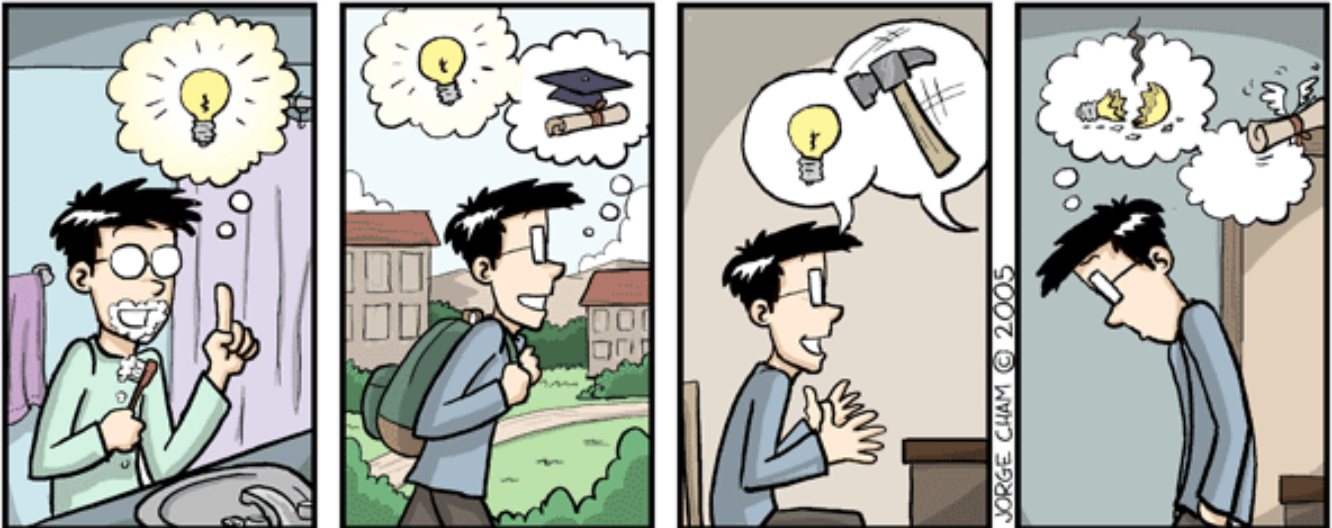
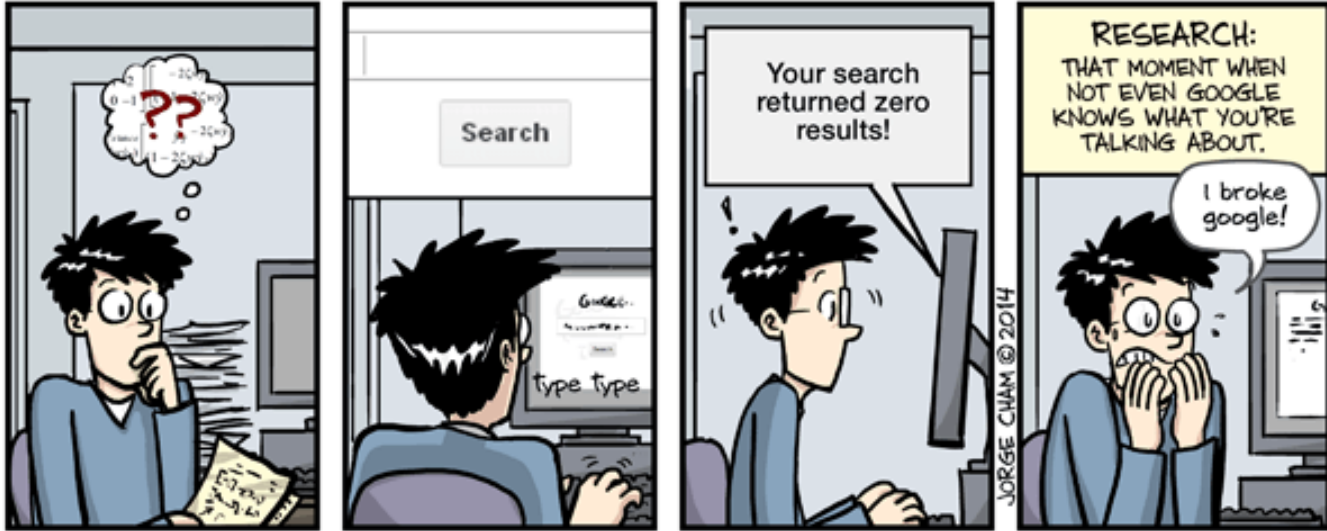


M3D1: Brainstorm ideas for Research Proposal presentation



The final hurdle: the Research Proposal

- Completed in “co-investigator” groups (i.e. lab partners)
- 12 minute talk (every word counts!)
- Propose a **novel project** to advance the field of biological engineering
 - Tangentially related to 20.109 via techniques or concepts
 - Can have computational component, but that cannot be the focus
 - **NOT** your UROP or other research experience
 - It has to be a piece of engineering (What are you making?)
- Project will include:
 - Research question/goal
 - Specific aims to address research goal
 - Alternative approaches to techniques proposed in specific aims
 - Ethical implications of your work

Here's what's *not* novel

- 1) Taking an existing tool and applying it to a different problem without major modifications
- 2) Following up on a proposed experiment in an existing discussion section (we have the power of pubmed)

Strategies for finding a novel project



Strategies for finding a novel project

Problem



Solution

I'm interested in x disease
Y would be a desirable product
We currently lack the tool for z...

Strategies for finding a novel project

Problem



Solution

New technology X will allow us to do Y but has Z limitations...

Strategies for finding a novel project

- Review Papers are your friend!
- Sort by most recent to catch up
- Once caught up, consult the latest literature on the gaps and unaddressed problems in the field (discussion section!)

rabies immune evasion review × **Search**

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15 results ⏪ < Page of 2 > ⏩

[Lyssaviruses and the Fatal Encephalitic Disease **Rabies**.](#)

1 Scott TP, Nel LH.

Cite Front Immunol. 2021 Dec 2;12:786953. doi: 10.3389/fimmu.2021.786953. eCollection 2021.

Share PMID: 34925368 [Free PMC article.](#) [Review.](#)

Pathogenic **rabies** lyssavirus strains inhibit innate **immune** signaling and induce cellular apoptosis as the virus progresses to the central nervous system and brain using viral protein facilitated retrograde axonal transport. ...It should be emphasized however, that ...

Helpful info on the wiki

	R/F May 5/6		Research proposal presentations	Bl pn
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What are we doing today?

- Discuss research from **Tyler**'s perspective with his ongoing PhD project
- Do an initial chat with your lab partner/co-investigator to talk about ideas and common interests
- Discuss deciding on research questions and projects with a former 20.109 student, **Desmond Edwards** at [1:45pm](#)
- Re-group and continue to work on developing your own proposal ideas
- Discuss research and troubleshooting with a former 20.109 student and current TA, **Daphne Faber** at [3:45pm](#)
- Final regroup to put final touches on the research question/goal you think you would like to pursue for Mod 3

