

TEACHING AT A LIBERAL ARTS COLLEGE: INDEPENDENT MINDS WORKING TOGETHER

Seth M. Kelly

Assistant Professor, Dept. of Biology,

The College of Wooster

Email: skelly@wooster.edu

WHAT ARE WE GOING TO DISCUSS TODAY?

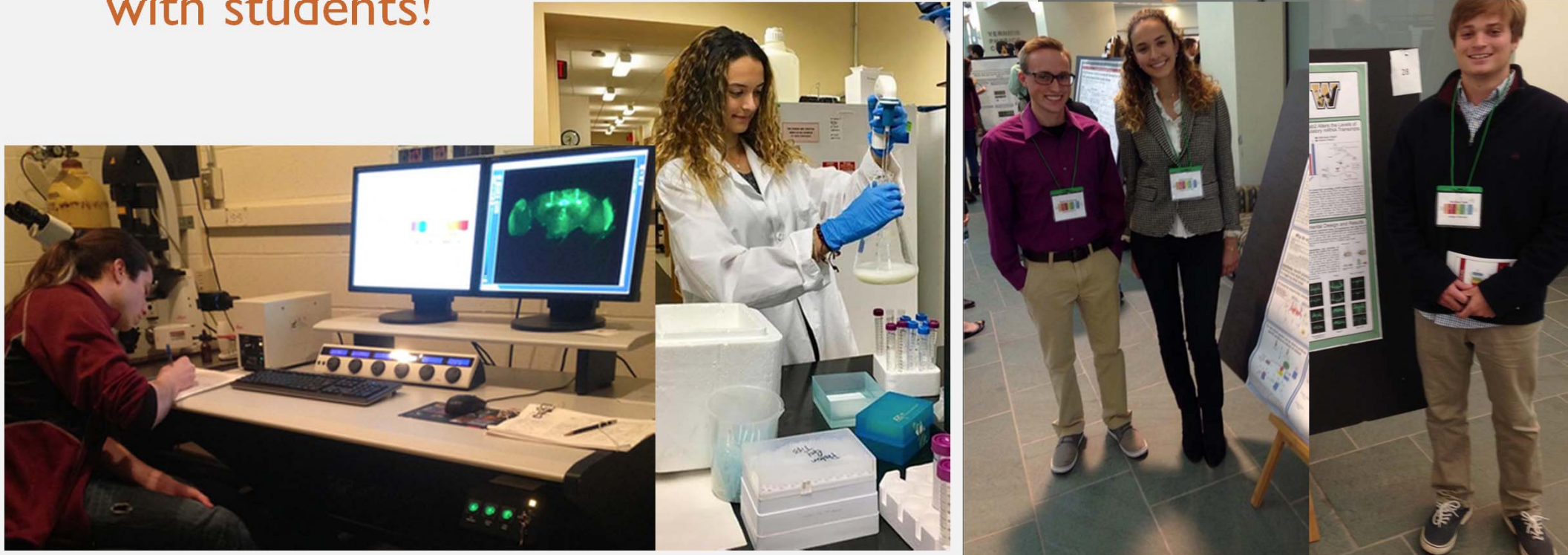
- Some background on me and The College of Wooster (the school where I work)
- What does the job consist of?
 - Teaching
 - Research
- Can I still conduct research (or...do I have to conduct research?)
- A day in the life...
- Where do I look for jobs and what do you have to submit to be competitive?

MAIN POINTS FOR TODAY!

- Teaching is very much a mentor/mentee relationship, just on a larger scale
- Upends the normal teacher student relationship – teacher becomes the coach/facilitator rather than the source of knowledge

MAIN POINTS FOR TODAY!

- Most importantly – you have to enjoy helping and working with students!



MAIN POINTS FOR TODAY!

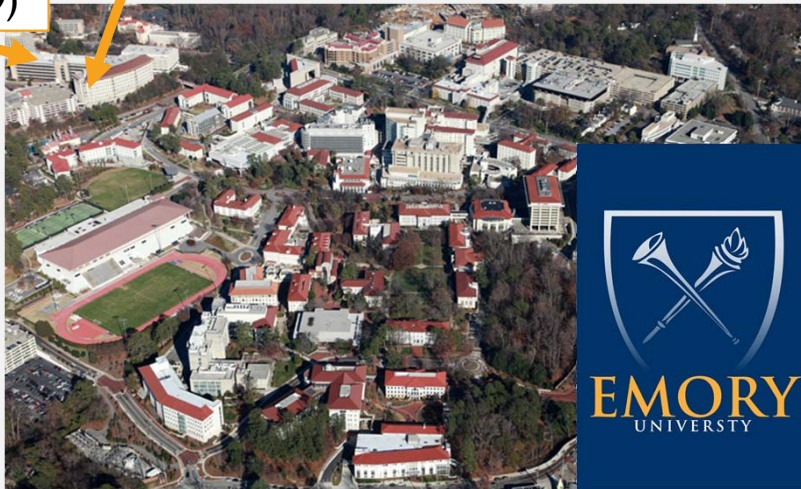
- Most importantly – you have to enjoy helping and working with students!
- Teaching is a learned skill...and so is doing research!
 - the more you practice (both formally and informally), read, and try things out, the better you can get (and the more you'll grow!)
 - You can learn a lot by watching...
- Teaching (and doing research at a small school) is not necessarily for someone who wants an “easy” academic route
 - it's a ton of work, but has a more defined end point (finals!)
 - At smaller liberal arts colleges, both teaching and research matters
 - Impact a large number of students (similar to RI)!

SOME BACKGROUND ON ME...

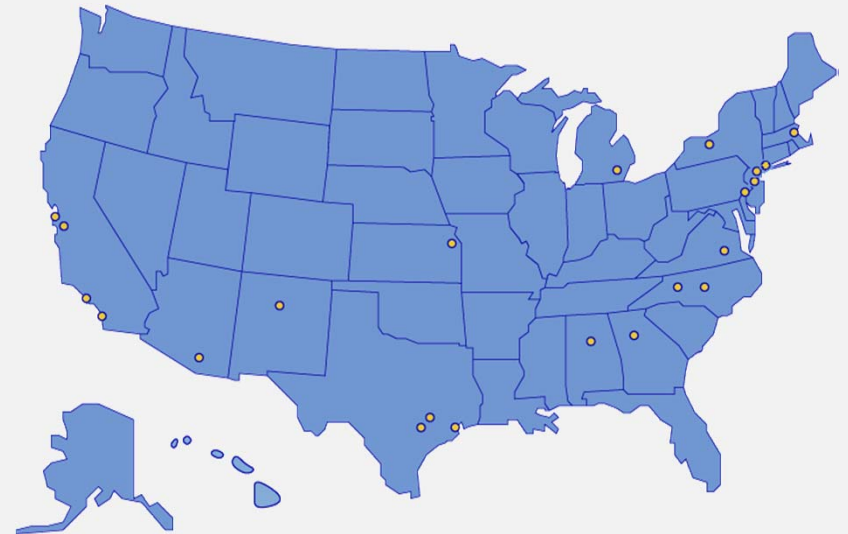
- Completed my Ph.D. in Biochemistry, Cell, and Developmental Biology at Emory University in 2009
- Did a teaching postdoc through the IRACDA program (<https://www.nigms.nih.gov/Training/CareerDev/Pages/TWDInstRes.aspx>) and map below

My Ph.D. Lab
(2003-2009)

My postdoc lab (2010-2013)

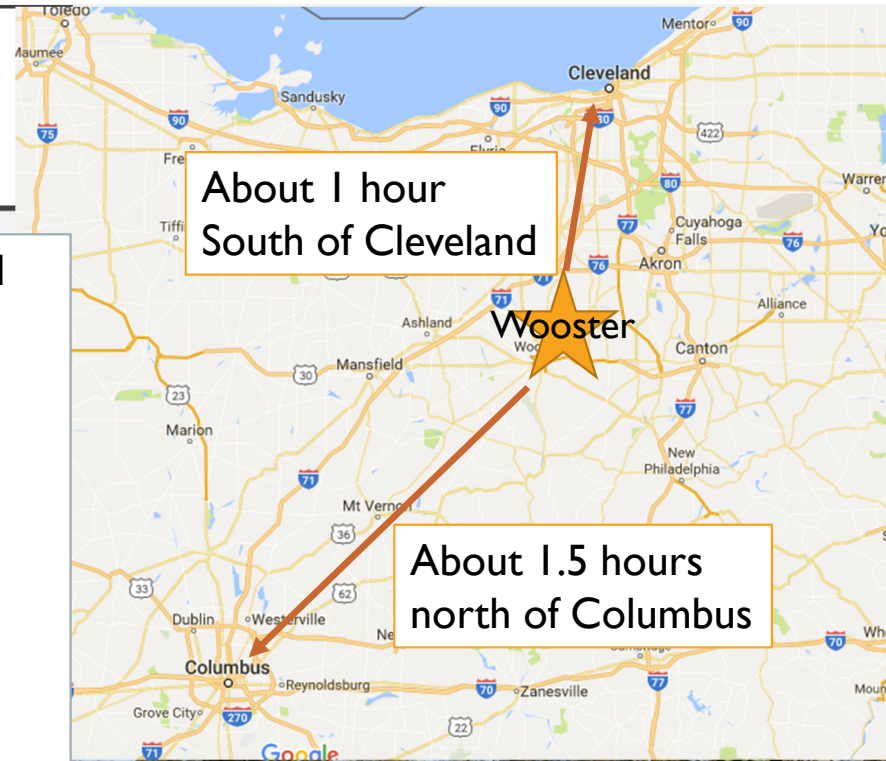


IRACDA programs exist across the country

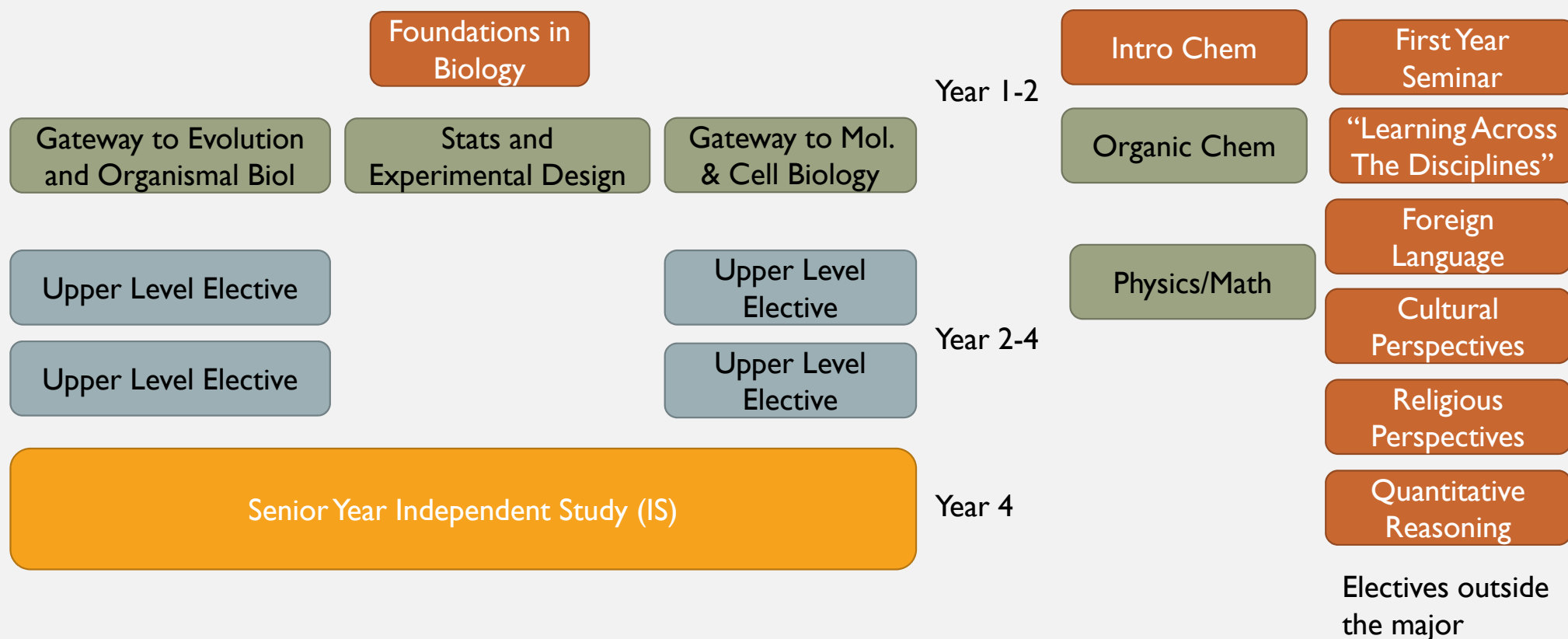


SOME BACKGROUND ON ME...

- Completed my Ph.D. in Biochemistry, Cell, and Developmental Biology at Emory University in 2009
- Did a “teaching” postdoc through the IRACDA program
- Started at The College of Wooster (in Ohio) in 2013-2014 school year
 - Background info on CoW...
 - Variety of science majors (Biology, BCMB, Neuroscience, Chem, Physics, etc.)
 - Capstone Independent Study (IS) research project completed by *all* students



WHAT TYPES OF CLASSES DO I GET TO TEACH AND HOW IS THE CURRICULUM STRUCTURED (BROADLY SPEAKING)?



MY TEACHING SCHEDULE FOR FALL SEMESTER OF 2017-2018

Foundations in
Biology

First Year
Seminar

Gateway to Evolution
and Organismal Biol

Stats and
Experimental Design

Gateway to Mol.
& Cell Biology

Coteaching with one other faculty
(~35-45 students)

Upper Level Elective

Upper Level
Elective

Cellular Neuroscience
(~40 students)

Upper Level Elective

Upper Level
Elective

+2 Lab sections (~20 each)

Senior Year Independent Study (IS)

7 IS students + 1-2 others
(sophomores/juniors)

FACULTY OFTEN HAVE TO BE BOTH GENERALISTS AND SPECIALISTS AT THE SAME TIME (IS THAT POSSIBLE?!)

- Our faculty...
 - Often you will be the only person working on a particular question or in that entire field...so keeping close contacts with those around you is key (to your own sanity)!
 - Truly interdisciplinary
 - Get to learn some really interesting biology
 - Teach a wide variety of topics
 - So...you need to be adaptable



WHAT ARE WE GOING TO DISCUSS TODAY?

- Some background on me and The College of Wooster (where I teach in the biology department and neuroscience program)
- What does the job consist of?
 - Teaching
 - Research
- Can I still conduct research (or...do I have to conduct research?)
 - Funding opportunities...
- A day in the life...
- Where do I look for jobs and what do you have to submit to be competitive?

DO I HAVE TO CONDUCT RESEARCH (OR CAN I JUST TEACH)?

- Depends on the school...some liberal arts college prioritize it more than others...but many will at least ask for a research statement and might ask you to do a little bit of research



All former FIRST fellows with current faculty appts.

- These types of positions are usually perfect spots to conduct educational research on the Science of Teaching and Learning (SoTL)
 - What are the best ways to teach certain topics?
 - Design controlled studies to understand whether teaching a topic in a new way can be more effective

WHAT IT IS LIKE TO CONDUCT RESEARCH AT A SMALL LIBERAL ARTS COLLEGE

- The project matters
 - Approachable to multiple levels of student ability and broadly interesting to students (can they explain the main idea of their projects to their non-science friends and relatives?)
 - Can be broken into smaller "pieces" (almost like rotation projects sometimes)

WHAT IT IS LIKE TO CONDUCT RESEARCH AT A SMALL LIBERAL ARTS COLLEGE

- **The project matters**
 - Approachable to multiple levels of student ability and broadly interesting to students for maximal interest
 - Examples from my own research
 - Can be broken into smaller "pieces" (almost like rotation projects sometimes)
- **Research as Teaching**
 - Lab research is often *the best* place for students to actually learn science
 - The sooner students can get into the lab the better!
 - Mentoring → see this book: The Mentor's Guide: Facilitating Effective Learning Relationships (<https://www.amazon.com/Mentors-Guide-Facilitating-Effective-Relationships/dp/047090772X>)

WHAT IT IS LIKE TO CONDUCT RESEARCH AT A SMALL LIBERAL ARTS COLLEGE

- (Somewhat) Smaller spaces –
 - Adaptability is key!



- Setting up a lab takes time and effort – so the more you learn now the better...
 - And you might have to move your lab a couple times – so you need to be adaptable
 - Maybe try helping out your advisor ordering for the lab
 - The more organized you can be the better – one example: Quartzy (<https://www.quartzy.com/>) And no...I don't work for Quartzy ☺

WHAT MIGHT A 1-2 SEMESTER LONG “DOABLE” PROJECT LOOK LIKE?

- A doable project (@ a smaller college):
 - What's your hypothesis?
 - What is your approach?
 - What do you need (equipment, reagents, etc.) to do that research?
 - How many students could work on that project?

HOW DO I GET FUNDING TO DO MY RESEARCH?

- **College/University funds**

- During interview— ask the Provost and/or folks in the department about the availability of school funds for research
- Start up funds - can vary widely (10K – 60K or more for small schools, lots more for R1)
 - Often will give you x years to use the funds, but this can be negotiated...see if you can extend it
- It's often more productive to negotiate startup than it is salary

- **National funding agencies**

- NIH (R15, etc...)
- NSF
 - Funding for research projects
 - Fundign for lab equipment (MRI)

- **Private Foundations**

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- **A day in the life...**
- Where do I look for jobs and what do you have to submit to be competitive?
 - Are there other types of jobs I might be able to do that are associated with education but not necessarily as a teacher?

A DAY IN THE LIFE...

Late Sept 2016

9 AM Celluar Neuroscience		9 AM Celluar Neuroscience		9 AM Celluar Neuroscience
	10 AM Office Hour		10 AM Meet with seminar...	
11 AM BIOL201	11 AM Department Meeting	11 AM BIOL201	11 AM Biology Seminar	11 AM BIOL201
		12 PM Faculty research lu...	12 PM Meet about the Full...	
1 PM Cell Neuro Lab	1 PM 201 Q&A session	1 PM IS group meeting	1 PM IS Lab - Microscope?	1 PM Office Hour
	2 PM Office Hour in the S...	2 PM Confocal with Allie?		
				3 PM Make u... 3 PM Meet w...
ISFLC meeting				4 PM Happy Hour

A DAY IN THE LIFE...

MWF

6-8 am: Wake up, eat, get ready, get breakfast for kids...walk to school

8-9 am: Last minute review for class #1

9-10 am: Teach class #1

10-11 am: Review notes/slides for class #2

11-12pm: Teach class #2

12-1pm: Eat and Review for Lab (Monday)

1-4pm (Monday): Lab

1-5:30pm (WF): Student Research/Meetings and if I'm lucky some grading/class prep

6-9pm: Family time

9-11pm: Prep for class/grade...occasionally

T/TH

6-8 am: Wake up, run?, eat, get ready, get breakfast for kids...

8-9:30 am: Take kids to school and then walk to CoW

9:30-11 am: Student meetings/prep for class

11-12pm: Seminar/Dept. Faculty meeting

12-1pm: Eat and Review for Lab (Tuesday)

1-4pm (Tuesday): Lab

1-5:30pm (Thursday): Student Research/Meetings and if I'm lucky some grading/class prep

6-9pm: Family time

9-11pm: Prep for class/grade

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APPLYING TO JOBS AT SMALLER LIBERAL ARTS COLLEGES

- Most jobs posted in late summer/early fall, although some posted in spring
- Where to look (or at least where I looked):
 - Chronicle of Higher Education (Vitae): https://chroniclevitae.com/job_search/new
 - Higher Ed Jobs: <https://www.higheredjobs.com/> (use the advanced search option)
 - Science Jobs: <http://www.sciencemag.org/careers> (\$\$\$, so not all schools advertise here - more R I type positions)
 - More specific locations/listerservs (FUN, GSA, GCAT, etc.)

A COUPLE POINTERS ABOUT APPLYING TO JOBS AT SMALL COLLEGES

- **Most important points to focus on...**
 - **Teaching** experience/statement: Write out your philosophy and give specific concrete examples of how you have (or would) incorporate these ideas into the classroom
 - Incorporate some of these ideas (briefly) into your cover letter
- **Do you have a research “program” that is translatable to the college/university?**
 - Papers as currency
 - Does it require animals? Tissue culture? Big pieces of equipment?
 - If it is very specialized, can you alter it a little bit to make it fit into this new context? Or are there less-expensive ways to do some of these experiments? Could you work with collaborators nearby?
 - If you're a post-doc, could you go back to work on something from grad school?

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QUESTIONS?

Also please feel free to contact me in the future if you have any questions!

Seth Kelly

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