Where does the money to run a lab come from?

Home Institute – Start-up ($300,000 – $1,500,000)
  – Internal grants (often $20K - $50K)

Private Foundations – Disease related and
  Career development

Companies – Biotech and Health oriented (rare for Jun. Fac.)

US Government – NIH, NSF, Dept. of Defense, Agriculture
How much do I need?

Rough Estimate of Lab Financial Needs by 2-3 Years

Lab size: 6 people + few support areas

Post-Doc ($40,000 – 45,000)
Post-Doc ($40,000 – 45,000)

Tech ($30,000 – 40,000)
Tech ($30,000 – 40,000)

Grad Student ($30,000)
Grad Student ($30,000)

Dish Washing ($10,000)
Fly Food Making ($10,000)

Secretarial Support ($15,000)

Salary Support: \( \sim \$175,000 + 25\% \text{ Benefits/Vacation (44,000)} = \sim \$220,000 \)
If tuition required, add another 25K per student

Supplies $1500/month/person – $110,000

Miscellaneous (Travel, Summer Salary (or more if school does not cover it), Small Equipment, Publication Costs, etc.) -- $60,000

Total needed to Run Lab of 6 people: approximately \( \sim \$400,000 \)
How the hell do I come up with ~$400 grand a year?????

- Use start-up initially
- Post-Docs can write their own grants for salary
- NIH Training grants can fund graduate student salaries for 1-3 years depending on school
- Write lots of grants

OR

Adjust My Expectations
How do I get it?

Personal Tips/Hints/Suggestions:

1a. Have a scientific program developed with preliminary data, offshoot projects for writing a host of grant applications.

1b. Get an academic appointment and know institute policies on grants (2nd visit is a good time to find out about grant restrictions placed on junior faculty, institute policies on grants, institute-specific junior faculty development awards, etc.).

2. Talk with piers about start-up package / lab costs / grants they applied for.

3. Envision strategies with best-case/worst-case scenarios for your junior faculty transition.

How do I get it?

Personal Tips/Hints/Suggestions:

5. Always get copies of grants (especially successful ones) from anyone who will give them to you. It’s useful to have a feel for the scope of the applications and the styles, as well as technical info on how people write up their equipment, space, lab personnel sections.

6. Write grants at least a month in advance of deadline due to institute grant routing/approval delays. It’s nice to have specific names to include on a grant for their funding. If a 1st year grad student is interested in your lab, include him rather than a TBA person.

7. Effectively balance getting lab up and running and writing grants – both are important.

8. Be aware of deadlines, restrictions, time limits, etc.


10. Have some fun doing science! Grant writing is usually a pain.
My Own Experience:

Arrived @MIT May 2000

1. (Applied for R01 Oct 1999)
   June 2000  – Notified of NIH 4 year RO1 award (7/00-6/04) (#1).

   -- Submitted MIT/Merck grant (MIT In House).
   -- Nominated for Searle grant.

   -- Merck Grant Approved (9/00-9/02) (#2a).


5. Oct 2000  – Awarded Poitras Scholar Award (MIT In-house small grant) (#2b).
   – Submitted Sloan Grant.


   -- Submitted McKnight Grant.

8. Feb 2001  -- Notified of Sloan Award (40 k over 2 years) (#3).

9. March 2001  -- Notified of Searle Award (240 k over 3 years) (#4).
   -- Submitted letter of intent for Ellison Foundation Infectious Disease Award – rejected.
   -- Klingenstein rejected.
   -- Submitted Packard proposal and Seaver proposal for MIT internal competition.
   -- Seaver Proposal rejected.
   -- $70K In house MIT grant Award
   -- Packard Proposal rejected.
10. May 2001 -- Awarded Surdna grant (MIT In house -- $30K/year) (#2c).
13. Sept 2001 -- Notified of HFSP Award (#5)
15. Feb. 25, 2002- Resubmitted 2nd R01
16. July, 2002-- 2nd R01 awarded 8%, likely to be funded in Dec.
18. Dec, 2002—Packard Grant Begins
20. July 1 2004 – Submitted 1st revision of Syt 4 grant
21. Oct 1, 2004 – Submitted HD and MD RO1 grants
22. Nov, 2004 – Syt 4 grant got a 172/24% -- rejected.
23. March 2005—Summitted Syt grant for 3rd and last allowed revision.
24. March 2005 – MD Grant Rejected
25. June 2005 – HD grant funded
Current:


NIH R01 #MH099557, Co-PI, “Computational and Functional Characterization of the Molecular Steps in Membrane Fusion” (7/16/2012-3/31/2017).


Picower Innovation Fund, PI “In vivo imaging of synapse formation” (1/31/2012-1/31/13).

Picower Neurological Disorder Research Fund, Co-PI “Characterization of Neurodegenerative Pathways in Mouse and Drosophila Huntington’s Disease Models” (7/1/2012-6/30/2014).

Rule is usually $60,000-$65,000 per person in lab:

My lab size is 11 people –
Current Lab Income $840,000 – Can support ~12 people
Senior Post-Doc/Career Development Awards:

NIH K-22 Career Transition Award – Salary and Research Costs
K01 Award – Mentored Research Award
Burroughs Welcome Fund
American Heart Association (Transition – last year of post-doc)
HDSA

Junior Faculty Grants:

Pew Charitable Trusts – Nomination Required
Searle Scholar Award – Nomination Required
Sloan Award – Nomination Required (Senior Faculty)
Dreyfus Foundation – Nomination Required
Packard Fellowship – Nomination Required

Human Frontiers Science Program (HFSP)
NSF Early Career Development Award
Alan Waterman Award (>=35yrs)
Muscular Dystrophy
American Heart Association
American Cancer Society
AFAR/Pfizer Aging Grant

In Neuroscience:

Klingenstein
McKnight
Epilepsy Foundation
American Paralysis Association
NARSAD Research Foundation
HDSA (Huntington’s Disease)
The Offer Letter

- Informal offer first, often
- Formal provisional next
- Formal formal can take a while
- In writing and in detail:
  - Space
  - Start up
  - Salary and benefits
  - Tenure
  - Teaching
Second visit - start of negotiation

- NOW, the partner, kids, housing, salary, benefits
- Ask to meet with housing office, benefits office.
- Short and long term teaching, space, tenure
• **Start-up packages:**
  - Equipment
  - Laboratory space
  - Salary for students and staff
  - Computers and software
  - Travel
Start-up money

• Apples and oranges
• What can come out of it?
• When must it be spent by?
• What happens to balance?
• What comes out of it/ what not?
  – Your 9 month salary
  – Your summer salary
  – Admin assistance
  – Glassware washing
  – Phone, mail, photocopying
Space

- Where (room numbers)?
- Shared/exclusive?
- When ready to occupy?
- What renovations needed?
- Who pays for these?
- Common space policy and access?
- Future needs?
Other sources of funds

• What and how are students paid (years 1-6)?
• Internal funds for students, post-docs, research?
• State monies?
• Local awards for “junior” faculty?
Salary and Benefits

• Apples and oranges; e.g., 9 or 12 month
• Base salary (on which benefits are determined)
• Benefits (esp. housing, childcare, retirement, pre-tax plans, tuition, moving expenses, parental leave)
• Percent off grants *expected vs. guaranteed*
• Policy if cover more than this percent
• Sabbatical (how much, how often, who pays)
Tenure

• Criteria?
• “Up or out”? 
• When does clock start and stop?
• Pauses for children?
• What is tenure-deciding group (especially if joint appointments - double jeopardy or twice the chances...)?
• What is history in that Department, School and Institution?
• What support (mentoring) programs exist?
• Moving Expenses
• Placement on the payroll early
• Salary sometimes fixed -- Faculty salary survey (http://chronicle.com/stats/aaup/)
Multiple offers

• Strengthens bargaining position
• Be honest
  – Keep everyone informed of the status of your other applications and offers.
• If you intend to say "no," do it quickly.
• Ask to extend deadlines if necessary, but don't miss them.
• Only ask a school to match an offer if you really would accept it.
Second Visits

• Very common
  – Only request if you are very serious ($$)
• Good chance to bring spouse/partner
• Look at housing, partner jobs, schools, etc.
The Decision:

• Gut Feeling!
• Do the faculty mesh with your interests
• Access to good students
• Space may be hard to increase in the future
• Start up money- might be least important!
• Non-science issues of schools, family, cost of living.
Starting Your Lab

• Spending Your Money:

• No spending = No research = No data = No Success

• Buy wisely: you may need it to last