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Jody Puglisi, Feb 1 2007

# Starting a Laboratory

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Most scientists enter their first (and second) faculty position with almost no understanding of the financial and management aspect of running a research group

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**Outline of Topics**

1. Before you arrive: the "startup package"
2. Managing your startup funds
   Setting up your laboratory--purchasing equipment and reagents
3. Getting people in your laboratory
   Recruiting students
   Hiring postdoctoral fellows and staff
4. Managing your resources
5. Managing your people
6. Growing your laboratory
7. Preparing for your first grant
8. Budgets and finance

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## Startup Packages

Startup funds represent your major source of money For the first 2-3 years of your laboratory.
Spend Wisely!

With startup money you may have to:
1. Buy Equipment
2. Pay part of your salary
3. Pay for staff, student, postdoc salaries
4. Pay for reagents
5. Pay for instrument user fees
6. Pay for maintenance contracts
7. Pay for renovations

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**Negotiating a good startup package.**

1. Calculate the equipment, glassware, reagent needs To stock your laboratory.
2. Get quotes for large equipment purchases.
3. Let the department pay your salary for first years
4. Avoid heavy user fees for years 1-3
5. Light teaching load
6. Administrative support provided by Dept.
7. You do not pay for lab renovations

Get all promises in writing from the chair/Dean of your Department and school.

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**Startup--how big numbers move rapidly to small**

Joanna Smythe Blow receives a startup package of $600,000. She starts on July 1, 2006 as an assistant Professor at a salary of 80,000 year in a prominent Medical school. What happens to startup.

She has her salary covered in years 1 & 2, then must Pay 25% and finally 50% of her salary from her funds In years 3 & 4

She will equip her lab with standard wet lab equipment, And purchases a xylophobochromatoscope (central for Her work) for $250,000

She will hire 2 postdocs (without funding), 1 lab tech And a graduate student (not on fellowship)

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Start with 600,000 on July 1, 2006

Purchases xylophobochromatoscope--$250,000
On day 1. 350,000 left.

Purchases $100,000 of lab equipment. Say
UV spec, FPLC, centrifuges, PCR machine, glassware

250,000 left

Hires 2 postdocs--50,000/year each (salary + benefits).
1 Lab tech--50,000/year

In 2 years, no more money!!!

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**Your Lab Space and Arrival**

How much do you need?--learning about Square footage and bench space.

What is yours and what is common space.

Is it ready? Are renovations needed?

What is involved in renovating space?

Should you wait or go?

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Remember…..Renovations can take (a lot) of time

Start early, before arrival.

Example:

I do NMR…….I arrive in July, but no spectrometer
Must:

a. Order spectrometer

b. Prepare/renovate room
   a. Planning, permits, waiting, construction

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Managing your startup funds: Equipment purchases

One of the joys and pitfalls of faculty-hood is lab Setup--you get to go on a shopping spree

However, go slow…..

- see how other laboratories are equipped
- get advice about vendors
- get quotes from multiple sources
- use shared equipment where possible
- buy what you need to use every day!

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# However, don't overspend

Better to have a lab full of people and sparse in equipment

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**Establish relationships with critical vendors**

- negotiate price, accessories, delivery date
  remember…some instruments take time to deliver
- assure that space is available and appropriate for sitting a given widget

- think about service contracts

- understand the basics of the university procurement system

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**Filling your lab….with people**

Staffing is the most important aspect of starting a lab

Three genres:

• graduate students (undergraduates)

•postdoctoral researchers

• technical staff

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First, Determine your true needs

What will be the initial focus of the laboratory?

Who will train the members of the laboratory?

What is the "talent pool" like?

Don't be flattered!

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**Recruiting Graduate Students**

• Get yourself known
give a seminar
teach a graduate class

• use rotation system as a way to get your laboratory known

• choose wisely

• make your expectations clearly known

• lead by example--first graduate students are often the key to success

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**Recruiting Postdoctoral Fellows:**

• start looking immediately

• adds don't work

• go to conferences/meetings to get yourself known

• use overflow from your colleagues

would you postdoc for you?

Good postdoc(s) is the key to early career success

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**Recruiting Postdocs**

Check references, best from people you know and trust
Call--people often tell you the truth over the phone.

I usually request 3 letters of recommendation

Invite for an interview--NEVER hire someone sight-unseen

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Structure the interview day (not too much)

Candidate should present a seminar first
judge their scientific approach
their skill set
Their ability to think critically, answer questions
Their personality--are they testy? Nasty?

Candidate should meet with individual lab members

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**Recruiting Postdocs**

Get the opinion of others (lab members, etc)
Ask Key questions.

Why do you want to work in my lab?

What are your career goals?

What projects have you led?

Do you like to work independently?

What are possibilities for postdoctoral fellowship funding?

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**Offering a position**

Usually University has an official wording of
An offer letter.

Term of employment

Salary--usually set by university--use NIH guidelines

Visa issues for foreign fellows….usually J-1

Contact others who have interviewed and tell them
Politely that you will not be offering them a position

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**Hiring Staff**

- Think hard about this…..they are real employees
- Will it be worth the expense?
- What tasks will you have them do?
- Define the job precisely.
- What are the advantages/disadvantages?

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**Building towards your first grant:**

- need preliminary data!!!…not worth submitting to NIH without it.
- NIH funding right now is difficult (paylines 15%) but not impossible….lots of sympathy to young investigators
- Takes 9 months from submission to $$$ if you are lucky
  so plan accordingly
- Get advice from your (younger) colleagues

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**NIH budgets**

NIH budgets are normally modular (you ask for funds in $25,000 increments, up to 250,000 per year.

Costs are divided into direct (they go to you) and indirect (they go to the university). You request direct costs

-your salary (part)
-staff salary
-postdoc salary
-graduate student stipend
-reagents/consumables
-equipment

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Lets say 30% of your salary + benefits
40,000
1 postdoc 45,000
1 tech 50,000
1 graduate student 35,000

170,000 already
Now consumables etc……

When should you submit?

What about alternate sources of funding?

Awards
Keck, Packard, Searle, etc.

other grant sources

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Good Luck!!