

Introduction To Research at Temple University

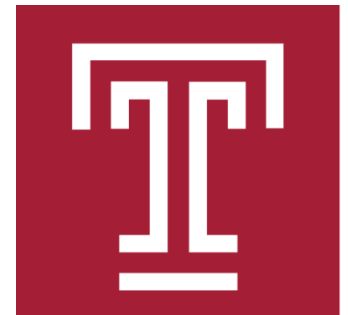
Iris Lee, MD

Associate Professor of Medicine

Core Faculty, Resident Research

Nephrology, Hypertension and Kidney Transplantation

Lewis Katz School of Medicine, Temple University



Overview

- Purpose of Research
- Research Process
- Data on Resident Research
- Types of Research
- Research Education and Resources
- Research Opportunities and Funding



Purpose of Research

Medical research as part of postgraduate training

Scholarship, research education and research experience; why is this important?

Provides opportunities to develop academic skills useful for all types of careers in medicine

- Develop skills in searching the literature
- Teaches critical reading skills and appraisal of the literature
- Practice generating hypotheses and questions
- Learn research and statistical methods
- Provides exposure to facets of academic medicine, and may help define career goals



Research Process

Choosing a Mentor

Who do you choose? What are your goals?

- Scholarship
- National and Regional Meetings
- Building up CV
- Competitive Fellowship
- Academic Faculty
- Physician Scientist
- Research Funding/Grants

What Should You Do?

- Get advice on who to meet
- Meetings
- Come Prepared
- Be Persistent

Choosing a Mentor

Temple Research Mentors / Points of Contact

Specialty	Resident Mentors	Faculty Points of Contact
General Internal Medicine		Bizath Taqui
Cardiology	Joanna Catalano	Anjali Vaidya
Endocrinology		Cherie Vaz
Gastroenterology		Henry Parkman
Hematology/Oncology		Koneti Rao (Temple); Efran Dofrat (Fox Chase)
Infectious Diseases	Kurt Kunz	Dan Mueller
Nephrology	Paris Barkan	Iris Lee
Pulmonary/Crit Care	Brooke Heyman	Erin Narewski
Rheumatology		Roberto Caricchio

Templeim.com/research

Research Process

- Choosing a topic
- Reviewing the literature
- Develop a research idea
- Forming a hypothesis
- Developing Aims (Objectives)
- Developing a Research Plan/Approach
- Institutional Review Board (IRB) approval
- Obtaining Support (monies, personnel)

Research Process

- Data collection
- Interpretation of data
- Writing up findings
- Communicating findings (poster/oral)
- Publications
- Grants and Funding
- Research as a Career

Research Relevant Computer Skills

- Literature Search Engines
- PowerPoint
- Adobe photo shop
- Excel
- SPSS, SAS, STATA
- Endnote

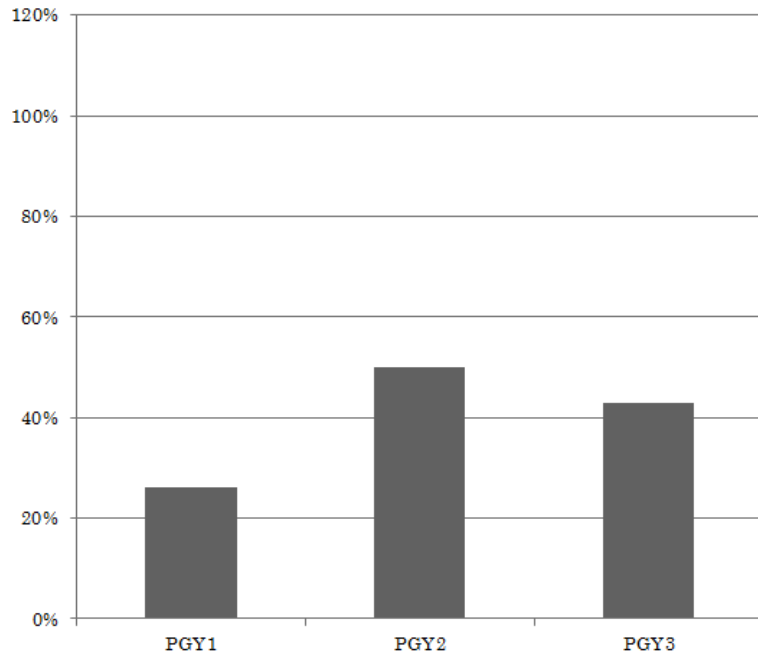
Research Policies and Research Blocks

- Residents will have up to 3 months of research elective time throughout residency
- Research blocks will be offered to PGY2 and PGY3 residents year-round, and will be offered to PGY1 residents in the second half of the year (if the resident has a research mentor and plan identified)
- Resident blocks will be offered only by request
- Blocks will be cleared by the chief residents and/or Dr. Iris Lee, Core Faculty for Resident Research. Permission will only be granted if a mentor and general project has been chosen.
- After completion of each block, an informal report of how time was spent on the block will be required. (verbal or written communication)
- All residents completing more than 2 weeks of research will be asked to present at the Sol Sherry Research Symposium in June.

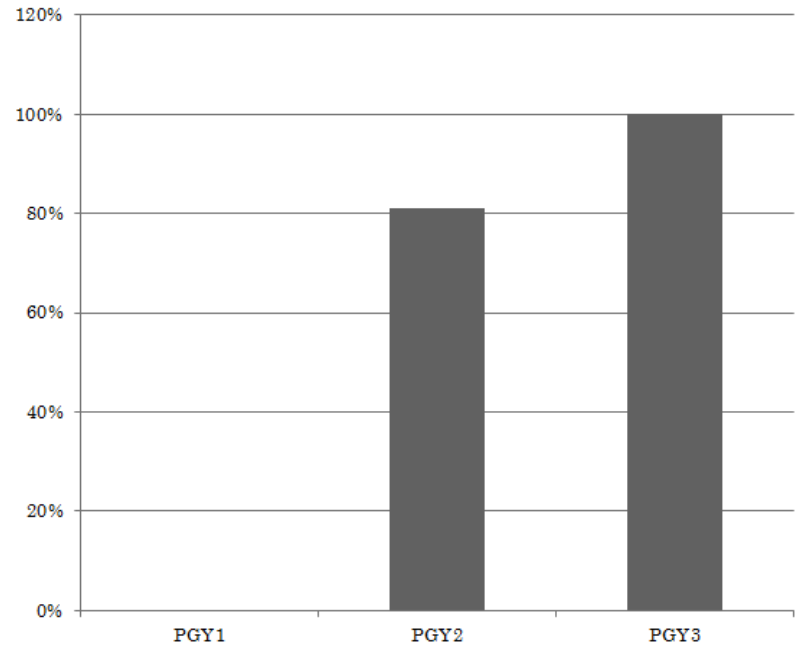
Resident Scholarship

- Scholarly activities can include:
 - Presentations at Morning Report, Morbidity and Mortality Conference, Resident Report,
 - Quality Improvement
 - Project presentation,
 - Poster and/or oral abstract presentations (local or national)
 - PICO reports and Journal Clubs in Ambulatory Clinic
 - Published reviews, case reports, chapters, peer reviewed or non-peer reviewed original articles.

Resident Research Activity



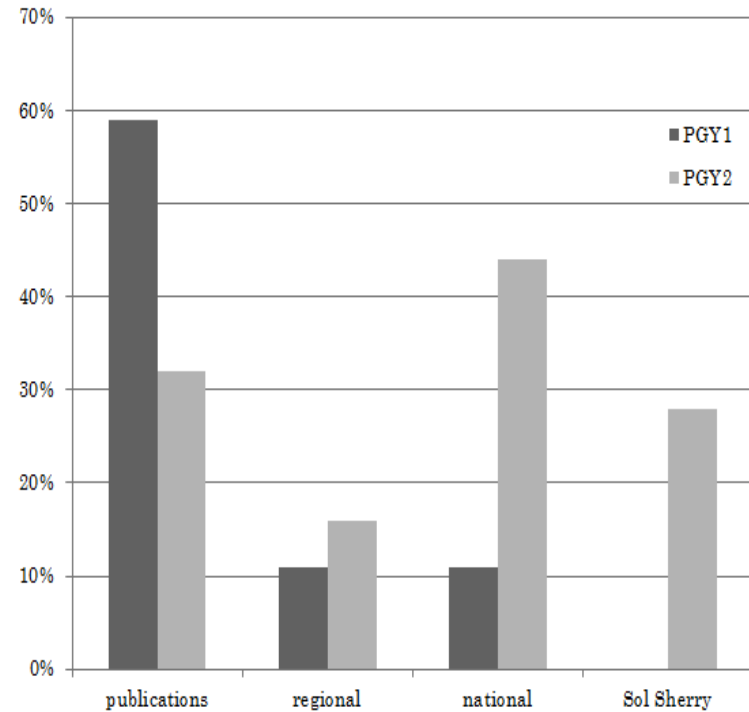
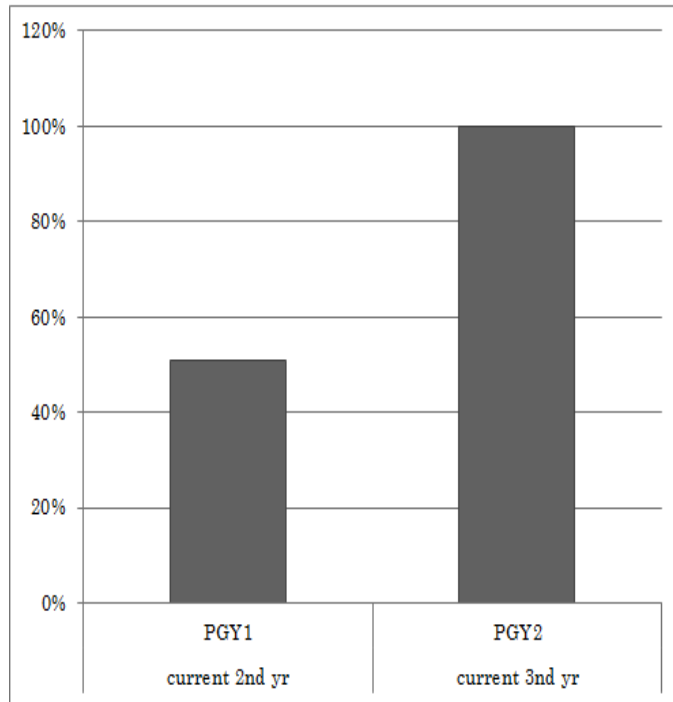
(2016-2017)



(2017-2018)

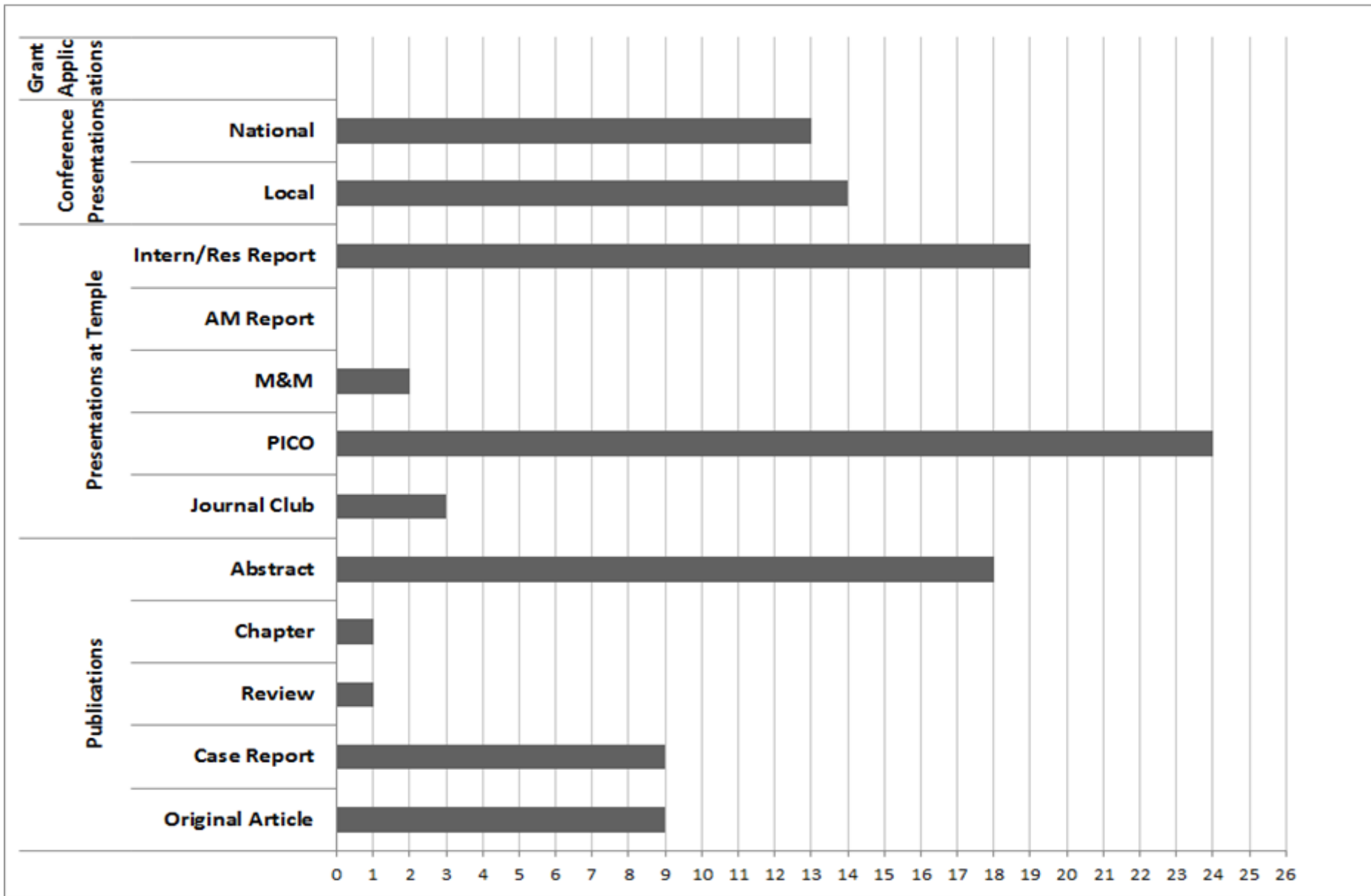
***Research block is one week
Can request multiple blocks***

Percentage of Residents With Documented Scholarly Activity



Data as of June 2017
(Academic Year 2016-2017)

SCHOLARLY ACTIVITY BY TYPE



Number of Residents

Carving out Time for Research

- Maximize research elective time during postgraduate training
- Meet with your mentor EARLY on and on a regular basis
- Use periods of clinical down time, weekends
- Attend research education conferences, weekly research conferences (*lab, section*)
- Organize a research timeline that helps you accomplish your ultimate goal
(*conferences, fellowship and faculty applications, training grants, funding*)

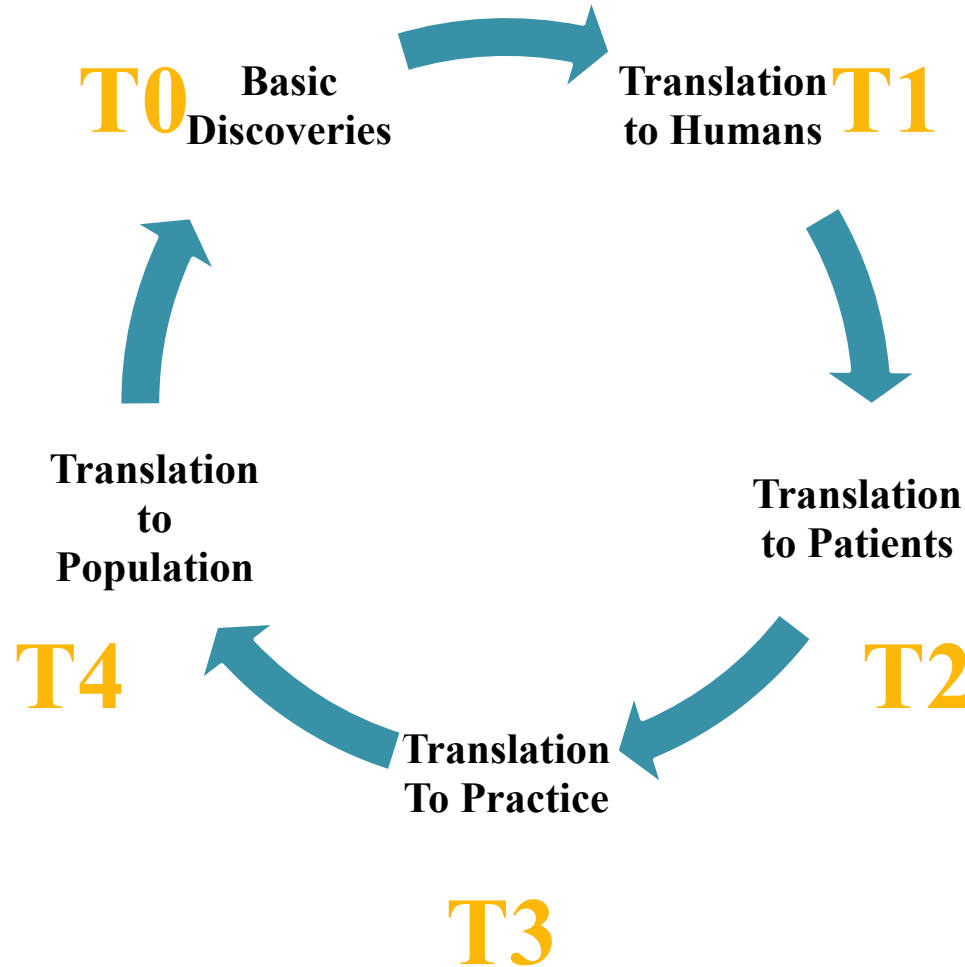


Types of Research

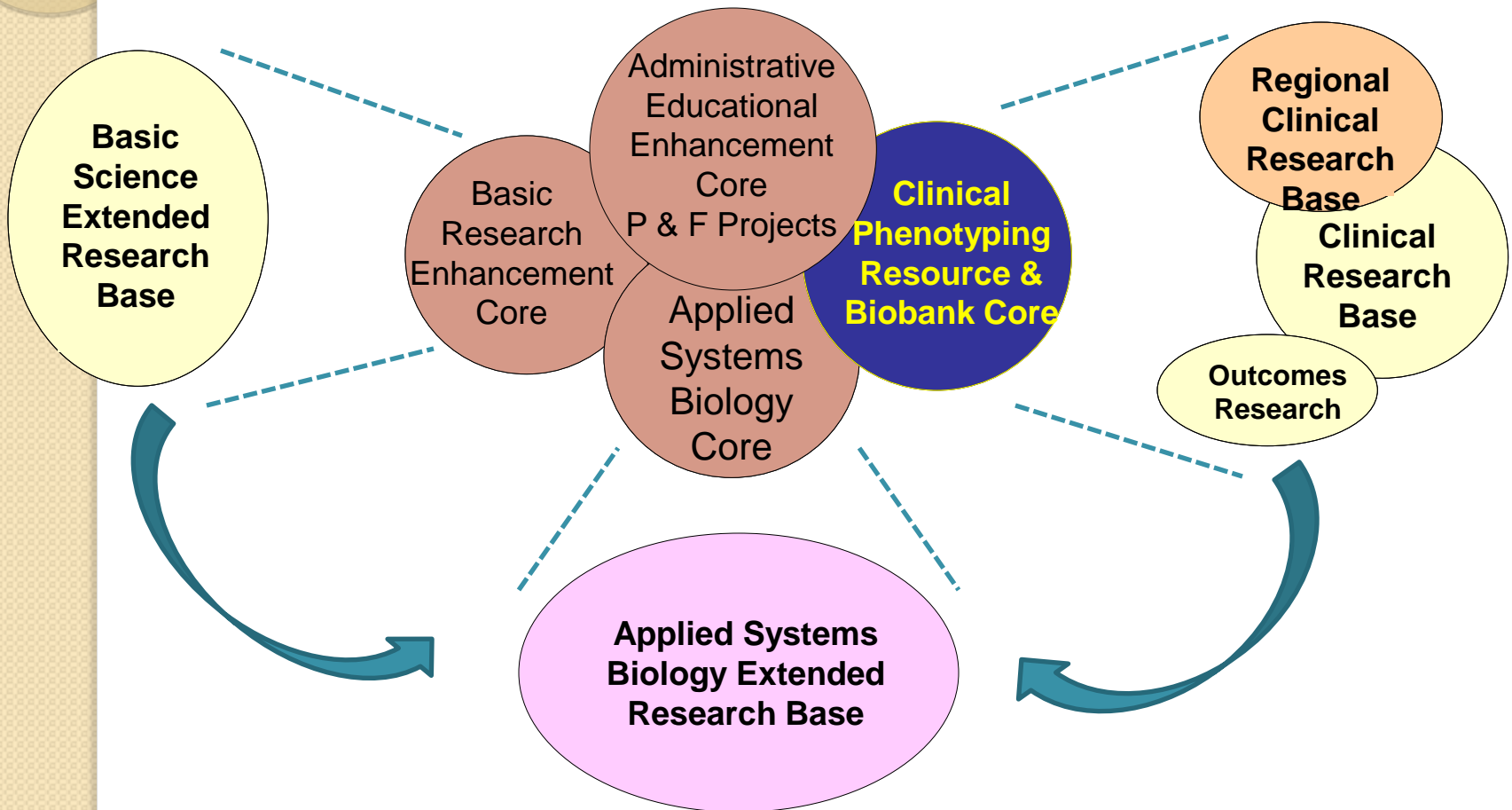
Types of Research

- **Basic Research**
 - in vitro experiments
 - in vivo experiments using animal models
- **Clinical Research**
 - Chart review
 - Database exploration and mining
 - Clinical trials-observational and/or interventional
- **Translational Research**
- **Social and Behavioral Research**

Translational Research (From Bench to Bedside)



Research Consortia



Social and Behavioral Research

- Uses a wide range of social science methodologies to help understand human behavior, attitudes, beliefs and interactions
- Surveys, Questionnaires , Behavioral interventions used as research tools
- Studies focus on how social networks influence health-related attitudes and behaviors that impact a variety of outcomes
 - Transplantation
 - Medication Adherence
 - Diet
 - Morbidity
 - Mortality





Research Education

Research Education and Curriculum

DOM Research Curriculum

- A monthly didactic conference on the second Thursday of each month at 12 noon.
- Location: Lecture Room A. Basement Hospital
- Intended Audience: Medical Residents and Fellows in the DOM
- Lunch provided by DOM.

The goal of this conference is to present topics that will help the participants to: 1) plan a clinical research project; 2) implement either observational or experimental clinical research; 3) analyze and interpret the data; and 4) present clinical research data.

Research Education and Curriculum

DOM Research Curriculum 2018-2019

- *Introduction to Research at Temple*
- *Writing a Study Protocol*
- *Studies using Large Databases*
- *Clinical Study Protocol: statistics needed*
- *Using EPIC for research*
- *Using REDCAP for Research*
- *Epidemiological Studies*
- *Ethical and IRB Issues in Biomedical Research*
- *Writing an Abstract and Manuscript*
- *Presenting Research Studies: Posters and Oral Presentations*

Research Education and Curriculum

Introduction to Research at Temple, Dr. Iris Lee

- Getting started, what you need to know

Abstract/Case Report Writing, Dr. Iris Lee

- Getting your Abstracts, Case Reports Submitted

Presenting Your Research, Dr. Iris Lee

- Tips on Oral and Poster Presentations

Presentation of Research Opportunities, DOM faculty

- Resident Research Day

Research Education and Curriculum

Critical Appraisal of Journals, Dr. Bizath Taqui, Director of Inpatient Education

Once every month, build critical skills for reviewing literature, reinforcement of key statistical concepts

Quality Improvement Projects, Dr. Leilani Lee, APD, Director of Ambulatory Medicine and Dr. Jamie Garfield, Core Faculty.

Evidence Based Medicine: PICO process, Dr. Leilani Lee

Research Education

- Graduate Programs

Public Health

Epidemiology

Microbiology and Immunology

Clinical and Translational Medicine



Research Resources

Internal Medicine Residency Program

[Welcome](#)[DOM Research Curriculum for 2017 to 2018](#)[How to Apply](#)[Why Temple?](#)[Education](#)[Research](#)[Resident Life](#)[Contact](#)

Research

The Department of Medicine is highly committed to research education and training. The Lewis Katz School of Medicine has multiple research centers engaged in a wide variety of scientific investigation, and is comprised of NIH funded faculty who are well known leaders in the field. Multiple events are sponsored yearly by the Department of Medicine affording opportunities to learn about ongoing research projects, scholarly opportunities, and areas of focus at the School of Medicine. Temple residents benefit from this environment, and most engage in scholarly activity, clinical or basic research. Each year, we have numerous residents who present their research at regional and national scientific meetings, and successfully compete for fellowship positions at major academic centers. Our program offers research elective time for all residents. For those seeking to develop a research career, our Physician Scientist Track provides opportunities for intensive mentored research training in different subspecialties.

Iris Lee, MD

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Program Director, ABIM Research Pathway
Core Faculty, Resident Research
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[Research Centers](#)

[Department of Medicine and Resident Research Curriculum](#)

Internal Medicine Residency Program

Welcome

How to Apply

Why Temple?

Education

Research

Resident Life

Contact

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Department of Medicine Research Curriculum for 2018-2019

Research

DOM Research Curriculum for 2017 to 2018

A monthly didactic conference generally on the second Thursday of each month at noon (12 p.m.).

Location: Lecture Room A. Hospital Basement

Intended Audience: Medical Residents and Fellows in the Department of Medicine.

Served with lunch provided by DOM.

The goal of this conference is to present topics that will help the participants to: 1) plan a clinical research project; 2) implement either observational or experimental clinical research; 3) analyze and interpret the data; and 4) present clinical research data.

1. September 13, 2018

Importance of scholarship, Introduction to research at Temple (Iris Lee)

2. October 11, 2018

Studies using Large Databases: How to use them well - Which to use, how to obtain, how to get the data (Meredith Briscoe)

3. November 8, 2018

Writing a Study Protocol: Aims & Hypothesis, Study Design, Statistical Analysis, Sample Size (Dan Rubin)

4. December 13, 2018

Using Epic for Research (Mark Weiner)

5. January 10, 2019

Using Redcap for Research Studies (Mark Weiner)

6. February 14, 2019

Epidemiological studies: Survey design, Case Control studies, observational cross-sectional and cohort designs that would take advantage of EHR data (Resa Jones)

7. March 14, 2019

Ethical and IRB Issues in Biomedical Research

8. April 11, 2019

Writing an Abstract and Manuscript (Frank Friedenber)

9. May 9, 2019

Presenting Research Studies: Posters and Oral Presentations (Roberto Caricchio)



TempleIM.com (password: temim)
Click on Research



Resident Resources

Educational Resources

Ambulatory

Research

The Wise Owl

- ❖ Tips to get started
- ❖ List of Faculty Contacts (Research Guide) for each section
- ❖ Research Policies and Research Blocks
- ❖ Research Curriculum-Dates
- ❖ Meetings and Abstract Deadlines by Specialty
- ❖ IRB links, CITI training
- ❖ Writing Tips (how to write a case report)
- ❖ DOM Research Award Application

Temple Clinical Research Institute

[About TCRI](#)[Faculty & Staff](#)[Clinical Research Administration](#)[Regulatory Affairs](#)[Research Implementation](#)[Community & Patients](#)[Consultations](#)[Data Management Tools](#)

Clinical Research Administration (CRA)

Supporting the mission of the Temple Clinical Research Institute, the Clinical Research Administration (CRA) is committed to providing expertise and resources designed to enhance and accelerate clinical research of the highest quality.

CRA manages:

- Confidential Disclosure Agreements (CDA)
- Negotiation of amendments, contracts, sub-awards and budgets for clinical trials
- Ensuring COI completion for each study
- Preparing Subject Registration and Billing Form
- Post award activities; obtaining study account numbers, check deposits, invoicing and payout of budgeted items and closeout of the trials
- OnCore, clinical trial database

Temple Clinical Research Institute

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Data Management Tools

REDCap

REDCap (Research Electronic Data Capture) is a secure, web-based application designed to facilitate electronic data capture for biomedical research studies. The system was developed through NIH funding at Vanderbilt University. Data collection forms are custom-built by end users using intuitive form-building screens. Extensive [instructional videos and tutorials](#) are available.

Log in to the TempleHealth REDCap server using your TUHS credentials:

<https://redcap.templehealth.org/redcap/>. If you do not have a TUHS account (i.e. you cannot log into access.templehealth.org), but you would like access to REDCap, please send an email to alice.livshits@temple.edu.

When designing the data collection forms, field-level data checks and question-level skip patterns can be set up. Different levels of data access can be configured for each member of the research team including completely de-identified views of the patient data that help to maintain HIPAA compliance. In addition to electronic forms to be filled in by Temple faculty and staff, surveys can be created to be filled out by non-Temple audiences. Data in existing spreadsheets can be imported into REDCap forms, and data captured via REDCap forms and surveys can be exported into SAS, STATA, R, or SPSS file formats. REDCap is not 21-CFR-Part-11 compliant. For more information, visit [REDCap \(Research Electronic Data Capture\)](#).

Office of Research

[ABOUT](#)[RESEARCH ADMINISTRATION](#)[RESEARCH COMPLIANCE](#)[INNOVATION](#)[Home](#) > [Research Compliance](#) > [Institutional Review Board \(IRB\)](#)

WELCOME TO TEMPLE IRB

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.

- › Human subjects research is reviewed via three methods: a convened IRB; expedited review; or exempt review. Note that the determination for exemption is made by HRPP, not the investigator, and therefore must always be submitted formally.
- › The HRPP supports Temple's dedication to excellence in research by promoting the ethical principles of respect for persons, beneficence, and justice as discussed in The Belmont Report. Investigators have ethical and Institutional responsibilities in conducting human subjects research.
- › For more information, please refer to the [Human Research Protection Program Plan](#) and the [WORKSHEET: Human Research Determination](#). For example, the Human Research Protection Program Plan provides the FDA definition of research and the DHHS and FDA definitions of human subjects. The Human Research Determination worksheet can guide you through the analysis of whether an activity is human subjects research.

If you have questions about whether an activity is Human Research, submit a synopsis of the proposed activity to: irb@temple.edu.

IN THIS SECTION

- › [Conflict of Interest](#)
- › [Responsible Conduct of Research](#)
- › [Institutional Review Board \(IRB\)](#)
 - › [IRB Forms & Standard Operating Procedures](#)
 - › [FAQs | Institutional Review Board](#)
 - › [Investigator Quick Links](#)
 - › [IRB Trainings and Resources](#)
- › [Institutional Animal Care & Use Committee \(IACUC\)](#)
- › [Institutional Biosafety Committee](#)
- › [University Laboratory & Animal Research \(ULAR\)](#)
- › [Meet Our Staff](#)



Office of Research

[ABOUT](#)[RESEARCH ADMINISTRATION](#)[RESEARCH COMPLIANCE](#)[INNOVATION](#)[ERA](#)

[Home](#) > [Research Administration](#) > [Grants Management](#) > [Funding for Your Project](#)

FIND FUNDING FOR YOUR PROJECT

WHERE TO FIND FUNDING

One of the missions of the Grants Management division is to assist faculty in identifying funding sources for intellectual research. The most up up-to-date information is available via the Web and we encourage faculty to make use of the many electronic tools available for locating funding opportunities

Temple University subscribes to several funding opportunity databases. The databases listed below provide the ability to search for funding by key words and other selection criteria. In addition to searches for funding, the databases such as PIVOT and SPIN have the capabilities to search for collaborators in your field. All databases are fairly intuitive but none are all inclusive. Where possible, all databases have direct links from their records to funding entity web sites for primary source information and/or e-mail sites for direct communication. Some allow you to select from their keyword thesaurus and/or do free-text searching.

Be sure to sign up for the email alert notices where available. In particular, PIVOT allows funding opportunity alerts to be targeted to individual research interests based on a faculty profile.

IN THIS SECTION

- [› Roles and Responsibilities](#)
- [› Grants Forms and Templates](#)
- [› Key Guidelines & Resources](#)
- [› Funding for Your Project](#)
- [› Processing Awards](#)
- [› Grants Management Assignments](#)
- [› Meet Our Staff](#)

Explore Temple Research Webpages

- **Research Programs**

<https://medicine.temple.edu/research/research-programs>

- **Research Centers**

<https://medicine.temple.edu/departments-centers/research-centers>

- **Office of Research**

<https://research.temple.edu/grants/key-guidelines-resources/funding-your-project>

- **Institutional Review Board (IRB)**

<https://research.temple.edu/irbTemple>

- **Internal Medicine Residency Program**

<https://medicine.temple.edu/departments-centers/clinical-departments/department-medicine/internal-medicine-residency-program>



Research Opportunities and Training

Research Symposia

- **Sol Sherry Research Symposium** one-day symposium held in June, where MD, MD/PhD, students, and postdoctoral fellows present research posters, and give oral presentations.
- **Temple Translational Science Symposium** -one-day symposium held each Fall, where MD, PhD, MD/PhD, students, and postdoctoral fellows present research posters. This event highlights in-depth research activities going on in the School of Medicine and across Temple University
- **Annual Dawn Marks Research Day** -one-day symposium held in June, where MD, PhD, MD/PhD, students, and postdoctoral fellows present research posters.

DOM Resident Research Awards

Purpose: To provide funding for Internal Medicine Residents to develop skills in clinical or basic lab research, to present research findings at scientific meetings and publish abstracts and/or original articles

Eligibility:

- Categorical Interns and Residents in good standing are eligible.
- Clinical, or Basic Science, Translational or Outcomes based research proposals are acceptable.
- Research must be performed at Temple under the direction of a ***Temple Faculty Member***.

Details:

- Grants will be funded up to \$2000.00 for research support
- The term of the award is for one year (July 1st-June30th)
- Applications are generally due in April
- 2 page description of research proposal including an explanation of how this award will impact career. Updated applicant and mentor CV and description of how funds will be used.

Research Training Grants

- DOM Internal Funding (training, seed, bridge)
- Society Grants
- Private non-profit research foundations and associations
- National Institute of Health

Training Grants

(F32) Ruth Kirschstein Postdoctoral National Research Service Awards

(T32) Ruth Kirschstein Institutional National Research Award

Early Career Development

(K08,) (K23) Mentored Clinical Scientist Research Career Development Award

<https://research.temple.edu/grants/key-guidelines-resources/funding-your-project>



Temple Research Centers



Research at Temple

Basic Research

Clinical Trials

Clinical Research

Translational Research

Social and Behavioral Research

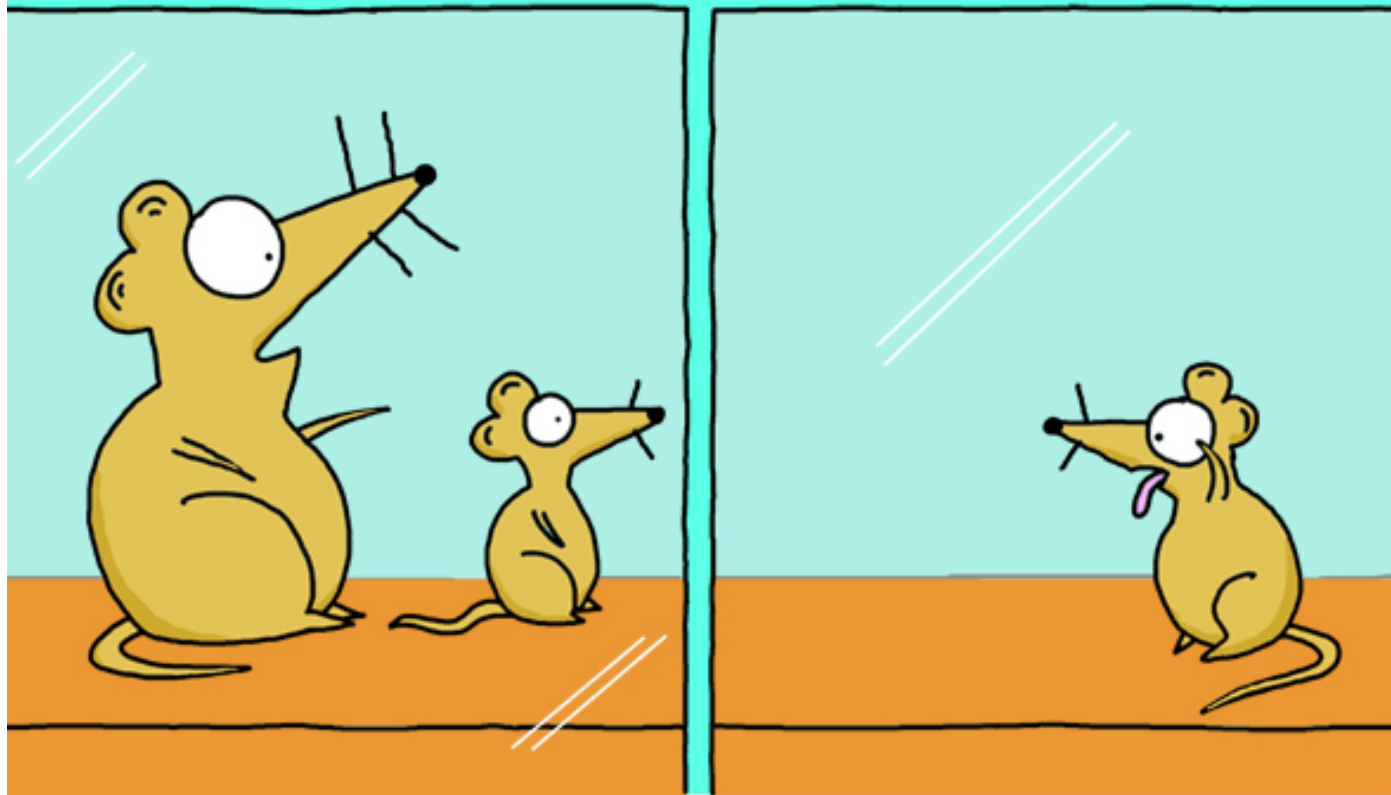
Multiple Divisions/Departments within DOM

Multiple Institutes

Multiple Research Centers

Temple Research Institutes and Centers

- Center for Bioethics, Urban health, and Policy
- Center of Inflammation, Translational and Clinical Lung Research
- Center for Metabolic Disease Research
- Center for Neurovirology
- Center for Substance Abuse Research
- Center for Translational Medicine
- Comprehensive NeuroAIDS Center
- Cardiovascular Research Center
- Fels Institute for Cancer Research & Molecular Biology
- Sol Sherry Thrombosis Research Center
- Fox Chase Cancer Center



“Don’t play with him, he is **Wild Type**.”

A photograph of a modern, multi-story building with a curved glass facade and a brick base. The building is set against a clear blue sky. The brick section in the foreground features white lettering that reads "TEMPLE UNIVERSITY LEWIS KATZ SCHOOL OF MEDICINE".

TEMPLE UNIVERSITY
LEWIS KATZ
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