Virtual Roundtable: Young Investigators
Establishing Your First Lab
January 30, 2019

As a first time principal investigator (PI), the logistics of setting up your first lab can be daunting. From ordering equipment and supplies to recruiting the members who will work beside you, there are considerations to be made that most would not be immediately prepared for.

We dive into these issues and more, with an emphasis on answering the questions you might have as you prepare to begin your journey as a PI.

Gregory Wiedman, Ph.D.
Assistant Professor of Biochemistry
Seton Hall University

Moderator:
Doreen Badheka, Ph.D.
Program Director, School of Graduate Studies
Rutgers University
Co-Founders:

Michael Welling, Chair Partner, Meridian Risk Management
Joanne Gere, Executive Director

Westchester Biotech Project
333 Mamaroneck Avenue, #340
White Plains, New York 10605
917-719-2226

www.WestchesterBiotechProject.org

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Getting Started in the Lab

Dr. Gregory Wiedman | Seton Hall University | January 30th, 2019
Outline

• Getting to Know People
• Taking Stock of Your Area
• Developing Your Financials
• Getting Students in the Lab
• Prepare for Administrative Work
Getting to Know People

Be Friendly!
Who You Should Know: Your Secretary

• The Department Secretary will be your lifesaver

• Generally the Person who knows all of the inside information

• Can help you with minor administrative tasks like setting up your office/phone/mailbox
Who You Should Know: Your Chair

• Next Person to meet is the current chair of your department who you likely negotiated with at some point.

• This person knows your work and wants to help you get started ASAP.

• They will know about the departments current goals.
Who you should know: Stockroom Staff

• You’re not going to be able to do anything without the people working in the stockroom.

• The stockroom staff can give you an idea of what reagents are readily available.

• Some stockrooms have long lead times, it’s good to make friends who can expedite the process.
Who you should know: Facilities

• Got a problem you can’t solve; who you gonna call?: Facilities!

• You will need their advice and help very early on after Taking Stock of your Lab

• Try to meet both the Building Manager as well as one of the Facilities Engineers
Who you should know: EHS

- Environmental Health and Safety (EHS) is the contact point for when things go wrong in the lab.

- Get to know your EHS officers to ensure that you are compliant.

- A good early relationship will lead to less “surprises” for you later.
Who you should know: Upper Administration

• Find out where the Dean’s office is and go there!!!

• Knowing the Dean’s Secretary can be just as important as knowing your own secretary.

• They will ultimately decide your fate at the University.
Taking Stock of Your Area
Taking Stock: Your Lab

• Take a look around your lab area and see if anything needs to be cleaned/renovated

• It may have old equipment that needs removal by your Facilities

• Take note of alterations that are needed to send to your Department/Dean.
Taking Stock: Floor Plan

• Many research institutions are opting for “Open Lab” plans.

• Take a look at who is around you and the size of their labs.

• You and your lab need to be comfortable working in this environment; take note of any problems that need addressing.
Taking Stock: Developing Blueprints

- You may need to work with your Facilities department to get alterations to your lab.

- Consider asking them for the blueprint/layout to your lab.

- Save a copy and use one to map out where things may need to go in your lab in the future.

- Consider Water and Power needs.
Taking Stock: Biosafety/Hazardous concerns

• Determine where hazardous work can be performed.

• Make sure to coordinate with EHS on compliance.

• Ensure that the proper safety equipment is in place (sinks, eyewashes, showers, etc.)
Taking Stock: Develop a Have/Need List

• Develop a list of all materials needed for your first experiments in lab.

• Determine, with the stockroom, the timeline for getting those materials.

• Compare this to your negotiated startup funds and look for gaps. Do you need to renegotiate?
Develop your Financials
Develop Your Financials: Budget Sheet

• Similar to a list of materials but this includes the costs relative to your startup budget.

• You might be asked at any time by your department to give a list of what you’ve spent.

• Comparing this to your needs can help you re-negotiate.

• This helps to slow overspending!
Develop Your Financials: Quartzy

- Consider using free online lab managing software like Quartzy.

- Some online programs can help suggest ways to save money such as bulk ordering or alternative suppliers.

- Be wary of ones that will cost you money in the end, also be wary of “Processing fees”
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Develop Your Financials: Audits

• Determine who will need information about your financials.

• Departments need to know how much their people are spending each semester.

• The University wants to know that you are spending the money appropriately.

• If you have a grant, the NIH/NSF/etc will want to see a budget update.
Develop Your Financials: Keep Your Receipts

- As the PI you are responsible for signing off on purchases.

- Make sure to keep and sign the invoices for things your purchase.

- Someone will ask for them later; it’s better to keep them organized.
Getting Students in the Lab
The purpose of doing academic research is to try new ideas and to develop students who will try new ideas as well.

Advising will be a key part of your “teaching load” if you are tenue track

Develop a fair, systematic approach to advising students.
Student Personal Strategic Plan \((sp)^2\)

**Name and Contact Info (student ID):**

**Define Your Career Goals:**
This can be anything from “Getting a Job in Industry”, to “Entering Medicine”, to “Working in Public Policy” or any other goals.

**Describe Your Current Skills:**
Describe any Skills you have that are useful for achieving your Career Goals.

**Identify Necessary Skills**
List the Skills you need to develop to achieve your Career Goals.

**Personal Development plan**
What Skills will you develop in 1 year and how?

What Skills will you develop in 2-3 years and how?

**Mentoring/Shadowing Opportunities to Explore:**
Getting Students in the Lab: Meeting Students

- Talk to your department about giving the department seminar early in the semester (it’s your job talk 2.0).

- Attend department social events for undergraduate/graduate students.

- Reach out to first year students using social media (LinkedIn/Research Gate)
3B Lab studies cells and the cell membrane to facilitate drug delivery and improve healthcare.

Our Lab

How can we meet the ever-growing need for new biomolecules to combat multi-drug resistant microorganisms and metastatic cancer? As scientists, we look towards nature. Nature relies on the synthesis and recombining of small building blocks to form macromolecular structures. The 3B Lab wants to mimic this process by building new molecules from the ground up. Our lab utilizes both combinatorial chemistry and intuitive rational design approaches.
Getting Students in the Lab: Evaluation

- As a PI you need to find the right people to be in the lab. Your IDP will help you do this.

- Have your 2-minute elevator pitch ready for students that come to your office looking to do research.

- Ask questions in the interview about why they want to do research; emphasize that you want them to grow to be independent.

- Set up a first meeting to give them the IDP and an understanding of the lab. Students who are motivated and interested will come back to you with it filled out.
Getting Students in the Lab: Rotations

- Some schools do rotations (some do not).
- Remember that you have competition; you need to negotiate with the other people in your department.
- Rotations can be a good time to allow current grad students the ability to train.
- You’ll need to spend time training the first group.
Prepare for Administrative Work

Don’t get overwhelmed!
Administrative Work: Meetings

• Keep a calendar to budget your time. It’s your most valuable resource.

• Set aside a certain time of day (mornings/evenings) to take individual meetings.

• Try to limit the number of individual meetings; book “lab meetings”.

• Respond to emails in a timely way.
Administrative Work: Teaching

- Teaching load may vary, researchers are usually 1-1, 1-2, 2-2.
- Set a fixed time for Office Hours and respond to emails quickly.
- Try to be 2-3 lectures ahead each week if not more.
- Post grades as quickly as possible!
- Get a good textbook. Utilize company-produced slides.
Administrative Work: Teaching Assistants

• Work with your department secretary to appoint “good” TAs

• Organize a TA meeting in the beginning of the year.

• Get feedback from students on the TA progress periodically.

• Experienced TAs can give you advice on how to run your first class.
Administrative Work: University Service

• Try to get onto committees that will forward your start-up goals

• Graduate Curriculum Committee, Lab Safety Committee, Building Committee are a few.

• Take any opportunity to be on a committee that works with or reports to higher administration.

• Be Friendly!!!
Administrative Work: Your Own Benefits

• Don’t forget to make sure you’re getting compensated for your time.

• If you give an outside lecture make sure it’s noticed by your university.

• Take to people invited guests to the university to build your network.

• Work with your secretary/HR department to make sure you’re covered on everything.
Best of Luck!

• Questions?

Information:

Dr. Wiedman’s websites:

www.the3blab.com

www.molecularyoga.wordpress.com
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Research Community Resources

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On Twitter we’re @WestchesterBio

Co-Founders:

Michael Welling, Chair Partner, Meridian Risk Management

Joanne Gere, Executive Director
Westchester Biotech Project
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