



## Optimizing the Resident Research Experience

### Panelists:

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Jenna Devare – Resident University of Michigan

### Moderator:

Marc Thorne – Program Director Michigan



# ACGME Program Requirements

## IV.B. Residents' Scholarly Activities

IV.B.1. **The curriculum must advance residents' knowledge of the basic principles of research, including how research is conducted, evaluated, explained to patients, and applied to patient care.** (Core)

IV.B.2. **Residents should participate in scholarly activity.** (Core)

IV.B.2.a) The educational program must provide at least three months of a structured research experience for residents. (Core)

IV.B.2.a).(1) The research experience must include instruction in research methods and design, as well as outcome assessment. (Core)

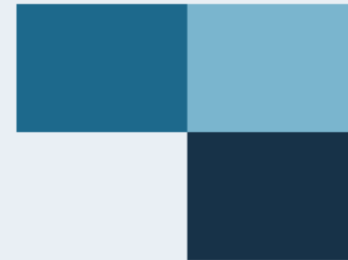
IV.B.2.a).(2) The research experience should result in a completed manuscript suitable for publication in a peer-reviewed journal. (Outcome)



# Learning Objectives

- Interactive Format
- Time for Questions and Discussion
- Take Home
  - Be familiar with different approaches programs take to meeting research experience
  - Identify best practices for optimizing the research experience
  - Identify shared challenges for the research experience





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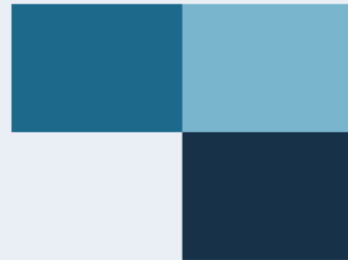
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# Research Rotation Structure

- Length
- Timing
  - PGY Year
- Preparation



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# Washington University Research Rotation

# PGY3 Research Rotation at WUSM

## Structure

- Goals: Complete clinical or PSQI research project
- Timeline
  - Meet with Vice-Chair for Research and potential research mentors early during PGY2 (June to August)
  - Research topic & mentor selected in PGY2 (winter-spring)
  - Written plan/protocol (max 5 pages) to be completed prior to start of research rotation, submitted to PD and Vice-Chair for Research
  - 3 months for research during PGY3
  - Self-directed learning during research rotation
    - Research methodology, Biostatistics, and Critical Appraisal of the Literature



# Clinical Methodology

## Online Coursework Options

- NIH Online Course: Introduction to the Principles and Practice of Clinical Research (<https://ocr.od.nih.gov/courses/ipPCR.html>)
- Fundamentals of Clinical and Translational Science (FunCaTS) Program - Mayo Clinic (<https://www.mayo.edu/research/centers-programs/center-clinical-translational-science/education/fundamentals-of-clinical-and-translational-science-funcats-program>)
- Statistics at Square One BMJ.com (<http://www.bmj.com/about-bmj/resources-readers/publications/statistics-square-one> )

# Research Structure

- Research Forum
  - Monthly session
    - Review of active projects and status
    - Problem-solving and brain-storming
    - Sessions on research methodology and biostatistics
- PGY-3 year – 3 month research rotation
  - Free of clinical responsibilities during daylight hours, still in call schedule
  - Preparatory phase of one year leading up to this including major project IR & grants
- All PGY-2 through PGY-5 expected to have active research each year
- Research Track
  - Separate match
  - PGY-1 year (inactive)



# University of Michigan: Structure of Research Experience

- Research Rotation
  - 6 months for clinical track residents, PGY-4
  - 18 months for NIH-funded T32 research resident, PGY-3/4 years
    - Separate match slot for research track (1 per year)
    - Begins midway through PGY-3 year
- Resident Research Committee
  - Meets monthly during resident didactic time
  - Structured didactic research education, research presentations
  - Annual research meet-up to pair medical students & residents with faculty



# Expectations

- Productivity
- Grant Applications
- Others?



# PGY3 Research Rotation at WUSM

- Expectations
  - Presentation at Annual Resident Research Day
  - Oral or poster presentation at national meeting
  - Publication in peer-reviewed journal

# Expectations

- Overall
  - Soft expectation of one publication per year (PGY-2-5)
  - PGY-2 to PGY-4 must submit to state meeting yearly
- Research Rotation
  - One major project
  - Additional projects as primary project allows
  - Application for internal and external grant opportunities for animal and tissue studies
  - Regular meetings with research mentor
- Research Track
  - Primary projects based on ongoing genomics
  - Ancillary spinoff projects
  - Clinical research as time allows



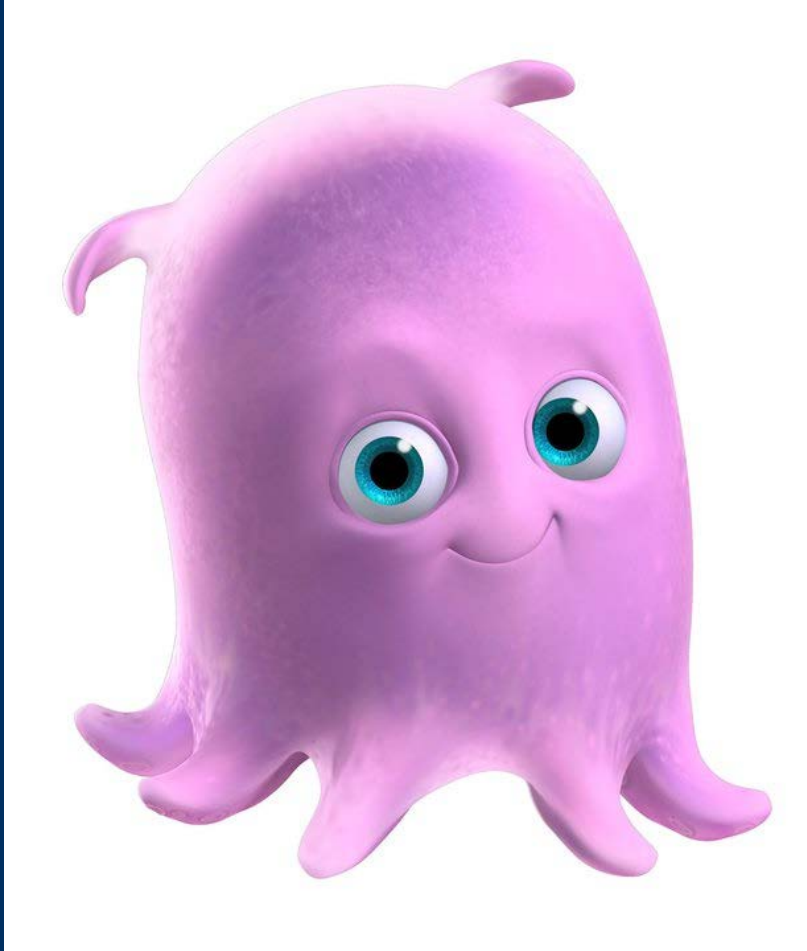
# University of Michigan: Resident Research Expectations

Year (PGY)	Attend resident research committee meetings	Establish a clinical project	Extramural research presentation	Peer-reviewed publication	Submit grant
1 (intern)	If available				
2	Y	Y			
3	Y	Y	Y	Y	Y
4	Y	Y	Y	Y	
5	Y	Y	Y	Y	





# Pearls and Challenges



**CHALLENGE ACCEPTED**



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# Pearls & Challenges

- Pearls

- Adequate large study preparation to start day #1
- Adequate backup project plans
- IRB process PRE-rotation

- Challenges

- Managing expectations of resident AND faculty
- Accounting for resident's time
  - In hospital vs at home
- Variability in productivity – controllable vs non-controllable factors
- Alter research plan if resident on clinical remediation



# University of Michigan: Pearls and Challenges

- Research committee structure: dedicated faculty leads
- PGY-3 grant writing requirement
  - Ensures quality of research during PGY-4 rotation
  - Internal grant opportunity (\$10,000 resident research award)
- Resources
  - Research opportunities
  - Support staff
  - Funding for extramural research presentations
- Challenges
  - Tendency to overcommit
  - Ensuring completion of projects



# Questions/Comments/Thoughts



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# Should Research Experience Be Required?



# Academic Appointment

(Residents Completing Training 2007-2016)

ACGME-Accredited Specialties and Subspecialties Completed	Professor		Associate Professor		Assistant Professor		Instructor		Other Rank		No Current Faculty Appointment		Total
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Otolaryngology	4	0.2	78	3.4	429	18.6	39	1.7	2	0.1	1,758	76.1	2,310
Otology-Neurotology (Otolaryngology)	1	1.1	11	11.6	36	37.9	4	4.2	1	1.1	42	44.2	95
Pediatric Otolaryngology (Otolaryngology)	1	0.6	10	6.0	76	45.2	0	0.0	0	0.0	81	48.2	168



# Weigh-In



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