

**OMG! From Sequester and Beyond:
Am I Going to Make it as a Scientist?**

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NHLBI Funding– August 2013

Grant Program	Percentile	Description
R01	11.0	Research Project Grant
ESI	21.0*	Early Stage Investigators
R21	11.0	Investigator-Initiated Innovative Research
R15	20	Academic Research Enhancement Awards
R41, R42	24	Small Business Technology Transfer (STTR) Grants
R43, R44	29	Small Business Innovation Research (SBIR) Grants
P01	15	Program Project Grant
K awards	25	Career Development Awards
T32/T35	25	Institutional NRSA Training
F30	15	Pre-doctoral NRSA
F31, F32, F33	30.0	Pre and Post-doctoral NRSA

*Summary Statement issues must be satisfactorily resolved on applications >16 percentile.

2012: % of grants reviewed that were funded: 14.7%

From NIH RePORT

NIDDK Funding Guidelines – May 2013

Grant program	Percentile	Description
RO1	11	Research Project Grant
ESI	16	Early Stage Investigator

2012: % of grants reviewed that were funded – 19.8%

Funding of Individual NRSA: F32

	Grants reviewed	Grants funded
NHLBI	198	42 (21%)
NIDDK	165	60 (36.3%)

Data from NIH RePORT

CAREER DEVELOPMENT AWARDS

	Grants reviewed	Grants funded
K02:		
NHLBI	17	4 (23.5%)
NIDDK	0	0 (0%)
K08:		
NHLBI	78	25 (32.1%)
NIDDK	66	33 (50%)
K99:		
NHLBI	130	39 (30%)
NIDDK	54	9 (16.7%)

Data from NIH RePORT

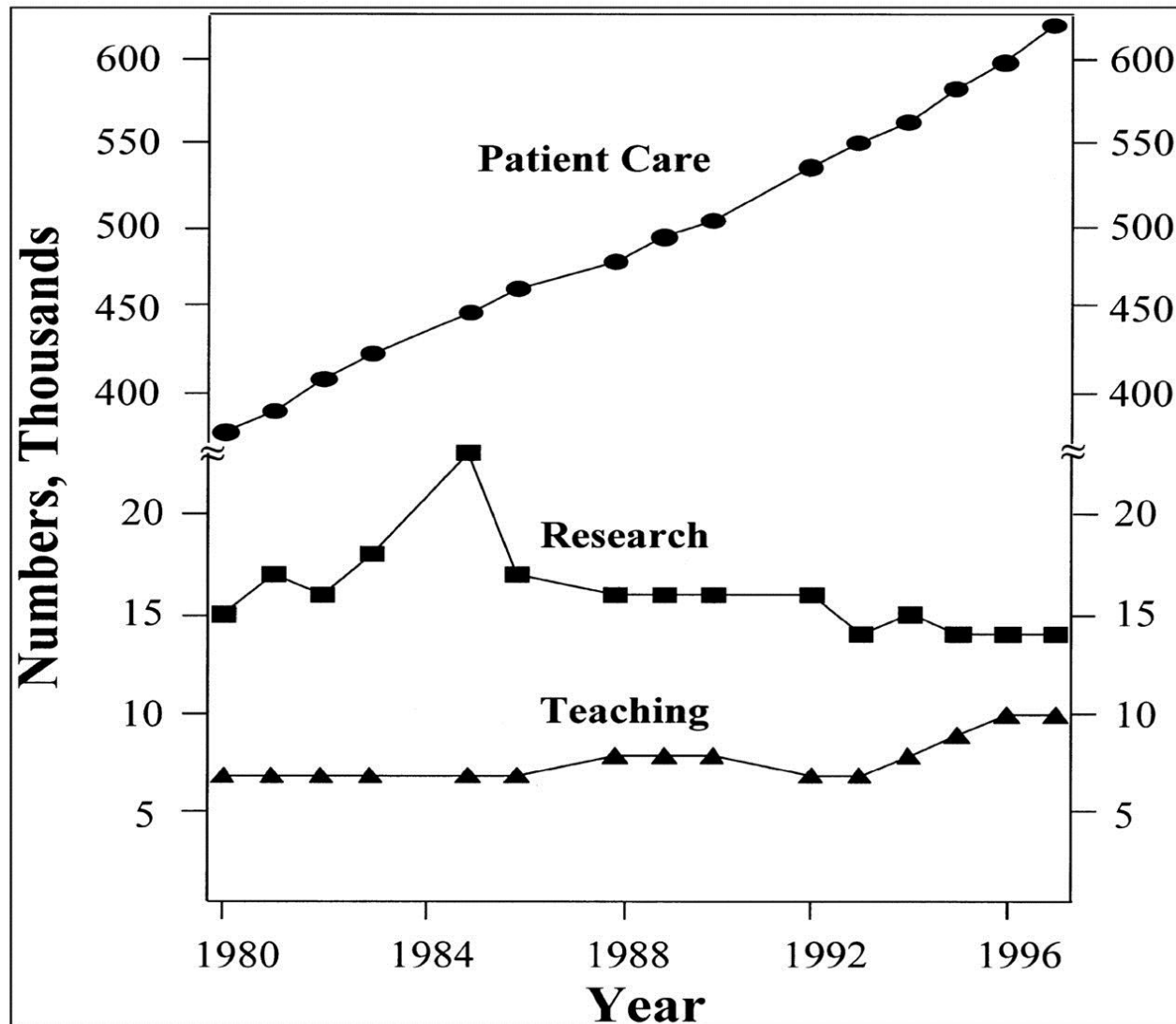
Is the Physician Scientist an Endangered Species?

". . . the clinical investigator, uniquely positioned to translate basic research advances to clinically meaningful programs, may be an endangered species."

Claude Lenfant, Director, The National Heart, Lung and Blood Institute.

***Circulation*. 2000; 102: 368–371**

U.S. Physicians by Major Professional Activity



My advice:

1. Know what you want to do. Have a plan.

Develop a 5 year plan for yourself

Important to have realistic goals

My advice:

1. Know what you want to do. Have a plan.

2. Work hard. Study hard. Do your best.

As a postdoc, learn as many new things, techniques, ideas, as you can.

**As junior faculty, read and study every night.
Know the recent literature.**

**Make sure you give yourself time to think
in addition
to performing experiments or clinical work.**

Physician scientists: > 50% protected time

My advice:

- 1. Know what you want to do. Have a plan.**
- 2. Work hard. Study hard. Do your best.**
- 3. Get good mentors.**

Mentor

- Odysseus entrusted his son, Telemachus, to Mentor: “ Person who imparts wisdom”
- So definition of a mentor is “loyal, trusted friend, enlightened advisor, teacher

You will benefit from having
mentors throughout your career.

Mentor/mentee relationship

- Mentors demonstrate and teach style and methodology in doing research
- Mentors evaluate and critique scientific research, improve mentee's communication skills
- Mentors promote career development

Mentor/mentee relationship

- Mentors perform different duties at different times, change over time, and it's a dynamic process

Mentor-graduate or postdoc advisor

Mentor-confidant, friend

Mentor- trusted critic

Characteristics of mentor/mentee relationship

- What a mentor is *not*:

Not just a “patron” (resource provider)

Not just a supervisor (one who oversees the dissertation or research)

Not just a role model

Mentor/mentee relationship

- Relationship is exclusive: outlives the time spent in formal training
- Requires trust
- Professional courtesy
- Women need mentors, too, and they don't have to be other women.

Responsibilities of trainees

- Act in mature and ethical manner, mindful of mentor's time constraints
- Be proactive in their training and education
- Devote appropriate time and energies to achieving academic, research excellence
- Maintain open lines of communication with mentor

Postdoctoral Fellowship Mentoring Plan--CRRC

Year 1	Year 2	Year 3>
<ul style="list-style-type: none">• Identify Mentor• Establish Mentoring Committee• Establish research plan and perform experiments• Attend departmental and CECR seminars, journal clubs• Ethics Course• Submit abstract to scientific meeting• Write individual fellowship grant	<ul style="list-style-type: none">• Present at national meeting• Meet with Mentoring Committee• Professional Skills Course• Perform research experiments• Publish manuscripts• Present seminar• Attend departmental and CRRC seminars, journal clubs	<ul style="list-style-type: none">• Present at national meeting• Meet with Mentoring Committee• Write NIH K99 or AHA Scientist Development Grant• Perform research experiments• Publish manuscripts• Present seminar• Attend departmental and CRRC seminars

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Mentorship in Grant writing at UMMC:

**K awards, NRSA, AHA postdoctoral fellowship,
SDG, R01**

**Reviewers: Faculty that have recently served on
study section**

Specific aims page

Research questions, preliminary data

Full grant

Grant Funding Opportunities for clinician scientists

- **NIH “K” Awards- KO8, K12, K23, K24, etc –only for clinician scientists**
- **NIH's Clinical and Translational Science Awards**
- **NIH –many requests for applications (RFAs) for clinical research**
- **Howard Hughes Physician-Scientist Early Career Award**
- **Am Heart Assoc. - Clinical Research Program, etc**

Opportunities for funding as a postdoc or early stage investigator

NIH:

Individual NRSA

K-99 Fellow to Faculty Award

K01, K02: Mentored Awards -- pays salary

National Kidney Foundation Grants

American Heart Association: Postdoctoral Fellowship

Scientist Development Grant

Grant-In-Aid

Other Foundations: ADA, JDRF

National Science Foundation: basic research

<http://www.MentorNet.net>

- Website to get a mentor and be a mentor
- No charge to you for participation
- Supported by various scientific societies, universities

My advice:

1. Know what you want to do. Have a plan.
2. Work hard. Study hard. Do your best.
3. Get good mentors.
4. Get involved with your professional society.

APS, ASN, ASH, HBPRC, ACC, ASPET, others

Benefits of getting involved with your professional society

1. **Networking** with peers, potential collaborators, new mentors, grant reviewers, manuscript reviewers
2. **Society benefits**: trainee benefits, travel awards, early career awards, website information, special grants, etc.
3. **Opportunity for leadership** experience and skills development

My advice:

1. Know what you want to do. Have a plan.
2. Work hard. Study hard. Do your best.
3. Get good mentors.
4. Get involved with your professional society
5. Develop collaborations.

Establish synergistic research partnerships/teams

- the successful “lone wolf” is rare

Because of the complexity of science today, it is difficult to be an expert every technique, method, etc.

Need other investigators to discuss your ideas.

Multi- and interdisciplinary research will be required to solve the “puzzles” of complex diseases/conditions

Physiology
Genomics
Proteomics
Metabolomics
Molecular Biology
Imaging
Drug development
Clinical trials
Population studies
Outcomes research



My advice:

6. LOVE what you do.

**The fun/thrill of discovery: you won't
consider research to be “work”**

“Feel lucky” – John Hall, Ph.D.

Reasons to Become a Clinician Scientist

- **Research training will make you a better clinician**
 - **develop the habit of lifelong learning**
- **Unique opportunities - Research tools have never been better and there are many mechanisms for support**
- **Physicians have unique skills and perspective: Clinical training gives physicians an edge in selecting research questions that are important for human health**
- **Now is the right time to be a physician scientist**
 - **Society needs you**

Taken from John Hall, Ph.D.

Women scientists

- Read “Lean In: Women, Work and the Will to Lead” -- Sheryl Sandberg
- Attend the AAMC Early Career Women Faculty Professional Development Seminar