Grant and Success Strategies for Young to Mid-level PIs

"You are completely free to carry out whatever research you want, so long as you come to these conclusions."

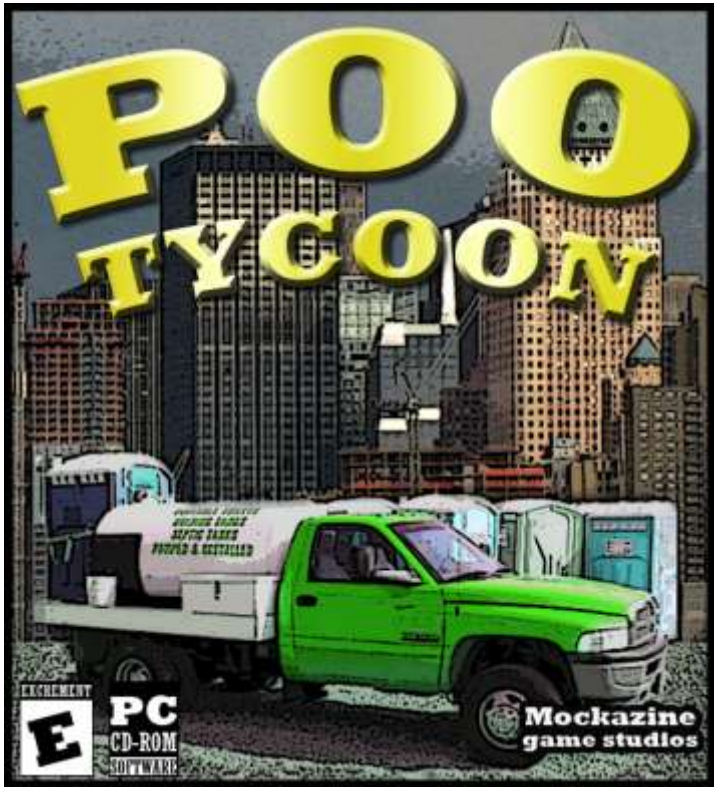
No relationships of any sort to disclose

Jeffery D. Molkentin, Cincinnati Children's Hospital

Strategizing to Get Your First Grant

Small business analogy

Idea #1



Idea #2

Strategizing to Get Your First Grant

1. Did you select the right postdoc and project/approach from the onset?

Thus, getting your first grant is much about area of study from the beginning.

•Picking postdoc is like playing the stock market….how hot will the area be in 2-5 years. Will it always generate income (10+ years)?

Mature field vs. emerging field

Newer genes vs. established genes

2. You should build your first grant as an extension of your postdoc

First R01 from junior investigators is scored separate from senior Investigators. (not the case for 2nd R01 or renewal)

Strategizing to Get Your First Grant

3. Know your audience and core interests of selected study section

Your **project** should be designed around 1-2 core NIH study sections (expertise)

- Then writing the grant to fit this audience is an after thought.

Forcing your project/view vs. adapting it to fit panel areas

Strategizing to Get Your First Grant

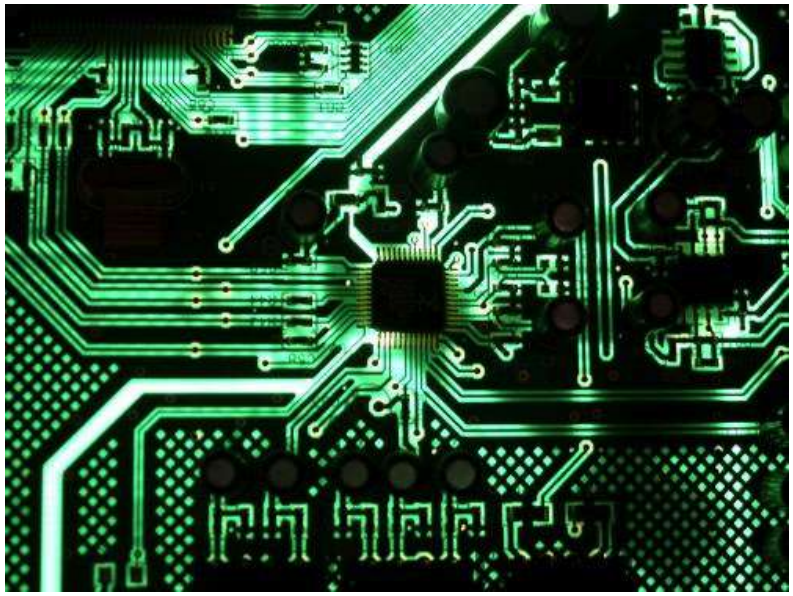
4. Use technology and novel approaches, but only as tools to address hypothesis

Your **project** should use innovative approaches and newer genes when possible

- But, don't focus on the technology as a means onto itself.

Developing technology as the basis for your program reduces you to a "core" functionality long term

But, employing approaches from 20 years ago will also come up short



Strategizing to Get Your First Grant

5. Project should address a medically relevant area of research

Purely basic science **projects** are still fundable, but twist in a medically relevant area of investigation to buttress relevance and significance.

The NAS mandate and funding trends are towards more translational and medically tangible research

Studies sections (audience) have also been realigned to reflect this mandate

Personal Experiences As First Time PI (99% perspiration)

1) First day as PI: You have not succeeded at anything yet!

2) You are the best pair of hands your lab will have for 3 years

3) Stay out of your office and work in the lab (grant writing at night)

4) Guard your collaborative time and minimize other responsibilities

5) Work weekends (establish this trend right from the start)

6) Separate yourself from your previous mentor as soon as possible

End of the day……All that matters is papers published and grants obtained

•Deflect everything you can to maintain this core element of your time

So You Want a Second NIH Grant (Fundamentals Needed)

1. Do you have a track record of productivity already?
2. Is the area more innovative than your first award?
3. Have you started to develop a reputation/recognition?

The start-up funds didn't stretch quite as far as we thought they would.

<u>Loophole:</u> Two concurrent NIH grant submissions, one cycle apart. Both will be viewed as first awards, although NIH may not give special status to second one

Building Your Program to Acquire a 2nd Grant

1. Think outside the box for a second grant

   Project should be more innovative than your first award

   Just because the project is new to you does not make it innovative

   Preliminary data is critical for 2nd award, and a paper to show your commitment and ability in this new area is important

Building Your Program to Acquire a 2nd Grant

2. Become part of the community in your area of peer review (politics)

Never underestimate the importance of recognition and public opinion when building a career in an area of investigation.

Attend as many meetings as possible, present your results

Building Your Program to Acquire a 2nd Grant

3. Serve on NIH study section if asked (ad hoc or full time)

Very educational for acquiring grant writing expertise
and it also helps with recognition by the community.

Building Your Program to Acquire a 2nd Grant

4. Try for program grants (PPG) or a dual PI grant with more senior scientists

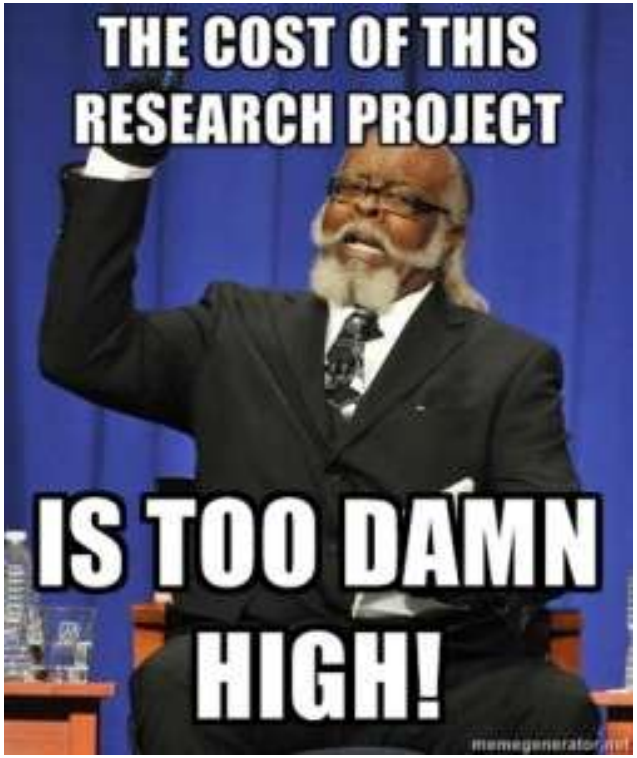
Strength in numbers and innovation by melding of dichotomous expertise

Alliance with wise masters

Building Your Program to Acquire a 2nd Grant

5. Keep the budget modular….don't be greedy

Even highly published senior scientists lose some goodwill in scoring with an inflated budget



Building Your Program to Acquire a 2nd Grant

6. Always keep evolving your science

Never give up creative thinking and time to read the literature

7. Screening endeavors in your lab for new gene discovery

Yeast 2-hybrid, proteomics, Affy arrays, high throughput screening

8. Hire the right people, or stay on top of mediocre people

9. Never stop caring about the details

It is all one big game of survivor, and everything matters

Out last, out wit, out play other scientists at your level

No other profession has peer review to the same extent and consequence