For Clinical Scientists: Designing a Strategy to Achieve the Level and Type of Research That Fits Your Career Plan

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First Mondays Faculty Development: Navigating a Research Career in Basic, Translational and Clinical Sciences

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Where is this session coming from?

- Conversations with many clinicians who want to do research but not as their primary professional role
- Others challenged to balance multiple work and personal interests/responsibilities
- Rising, or at least not abating, challenges getting NIH grants
- Heavy emphasis of research training programs on preparing PIs - potential sense of failure if one does not seek or achieve that level of research
- Need for Q&A vs. emphasis of presentation
Some current realities…

• The number of PIs leading research teams with NIH R01 level support is more or less constant – the $$$ can only support so many

• As an academic laboratory-based scientist there are largely three options
  • Tenure-track PI – the numbers have been flat for years
  • Non-TT PI – numbers expanding over past decade
  • Co-I and part of team led by of PI – numbers variable

• As clinician, more options because one can generate an income outside of research – but clinical demands intense

• Translational research requires collaborations of full-time and part-time investigators

• Training models don’t focus much on part-time/collaboration
Academic Advancement and Satisfaction

• Recently gone through major review of ‘tracks’
• Clarification of separation between tenure-eligible (TE) and non-tenure eligible (NTE) tracks
• For clinicians, clearer expression of the continuum in amounts of effort distributed between care, research, teaching, service
• With research as one of two primary non-clinical focuses, promotion is possible on NTE track without being a PI of an NIH-funded award
• Won’t happen by chance – requires very conscious and careful career planning and control
• Remember Career Advancement Plan? Let’s look at…
Strategies for Research-Intensive Focus

- PhDs and MD/PhDs spend years becoming skilled scientists – no easy short-cuts for MDs who decide later
- You have to establish a personal history with data projecting future work – publications and other evidence of productivity
- Dedicated research time without clinical demand essential
- Progression from training to collaboration to independence likely to take 7-10 years – department/division investment
- Training grants often focus on bench research, not clinical and translational niche – will require evolution
- Typically this is a path that is negotiated and pursued at the time that an initial position is obtained – challenging to evolve into this role – K awards hope to enable this
- Questions and Answers on this niche…
Two Strategies for Part-time Research

• Time/energy commitment in the range of 20-40% (generally an expectation that this time will be covered on grants, etc.)
• Create and develop a unique individual identity, expertise and contribution to new knowledge within your field
• Require VERY targeted focus – can’t dabble in a bunch of different arenas – K awards can enable this too
• Decide if you want to become a visible, small player in an established area or create a niche in a new or evolving one
• Will likely need to be closely aligned with your clinical field
• Likely closely related to advances in clinical care, or research that is not very expensive in time or $$$
• Important opportunity – co-investigator on grants providing clinical expertise (and/or patients)
• Could be in clinical trials
Second Strategy for Part-time Research

- Time/energy commitment in the range of 20-40%
- Create and develop collaborations with individuals or groups whose lives are focused on research
- Still requires targeted focus but more room for several areas of interest
- Still must decide if you want to become visible in established area or create a niche in a new/evolving one
- If it is in translational research, may have to exert more effort acquiring knowledge/expertise outside your comfort zone – but this can be great role of training time
- Can be in clinical trials
- It is OK to consciously construct a career as a collaborator if you are not on the tenure track!
Fundamentals

• Start from what you really enjoy, what interests you – internal motivation is all you can build on during early phases of research
  • This is what drives scientists in general – not the external rewards that eventually come if one is successful
• Start from what you know well
• Start from what you are good at or are confident you can and want to become good at
  • If you don’t like and/or don’t get statistics, don’t try to build a career on sophisticated mathematical modeling!
  • But you can go after those problems through collaboration
  • You don’t have to master everything to succeed
Common Pitfalls

- Most research training stems from laboratory research
- Largest fraction of research dollars
- Best way to learn research method – short cycles of planning and executing research
- Great preparation for bench science, not for clinical studies
- Highest reward for ‘why’ questions - mechanism
- Dominated by full-time (150%) scientists
- Clinical research training needs to be very different
  - MSCI great foundation but requires a lot of time
  - May be better to pick and choose pieces
  - Still need heavy emphasis on learning by doing
Starting Points for Funding

- Figure out what you need
  - Your time away from patients
  - Research Assistant
  - Purchased serves – cores, statistics, database access, epidemiology consultants
- Research subject costs
- Research supplies and other direct costs
- Look for small grants, disciplinary, foundations
  - Establish your record of peer-reviewed funding
  - Publish! – Must have first author research pubs
- Become familiar with the Enterprise Data Warehouse
Must Do’s!

• Get substantive feedback on anything you write – both content and style
• Ask for specific help from established colleagues and peers – not just generic ‘mentoring’
• Get to know people locally – conversations lead to collaborations and new ways of thinking
• Go to the right national meetings and engage – networking and conversations really matter
• Follow through and publish everything you can
Questions?

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