

Lessons learnt from stumbling

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Models I know & history

- Goldstein and Brown
- Alfred Gilman
- Seldin

What is a Clinician Scientist

- Type 1: 50% Clinical work/50% Lab (basic) research? (MB,ChB + PhD)
- Type 2: Clinician who performs clinical research/clinical trials?
- Type 3: Translation scientist? Translates from bench to bedside?
- Type 4: PhD who focuses on clinical questions

The post-doc experience

- Propose to actively fund post doc time & include that as part of clinical scholar time going forward
- Often missing in planning for clinical scholars
- Very clear model set up in basic sciences, missing somewhat in clinical sciences

Crucial role of basic science

- First, some courses that cut across disciplines (e.g., immunology, molecular techniques etc are mandatory training).
- Most cutting edge clinical investigation arises out of cutting edge bench research
- Clinical scholars program should include deliberate contact, relationships, and collaboration with our basic science colleagues

What are you training them for?

- To perform clinical trials?
- To examine pathogenesis?
- For drug discovery?
- To teach at universities?
- To get into pharmaceutical industry?
- To be better clinicians?

PhD level versus Masters versus other levels

- How many years?
- How much time should they be away from clinical duties?
- What is the level of scientific output that is mandated for completion of program?
- Doctorate versus Masters in Clinical Sciences
- Are there only 2 levels, or should there be more?
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Mentorship

- Mentors must be trained: plan for that
- Mentors can be international
- One of the best tested relationship is that between a supervisor/mentor and a PhD student.
- Some programs have had much looser (meet once a month etc)
- The mentor is also crucial in choice of project
- Clear guidelines on choosing a mentor and the role of mentors should be set out prior to start of program
- First, mentors must be trained

Funding

- Who will fund the scholar?
- In US, system of 75% funded via grants from NIH to scholar; applicant's primary department pays 25% so applicant expected to have 25% of duties as regular clinical work
- Crucial to have funding for pilot projects by scholars: scholars still have to apply for it, which makes their first grant application

Applicants

- What measures/assurance that they will commit for the entire period
- Drops outs occur due to the lure of money in private practice, usually after a significant investment in training has already been made
- Set up criteria for selection, including letters from department heads, etc
- Applicant should set up clear goals as part of application program which will be used as criteria for selection
- What measures that they will continue in the field?

Grantsmanship

- There should be seed money for scholars primary pilot project
- Application process and quality must be exactly as that for public granting agencies
- Practicum & didactics should include deliberate training on grants
 - Local funding agencies
 - International public agencies
 - Pharmaceutical industry

When finished?

- Would suggest positions ready for those who finish program: in US, they usually go back to departments and clock ticks for grants and publications
- Alternatively funding for a research project for 2years after finishing to start them off: they must still put in a high quality fundable project
- Will their station improve after finishing the program?
- What are the academic expectations