allocability of payroll charges for each activity listed on the effort report for the period being verified.

Temple University is an “after-the-fact” institution, where effort reporting occurs after the work has been performed. Effort reports for full-time personnel and faculty in the Lewis Katz School of Medicine and the College of Public Health are issued and certified on a quarterly basis, and in each semester for the rest of the university faculty and staff. Temple University utilizes the Maximus Effort Reporting System (ERS), a web-based system with electronic routing and e-mail notifications for updating and certifying effort. Effort reports are generated with data extracted from the Banner Payroll system. They are reviewed and managed by the post-award Effort Coordinator, who works with faculty and department administrators to ensure timely and accurate completion.

Who is required to verify effort?
All employees who have salaries charged to a federally-sponsored project or who have effort on a sponsored project are required to complete effort reports. Effort reports are automatically generated for individuals who have had salary charged to a sponsored agreement during the quarter or semester. Faculty/PIs are responsible for certifying their own effort reports and those of the graduate students and post-docs working on the faculty member’s grants.

Effort reporting is essential for the proper allocation of salary expenses to sponsored agreements. As such, the integrity of the university’s effort reporting process is of the utmost importance.

Here is a snapshot of how effort reporting works at Temple.

https://research.temple.edu/effort-reporting
Starting Your Research Program

Effort Reporting System Cycle

**Points of Contact: Research Administration**

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<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allison Philabaum Shah</td>
<td>Associate Vice President for Research Administration</td>
<td>215-926-2088</td>
<td><a href="mailto:allison.shah@temple.edu">allison.shah@temple.edu</a></td>
</tr>
<tr>
<td>Karen D. Mitchell, MBA</td>
<td>Assistant Vice President for Research Administration</td>
<td>215-707-7547</td>
<td><a href="mailto:karen.mitchell@temple.edu">karen.mitchell@temple.edu</a></td>
</tr>
<tr>
<td>Christine Blewett</td>
<td>Senior Grants and Contracts Specialist</td>
<td>215-707-8388</td>
<td><a href="mailto:cblewett@temple.edu">cblewett@temple.edu</a></td>
</tr>
<tr>
<td>Angie Calicat, MLA</td>
<td>Grants and Contracts Specialist</td>
<td>215-707-9227</td>
<td><a href="mailto:gcalicat@temple.edu">gcalicat@temple.edu</a></td>
</tr>
<tr>
<td>Name</td>
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</tr>
<tr>
<td>Adria Colquitt</td>
<td>Lead Grant Analyst</td>
<td>215-926-2063</td>
<td><a href="mailto:adri@temple.edu">adri@temple.edu</a></td>
</tr>
<tr>
<td>Jeanne C. Daniels, MBA</td>
<td>Special Projects Coordinator</td>
<td>215-926-2053</td>
<td><a href="mailto:jeanne.daniels@temple.edu">jeanne.daniels@temple.edu</a></td>
</tr>
<tr>
<td>Caristine Earl-Prince</td>
<td>Director, Post-Award Specialist</td>
<td>215-926-2057</td>
<td><a href="mailto:caristine.earl-prince@temple.edu">caristine.earl-prince@temple.edu</a></td>
</tr>
<tr>
<td>Sherri Gibbs</td>
<td>Grants and Contracts Specialist</td>
<td>215-707-3106</td>
<td><a href="mailto:sherri.gibbs@temple.edu">sherri.gibbs@temple.edu</a></td>
</tr>
<tr>
<td>Sylvian Garbutt</td>
<td>Grant Analyst</td>
<td>215-926-2036</td>
<td><a href="mailto:sylvian.garbutt@temple.edu">sylvian.garbutt@temple.edu</a></td>
</tr>
<tr>
<td>Quadirah Green</td>
<td>Grants and Contracts Specialist</td>
<td>215-707-3391</td>
<td><a href="mailto:qbgreen@temple.edu">qbgreen@temple.edu</a></td>
</tr>
<tr>
<td>Iqbal Khan</td>
<td>Grant Analyst</td>
<td>215-926-2055</td>
<td><a href="mailto:iqbalkhan@temple.edu">iqbalkhan@temple.edu</a></td>
</tr>
<tr>
<td>Fatimah Knight</td>
<td>Lead Accounts Receivable Analyst</td>
<td>215-926-2054</td>
<td><a href="mailto:fatimah.knight@temple.edu">fatimah.knight@temple.edu</a></td>
</tr>
<tr>
<td>Michele L. Mai, MBA</td>
<td>Accounts Receivable Manager</td>
<td>215-926-2014</td>
<td><a href="mailto:michele.mai@temple.edu">michele.mai@temple.edu</a></td>
</tr>
<tr>
<td>Karee McFarlane</td>
<td>Senior Grant Analyst</td>
<td>215-926-2026</td>
<td><a href="mailto:karee.mcfarlane@temple.edu">karee.mcfarlane@temple.edu</a></td>
</tr>
<tr>
<td>Cameron Milton</td>
<td>Senior Grants and Contracts Specialist</td>
<td>215-707-9654</td>
<td><a href="mailto:cameron.milton@temple.edu">cameron.milton@temple.edu</a></td>
</tr>
<tr>
<td>Daniel Nguyen</td>
<td>Grant Analyst</td>
<td>215-926-2056</td>
<td><a href="mailto:daniel.nguyen@temple.edu">daniel.nguyen@temple.edu</a></td>
</tr>
<tr>
<td>John Penner</td>
<td>Senior Grants and Contracts Specialist</td>
<td>215-707-3887</td>
<td><a href="mailto:john.penner@temple.edu">john.penner@temple.edu</a></td>
</tr>
<tr>
<td>Teah Taylor</td>
<td>Compliance Manager</td>
<td>215-926-2051</td>
<td><a href="mailto:teah.taylor@temple.edu">teah.taylor@temple.edu</a></td>
</tr>
<tr>
<td>Elysa Weiss, MBA</td>
<td>Senior Grants and Contracts Specialist</td>
<td>215-707-4831</td>
<td><a href="mailto:elysa.weiss@temple.edu">elysa.weiss@temple.edu</a></td>
</tr>
</tbody>
</table>

**Location**
Research Administration
TASB: Temple Administration Services Building
2450 West Hunting Park Avenue (physical address)
1852 N. 10th Street (mailing address)
Philadelphia PA 19122
grantsmanagement@temple.edu
ras@temple.edu
Research Compliance aims to ensure that all research activities at Temple University are conducted in a responsible and ethical manner in alignment with the guidelines and regulations of the university, government, and funding agencies. Compliance specialists provide scientific, regulatory, and ethical consultation for faculty, research teams, research regulatory committees, staff, and other partners in coordination with Temple’s Vice President for Research, who serves as the university’s Institutional Official.

Temple’s strong compliance culture is reinforced through policies, programs, and committees that assure all investigators achieve and maintain ethical practices and comply with federal, state, and university regulations overseeing research. Compliance requirements govern an individual researcher’s work, as well as mentoring/instruction programs for students and laboratory research staff. Temple’s compliance team strives to provide the best quality service to faculty and research investigators to understand these guidelines and regulations so that they can successfully implement their programs of research.

The university’s compliance regulatory framework supports and assists faculty in interpreting laws and understanding the requirements that pertain to work covering these areas:

- Institutional Review Board (IRB)
- Institutional Animal Care and Use Committee (IACUC)
- Institutional Biosafety Committee (IBC)
- University Laboratory Animal Resources (ULAR)
- Environmental Health and Radiation Safety (EHRS)
- Conflict of Interest Program (COI)
- Responsible Conduct of Research/Research Misconduct
- Export Controls

### Research Compliance at Temple University

This chart illustrates eight categories of research compliance and the guidelines that pertain to each as a reference for investigators.

<table>
<thead>
<tr>
<th>Institutional Review Board (IRB)</th>
<th>Conflict of Interest Main Campus/TUHS</th>
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<td>FDA/HHS/OHRP</td>
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<th>Environmental Health and Radiation Safety (EHRS)</th>
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<td>NRC/DEP</td>
<td>37 CFR 401.14(A) 35 U.S. CODE 203</td>
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The mission of Temple University’s Human Research Protection Program (HRPP) is to protect the rights, dignity, and welfare of human subjects who participate in the research programs of the Temple system. Specifically, the HRPP has authority over all human subjects research conducted using any property or facility of Temple and under the direction of any employee, student or agent of Temple. This authority extends to Temple University Hospital System employees, who must submit human subjects research to HRPP. The Institutional Review Board (IRB) reviews human subjects research. The activity has to be considered “research” and has to involve “human subjects” for the IRB to review it.

The Department of Health and Human Services’ (DHHS) definition of research is “a systematic investigation…designed to develop or contribute to generalizable knowledge.”

This definition is broken down as follows:

1. Investigation – a searching inquiry for facts; detailed or careful examination;
2. Systematic – having or involving a system, method, or plan;
3. Knowledge – truths, facts, information;
4. Generalizable – widely applicable.

Human subjects research at Temple is reviewed via three methods: a convened IRB; expedited review; or exempt review. Please note that the determination for exemption is made by the IRB Committee based on the HRPP, not the investigator, and therefore must always be submitted formally.

**Quick and Easy: Eight Steps to the IRB Process**

1. **Determine if the Study Requires IRB Review**
   - The Human Research Determination Worksheet¹ can be used to help determine if a study meets the regulatory definition of Human Subjects Research.
   - For questions about whether an activity is Human Research, submit a 2-3 paragraph synopsis to: irb@temple.edu.

2. **Completing IRB Educational Requirements at Citiprogram.org:**
   - The “Biomedical Research Investigators” OR “Social & Behavioral Research Investigators” course, depending on the proposed research
   - The “Practice Runs Training” course

   Instructions on how to create an account and complete the required courses can be found here: citi_directions Updated 17Mar17.doc²

3. **Prepare for IRB Submission**

   Investigators developing a new research project will need to develop a protocol and other study documents as appropriate (e.g. consent, recruitment materials, data collection instruments, etc.). Protocol and consent templates are located at the IRB website’s Quick Links page³.
Starting Your Research Program

Submission to the IRB

Submit to the IRB via ERA by logging on with your TU Accessnet username and password and following the prompts.

- IRB submission is completed via the “My Human Subjects” tab within ERA. Instructions can be found on the Temple’s “Training Tutorials & Documentation” page.
- The application form for Initial Review is an e-form, and it is located within the ERA platform. It must be completed and be consistent with all other study documents for the IRB to review the proposal.

IRB Review

Once the IRB receives the application for human subjects research, the IRB determines which of the following four categories the proposal belongs to: Not Human Subjects Research, Research Deemed Exempt from continuing review, Expedited Review (review type does not mean speed of review) and convened Full Board IRB Review.

Modifications Required to Secure Approval

- The IRB occasionally requires additional modifications to approve a protocol. This is not the same as a Modification.
- Researchers are required to submit requested modifications to the IRB within 90 days of receiving notice.
- The response process is described in this pdf, located on the IRB website’s “Training Tutorials & Documentation.”

Post Approval Submissions

- After initial IRB approval, researchers are required to submit the following (when applicable): Modifications, Continuing Reviews, Reportable New Information, and Closures.
- Modifications (changes to the protocol or other study documents and forms) cannot be implemented prior to IRB approval.
- Submit Continuing Reviews at least annually.
- Report information meeting the criteria of Reportable New Information within five days. See HRP 801- Prompt Reporting Requirements at research.temple.edu/irb under “IRB Forms & Standard Operating Procedures.”

Investigator Obligations

The Principal Investigator (PI) is responsible for assuring compliance with applicable IRB policies and procedures, DHHS regulations, FDA regulations, and oversight of the study. The PI will often delegate duties to members of the research team, but the PI retains the ultimate responsibility for the conduct of the study (true even if it is student research). See HRP 800 – Investigator Obligations on the IRB website (research.temple.edu/irb) under “IRB Forms & Standard Operating Procedures.”
Reference links:
2. https://research.temple.edu/research-compliance/institutional-review-board-irb/irb-trainings-and-resources
5. https://www.temple.edu/research/researchadmin/era/era_login.asp

Points of Contact: Research Compliance/IRB Staff and Chairpersons

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Phone</th>
<th>Email</th>
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</thead>
<tbody>
<tr>
<td>Michael B. Henderson, JD, LLM, MS</td>
<td>Associate Vice President for Research Regulatory Compliance and Strategic Initiatives</td>
<td>215-707-9192</td>
<td><a href="mailto:michael.henderson@temple.edu">michael.henderson@temple.edu</a></td>
</tr>
<tr>
<td>La'Shay Cobb, MBA, CCRP</td>
<td>IRB Assistant Director</td>
<td>215-707-1248</td>
<td><a href="mailto:lashay.cobb@temple.edu">lashay.cobb@temple.edu</a></td>
</tr>
<tr>
<td>David Comalli, PhD</td>
<td>IRB Program Coordinator</td>
<td>215-707-7792</td>
<td><a href="mailto:david.comalli@temple.edu">david.comalli@temple.edu</a></td>
</tr>
<tr>
<td>Casey Madden</td>
<td>IRB Program Coordinator</td>
<td>215-707-2678</td>
<td><a href="mailto:casey.madden@temple.edu">casey.madden@temple.edu</a></td>
</tr>
<tr>
<td>Edgardo Parrilla</td>
<td>IRB Program Coordinator</td>
<td>215-707-7145</td>
<td><a href="mailto:Edgardo.parrilla@temple.edu">Edgardo.parrilla@temple.edu</a></td>
</tr>
<tr>
<td>Maureen McIlhinney</td>
<td>Associate IRB Coordinator</td>
<td>215-707-1293</td>
<td><a href="mailto:reene@temple.edu">reene@temple.edu</a></td>
</tr>
<tr>
<td>John Daly, MD, FACS</td>
<td>Chair, Biomedical, Social &amp; Behavioral Board</td>
<td>215-707-3390</td>
<td><a href="mailto:irb@temple.edu">irb@temple.edu</a></td>
</tr>
<tr>
<td>Zebulon Kendrick, PhD</td>
<td>Vice Chair, Biomedical, Social &amp; Behavioral Board</td>
<td>215-707-3390</td>
<td><a href="mailto:irb@temple.edu">irb@temple.edu</a></td>
</tr>
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</table>

Location
Institutional Review Board
HSC: Health Sciences Center Campus
Student Faculty Conference Center, Suite 427
3340 N. Broad Street Philadelphia PA 19140
irb@temple.edu
Institutional Animal Care and Use Committee (IACUC)
http://research.temple.edu/iacuc

Temple University’s Institutional Animal Care and Use Committee (IACUC) regulates and monitors all university research and teaching involving animal subjects. This committee ensures compliance with all federal and state regulations for the humane care and use of animals in teaching and research, including the provisions of the Animal Welfare Act and Animal Welfare Regulations and the PHS Policy on Humane Care and Use of Laboratory Animals.

Temple’s IACUC is the research community’s resource for expert guidance on conducting animal use procedures with the highest level of scientific and ethical principles and assistance with the protocol review process. Key functions include:

- Review protocols that involve the use of live animals
- Review entire animal care program every six months
- Inspect all animal facilities and lab areas every six months
- Address animal welfare concerns
- Report instances of non-compliance and recommend corrective action.

IACUC membership includes Temple faculty and staff, as well as non-Temple community members who represent the public interest. The committee also includes a scientist who uses animals in research, a non-scientist, and veterinarians whose responsibility is to ensure that the animal care and use program at Temple University meets federal regulations and standards.

IACUC administrative staff assist with processing protocol submissions, communication between the committee and investigators, and review of training. IACUC staff also conduct pre-reviews and execute post-approval monitoring. Investigators who intend to use animal subjects in any type of research or teaching activity should contact the IACUC office to get started. Investigators will need to complete the Animal Care & Use Procedure (ACUP) form and submit it to the IACUC office for review. If the study involves the use of recombinant DNA or hazardous drugs/chemicals, plan ahead to submit for Institutional Biosafety Committee (IBC) approval before submitting the ACUP for review. Necessary forms can be downloaded from the IACUC website, under the Forms heading.

The IACUC meets the first Friday of every month, unless there is a conflict with holidays. In order to receive full committee review, protocol submission must be sent to the IACUC two weeks before each meeting. Specific dates of meetings and deadlines are listed on the IACUC website. FAQs can be found here.

Essential Resources – These and other policies, guidelines, and operating procedures can be found on the IACUC website.

1. AAALACi – Association for Assessment and Accreditation of Laboratory Animal Care International - https://www.aaalac.org/
2. AALAS – American Association for Animal Laboratory Science - https://www.aalas.org/
6. Temple’s Research Compliance IACUC Website - https://research.temple.edu/iacuc
7. Temple’s University Laboratory Animal Resources Website – https://research.temple.edu/research-compliance/university-laboratory-animal-resources
Points of Contact: Research Compliance/IACUC Staff and Chairperson

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<th>Name</th>
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<tr>
<td>Michael B. Henderson,</td>
<td>Associate Vice President for Research</td>
<td>215-707-9192</td>
<td><a href="mailto:michael.henderson@temple.edu">michael.henderson@temple.edu</a></td>
</tr>
<tr>
<td>JD, LLM, MS</td>
<td>Regulatory Compliance and Strategic</td>
<td></td>
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<td></td>
<td>Initiatives</td>
<td></td>
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</tr>
<tr>
<td>Jennifer Ippolito</td>
<td>IACUC Assistant Director</td>
<td>215-707-7263</td>
<td><a href="mailto:jennifer.ippolito@temple.edu">jennifer.ippolito@temple.edu</a></td>
</tr>
<tr>
<td>Elizabeth Murner</td>
<td>IACUC Program Coordinator</td>
<td>215-707-5677</td>
<td><a href="mailto:elizabeth.murner@temple.edu">elizabeth.murner@temple.edu</a></td>
</tr>
<tr>
<td>Ellen Unterwald, PhD</td>
<td>IACUC Chair</td>
<td>215-707-1681</td>
<td><a href="mailto:ellen.unterwald@temple.edu">ellen.unterwald@temple.edu</a></td>
</tr>
</tbody>
</table>

Location
Institutional Animal Care and Use Committee
HSC: Health Sciences Center Campus
Student Faculty Conference Center, Suite 427
3340 North Broad Street Philadelphia PA 19140
iacuc@temple.edu

Institutional Biosafety Committee (IBC)
https://research.temple.edu/welcome-institutional-biosafety

The Institutional Biosafety Committee (IBC) facilitates review of research involving recombinant DNA (rDNA), synthetic nucleic acid molecules, infectious agents and other hazardous biological agents conducted at, or sponsored by, Temple University. As Temple receives funding from the National Institutes of Health (NIH) for rDNA/synthetic nucleic acid research, the university is required to establish and register an Institutional Biosafety Committee (IBC) with the NIH Office of Biotechnology Activities (OBA) in assurance with the NIH Guidelines for Research involving rDNA/synthetic nucleic acid and meet other applicable regulations and standards.

A broad array of available research and regulatory expertise is important for the IBC. The National Institutes of Health (NIH) requires that the IBC have at least five members who collectively have the experience, expertise, and capability needed to assess the breadth and safety of recombinant DNA and synthetic nucleic acid molecules, as well as other biological materials, agents, and organisms as needed to identify any potential risks to workers, public health, or the environment.

The IBC meets the third Tuesday of every month. Protocol submissions must be submitted to the IBC two weeks before the meeting. Protocol renewals and amendments are reviewed regularly throughout the year as well.

How to Obtain IBC Approval
- Send the IBC registration form and associated documents to ibc@temple.edu;
- Expect a confirmation of receipt;
- Provide additional materials if requested;
- IBC review decision emailed within 48 hours of monthly meeting.

Post Review Process
- Approved – no changes necessary;
- Conditional Approval – requires revision, but not another IBC meeting review; or
- Deferred – must be resubmitted for the next IBC meeting for another full review.
To determine if your research needs IBC Registration:
• Contact the IBC office – ibc@temple.edu – 215-707-9741;
• Contact the Senior Biosafety Officer – ehrs@temple.edu; or

Get Started
More detailed information on the IBC review process and IBC registration and training programs can be found at the links below.

Institutional Biosafety Forms and Standard Operating Procedures (SOPs)
https://research.temple.edu/institutional-biosafety-forms-standard-operating-procedures

Biosafety Resources
https://research.temple.edu/biosafety-resources.

Points of Contact: Research Compliance/IBC Staff and Chairperson

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<td><a href="mailto:michael.henderson@temple.edu">michael.henderson@temple.edu</a></td>
</tr>
<tr>
<td>Mary B. Pultro</td>
<td>IBC Coordinator</td>
<td>215-707-9741</td>
<td><a href="mailto:marybp@temple.edu">marybp@temple.edu</a></td>
</tr>
<tr>
<td>Artur Slupianek, PhD</td>
<td>Biosafety Officer, Environmental Health and Radiation Safety</td>
<td>215-707-3198</td>
<td><a href="mailto:aslupian@temple.edu">aslupian@temple.edu</a></td>
</tr>
<tr>
<td>Thomas Rogers, PhD</td>
<td>IBC Chair</td>
<td>215-707-3215</td>
<td><a href="mailto:thomas.rogers@temple.edu">thomas.rogers@temple.edu</a></td>
</tr>
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</table>

Location
Institutional Biosafety Committee
HSC: Health Sciences Center Campus
Student Faculty Conference Center, Suite 427
3340 N. Broad St. Philadelphia, PA 19140
ibc@temple.edu
The University Laboratory Animal Resources (ULAR) unit provides for the care, health, and well-being of all research animals at the university. Emphasis is placed on providing creature comfort and environmental enrichment with minimization of pain and distress for animals used in research, testing, and education. A centralized ULAR office promotes increased quality control, efficiency, and coordination of service.

ULAR at Temple University consists of Central Animal Facilities (CAF) at both the Health Sciences Center (HSC) and the Main Campus (MC). They fall under the organizational direction of the university veterinarian, who is under the institutional direction of the Vice President for Research (VPR). ULAR serves the collective needs of the HSC and MC for supporting research, teaching and testing programs that employ the use of animals.

**ULAR Responsibilities**

- Daily oversight, husbandry, and veterinary care for all laboratory animals
- Maintenance of all associated animal facilities and related equipment
- Ordering, receiving, invoicing, and transportation of animals to and from commercial vendors and associated institutions
- Maintaining the sentinel program for animal health profiles and treatment regimens
- Record-keeping for controlled drugs and all USDA-regulated animals, including associate research procedures and subsequent archiving
- Maintaining a current armamentarium of drugs, supplies and operating equipment
- Training and instructional techniques for research personnel associated with approved protocols and animal research
- Continual operation of computer database system of all related animals on approved protocols
- Daily operation of the administrative offices to include, day-by-day animal census, monthly billing procedures and ongoing personnel and staff service.

**Standard Operating Procedures and Policies**

https://www.temple.edu/research/regaffairs/ular/ular_sop.asp

Here you will find ULAR guidance documents applicable across all central animal facilities at both the Main Campus and Health Sciences Center.

**eSirius**

https://www.temple.edu/research/regaffairs/ular/ular_esirius.asp

eSirius, Temple's on-line animal ordering system, offers these key services for investigators:

- Animal procurement – manages the complete animal workflow including order placement, receiving, vendor reconciliations, and cage card printing;
- Animal census – collects, reconciles, and reports census data using bar code and RFID data capture;
- RFID animal inventory – utilizes the latest RFID technology for collecting animal census data making census taking much faster and more frequent census calculations feasible;
- Services – sets up charges for individual services or service groups for electronic invoicing of animal care days, animal purchases, and invoicing.

Investigators will access the eSirius animal ordering system through an electronic portal using their Temple credentials.
### Points of Contact: Research Compliance/ ULAR

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<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Christopher Romines, DVM.</td>
<td>ULAR Director and University Veterinarian</td>
<td>215-707-1761</td>
<td><a href="mailto:chris.romines@temple.edu">chris.romines@temple.edu</a></td>
</tr>
<tr>
<td>Dawn Forste, DVM</td>
<td>Associate University Veterinarian</td>
<td>215-707-0761</td>
<td><a href="mailto:dawn.forste@temple.edu">dawn.forste@temple.edu</a></td>
</tr>
<tr>
<td>Joanne Drew</td>
<td>Manager, Central Animal Facilities</td>
<td>215-707-3173</td>
<td><a href="mailto:joannedrew@temple.edu">joannedrew@temple.edu</a></td>
</tr>
<tr>
<td>Tanya Bryant</td>
<td>Sr. Administrative Specialist</td>
<td>215-707-6006</td>
<td><a href="mailto:tanya.bryant@temple.edu">tanya.bryant@temple.edu</a></td>
</tr>
<tr>
<td>Lynette Oguntayo</td>
<td>Operations Manager</td>
<td>215-707-2530</td>
<td><a href="mailto:lynetteo@temple.edu">lynetteo@temple.edu</a></td>
</tr>
<tr>
<td>Lewis Bright, CLAT</td>
<td>Veterinary Technician</td>
<td>215-707-1245</td>
<td><a href="mailto:holtbright@temple.edu">holtbright@temple.edu</a></td>
</tr>
<tr>
<td>Shanna McAlaren, CVT</td>
<td>Veterinary Technician</td>
<td>215-707-7640</td>
<td><a href="mailto:shanna.mcalaren@temple.edu">shanna.mcalaren@temple.edu</a></td>
</tr>
<tr>
<td>Kimberly Gilmore, MLAS, RLAT</td>
<td>Sr. Veterinary Technician</td>
<td>215-707-1944</td>
<td><a href="mailto:kimberly.gilmore@temple.edu">kimberly.gilmore@temple.edu</a></td>
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### Locations

**ULAR**

**HSC:** Health Sciences Center Campus  
Central Animal Facility – Medical Education and Research Building  
3500 N. Broad St. Philadelphia, PA 19140  
215-707-3173  

**MC:** Main Campus  
Biology Animal Facilities – Biological Life Science (BLS) Building  
1900 N. 12th Street  
Philadelphia, PA 19122  
215-204-8856
Environmental Health and Radiation Safety Services (EHRS)
http://www.temple.edu/ehrs/

Scientific research often involves close work with hazardous chemicals, radioactive materials, radiation-producing equipment, chemicals, and other biological substances. Temple’s Environmental Health and Radiation Safety Department (EHRS) ensures the safe use of these materials at the university, Temple Hospital and affiliated institutions. While not a part of the OVPR administrative structure, EHRS works closely with the OVPR Research Compliance division to inform and educate Temple’s research community on incorporating best practices and safety measures as a critical component of all research projects.

EHRS identifies safety problems and initiates, recommends, or provides corrective actions. It also verifies implementation of corrective action and ensures compliance with regulations and University policies for the use of hazardous substances. EHRS has developed an informational form for new faculty to familiarize them with the university's policies and procedures, as well as its training requirements. Completing this form will help faculty prevent delays when seeking approval for research applications. The form can be accessed here: https://www.temple.edu/ehrs/safety/lab-safety/documents/newfacultyinformation.pdf.

Key EHRS Units

Safety: Each section of the EHRS website covers a particular kind of safety (areas listed below). In each section investigators will find policies and procedures, safety guides, forms, and much more information. These sections will be constantly be updated to reflect current federal, state, and local regulations, so please be sure to check whenever you have a question about safety.

- Art School Safety
- Biological Safety
- Chemical Safety
- Environmental Safety
- Healthcare Safety
- Lab Safety
- Laser Safety
- Nanotechnology Safety
- Occupational Safety
- Radiation Safety

Waste Management: This section includes information on the different types and categories of waste materials.

- Chemical waste
- Radiation waste
- Waste management program guide
- Waste disposal guides
- Waste minimization guides
- Relevant handbook policies

Training: EHRS has many training courses that can be taken online through Canvas. Classroom training sessions also are available and are held on the Health Sciences Center Campus in the EHRS Offices, located in Room B-49 in Pharmacy Building, 3307 N. Broad Street. The complete training catalog can be found here: https://www.temple.edu/ehrs/training/.

Handbook: A comprehensive EHRS Handbook is available for downloading and includes these categories: https://www.temple.edu/ehrs/handbook/.
• Emergency management
• Respiratory protection
• Laser safety.

Related Resources: Information relating to regulatory agencies, personal protective equipment information, and University health and safety resources can be found here: https://www.temple.edu/ehrs/related-resources/.

Required Forms: The EHRS website also has these forms available for downloading: https://www.temple.edu/ehrs/related-resources/

• Radiation Worker Registration;
• Assurance on Hazardous Procedures;
• Shipping of Dangerous Goods;
• Lab Vacancy;
• Instrument Decontamination;
• Chemical Hygiene Plan;
• Hazardous Materials/Operations Registration.

Location
Environmental Health and Radiation Safety Services
HSC: Health Sciences Center Campus
3307 N. Broad Street
Philadelphia PA 19140
215-707-2520
ehrs@temple.edu
Work Environment
https://research.temple.edu/research-compliance/promoting-safe-and-respectful-work-environment

Temple University is committed to research and academic excellence and recognizes that this commitment requires a training and research environment free from harassment and discrimination. Policies and procedures on the university’s commitment to promoting a safe and respectful work environment can be found at the above link.

Conflict of Interest Program
https://research.temple.edu/research-compliance/conflict-interest

Research at Temple University is wide-ranging, involving work with other educational institutions, businesses, and corporate industry collaborators. Research ideas advance the scientific field and often are used in the development of products and applications that may directly benefit society at large. Sometimes, these discoveries result in financial gain for the researcher and the university, which can lead to further research and development incentives. These activities, while encouraged by the university and the federal government, must be monitored and managed so that any potential conflict with the various interests of investigators (researcher, teacher, advisor, employee, business owner), is eliminated.

Temple University requires faculty and other research investigators to avoid any conflict, or appearance of conflict, between their personal interests and the interests of the university when dealing with any organization or individual whose objectives or interests may be adverse to university interests. Financial or management interests in an outside company or other entity as it relates to employment at the university are expected to be disclosed.

Temple maintains a comprehensive Conflict of Interest (COI) Program governed by these policies:

- Conflict of Interest - Faculty
- Financial Conflict of Interest In Research
- Conflict of Interest - All Employees
- Conflict Of Commitment and Interest - Lewis Katz School of Medicine
- Gifts And Conflict of Interest - All Employees
- TAUP Collective Bargaining Agreement - (Article 20)
- Temple University Faculty Handbook (Article VIII).

Federal regulations require key personnel on all federal grant applications to disclose financial interests and have an approved management plan for identified conflicts that have the potential to impact the implementation of funded grant awards. Temple University also requires employees to disclose financial interests as a condition of employment.

Examples of conflict include situations such as the following:

- an investigator holds an executive position or a position of managerial control in a business engaged in research directly related to the investigator’s institutional responsibilities;
- an investigator receives research funds from a business in which the investigator or family member is a member of the board of directors or an advisory board; or
- favorable administrative action is taken with respect to any sponsored activity in which a University official or family member has a financial interest in the sponsor or donor.

FCOI Disclosures for PHS and NSF Proposals and Awards
Under the Public Health Service (PHS) Financial Conflict of Interest (FCOI) regulation effective 8/24/12, FCOI disclosures are required to be completed and reviewed annually for all PHS, including NIH, funded research.

The National Institutes of Health (NIH) adopted a new financial conflict of interest (FCOI) regulation effective 08/24/12. http://grants.nih.gov/grants/policy/coi/. This regulation promotes objectivity in
research by establishing standards that provide a reasonable expectation that the design, conduct, and reporting of research funded under NIH grants or cooperative agreements will be free from bias resulting from investigator financial conflicts of interest. Temple University's COI program also covers proposals submitted to and awards received from the National Science Foundation (NSF).

The NSF’s current Proposal and Award Policies and Procedures Guide (NSF-18-1, effective January 2018), https://www.nsf.gov/pubs/policydocs/pappg18_1/nsf18_1.pdf states that an institution’s Authorized Organizational Representative (AOR) is required to complete certifications stating that the organization has implemented and is enforcing a written policy on conflicts of interest (COI) consistent with the provisions of the NSF’s Conflict of Interest policy; that to the best of his/her knowledge, all financial disclosures required by the COI policy were made; and that conflicts of interest, if any, were, or prior to the organization’s expenditure of any funds under the award, will be, satisfactorily managed, reduced or eliminated in accordance with the organization’s COI policy.

At Temple, investigators must have a conflict of interest disclosure on file before any grant proposal can be submitted. The disclosure is required to be certified on an annual basis and is valid for 12 months, unless there is a material change in any circumstance; investigators must report changes within 30 days. Investigators do not have to re-file for each grant submission during that 12-month period.

The COI website is your source for current policies and procedures, training opportunities and other assistance regarding university and agency regulations on financial conflict of interest. It also provides step-by-step instructions on How To Create Or Update Your COI Disclosure. The disclosure is submitted through the My Conflict of Interests module in ERA – the university’s electronic research administration system.

**Points of Contact: Research Compliance/Temple University COI Program**

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<th>Name</th>
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<tr>
<td>Michael B. Henderson, JD, LLM, MS</td>
<td>Associate Vice President for Research Regulatory Compliance and Strategic Initiatives</td>
<td>215-204-7467</td>
<td><a href="mailto:michael.henderson@temple.edu">michael.henderson@temple.edu</a></td>
</tr>
<tr>
<td>Dwayne King, JD</td>
<td>Director, Conflict of Interest Program; All Temple University Schools and Colleges, except for Lewis Katz School of Medicine</td>
<td>215-707-7819</td>
<td><a href="mailto:coitemple@temple.edu">coitemple@temple.edu</a></td>
</tr>
<tr>
<td>Elizabeth Oquendo, JD</td>
<td>Director, Conflict of Interest and CME; Lewis Katz School Medicine, Temple University Health System, Fox Chase Comprehensive Cancer Center, Shriners Pediatric Research Center</td>
<td>215-707-1986</td>
<td><a href="mailto:coisom@temple.edu">coisom@temple.edu</a></td>
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Research ethics and compliance are an important component of the research enterprise. The university’s focus is to facilitate best practices for integrating compliance information with effective grants management, while providing proper stewardship to safeguard investments in research.

Research, scholarship, professional, and creative activities conducted at Temple University are to be done according to the highest ethical and professional standards. Temple University strives to promote a healthy research environment, while establishing policies and procedures that effectively address evidence of misconduct. Through its Policy On Misconduct in Research and Creative Work, the university is committed to generating and disseminating knowledge and to protecting traditional principles of academic freedom.

Temple University further recognizes the importance of protecting the lives and rights of all who are involved in those processes and of maintaining a relationship of trust within the broader academic, research, and social communities. By this policy, Temple University requires that each person who engages in or supervises research or creative work be responsible for conducting these activities in an ethical manner.

All faculty must receive training in the integrity procedures. Misconduct may include fabrication, plagiarism, falsification, and failure to comply with the proper conduct of research. After the review of a charge made in good faith, the University’s Integrity Officer, Dr. Michele Masucci, Vice President for Research, will refer the situation to an inquiry committee to determine possible misconduct. If the committee considers there to be probable cause, then it is referred to an investigation committee. If the committee concurs that there is misconduct, the case will then be referred to the President for possible sanction.

It is expected that all researchers carry out their work according to the highest ethical and professional standards. Responsible Conduct of Research (RCR) training is a framework for imparting these best practices standards and is increasingly regarded as a critical component of scholarly and career development. Temple University’s RCR Training module can be found here.

National Institutes of Health (NIH) Responsible Conduct of Research Requirement

The NIH requires that all trainees, fellows, participants, and scholars who receive support through any NIH training, career development award (individual or institutional), research education grants, and dissertation research grant must receive instruction in responsible conduct of research.

National Science Foundation Responsible Conduct of Research Requirement

The NSF requires that any undergraduate or graduate student, and postdoctoral researchers supported by NSF to conduct research must undergo RCR training. Exemptions are for conference, symposium, workshop or travel proposals.

Beyond these regulations, RCR training is strongly encouraged for all faculty, staff, and students engaged in scholarly work, regardless of funding source or field of study.

Export Control

Federal laws restricting exports of goods and technology are currently implemented in the United States by the following government agencies: the Department of Commerce through its Export Administration Regulations (EAR—trade protection); the U.S. Department of State through its International Traffic in Arms Regulations (ITAR—national security); and the U.S. Department of Treasury through its Office of Foreign Assets Control (OFAC—trade embargoes).
Export control laws and regulations have several purposes: to restrict exports of goods and technology that could contribute to the military potential of U.S. international adversaries; to prevent proliferation of weapons of mass destruction; to advance U.S. foreign policy goals; and to protect the U.S. economy and promote trade goals. Attention to export controls has increased due to recent heightened concerns about national and homeland security as well as the need to prevent proliferation of weapons of mass destruction and terrorism and leaks of technology to U.S. economic competitors.

Export controls present unique challenges to universities and colleges because they require balancing concerns about national security and U.S. economic vitality with traditional concepts of unrestricted academic freedom and publication and dissemination of research findings and results. University researchers and administrators need to be aware that these laws may apply to research, whether sponsored or not.

The EAR and ITAR apply to the transfer of specific physical items and information and the provision of specific services to persons and entities outside the United States (“exports”) and to the disclosure of specific information and the provision of specific types of services to foreign nationals inside the United States (“deemed exports”).

Temple University is fully committed to export control compliance. Investigators at Temple may engage in research that may involve the development or use of products, goods, hardware, software or materials or technology that may be subject to U.S. export control laws.

In general, export control regulations apply to:

- the transfer or “export” of specified materials, information, items or technology outside the U.S.
- the disclosure of certain information to certain foreign nationals inside the U.S. (“deemed exports”)
- the training or offering of services involving controlled equipment or information to foreign nationals
- the design or production of items related to defense services
- transactions with certain foreign countries or individuals who are on embargo or restricted lists.

It is imperative that research faculty and staff understand how and when these regulations may apply to their activities when certain compliance obligations are in effect and to what extent OVPR’s Offices of Research Administration, Technology Commercialization and Business Development, and Temple’s Office of University Counsel can provide assistance when needed.

The OVPR export control website has additional information on specific aspects of Temple’s export control program, including working with controlled technology and the import and export of controlled substances. It also provides links to the federal regulations.

Export control FAQs can be accessed here.

**Point of Contact: Responsible Conduct of Research/Export Control**

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+ INNOVATION

Technology Commercialization and Business Development
https://research.temple.edu/innovation

Overview

Technology Commercialization and Business Development (TCBD) at Temple empowers faculty, staff, and student innovators to advance research that impacts economic development, solves societal problems, opens new fields of discovery and creates sustainable technologies and businesses for the next generation. Fueled by more than $273 million in annual research expenditures, Temple’s innovation pipeline features a diverse mix of technologies and generates over 110 research-based inventions per year.

The TCBD division cultivates discoveries, licenses, patents, start-up ventures and commercial funding partnerships through a “one-stop shop” integrating entrepreneurs and industry. TCBD team members help faculty, staff, and students evaluate and protect their research and intellectual property by identifying, protecting, and commercializing their inventions, as well as translating their work into partnership ventures. New discoveries are submitted to TCBD by completing an electronic Invention Disclosure Form that is evaluated to determine the probability for commercial success.

TCBD works with the university’s external patent counsel to determine the most appropriate intellectual property protection (e.g. patents and copyrights) and commercialization strategy for inventions Temple elects to pursue. Various marketing strategies are employed to identify companies and entrepreneurs to further develop and bring Temple’s discoveries to the marketplace.

The robust commercialization and business development program of the university plays a critical role in the continued advancement of Temple’s research enterprise and situates the faculty and university as a nexus of discovery, education, translational research, and service dedicated to the betterment of society. During the past five years, there were 435 invention disclosures, 67 patents issued, 52 license option deals, and 39 start-up companies formed. Temple has generated $13.1 million in license revenues throughout this period. This significant increase in the rate of discovery has been met with a substantial increase in the rate of technology transferred to industry partners.

Temple discoveries currently in the marketplace include a diagnostic test for chronic fatigue syndrome, instruments for the diagnosis and treatment of tooth decay, mobile apps for chronic disease management, a virtual assistant for providing instruction to autistic individuals, and a system for policy surveillance.

New microsphere taste strips for drug delivery, interventional catheter-based therapies, naturally derived wound healing materials, next-generation lithium-ion battery materials, virtual reality-based rehabilitation for balance impairment, and therapeutics for inflammatory bowel disease, cancer and HIV are just a few examples of the technology under development at Temple.

Commercialization Process

Commercialization and business development for Temple innovators is fostered through internal connections and external partnerships with an embedded commercialization goal. This leads to a diversification of research outcomes that includes both basic science accomplishments and applied research resulting in protecting more intellectual property, developing spin-off company opportunities, engaging in nationally significant research discourse, and developing state-of-the-art replicable programs that can be adapted broadly in the U.S. and beyond.

Temple researchers drive the creation of new intellectual property through research/discoveries/inventions funded by federal, state, local, and private organizations. The steps shown below will help faculty, staff, and students understand how the invention disclosure, evaluation, protection and commercialization process works.
Starting Your Research Program

Step 1: Submit an Invention Disclosure
As the first step towards a possible patent application or other appropriate form of intellectual property protection, Invention Disclosures must be made to the Office of Technology Commercialization and Business Development. Disclosures should be made as early and as completely and accurately as possible (although it may be amended at any time later); the benefits of early, complete and accurate disclosure are stronger patent protection.

Important Note: Please contact our office before submitting any invention-related manuscripts for publication, making oral presentations, or disclosing an invention to companies (or other third parties); any disclosure may seriously jeopardize patentability if not handled properly.

Start by disclosing your invention using our online system. Follow these steps to access the electronic Invention Disclosure Form:

1. Log into the Electronic Research Administration (ERA) portal: https://era.temple.edu/tu_login/login.asp;
2. Under the Technology Transfer module, select Invention Disclosures from the drop-down menu;
3. Select New Invention Report to begin your invention disclosure.

Additional training guidance can be found in the ERA Training Tutorials and Documentation platform under How to Create Your Invention Disclosure in ERA.

Step 2: Invention Disclosure Evaluation
Your invention disclosure will be assigned to the Technology Commercialization team to assess the invention’s commercial potential. Within 3-4 weeks after submission, a Technology Commercialization team member will follow up to discuss their analysis with you. During this process, outside consultants, experts, and patent counsel are often retained to assist with this evaluation.

Step 3: Intellectual Property Protection
Temple retains outside legal counsel to issue an opinion regarding intellectual property protection. If favorable, Temple’s patent counsel drafts, files and manages Temple’s patents and copyrights covering the invention.

Step 4: Commercialization Process
After Temple decides to pursue an invention, the Technology Commercialization and Business Development group begins the commercialization process by determining the appropriate path to market. TCBD seeks to license Temple’s intellectual property rights to an established or startup company in exchange for royalties, licensing fees and other forms of compensation.

Startup companies are an important vehicle for advancing technologies along the commercialization pathway. With assistance from Temple Ventures—Powered by Ben Franklin and several regional programs, TCBD works with inventors to further develop inventions and facilitate the creation of new startup companies for this purpose.

Regional commercialization programs include the University City Science Center, BioStrategy Partners, Ben Franklin Technology Partners of Southeastern Pennsylvania, and BioAdvance.
**Partnership Process**

The TCBD team partners with faculty early in the research process to develop patents and other intellectual property. It is charged with managing, marketing and licensing university-owned intellectual property created by Temple faculty, staff, and students. TCBD oversees identification and vetting of technologies with commercial potential, as well as assists inventors with strategies for business partnerships and new venture creation. As new intellectual property is developed, TCBD serves as the first intake point to establish a formal record of invention using the Temple Invention Disclosure Process. Invention disclosures are then evaluated to identify opportunities with the highest probability for commercial success.

**Collaborating with Temple**

Technology Commercialization and Business Development actively seeks partnerships with companies to commercialize Temple-owned inventions. All confidentiality, material transfers, and industry sponsored research agreements are managed by a contract team dedicated to advance research collaborations. Rights to commercialize an invention are negotiated by technology commercialization managers and granted through a royalty-bearing licensing agreement.

**Available Technologies**

Companies interested in exploring Temple's licensing opportunities can visit the iBridge Network or preferably contact us to identify relevant opportunities. You can view Temple licensing opportunities through the iBridge Network, which provides a gateway for companies and entrepreneurs seeking university licensing opportunities. Temple University's participation in the iBridge Network is supported by Pennsylvania's Ben Franklin Technology Partners.

**Agreement Structures**

Temple University actively advances research in partnership with companies seeking to commercialize the results. A business development and contracting team serves as a central interface for industry relationships. Key agreement areas are included below.

**Confidentiality**

Temple University enters into hundreds of confidentiality agreements per year to protect the confidentiality of information that is exchanged to explore collaborations, including technology transfer arrangements and research collaborations.

**Commercialization**

Companies seeking to commercialize Temple technologies enter into an option or license agreement that offers companies the rights to make, use and sell Temple inventions in exchange for royalties, licensee fees and other compensation that is negotiated on a case-by-case basis.

**Research Collaborations**

Companies interested in collaborating with Temple to advance company products and/or Temple intellectual property enter into our industry Sponsored Research Agreement (SRA). SRAs protect the interests of both parties, including the management of intellectual property (IP), confidentiality, and publication.

**Material Transfers**

Receiving or transferring research materials between academic institutions, companies and other organizations requires a Material Transfer Agreement (MTA). An MTA defines the approved use of the materials and any related terms such as material handling and distribution, intellectual property rights and publication.
Corporate Partnership Innovation Funding Programs
https://research.temple.edu/innovationFunding

Research and Development
Temple University actively advances research in partnership with companies seeking to commercialize the results. A new business development and contracting team has been established to serve as a central interface for industry funding relationships. Standard funding agreements protect the interests of both parties, including the management of intellectual property (IP), confidentiality and publication. Under a sponsored research collaboration, IP ownership follows inventorship for patents and authorship for software. To protect the company’s competitive position and enable it to bring IP to market, companies are granted an exclusive right to negotiate an exclusive license for any Temple-owned IP funded by the company. Publication delay periods are incorporated to protect confidential information and secure IP protection.

Technology Development
The University City Science Center’s QED Program is a multi-institutional proof-of-concept program that provides $200,000 in proof-of-concept funding and business development support for academic researchers developing early-stage life-science and healthcare IT technologies with high commercial potential. Industry representatives serve as mentors to guide projects to a commercially relevant milestone.

BioStrategy Partners (BioSP) is a nonprofit commercialization consortium comprised of Temple University, The Pennsylvania State University, Thomas Jefferson University, The Wistar Institute, Children’s Hospital of Philadelphia, the University of the Sciences, and the Lankenau Institute for Medical Research. BioSP’s “Pharma Germinator” program aligns the technology interests of Janssen Research and Development with potential solutions offered by the consortium members. Selected projects have access to $300K in annual funding with an opportunity to attract follow-on funding from Janssen.

New Venture Accelerators Aligned With Strategic Partners
In addition to more than 35 active licenses with companies to commercialize Temple discoveries, Temple recently launched two startup accelerators designed to help faculty, staff, and students launch new ventures to bring their ideas to market, many in collaboration with industry.

Temple University and SmartVentures established a $10M fund that will offer the next stage of investment (i.e. first round of venture capital) and participate with Temple’s existing early stage investment programs, including Temple Ventures — Powered by Ben Franklin and other partner technology accelerators such as the University City Science Center. Temple and SmartInvest, the capital arm of SmartVentures, have each committed $5M to the fund. SmartInvest’s mission is to grow the most successful and prolific early stage venture fund focused on providing “graduation capital” to high growth startup opportunities. These startups will be able to leverage SmartInvest’s global network of businesses, entrepreneurs and investors, including the firm’s established operations in Ireland, and benefit from the following programs:

- **Life’s a Pitch** – an event designed to provide inventors and entrepreneurs the opportunity to “pitch” their technologies live to a panel of investors, commercialization and business experts;
- **SmartBase** – focuses on nurturing entrepreneurial talent;
- **SmartStart** – grows business through mentorship, executive development and angel investment.
Temple University Blackstone LaunchPad is a co-curricular program open to all students, faculty, and alumni at Temple University, regardless of academic major. The Temple University community has access to an expanded universe of resources to help them launch new business ventures, strengthening the local economy.

Temple University is a member of the University City Science Center’s Phase 1 Ventures (P1V) program. P1V draws from the Science Center’s network of entrepreneurs to increase the competitiveness of SBIR/STTR proposals from companies spun out by its members. Selected companies will receive management resources and up to $450K in financing as a match for awarded SBIR/STTR grants.

Temple University and Ben Franklin Technology Partners of Southeastern Pennsylvania jointly launched Temple Ventures—Powered by Ben Franklin. Temple Ventures is a $2M startup accelerator designed to assist startup companies advancing Temple-created technologies. Temple and Ben Franklin invest both capital and consulting resources to develop great ideas into promising businesses. Companies can apply for business formation, financing, and incubation resources necessary to advance Temple discoveries.

Temple Ventures features three main components:
1. A joint Temple/Ben Franklin Seed Fund for prototype and startup funding;
2. New business launch resources to support the formation of the new Temple-created technology ventures;
3. Incubation services to provide workspace, professional resources, and management and commercialization guidance.

A partnership designed to bring industry-guided engineering expertise and resources to Temple inventions that require prototype development and testing. Temple University and AmpTech co-fund the initial technology and business assessment phase. If favorable, a prototype plan is implemented and a new company is established as the commercialization vehicle for the technology.

Policy and Global Affairs
In addition to robust associations with local and regional partners, Temple also advances the university’s visibility by cultivating the growth of research and commercialization of research activities through strategic national affiliations. In collaboration with one of its long-standing commercialization partners, Onconova Therapeutics, Temple University joins government, academia, and business leaders to discuss research issues of national importance through the Government University Industry Research Roundtable (GUIRR) of The National Academies of Sciences, Engineering, and Medicine.
**TCBD Resources and Services**

**Electronic Invention Disclosure Form** – view the disclosure submission training guide under the [ERA Training Tutorials and Documentation](http://research.temple.edu/era-training) platform for further information.

**Contracts and Agreements** – including Confidential Disclosure Agreements (CDA), Material Transfer Agreements (MTA), the transfer of biologic materials between academic institutions; Corporate Sponsored Research Agreements, Clinical Trial Agreements, Data Use Agreements, Option and License Agreements for Technology Transfer. A complete list of research agreements and the offices responsible for obtaining approval and signatures can be found in the Temple University [Research Agreement Responsibility Matrix](http://research.temple.edu/era-rag).

**Temple University Invention and Patent Policy** – invention rights covered by the policy include both intellectual property rights (such as patent rights) as well as tangible property rights (such as biological materials). Net Income distribution for each invention can be found at [http://research.temple.edu/innovation/policies-guidelines](http://research.temple.edu/innovation/policies-guidelines).

**Temple University Invention and Patent Committee** – Appointed by Temple University’s President, the IPC is charged with reviewing intellectual property policy matters including ownership, royalty distribution and conflicts of interest. Visit Section 6 of the policy for further information. [http://www.temple.edu/Senate/committees/university-inventions-patents.html](http://www.temple.edu/Senate/committees/university-inventions-patents.html)

**Temple University Blackstone LaunchPad**
[http://research.temple.edu/technology-innovation/blackstone-launchpad](http://research.temple.edu/technology-innovation/blackstone-launchpad)

Temple University’s Blackstone LaunchPad is an innovative, campus-based program that treats entrepreneurship as a viable career path supporting and mentoring students, faculty, and alumni – regardless of major, experience or discipline. The program is designed to help drive economic development in communities around partner universities, increasing the likelihood that students in particular remain and develop their ideas within the region, while entering the modern workforce with a flexible, entrepreneurial mindset.

The overarching goal is to provide Temple students and alumni with the skills, knowledge, and guidance to transform ideas into companies. The LaunchPad team works to introduce students and alumni to entrepreneurship, help them develop entrepreneurial skills and enable them to independently achieve success in any venture they pursue.

**TU Blackstone LaunchPad Program offers:**

- Free and confidential mentorship for individuals or start-ups at any stage in any industry
- 1:1 meetings with Blackstone LaunchPad coaches
- A forum to share knowledge and best practices, post jobs, and find team members across the global network
- Great resources and exclusive deals to help you get started from software to online courses
- Use of specialized applications and online tools to help get your start-up off the ground and up to scale
- Mentors who will take your idea and help you flesh out initial concepts and understand the roadmap to execute it
- Strategies to overcome obstacles as you look to grow and scale your business
- Opportunities to participate in events, join the online community and sign up for free mentorship.
## Points of Contact: Office of Technology Commercialization and Business Development

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephen G. Nappi</td>
<td>Associate Vice President for Technology Commercialization and Business Development</td>
<td>215-204-5293</td>
<td><a href="mailto:snappi@temple.edu">snappi@temple.edu</a></td>
</tr>
<tr>
<td>J. Todd Abrams, PhD</td>
<td>Senior Director, New Ventures and Business Development</td>
<td>215-204-8823</td>
<td><a href="mailto:todd.abrams@temple.edu">todd.abrams@temple.edu</a></td>
</tr>
<tr>
<td>Niraj J. Muni, PhD, MBA</td>
<td>Associate Director, Technology Commercialization</td>
<td>215-707-9616</td>
<td><a href="mailto:nmuni@temple.edu">nmuni@temple.edu</a></td>
</tr>
<tr>
<td>Partha Choudhury, PhD</td>
<td>Manager, Technology Commercialization</td>
<td>215-204-5165</td>
<td><a href="mailto:Partha.choudhury@temple.edu">Partha.choudhury@temple.edu</a></td>
</tr>
<tr>
<td>Jeffery Tolliver, MBA</td>
<td>Contracts Manager</td>
<td>215-204-2109</td>
<td><a href="mailto:jeff.tolliver@temple.edu">jeff.tolliver@temple.edu</a></td>
</tr>
<tr>
<td>Dan Carr</td>
<td>Contracts Specialist</td>
<td>215-204-4321</td>
<td><a href="mailto:d.carr@temple.edu">d.carr@temple.edu</a></td>
</tr>
<tr>
<td>Ted McIntosh</td>
<td>Contracts Specialist</td>
<td>215-204-2275</td>
<td><a href="mailto:theodore.mcintosh@temple.edu">theodore.mcintosh@temple.edu</a></td>
</tr>
<tr>
<td>Lorne Daniel Starr, Esq</td>
<td>Contracts Specialist</td>
<td>215-204-4137</td>
<td><a href="mailto:lorne.starr@temple.edu">lorne.starr@temple.edu</a></td>
</tr>
<tr>
<td>Renita A. Fields</td>
<td>Coordinator, Intellectual Property and Business Operations</td>
<td>215-204-5732</td>
<td><a href="mailto:reenie@temple.edu">reenie@temple.edu</a></td>
</tr>
<tr>
<td>Julie Stapleton Carroll, MSEd</td>
<td>Program Director, TU Blackstone LaunchPad</td>
<td>215-204-2499</td>
<td><a href="mailto:jscarroll@temple.edu">jscarroll@temple.edu</a></td>
</tr>
<tr>
<td>Kate Cassidy</td>
<td>Program Manager, TU Blackstone LaunchPad</td>
<td>215-204-2499</td>
<td><a href="mailto:kate.cassidy@temple.edu">kate.cassidy@temple.edu</a></td>
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## Locations
Technology Commercialization and Business Development

**MC:** Main Campus  
Conwell Hall, Suite 401; and  
Carnell Hall, Suite 1003  
1801 N. Broad Street  
Philadelphia PA 19122  
-----  
**HSC:** Health Sciences Campus  
Medical Education and Research Building  
Room 1055  
3500 N. Broad Street  
Philadelphia PA 19140

**TU Blackstone Launchpad**  
**MC:** Main Campus  
Howard Gittis Student Center, Lower Level  
1755 N. 13th Street  
Philadelphia PA 19122  
-----  
**HSC:** Health Sciences Campus  
Student Faculty Center  
Suite 327  
3340 N. Broad Street  
Philadelphia PA 19140
**ELECTRONIC RESEARCH ADMINISTRATION**

*Electronic Research Administration – ERA*
http://research.temple.edu/eRA

Electronic Research Administration (ERA) at Temple University offers investigators an integrated web-based platform for the execution of all research administration, compliance, and innovation activities. Temple's ERA effectively supports research proposal preparation and submission, research compliance protocol development and tracking, clinical trials management, vertebrate animal ordering, and conflict of interest disclosures. It also is used to obtain required approvals for research-related processes from departments, individual schools and colleges, and the university’s central administration.

ERA's integrated and automated system affords efficient and effective support for researchers through streamlined business processes that cover the life cycle of a project and monitor the administrative and regulatory aspects of grants, contracts, financial conflicts of interest and clinical trials. Technical assistance related to all uses of the system is available through the ERA team - https://research.temple.edu/electronic-research-administration/contact.

The ERA system can be easily accessed with Temple University access net credentials - https://era.temple.edu/tu_login/login.asp.

**Benefits for Researchers**
- Secure access 24/7 for authorized users;
- Web environment that can be accessed from any computer compatible with Microsoft Internet Explorer, Google Chrome, Mozilla Firefox, and Apple Safari;
- Extensive documentation – both video tutorials and PDFs;
- Experienced technical support for proposal and protocol submissions;
- Investigator’s entire research portfolio is present in one location – proposals, contracts, sub-awards, protocols, invention, and COI disclosures.

**ERA Services**

**Pre-Award Management**
- Identification of funding opportunities
- Institutional and faculty profiles
- Proposal development
- Budget development
- Electronic approval and routing
- Cost sharing information
- Sub-contract tracking

**Protocol Management**
- Regulatory protocol development and approvals for IRB, IACUC, IBC, and Radiation Safety
- Electronic submissions of protocols
- Electronic notification of protocol status
- Animal purchasing and facilities management
- Invention Disclosures (Technology Commercialization and Business Development)

**Clinical Trials Management**
- Budget preparation
- Integration and use of approved University costs/charges
- Patient/procedures scheduling
- Sponsor billing
- Financial analysis

**Conflict of Interest (COI) Disclosures**
- Conflict of Interests module used to prepare and submit conflict of interest disclosures
• Electronic approval routing for review and certification decision
• Certifications/management plans uploaded as part of the investigator's COI record
• COI disclosures linked to relevant proposals for audit purposes

Proposal Submission To Sponsors
• Electronic system-to-system submission for research proposals
• Non-system-to-system proposal record established when a sponsor's submission site must be used

Electronic Notification Of Award Notices
• Automated notification to investigator and cognizant business administrator
• Automated project set-up

Post-Award Management
• Project closeout and reporting

Reporting
• Timely and accurate reporting at all phases of the project/protocol lifecycle
• Ability to link sponsored project data with other University systems of record.

TRAININGS AND FAQs

ERA training documentation has been developed to help investigators successfully prepare proposals and human subjects and vertebrate animal protocols. All ERA trainings demonstrate step-by-step instructions to navigate each specific feature. Individualized trainings can be arranged by contacting era@temple.edu.

FAQs, updated continuously, provide quick and easy answers to connectivity issues or system concerns. Use this resource as your first stop for troubleshooting problems.

Points of Contact: ERA

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<tr>
<th>Name</th>
<th>Title</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Krunal M. Cholera, MS</td>
<td>ERA Director/Project Manager</td>
<td>215-204-5370</td>
<td><a href="mailto:krunal@temple.edu">krunal@temple.edu</a></td>
</tr>
<tr>
<td>Joseph Smallberger, MBA</td>
<td>ERA Technical Support Manager</td>
<td>215-204-2136</td>
<td><a href="mailto:joe.s@temple.edu">joe.s@temple.edu</a></td>
</tr>
<tr>
<td>Daniella Gallo</td>
<td>ERA Proposal Management Specialist</td>
<td>215-204-2660</td>
<td><a href="mailto:dsev@temple.edu">dsev@temple.edu</a></td>
</tr>
</tbody>
</table>

Location
ERA
MC: Main Campus
Carnell Hall, 10th Floor
1801 N. Broad Street
Philadelphia PA 19122
era@temple.edu
Starting Your Research Program

+ RESEARCH DEVELOPMENT SERVICES

Grantsmanship Training and Outreach Program

Temple University fosters a culture of progressive research and innovation. An extensive array of research development programs and services has been designed to enhance grantsmanship skills and strategies for investigators at all stages of their research careers. New faculty are especially encouraged to take advantage of these strategic, capacity-building platforms – workshops, trainings, webinars, seminar series, research exchanges – to produce a trajectory of success through the research pipeline.

Research development activities help faculty strengthen their research programs and proposals to make them more competitive for extramural grants and contracts from governmental, private and non-profit funding agencies. At Temple, these services are offered to facilitate and enhance faculty research excellence and competitiveness, as well as help new faculty become involved and connected with the broader Temple community.

For information on any of these activities, contact Rosemary C. Dillon, Director of Special Projects, at dillon@temple.edu.

Grant Academy

A marquee research development initiative of the Office of the Vice President for Research (OVPR) is Grant Academy. Led by Hanover Research, a nationally recognized research development consulting firm, Grant Academy strives to provide faculty with training and mentoring to structure and design their program of research as a critical core of a meaningful, productive grantsmanship portfolio. Skills attained through the Academy help faculty thrive in an increasingly competitive research landscape, promote self-confidence, and help shape a positive, strategic approach to developing a foundational academic research and scholarship program.

Grant Academy provides a series of development activities/strategies through workshops and 1:1 consultations designed to help faculty advance their research plans and facilitate the process of obtaining extramural funding for their projects.

Academy members refine their research expertise through engaging in an intensive year-long program focused on enhancing skills and experience and acquiring strategies to identify, pursue, and secure competitive grant funding. They learn how to tailor and refine their search for funding opportunities and are required to develop a grant proposal based on feedback from Academy mentors. Faculty are counseled and encouraged to cultivate a positive approach to writing effective proposals. They are guided on establishing plans for initial grant-funded research, as well as advancing a five-year strategy for sustaining their research programs. Grant Academy graduates have gone on to garner significant external funding from NIH, NSF, HRSA, and the Pew Foundation, among other agencies.

Grant Academy members are nominated by their associate dean for research.

Grantsmanship Workshops

The Offices of the Vice President for Research and Corporate Foundations and Relations co-sponsor interactive grantsmanship training sessions that deliver high-impact, content-rich presentations and facilitate collaborative breakout activities. Popular topics include:

Grantsmanship Training – Grantseeking and RFPs

- Overview of prospecting tools and how to use them to identify funders;
- Overview of key humanities funders;
- Making a case for support;
- Transitioning from internal to external funding and knowing when you’re ready to do so;
- Developing a compelling budget.
White Papers And How To Use Them
- How to write a White Paper for various audiences – NSF, NIH, foundations;
- How to use the White Paper to solicit feedback from peers and Program Officers;
- Overview of the Corporate and Foundation Relations request form on the CFR website;
- Writing exercises.

Navigating The Funding Landscape
- Types of funding;
- Overview of prospecting tools and how to use them to identify funders;
- When and how to reach out to funders;
- Cultivating a foundation relationship;
- How Program Officers can help you;
- Knowing and navigating the funding landscape through professional opportunities.

What To Do When Your Proposal Is Rejected
- Revising rejected proposals;
- How to get reviewer feedback and how it can strengthen your next proposal;
- What to do when you can’t get feedback.

Faculty Career Development (Mid-Career)
- how to re-boot a stalled path
- how to amplify and build upon an existing research portfolio
- how to develop a sustainable platform for research and scholarly activities.

Research Exchanges/Special Topic Research Symposia
Faculty also are encouraged to engage in collaborative, interdisciplinary research initiatives by participating in steering committees and research working groups, and contributing to themed research exchanges that showcase cutting-edge, catalytic research from across the university. Brain research, materials science, global change, and health data science materials are a sampling of research exchanges with anticipated annual updates. New initiatives showcasing STEM, CyberTech and SmartCity research are planned.

Research exchanges bring together a broad cross-section of faculty from across the university to learn about the interests and activities connected with the overarching theme. They help provide strategic direction and expert support for institutional research priorities. In addition to these exchanges, OVPR has established several working groups focused on specific research topics with the aim of applying for external grants and contracts. These groups help develop cross-cutting themes for research, provide strategic direction, and strategize pathways for government and industry support external grants and contracts. They provide expert support for the institutional research enterprise.

Other research support resources include a broad array of internal funding programs, web-based training and event calendars, and a research infrastructure that boasts comprehensive, state-of-the-art core facilities.

Limited Submission Opportunities Program
Limited submission opportunities occur when sponsors place restrictions, i.e. limits on particular grant and contract opportunities. These limits could include the number of proposals, applications, or letters of intent that one university can submit for a specific funding cycle.

In such cases, the Office of Research will pre-review internal applications to determine which may be submitted on behalf of Temple University. As this is a common practice at research institutions, faculty are strongly encouraged to follow the university's limited submission process to secure authorization. The overall objective is to make Temple as competitive as possible for these extramural opportunities.
Overall Process
The limited submission opportunities program involves these steps:
- Targeted dissemination and OVPR website posting of funding opportunity;
- Indication of interest from faculty and/or staff;
- Pre-proposal submission by faculty/staff;
- Review of pre-proposals from a select internal peer committee;
- Notification of selection decision to internal competitors;
- Completed proposal submitted to sponsor.

If you have questions or would like to receive more information about limited submission opportunities, send your inquiry to dillon@temple.edu.

Intramural Funding Programs
Intramural funding programs at Temple University are administered through both the Office of the Vice President for Research and the Office of the Vice Provost for Faculty Affairs. Each office offers a variety of opportunities to cover both research, scholarly, and creative endeavors.

Office Of The Vice President For Research
https://research.temple.edu/ovpr-internal-funding-programs

The Office of the Vice President for Research conducts an annual Intramural Funding Program for faculty to help bolster research programs and attain extramural funding. The mechanisms offered provide support for: early-stage interdisciplinary research projects in specific targeted areas; bridging funding gaps so existing research programs and staff can be maintained while extramural funding is secured; supporting novel interdisciplinary projects with strong potential for external funding; and supporting scholarly or creative projects in the humanities and arts disciplines.

Targeted Research Funding Program
The Targeted Research Program supports innovative early-stage multidisciplinary research projects on a specific strategic theme that changes each year. The Targeted research projects must demonstrate potential to expand on existing strengths or develop new innovative research related to strategic areas of emphasis for Temple. These projects also must include a commercialization plan and awardees are expected to submit grant proposals to external funding agencies within a year.

Viable proposals must have significant school/college and department support, as evidenced by matching for the funds requested, including "dollar-to-dollar" matching or "in-kind" support, such as teaching relief and summer support, from the cognizant school/college or department.

Overview
This program will fund three categories of work. Investigators may compete for one category of funding.
- Plus-up funding for existing interdisciplinary projects: $50,000/year for two years; matching support not required
- Exploratory research in new interdisciplinary projects: $100,000/year for two years with matching support
- Small grants: $10,000/year for one year; matching support not required

Review Criteria
- Scholarly merit and quality of the overall study design
- Proven research track record of the investigators related to the topic
- Feasibility of the project to deliver outcomes within the projected timeline
- Quality of the strategy proposed to seek external research funding, including its alignment to the anticipated outcomes from such funding
- Appropriateness of budget to support the scale and timeline of the project
- Well-developed strategy for the protection of intellectual property (IP) derived from the work and the pursuit of a commercialization strategy related to the anticipated IP
- Availability of facilities and infrastructure to conduct the research
Bridge Funding Program
Bridge funding provides financial support for existing research programs when external funding sources are expended. The funding needs to support the continuation of the operations of a lab or program to avoid ending the program while external support is being reviewed or pursued. Bridge funding must be used in a strategic and coordinated way to maintain project/lab momentum while assuring effective use of limited resources.

Bridge program funds may be used to retain key personnel, the performance of limited laboratory or other research activity to permit the accumulation of new data essential to renew a source of external funding, or to prevent major disruptions in the continuation of research activities that would negatively impact the ability to secure continuation funding from external sponsors. It is expected that all discretionary monies available to an investigator will be expended before using funding provided through this program.

Overview
• Between six and eight one-year bridge fund awards of up to $25,000 will be available each year, as matching support for equivalent funds being provided by the requesting Dean;
• Each academic unit is responsible for developing its own process for considering bridge-funding requests internally before submitting proposals through the Dean to the Vice President for Research.
• Requests must have the approval of the investigator’s Chair and Dean;
• Approved bridge funding will cease upon either the start date of the external award or notification that the final round of funding requests was not awarded

Review Criteria
• Bridge funding must extend externally funded research projects only
• Pilot studies or other unfunded research will not be considered
• Proposals must include a plan to request funding from external sponsors
• Prior proposals submitted, along with reviewer comments should be provided when possible.
• Support will be provided for projects with a high likelihood of continued funding by the sponsor

Temple University Humanities and Arts Research Program
The Humanities and Arts Research Program is an exciting new initiative that fosters faculty research, scholarship and creative activity in the humanities and arts. The fund supports creative, scholarly activities that have the potential to drive external gifts, foundation funding, donations, and grant competitiveness of the individual or team. Eligible projects for this program include: publications, performances, films, artistic or museum installations, digital arts and humanities projects, and other arts or humanities works. Proposals may be discipline specific or interdisciplinary in nature. A call for proposals is typically issued in the spring.

Overview
• Individual projects may be submitted for up to $7,500
• Project completion proposals may be submitted up to $3,500
• Collaborative projects may be submitted for up to $15,000
• Funding is available for either new or continuing projects over a two-year period
• Full-time faculty with a scholarly or artistic work in the arts and humanities are eligible
• The budget can fund salary, supplies, travel, production costs, and events

Review Criteria
• Statement of purpose, description, and intended outcomes of the project or work
• Discussion of the evaluation plans for the program
• Discussion of plans to seek external funding or support for the program and/or a sustainability model
• Timeline for the implementation of activities
• Budget and justification associated with the proposed activities
Temple University Technology Commercialization Program
Temple’s $6M Technology Development Program serves as a matching fund for external proof-of-concept programs, and actively engages industry by matching investments directed to the development of Temple University inventions. Projects are eligible to receive up to $100K from Temple to de-risk technology with an equal cash match from an industry partner to achieve a critical milestone that will position the technology to attract follow-on funding.

This program support faculty entrepreneurs to polish technologies for potential licensure, joint venture, or spin-out formation, and to build relationships with commercial partners. Funding opportunities include gap funds (e.g. proof of concept activities) and matching funds for opportunities provided by the University City Science Center QED and the Ben Franklin Technology Partners programs. No application is necessary; your invention or product disclosure is sufficient for consideration. The evaluation process involves internal technology commercialization review and prioritization. Key areas for consideration are the need for technology diversity, a cooperative Principal Investigator, a commercial partner, and an appropriate timeline.

High priority projects are submitted to an external review process to further prioritize and identity commercial partners. An external technical expert with market experience will help Temple set an appropriate technical milestone; the Principal Investigator needs to agree to attempt to meet this commercial milestone.

Projects are eligible to receive up to $100,000 from Temple to de-risk technology with an equal cash match from an industry partner to achieve a critical milestone that will position the technology to attract follow-on funding. An internal match from a dean and/or chair also is acceptable.

Office of the Vice Provost for Faculty Affairs
https://faculty.temple.edu/

The Office of Faculty Affairs offers annual opportunities for faculty to pursue professional development, conduct research and/or creative activities, and/or develop methods and materials that improve teaching and curricula. A complete listing can be found at the link above. Decisions for all funding mechanisms administered by this office are made according to three criteria:

- The importance of the project;
- The feasibility of the project;
- The applicant’s record of effective use of previous awards.

Selected opportunities are highlighted here.

Grant-In-Aid
Grant-in-aid awards offer faculty another opportunity to support scholarly research/creative activity. These awards are available to all tenure and tenure-track faculty across all Temple schools and colleges. Due to funding limitations, awards are typically capped at $3,000 overall, with generally no more than $1,500 allotted to travel or related expenses.

Summer Research Award
Summer research awards are offered to support faculty to pursue professional development, conduct research and/or creative activities, and/or to develop methods and materials to improve teaching and curricula with the outcome of increasing the individual’s future contribution to the University. Thirty-five awards carrying a $7,000 stipend are available each summer for the most meritorious research/creative activity proposals. All eligible faculty members are encouraged to apply.

Summer research awards are available to all tenured and tenure-track faculty from schools/colleges represented by the Temple Association of University Professors (TAUP) schools and colleges. An award recipient may not accept any teaching or other reimbursed appointment for the summer at Temple, or elsewhere. Faculty are not eligible for this award more than twice within a three-year period. Summer research awards may not be combined with a sabbatical in the same 12-month academic year; the academic year is defined as divided into three semesters – fall, spring, summer.
Sabbaticals
Sabbaticals are available for faculty to pursue professional development, to conduct research and/or creative activities, and/or to develop methods and materials to improve teaching and curricula with the outcome of increasing the individual’s future contribution to the University. All eligible faculty members are encouraged to apply.

Sabbaticals are open to all TAUP tenured, tenure-track, and non-tenure-track faculty. A faculty member on the tenure track, but not yet tenured, may apply for a sabbatical to be taken in the fourth or fifth year of full-time service at Temple. If a tenure-track faculty member’s probationary period has been extended, his/her time to apply for a sabbatical will be adjusted accordingly. Please note that sabbaticals taken by tenure-track faculty do not stop the tenure clock.

Faculty who have received a sabbatical are eligible for another sabbatical following six additional years of service. Requests to postpone an application for sabbatical or an awarded sabbatical for up to two years may be made to the respective dean. Non-tenure-track faculty who have completed ten years of full-time service at Temple are eligible to be considered for sabbatical. Faculty members granted a sabbatical will be required to return to his/her position at Temple for at least one year.

Extramural Funding Program

To further enhance the funding information available to Temple's faculty, the Office of the Vice President for Research posts information regarding various external research funding opportunities on the OVPR website. These include listings for federal, foundation, and non-profit organizations.

These sites are monitored and updated regularly to provide the most accurate and up-to-date information possible. In addition, the Research Administration division routinely monitors publications and databases that identify, list, and describe funding sources and opportunities for external support.

Federal funding opportunities can be accessed here:
http://research.temple.edu/about/resources/federal-funding.

Non-Federal and Foundation funding opportunities can be accessed here:
http://research.temple.edu/about/resources/other-funding-agencies.

Resources and Tools for Research Collaboration
https://research.temple.edu/grants/key-guidelines-resources/funding-your-project

Funding Portal Tools
Faculty may take advantage of tools for collaboration through access to several funding opportunity portals. These provide the ability to search for funding by key words and other selection criteria. In addition to funding searches, tools such as Pivot/COS and SPIN offer the capability to search for collaborators in an investigator's field or discipline. Key portals are highlighted here; the above link offers many others.

Pivot/Community of Science (Pivot/COS):
https://www.cos.com/

- One of the most valuable tools for researchers at Temple is to take advantage of the Pivot/Community of Science (Pivot/COS) database. Pivot/COS is a comprehensive global source of funding opportunities that affords access to billions of dollars from potential funding sponsors. Pre-populated scholar profiles are matched against more than 26,000 funding opportunities.
- Collaborators can be found from among 3 million profiles worldwide. Pivot/COS also allows funding opportunity alerts to be targeted to individual research interests based on a faculty profile.
• The Pivot/COS database contains first-person profiles of researchers at leading universities and other institutions involved in basic or applied research.

• Pivot/COS contains approximately 480,000 profiles submitted by researchers, scholars and other experts from more than 1,600 universities, government agencies, and other research and development organizations from around the world.

• Pivot/COS profiles include contact information and position, qualifications and expertise, publications, patents and awards, and Pivot/COS keywords – a standardized list, applied consistently through all profiles.

• New users can construct a profile in Pivot/COS after registering and setting up an account. For help with account registration, contact Ming-Hui Chou at era@temple.edu.

Sponsored Programs Information Network (SPIN)
https://era.temple.edu/tu_login/login.asp

• SPIN is an online accessed database that provides web-based information resources and searchable databases for federal, non-federal and corporate funding opportunities. It is designed to assist faculty and staff in the identification of external sources of support for research, education and development projects.

• SPIN is accessed by logging into the ERA platform with your Temple credentials (AccessNet ID and password). After you are in ERA, you will click on the Find Funding link in the dashboard. This will take you to the main SPIN search platform.

• The database is searchable using SPIN keywords, sponsor names(s), award type(s), applicant type(s), geographic region, and/or deadline date/date ranges. It includes the InfoEd Commerce Business Daily and a SPIN keyword thesaurus. It also provides listings of upcoming deadlines and allows investigators to customize email notifications of funding information.

Foundation Directory Online
http://guides.temple.edu/az.php?q=foundation+directory+online

• Temple University's Office of the Vice President for Research and the Office of Institutional Advancement jointly sponsor a subscription for the Foundation Center's Foundation Directory Online (FDO) Professional via Temple University Libraries. FDO provides access to an unprecedented wealth of timely, comprehensive information on grant makers and their grants, including over 140,000 foundations, corporate donors, and grant making public charities.

• FDO contains listings of over 3.2 million recent grants, more than a half million indexed trustee, officer, and donor names, and over one million IRS 990s – all fully keyword-searchable, with 54 search fields including keyword search.

• Other FDO features include:
  o power search across 9 Foundation Center databases;
  o interactive maps and charts show foundation grants by location or subject;
  o update central: build customized reports by state on new grant makers, high-growth grant makers and grant makers with recent changes;
  o unique funder portfolios including grant maker news, publications, RFPs, and social media channels.

The above link will take you to the FDO using the institutional subscription through the library. If you are off campus, you will be prompted to enter your Temple credentials (AccessNet ID and password) first.

Collaboration Platforms
Temple also offers faculty several avenues for sharing expertise and collaborating with colleagues. A few are highlighted here.

Temple University Libraries
https://library.temple.edu/home

Temple University Libraries facilitate teaching, learning, and research with world-class collections and services. They maintain compiled lists of resources support services and databases.
Grant funding agencies have increased their enforcement of research data management plans. These plans detail processes and practices for collecting storing and encrypting working data. They also document specifics ensuring long term access to curated data sets in support of publications.

To facilitate this requirement, Temple University Libraries has launched an updated Research Data Services Webpage to support researchers at each stage of the Data Lifecycle. Links to a select number of resources are available, as well as an Ask A Data Question form that will direct researchers’ queries to appropriate data management specialists. Two sites of particular interest are the Data Management Home Page and the Data Management Planning Tool site.

**OwlBox**
https://computerservices.temple.edu/owlbox

- OwlBox, powered by box.com, is Temple’s convenient resource for storing, sharing and collaborating on files. The OwlBox website (above) offers faculty, staff, and students up to 100GB of storage space. Files can be accessed online from anywhere including mobile devices, and sync capability with desktop files. OwlBox also has a Facebook-like feature where users can comment and exchange feedback on files that are shared. The box service automatically keeps previous versions of the documents. In addition, users can assign tasks to a shared file and supply a due date for action.
- To access OwlBox, log in to TU Portal and select OwlBox on the left side of the page.
- For additional information about OwlBox, please contact the Computer Services Help Desk at 215-204-8000.

**Center for The Advancement of Teaching**
http://teaching.temple.edu/

- The Center for the Advancement of Teaching (CAT) promotes the value and practice of excellent teaching – teaching that facilitates student learning and growth. CAT’s programs and resources support evidence-based teaching and provide opportunities for faculty and TAs to learn from the experience and expertise of their colleagues.
- A range of services are offered to provide learning opportunities through programs, campus-wide events, and department-specific workshops that promote excellent teaching to facilitate student learning and growth.
- CAT resources include one-on-one consultations, group workshops, special events, and facilities that foster teaching excellence through research-based practices and the use of instructional technology.

**Location**
Center For The Advancement Of Teaching
TECH Center, Suite 112
1101 W. Montgomery Avenue
Philadelphia PA 19122

**Contact:**
Email: cat@temple.edu
Phone: 215-204-8761

**Other Temple Resources**

In addition to Temple’s Office of the Vice President for Research, faculty have other key resources within their own units to help them navigate the university’s business and operations systems. These key colleagues typically include research business managers or department administrators, department chairs or center directors, associate deans for research, and deans.

Research business managers/department administrators will be the point of contact or gateway for services including hiring graduate/research assistants and laboratory staff, as well as understanding compensation, benefits, travel, and reimbursement functions, among others. These individuals also partner with the OVPR divisions for all the functions described in this guide.
CORE FACILITIES

Recognizing the need to provide faculty with the necessary tools to conduct state-of-the-art research, Temple offers a wide range of research core facilities across the university. With the affiliation of the Fox Chase Comprehensive Cancer Center with Temple University’s Health System, researchers have access to cross-cutting tools that will continue to solidify Temple’s role as an emerging leader in basic and clinical research. Here are some of the many resources available to faculty researchers.

Temple University

- Comprehensive NeuroAIDS Center (CNAC)
- Ex Vivo Microcomputed Tomography (microCT) Core
- TUBRIC: Brain Research and (Magnetic Resonance) Imaging Center
- Biostatistics Consulting Center
- Jayne Haines Center for Pharmacogeomics and Drug Safety Core
- Moulder Center for Drug Discovery Research
- Temple University cGMP Core
- Materials Research Facility
- Institute for Genomics and Evolutionary Medicine
- Institute for Survey Research
- Flow Cytometry and Cell Sorting Facility
- Confocal Imaging Facility
- Large Animal Facility
- Proteomics Facility
- Viral Vector Core Facility
- Mass Spectrometry Facility

Fox Chase Comprehensive Cancer Center

- Animal Research
  - Irradiation
  - Laboratory Animal
  - Transgenic Mouse
  - Zebrafish
- Biotechnology
  - Biochemistry and Biotechnology
  - DNA Sequencing
  - High Throughput Screening and Translational Research Services
  - Screening and Translational Screening Equipment
  - Instrument Shop
  - Molecular Modeling Facility
  - Organic Synthesis Facility
  - Spectroscopy Support Facility
- Cell Biology
  - Biological Imaging Facility
  - Cell Culture Facility
  - Cell Sorting Facility
- Computing and Information
  - Biostatistics and Bioinformatics Facility
  - Population Studies Facility
- Genetic Research
  - Biosample Repository
  - Genomic Sequencing
    - Cytogenetics and Chromosome Microarray Analysis
    - Illumina Next Gen Sequencing
    - Genotyping and Real-time PCR
    - Laser Capture Micro-Dissection Facility
+ **POLICIES**

[http://policies.temple.edu/](http://policies.temple.edu/)

**Temple University Policies Related To Research**

*All policies are found at the above link except for the last one, which is on the Lewis Katz School of Medicine website.*

- 02.52.11 RESEARCH INCENTIVES
- 02.52.12 FINANCIAL CONFLICT OF INTERESTS IN RESEARCH
- 02.52.13 POLICY ON INSTITUTIONAL CONFLICT OF INTEREST IN RESEARCH
- 02.53.01 INVENTIONS AND PATENTS
- 02.54.01 MISCONDUCT IN RESEARCH AND CREATIVE WORK
- 04.16.01 CONFLICT OF INTEREST – ALL EMPLOYEES
- 04.16.02 CONFLICT OF INTEREST – FACULTY
- 04.16.03 GIFTS AND CONFLICTS OF INTEREST – ALL EMPLOYEES
- 08.2012 CONFLICT OF COMMITMENT AND CONFLICT OF INTEREST-LKSOM
Temple University’s Office of the Vice President for Research, led by Dr. Michele M. Masucci, empowers faculty, staff, students, and alumni to develop research that impacts economic development, solves societal problems, opens new fields of discovery, and creates sustainable technologies and businesses for the next generation.

Dr. Masucci and her central team are poised to assist researchers as they develop and manage their sponsored research projects as well as their obligations to conduct research in a responsible manner. Team members assist, guide, advise, and help navigate the various resources available to investigators as they launch their research programs at Temple University.

Office of the Vice President for Research

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michele M. Masucci, PhD</td>
<td>Vice President for Research, Professor of Geography and Urban Studies</td>
<td>215-204-6875</td>
<td><a href="mailto:masucci@temple.edu">masucci@temple.edu</a></td>
</tr>
<tr>
<td>Stephen G. Nappi</td>
<td>Associate Vice President for Technology Commercialization and Business Development</td>
<td>215-204-5293</td>
<td><a href="mailto:snappi@temple.edu">snappi@temple.edu</a></td>
</tr>
<tr>
<td>Michael B. Henderson, JD, LLM, MS</td>
<td>Associate Vice President for Research Regulatory Compliance and Strategic Initiatives</td>
<td>215-204-7467</td>
<td><a href="mailto:michael.henderson@temple.edu">michael.henderson@temple.edu</a></td>
</tr>
<tr>
<td>Allison Philabaum Shah</td>
<td>Associate Vice President for Research Administration</td>
<td>215-926-2089</td>
<td><a href="mailto:allison.shah@temple.edu">allison.shah@temple.edu</a></td>
</tr>
<tr>
<td>Karen D. Mitchell, MBA</td>
<td>Assistant Vice President for Research Administration</td>
<td>215-707-7547</td>
<td><a href="mailto:karen.mitchell@temple.edu">karen.mitchell@temple.edu</a></td>
</tr>
<tr>
<td>Andrew J. McGinley, Esq.</td>
<td>Executive Director for Strategic Business Operations and Planning</td>
<td>215-204-6935</td>
<td><a href="mailto:andrew.mc@temple.edu">andrew.mc@temple.edu</a></td>
</tr>
<tr>
<td>Rosemary C. Dillon, MA</td>
<td>Director of Special Projects</td>
<td>215-204-7551</td>
<td><a href="mailto:dillon@temple.edu">dillon@temple.edu</a></td>
</tr>
<tr>
<td>Krunal M. Cholera, MS</td>
<td>ERA Director/Project Manager</td>
<td>215-204-5370</td>
<td><a href="mailto:krunal@temple.edu">krunal@temple.edu</a></td>
</tr>
<tr>
<td>Sharon A. Barkley, MS</td>
<td>Assistant Director, External Affairs</td>
<td>215-204-6301</td>
<td><a href="mailto:sbarkley@temple.edu">sbarkley@temple.edu</a></td>
</tr>
<tr>
<td>Matthew DiMarco, MLA</td>
<td>Assistant Director, Finance and Accounting</td>
<td>215-204-9336</td>
<td><a href="mailto:dimarco@temple.edu">dimarco@temple.edu</a></td>
</tr>
</tbody>
</table>

Location
OVPR
MC: Main Campus
Conwell Hall, Suite 401
1801 N. Broad Street
Philadelphia PA 19122
ovpr@temple.edu