

Research Requirements for Residency

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- **Research funding:** Amgen, Array Biopharma, BMS, Celgene, GSK, Janssen, Merck, Pharmacyclics, Sanofi, Sattle Genetics, Takeda.
- **Consulting:** Amgen, Array Biopharma, BMS, Celgene, GSK, Janssen, Merck, Pharmacyclics, Sanofi, Sattle Genetics, SkylineDX, Takeda.
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What is Research?

- Systematic investigation of a particular topic
- The three major goals of research:
 - establishing facts,
 - analyzing information, and
 - reaching new conclusions.
- The three main acts of doing research are searching for, reviewing, and evaluating information.
- Research requires organization, resourcefulness, synthesis, patience and above all, *time*.

GOOGLE SEARCH ≠ RESEARCH

Identify Your Goals

- Which subspecialty are you interested in?
- What resources for research are available to you at your institution?
- How much time can you expend for a research project?
 - 1-2 months vs. 3-4 months vs. >6 months
- Do you want to pursue an academic career?

Type of Research Projects

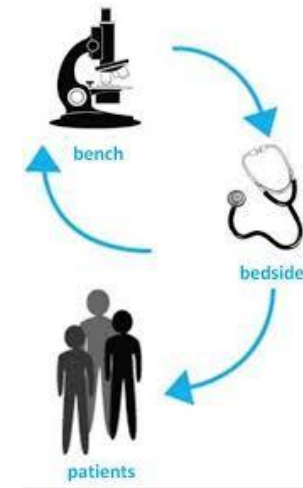


"I was just rubbing sticks together for fun – I didn't realize I was doing basic research."

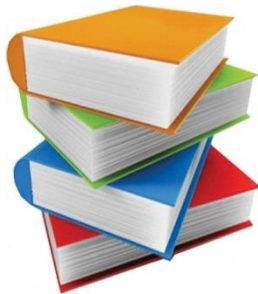
Basic Science



Clinical



Translational



Educational



Quality Assessment & Performance Improvement

Basic Science Opportunities

- Research that involves basic science laboratory and/or animal assays and procedures.
- Requires patience, hard-work and long-term commitment from both mentee and mentor.



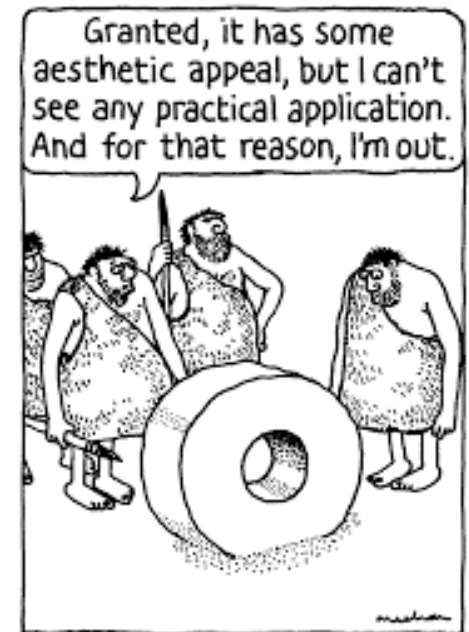
"Ed's in medical research."

What is Clinical Research?

- A branch of medical science
 - determines the safety and effectiveness of medications, devices, treatment regimens, hospital resources etc.
 - These may be used for prevention, treatment, diagnosis or for relieving symptoms of a disease.
- The three main acts of doing clinical research are:
 - Data collection (Retrospective or Prospective)
 - Data analysis and interpretation
 - Publication

Other Research Opportunities

- Educational Research
 - Medical student education
 - Resident Education
- Quality Improvement, Performance Improvement



What do you have to do? (1)

- Complete CITI training
- Identify your faculty mentor
 - Meet with several faculty members with you research interest
 - See their current projects
 - Share your interests and goals
 - Get ideas on future projects
 - Decide your research topic and your mentor

What do you have to do?

(2)

- Get IRB Approval
 - Work with your faculty advisor and research director
- Conduct research
 - Generate hypothesis & design your study
 - Collect, analyze and interpret data
 - Derive new conclusion(s)
 - Present in a local/state/national meetings
- Publish a paper (write, edit, submit, revise, resubmit)

Tentative Timeline

- By end of 1st Year → Complete CITI course,
Meet the research director,
potential faculty advisor, get
IRB done
- By end of 2nd Year → Complete the research
work, write abstract and
submit for presentation
- By end of 3rd Year → Submit the manuscript,
revise it per reviewers'
comments and resubmit

My Academic Road

- Medical School Graduation 2002 – no research experience
- 1 year clinical research at SKMCH&RC : 2 abstract
- Internal Medicine Residency 2004-2007: Case reports, 1 clinical research project and 1 basic science project.
- Hem/Med Onc Fellowship 2007-2010: 2 funded clinical research projects, 2 funded basic science projects (18-months in lab).
- 1st Faculty Position: Developed translational research focus, failed on 5 grants before getting 1st foundation grant.
- 2nd Faculty Position: see next page

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