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Academic Surgery

# Creating a Timeline for Success in a Basic Science Lab

Allison L. Speer, MD

Assistant Professor

Department of Pediatric Surgery

McGovern Medical School at The University of Texas Health Science Center at Houston

# Disclosures

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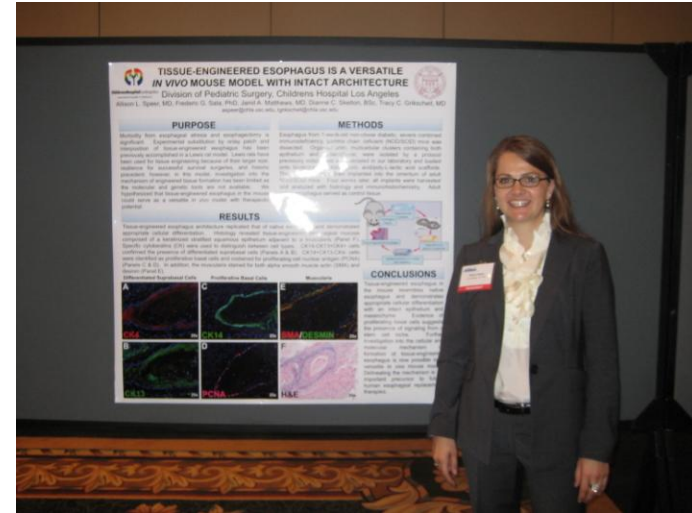
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# Your timeline should be organized to meet your goals



# Goals

- Present abstracts
- Publish manuscripts
- Obtain grant funding
- Match into Fellowship
- Gain experience in new area or with a technique
- Decide if you desire a future as a basic scientist
- Create a solid foundation on which you can establish your own lab after clinical training

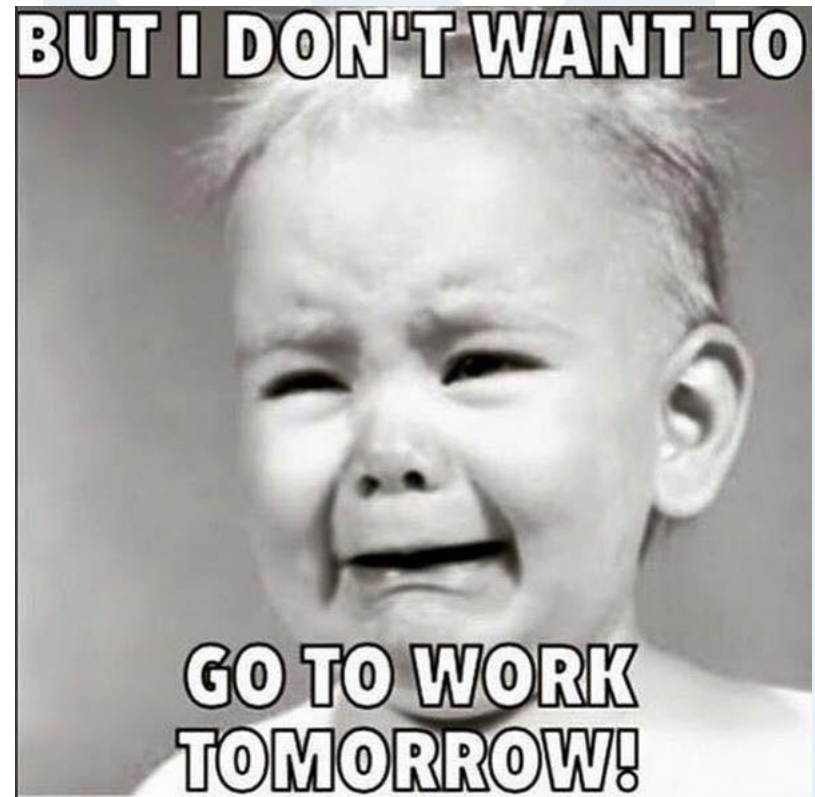


# Timeline Overview

- 12-6m prior: find the right lab & mentor
- 6-0m prior: discuss potential projects, grants
- 0-1m: lab orientation
- 0-3m: background reading & write review paper
- 1-6m: learn techniques, collect prelim data
- 6m prior-6m: submit grants
- 6-18m: collect data, submit abstracts & papers
- 18-24m: same as 6-18m & revise papers
- 21-24m: transition projects

# 12-6m prior: find the right lab & mentor

- Refer to prior lecture by Dr. Frankel
- Word of mouth
- Trusted mentors
- University/Lab website
- NIH reporter
- Pubmed



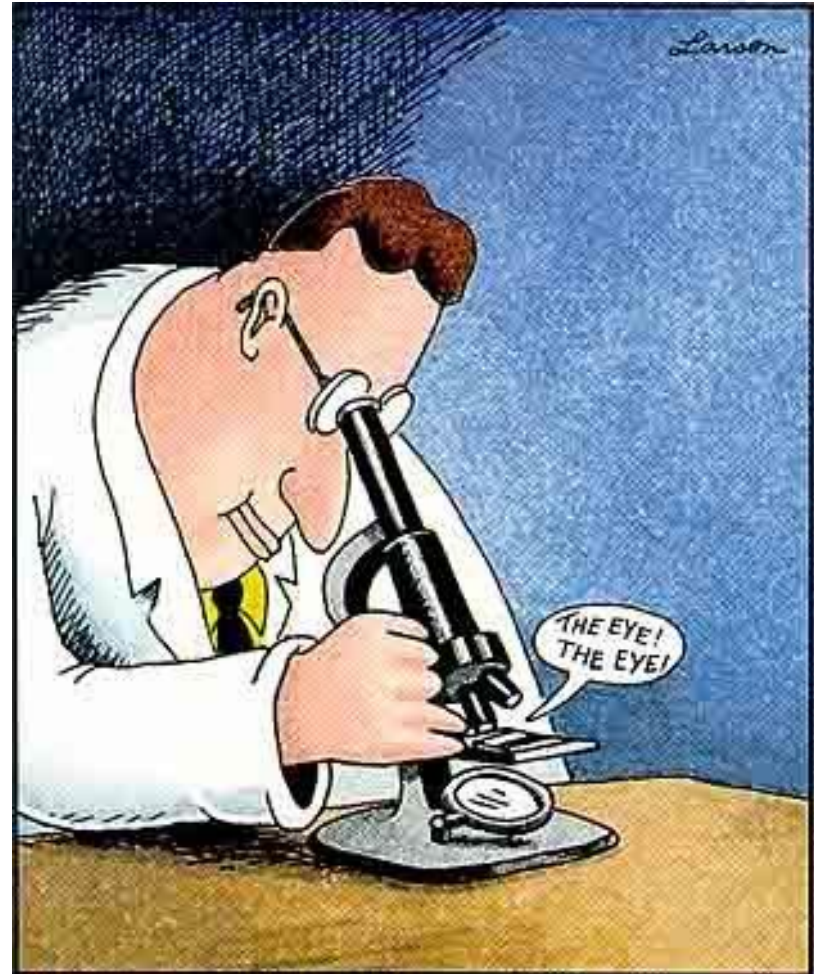
# 6-0m prior: discuss potential projects

- Meet with your PI
  - \*Read recent papers before meeting
- Tour lab, meet lab members
- Discuss potential projects that may be ready when you join lab so you can hit ground running
- Discuss possible grants
- Required paperwork



# 0-1m: lab orientation

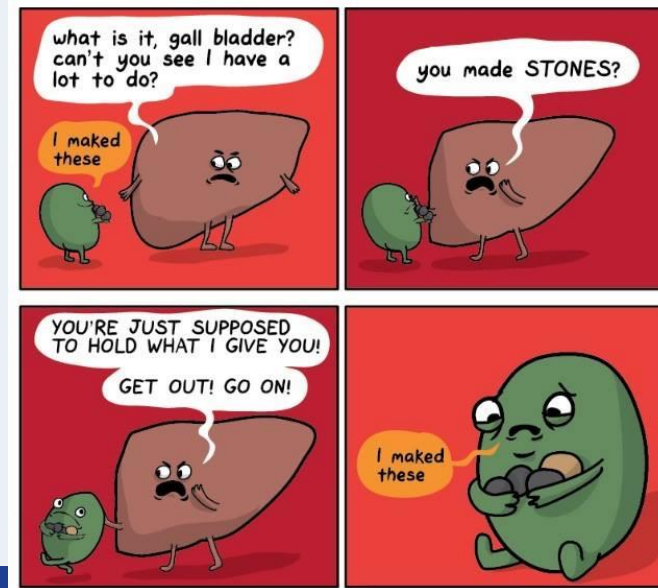
- Familiarize yourself
  - Lab space
  - Equipment
  - Personnel
- Training
  - General lab/biohazard
  - Animal Facility
  - Computer software





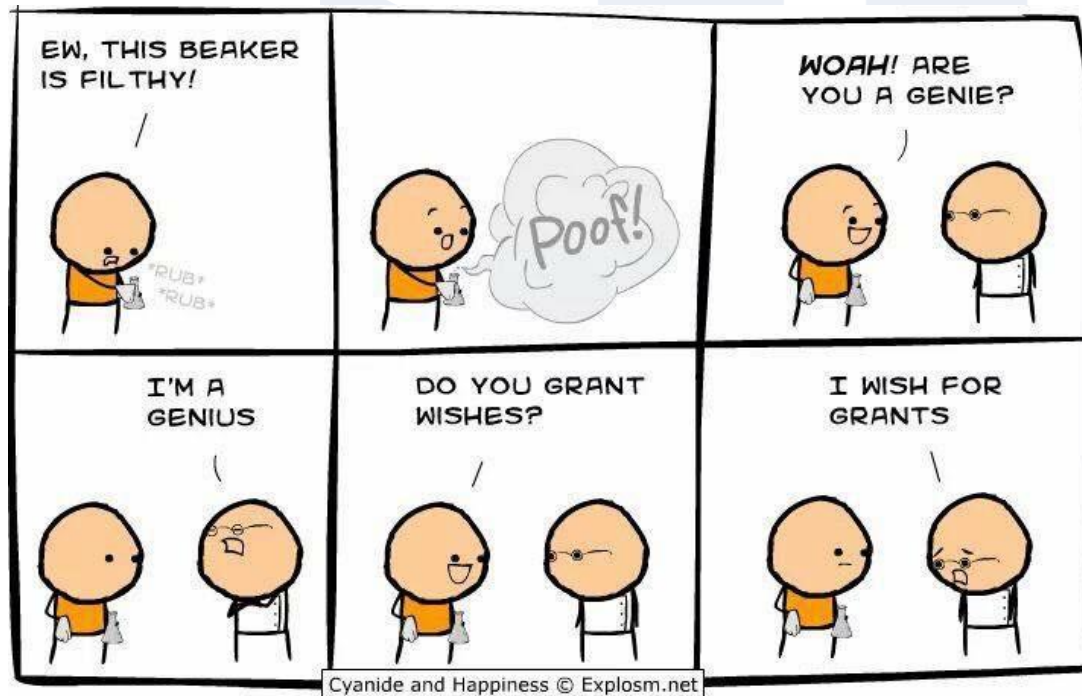
# 0-3m: background reading & write review paper

- Background reading
  - PI/PostDoc can help direct you to key papers
- Write review paper
  - Background reading will help you prepare for this
  - Most PI's have regular review opportunities available (such as an invited review)



# 1-6m: learn techniques, collect prelim data

- Learn necessary techniques to conduct experiments for your project
- Collect prelim data that you can use in a grant



# 6m prior-6m: submit grants

- Submitting grants is a Catch-22
- You may be able to submit before you are in the lab if you have prelim data given to you
- If not, you need to generate prelim data to submit which requires some time
- Either way, best to submit a grant early so it will fund while you are still in the lab (many don't fund until the following year)
  - AAS, SUS, ACS
  - Sub-speciality or society grants: APSA, CIRM, Crohn's & Colitis Foundation, etc.

# 6-18m: collect data, submit abstracts & papers

- Collect data
- Make a table of all abstract deadlines
  - AAS qAugust for February meeting
  - ACS qMarch for October meeting
  - Sub-speciality meetings
- Decide with PI where to submit papers
  - Some may be associated with abstracts/meetings
  - Basic science vs clinical/society journals



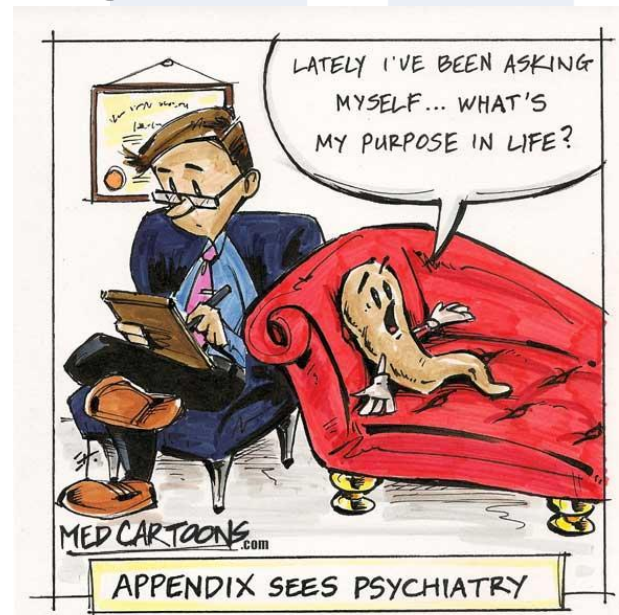
# 18-24m: same as 6-18m & revise papers

- Submit papers as early as possible
  - It may take 3 months for the reviewers to respond
  - It may take another 3 months for you to perform the necessary experiments to respond back
  - You don't want to do this when you are out of the lab and back in residency



# 21-24m: transition projects

- Even if you submit papers early you will need to transition ongoing or unfinished projects
- Keep an organized lab notebook
- Preferably arrange a time to handoff in person



# Tips & Tricks

# Tips & Tricks

- Read every day
  - Critical literature appraisal is a learned skill
- Write every day
  - Writing published manuscripts and funded grants comes with practice
- Keep an organized lab notebook
  - Hardcopy vs electronic (evernote, labarchives)
- Take advantage of schedule & time
  - Grant writing courses, classes, journal clubs, etc
- Have fun



Allison.L.Speer@uth.tmc.edu  
@allisonspeer5