

# EMBARKING ON A SCIENTIFIC CAREER

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SURVIVING AND THRIVING DURING THE RESEARCH YEARS

UW Medicine

DEPARTMENT OF MEDICINE

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A Few Things About Myself

Some General Observations/Advice

Questions/Discussion



# Why do a fellowship/what to get out of it?

- Area is interesting
  - Patients
  - Research questions
  - Teaching opportunities
  - Practice opportunities
  - Life style
    - Hours
    - Geography
  - \$

# Research

- Having time enough to think about something in detail
  - Have new ideas/questions
- Finding out something that no one knew before (even if it is very small!)

# Choosing Training/Mentors

1. Follow what is interesting

2. Balance

- how to earn a living
- and geographic issues/preferences
- and flexibility/travel

3. Mentor

- check the records of people previously under the proposed mentor.

# Patients

- Various conditions/presentations - Learning from each one
- Inspirations for research
- Learning to do patient-oriented research and teaching
- Mentors

# Research

- Mentorship—primary, secondary
- “Lab” facilities/environment
  - Space, equip, staff
- Other trainees
- Rarely if ever—a specific research questions first



# Teaching

- Mentorship
  - Seek out excellent clinicians/teachers
- Not so well supported financially
- Very gratifying

# Academics

- Clinical/Research/Teaching/Leadership
  - Can determine individual balance
  - Can vary over one's career
  - Varied life/challenges/opportunities
  - Travel
  - Generally lower incomes than practice or biotech/pharma

# Yearly Goals

## □ Year One

- Concentrate on clinical mastery.
- Identify and bond with mentor(s)
  - Check track record of mentees and funding of mentor
- With mentor, identify ongoing studies that can be “joined” and consider IRB or Animal Care submissions for studies in second year
- Consider writing a review paper in area targeted for research

# Year Two

- ▣ Conduct research studies
- ▣ Initiate new studies
- ▣ Submit abstract(s) for regional, national meetings
- ▣ Training in statistics, study design
- ▣ Write paper(s) as soon as data available
  - Maybe middle author initially, then first author
- ▣ Consider NRSA application

# Year Three

- ▣ Continue and initiate additional research
- ▣ Publish (first author) initial research
- ▣ Additional middle author papers
- ▣ Submit NRSA, K award, foundation applications

# Year Four

- ▣ Additional first and middle author research papers.  
Reviews and chapters usually not worth the time spent
- ▣ K award and foundation or pharma support for salary
- ▣ Looking to Acting Instructor or Assistant Professor appointment

- By end of year four (definition of success / victory!)
  - ▣ 5-10 papers, most as first author, in good journals and K award
  - ▣ Junior faculty appointment

# Department of Medicine—Fellowship Programs

□	ACGME Fellows	123
□	M.D. Fellows not in ACGME	68
□	Ph.D. Fellows	58
□	Other	<u>1</u>
□	Total	250



# Fellowship Salaries: Sources

- **ACGME Fellows:**
  - Medical Center Stipends
  - Training Grants
  - Division Funds
- **Non ACGME Fellows:**
  - Research – Grants, Foundations, Philanthropy
  - Clinical – Medical Center, Division Funds

# Institutional Research Training Grants



- T 32 Institutional National Research Service Award

# Individual Fellowships

- F 32 Postdoctoral Individual National Research Service Award
- F 33 National Research Service Awards for Senior Fellows

# How to support fellow to Academic Position

- Apply for
  - K awards
  - Foundations
  - Request support on mentors' grants
- Collaboration with other faculty

# K-awards

- [K08 Mentored Clinical Scientist Development Award](#) Development of independent clinical research scientist. 3-5 yrs; 75% effort.
- [KL2 Mentored Clinical Scientist Development Program Award](#) Support to institution for the development of independent clinical scientists. 5 yrs; 75% effort; initiated by the educational institution.
- [K23 Mentored Patient-Oriented Research Career Development Award](#) Development of the independent research scientist in the clinical arena. 3-5 yrs, 75% commitment.
- [K99/R00 NIH Pathway to Independence \(PI\) Award](#) Facilitate receiving an R01 award earlier in a research career and to assist investigators in securing a stable research position during the critical transition stage of their career.
- [K01 Mentored Research Scientist Development Award](#) New direction for PI. Development of the independent research scientist. 3-5 yrs; 75% effort.

# “K to R Transition”

- R-01 – Classic benchmark
- P – Program Project Grants – Project PI
- U – Interactive grants or PPG’s - PI
- VA – Merit Award – PI

- Research Fellowships are a gateway to great career opportunities
  - Especially academics
  - But also practice, biotech, and others
  - Pick successful mentors and pick important questions
  - Enjoy the time
    - Be challenged and be challenging

# Scientist

- Research accomplishments
  - Value of contributions
  - First and last authored publications in strong, peer-reviewed journals
  - Independent grant support
  - Eventual independence from mentor
  - Eventual national reputation
- Teaching, Clinical, Leadership, Mentorship



# Should I “go or stay”?

- Switching institutions
  - Positive: establish independence—acquire new perspectives and methodologies
  - Negative: dead time for move, start-up, and establishing new collaborators

# Leadership

- Dissatisfaction with things as they are
- Why don't we do X?
- The feeling that you can do something better than others
- A key talent is being able to pick excellent trainees, faculty and staff
  - people have to be given responsibility and resources
- Requires ability to tolerate some failures in yourself and others

# Key Values

- Honesty/Integrity
- Communication
  - "Overdo" it somewhat
- Do not "talk behind peoples back"
- "The secret to success in patient care is caring for the patient."
  - similar in all areas – have to have a true interest in the welfare/success of others