Flourishing in the Academy,
or
Taking Nothing for Granted

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Congratulations!

- Your strategy was successful…

"Maintaining sustained extramural funding in this climate is like constantly having to rebuild a sinking boat in the middle of the ocean. In a storm. At night. While being shot at."

Vladimir V. Säktor, Ph.D.

- M.D. — University of N. Carolina (1986)
- Internship, Internal Medicine — Brown University (1986-7)
- Resident, Internal Medicine — Georgetown University (1987-9)
- NRSA Fellow — LPD, NIAID (1989-92)
- Infectious Disease Fellow — Johns Hopkins U. (1992-3)
- Assistant-Associate Professor — Johns Hopkins U. (1993-2000)

- Professor; Director — Cincinnati Children's Res. Found.
  Division of Molecular Immunology

Why are you on this path?

- Desire to contribute to amelioration of suffering
- Excitement of obtaining novel insights into biology
- Realization that it's better to have a passion than a job
- Need to have the respect of your peers
- Want to be famous
- Interest in being in control of your (intellectual) life
- It happened…

The Real, Practical Goal:

Building and sustaining an exciting, novel, productive, independent (collaborative) research program

Measures of Success

- Publication of important, novel work in good journals
- Garnering of substantial, sustained extramural funding
- Development of a national and international reputation
- Development of a vibrant web of scientific collaboration

Various Considerations

- Scientific focus
- Time management
- Mentors/being a mentor
- Your scientific environment
- Building a group
- Networking
- Common obstacles
- Common maladaptive phenotypes
- Publishing practices
- Ethics
- Having a life
- Staying funded

Scientific Focus

- Problems: important, interesting, soluble
- Mechanistic; Translational
- Keeping it narrow: career stage…
- Measured programmatic expansion
- Don't fall into the trap of being totally technique-focused…
- Bread and butter vs. high risk, high yield
- Be overly ambitious: just not on the grant
- Relationship to disease?
- Relationship to the field and those around you?

Time Management

- You've got to focus on your research
- You are likely the only one looking out for your need to focus on your research program
- You need to contribute to the broader community:
  - Teaching
  - Clinical work
  - Committees
  - Manuscript review
  - Grant review
- Balance!

(tor)Mentors

- Find several: They are essential at all stages
- Need someone with real perspective, who is detached
- Counsel, perspective, avoidance of mistakes, networking, peer recognition
- (Always learn by example: positive and negative)
- Pass it on

Your scientific environment

- Critical need to find and talk with those with broad and deep intellectual enthusiasms and skills
- Proximity breeds far more than contempt!
- If not locally available, then search out or move

Building a group

- One bad apple can ruin the group
  - Screen well
  - Be or find a good bullshit detector
  - Always talk with applicant mentors (and others)--*especially* if they ask you not to
- More is not better
- Trainee stage: technician, student, post-doc
- Mentoring:
  - give them projects and rope
  - One of the most satisfying parts of the career

Networking

- Talk about your science
- Find/build a rich scientific environment
- Collaborate wisely and widely (beware of sharks: especially those with big groups and few ideas!)
- Meetings, Study Sections
- Don't be a pest: the aim is not political, but scientific

Common obstacles

- Insufficient Resources:
  - Negotiate well
  - Get it on paper
  - Get involved with institutional, strategic core/program development
- Difficulties with individuation
- Opportunistic parasites…

Common maladaptive phenotypes

- Lack of hunger
- Lack of broad intellectual interest in science/biology/medicine/ research
- Poor or non-fluid writing skills (great presentations, can't be logical or even grammatical on the page…)
- Lousy presentations
- A grant, lots of data; few papers out the door
- Waiting for the full monograph; in Science
- Narrow, pedestrian focus on technique/experimental minutiae, without being able to put it into biological focus
- Snake oil salesman
- Great science; total pain in the ass (see: Ethics)

What we look for in faculty…

- Superb track record of achievement (quality of science; high specific activity of science)
- Broad intellectual enthusiasm
- Intellectual independence
- Hunger
- Something novel: area, level of analysis, model systems, diseases, pathological/physiological processes, organ systems, academic divisions, but--
- Interest and capacity to be broadly collaborative
- Low maintenance
- Interested in contributing to the overall development of the environment

Publishing practices

- Get it out!
- Don't focus on the highest profile journals
- Authorship:
  - Reward contributions
  - Discuss upfront
  - Courtesy authorship is bad (and is usually its own punishment)
  - The golden rule
- Data:
  - Avoid over-interpretation
  - No cherry picking

Serving on a Study Section

- Ad hoc, occasionally
- "All happy study sections are alike. All unhappy study sections are unhappy in their own way."
- Avoid the common mistakes (the "overly ambitious" of the junior reviewer):
  - Lack of perspective
  - Nit-picking
- But stand your ground

Ethics

- The data are the data
- Play fair

(the rest is just commentary)

Having a life

- Outside interests
- Family
  - Useful to find a partner who understands (or can learn to understand) the peculiar demands of the career
- Health
- But:
  - You've got to have passion
  - Like music, this is not an 8-5 job if you want to be successful…

Staying Funded

- Renew your current grant
- Routinely survey RFAs, non-NIH funding agencies
- Plan well in advance
- Show your grants to successful, funded scientists well in advance: find mentors!
- Grant early and often (at least until the system changes)