

Research Careers on the Academic Pathway

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Academic Appointments



- Tenure track
- Non-Tenure track



What does Tenure mean?

Academic freedom
and

“a sufficient degree of economic security to
make the profession attractive to men and
women of ability”

1940 Statement of principles on academic freedom and tenure with 1970 interpretive comments.
In: AAUP Policy Documents and Reports. 9th ed. Washington DC: American Association of
University Professors; **2001**



What does Tenure mean?

Caveat Emptor



Tenure-Track Positions

-Traditional notion of tenure:

University/Colleges

Academic 9 month salary

Tenure clock

-Medical Schools/Research Institutes

salary support?

Tenure clock?



- Growth in academic positions for those trained in the United States during past 10 years: ~33%
- Growth has been heavily concentrated in non-tenure track positions.
 - Non-tenure track has grown by over 70%
 - Tenure track has grown by 20%
- Growth has taken place primarily in medical schools

From the *NSF Survey of Doctorate Recipients*, **2003**



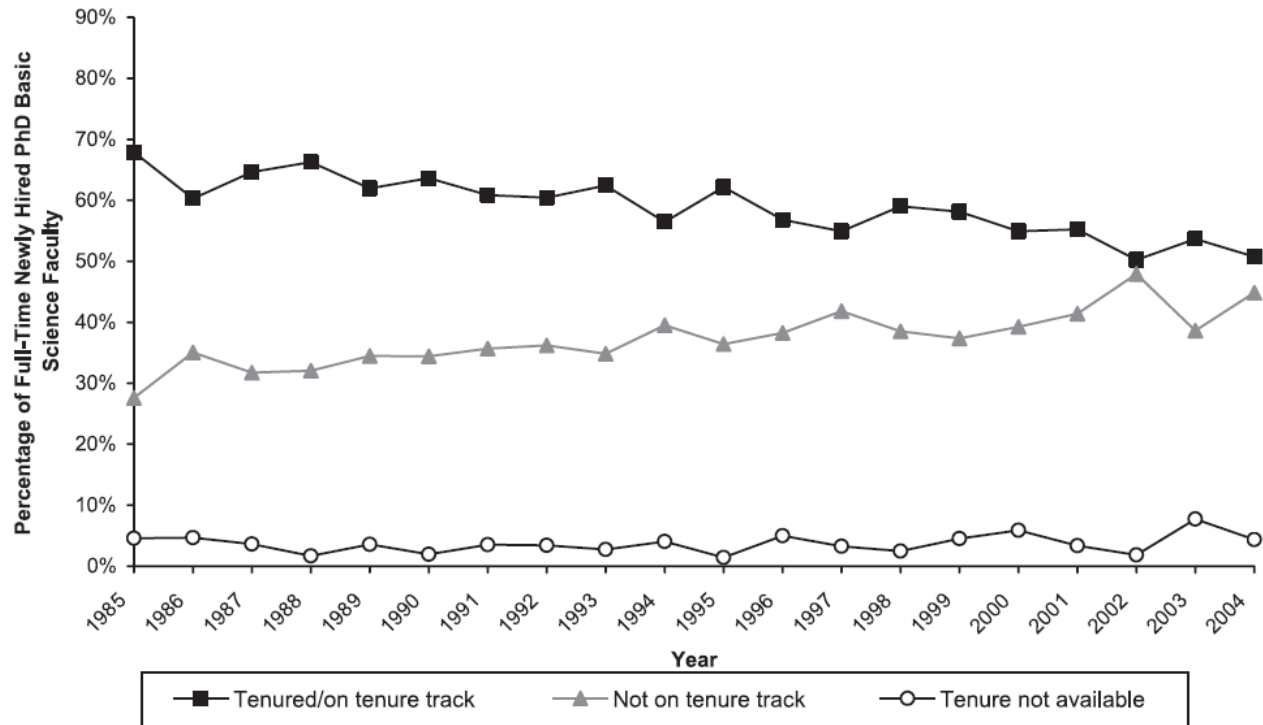


Figure 5 Tenure status for full-time newly hired PhD faculty in basic science departments at U.S. medical schools, in percent, 1985–2004. (Newly hired faculty are those at the rank of assistant professor and above, hired in the previous year.)

Source: AAMC Faculty Roster database.

Bunton, S. S., Mallon, W.T. *Acad. Med.*, **2007**, *82*, 281-289



The Academic Job Application

- Cover letter
- *Curriculum vitae*
- Research Proposals
- Reprints
- Letters of Recommendation
- Statement of Teaching



The Academic Job Interview

- The Job Talk
- The Chalk Talk
- Meeting Potential Colleagues



Resources for the Job Search

- Science magazine's Career Development website (<http://sciencecareers.sciencemag.org>)
- Chronicle of Higher Education (<http://chronicle.com.jobs>)
- Nature magazine's job website (<http://www.nature.com/naturejobs/index.html>)



What to consider before you accept:

- The Appointment:
 - Title and what does it mean?
 - Duration of initial contract
 - Terms for renewal of contracts
 - Joint appointments
- Start-up package
- Tenure rates
- Teaching and service responsibilities
- Hard money vs soft money benefits
- Issues for dual career couples
(<http://www.neherc.org/>)



Salary and Start-up Packages

Figure 1.1. University starting salaries and start-up packages for junior faculty who received Burroughs Wellcome Trust Career Awards in Biomedical Sciences (CABS) and began faculty positions as tenure-track assistant professors in U.S. universities.

Faculty Appointments, 2004–2005*	
Ph.D.s (n = 21)	
Average 12-month salary	\$92,632 (\$73,000–\$135,000)
Median 12-month salary	\$89,333
Average start-up package (less salary)	\$506,392
Median start-up package (less salary)	\$675,000
Physician-Scientists (n = 11)	
Average 12-month salary	\$127,315 (\$93,000–\$155,000)
Median 12-month salary	\$125,500
Average start-up package (less salary)	\$441,245
Median start-up package (less salary)	\$480,000
<p>*These data were obtained from accepted offers received by CABS awardees who moved from postdoctoral to tenure-track assistant professor faculty positions. The positions ranged across the basic biomedical sciences, public and private institutions, and U.S. geographic areas. Although the sample size is small, the data are consistent with those obtained from CABS awardees who have received faculty appointments since 1996.</p> <p>Source: Rolly L. Simpson, BWF.</p>	

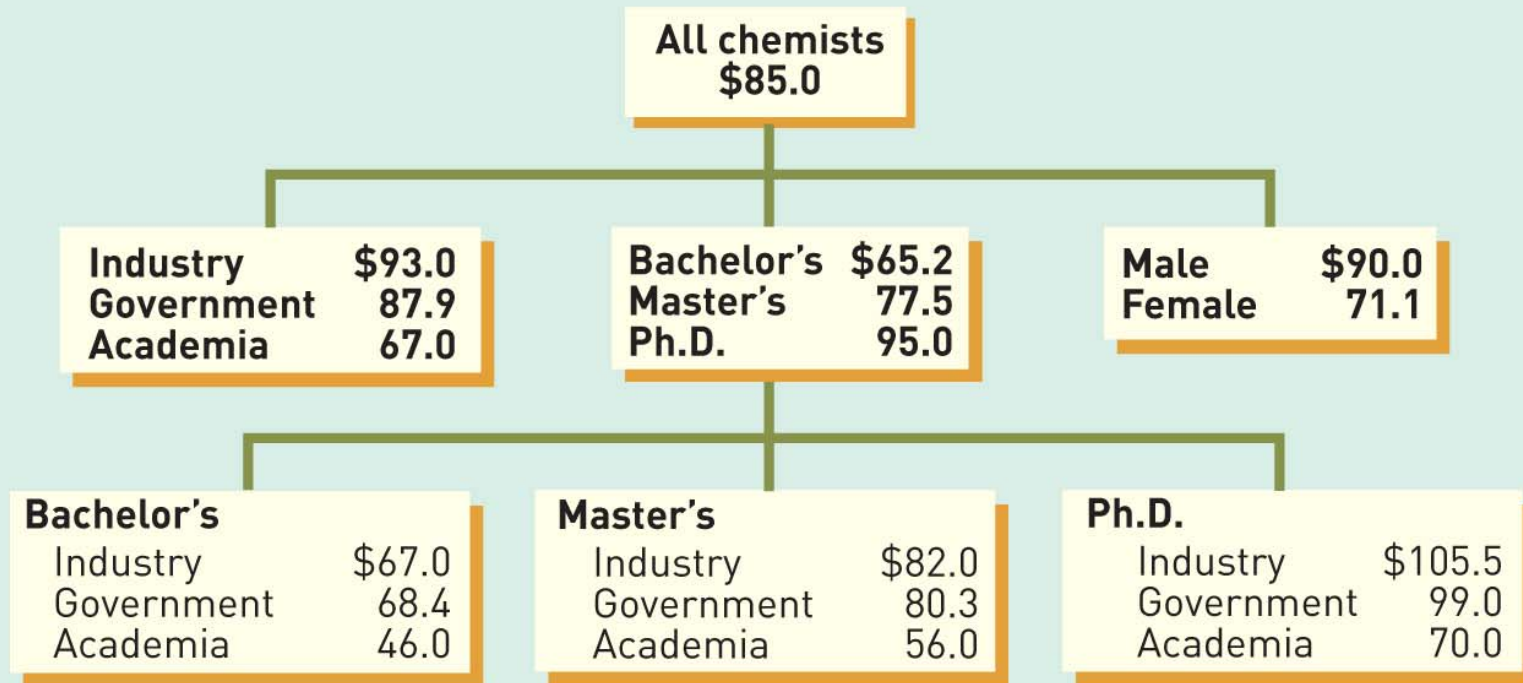
From *Making the Right Moves*. 2006 BWF, HHMI



Median Base Salaries (Chemistry)

MEDIAN BASE SALARIES

Ph.D. brings a substantial salary advantage in all fields



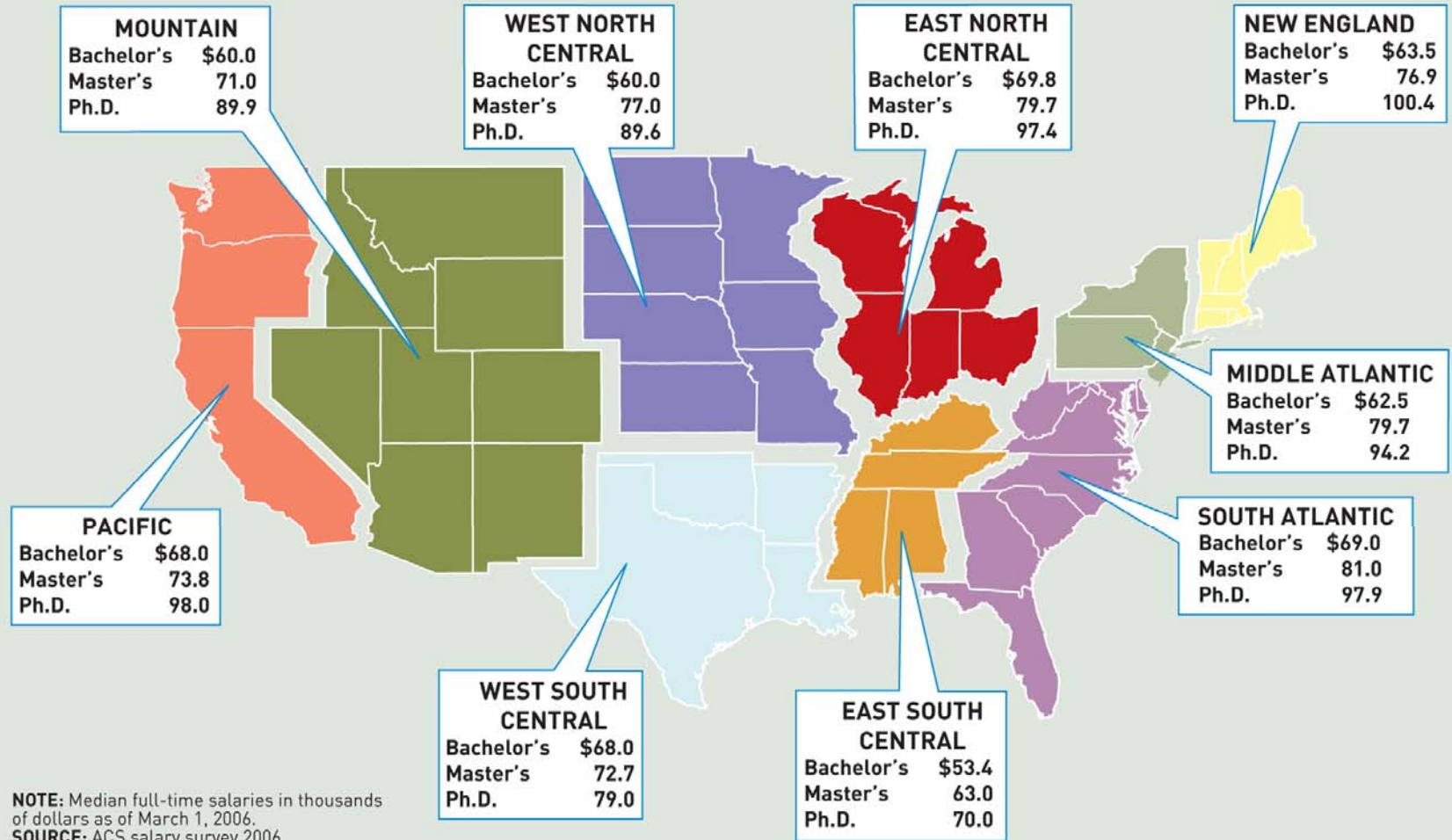
NOTE: Median annual base salary in thousands of dollars for those with full-time permanent jobs as of March 1, 2006. **SOURCE:** ACS salary survey 2006



Salaries by Region (Chemists)

SALARIES BY REGION

Chemists on the East and West Coasts may have an advantage

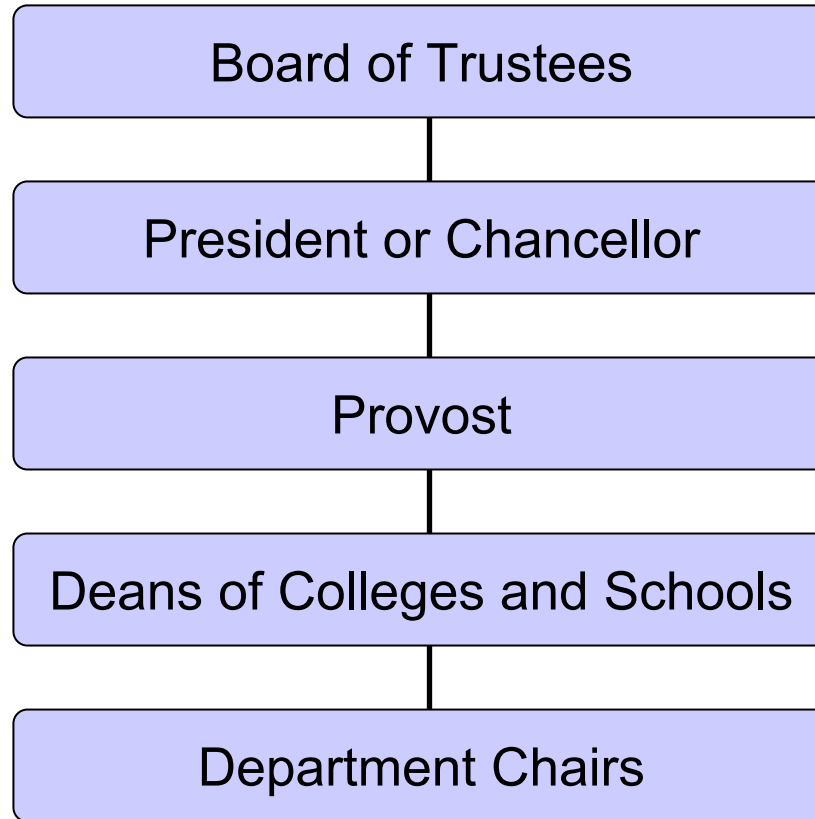


Salary Surveys

- American Association of Medical Colleges
Annual salary survey
(<http://www.aamc.org>)
- American Chemical Society
(<http://pubs.acs.org>)
- American Association of University
Professors (<http://www.aaup.org>)



Organization of a “Typical” University



Supporting Infrastructure

- Grants and Contracts Office
- Technology Transfer Office
- Regulatory Compliance Office
- Environmental Health and Safety
- HR/Public Relations
- Development Office



Preparing for Promotion

Promotion is evidence based

Do:

Get the Faculty handbook

Learn the formal and informal rules

Consult with senior faculty about expectations

Focus on research, teaching, and service

Don't:

Forget to document research, teaching, service activities

Promotion Dossier

The CV as a living document

- Professional history:

academic positions, other professional appointments; honors, prizes, invited lectures and conferences; offices in professional societies; editorial boards, study section service.

- Grants

- Publications

- Teaching Activities

- Trainees and Advisees: current positions

- Research Goals and Accomplishments

Narrative





“Your CV is not in the correct format. Please revise using guidelines for faculty CVs version 2.5.6. and resubmit by tomorrow”

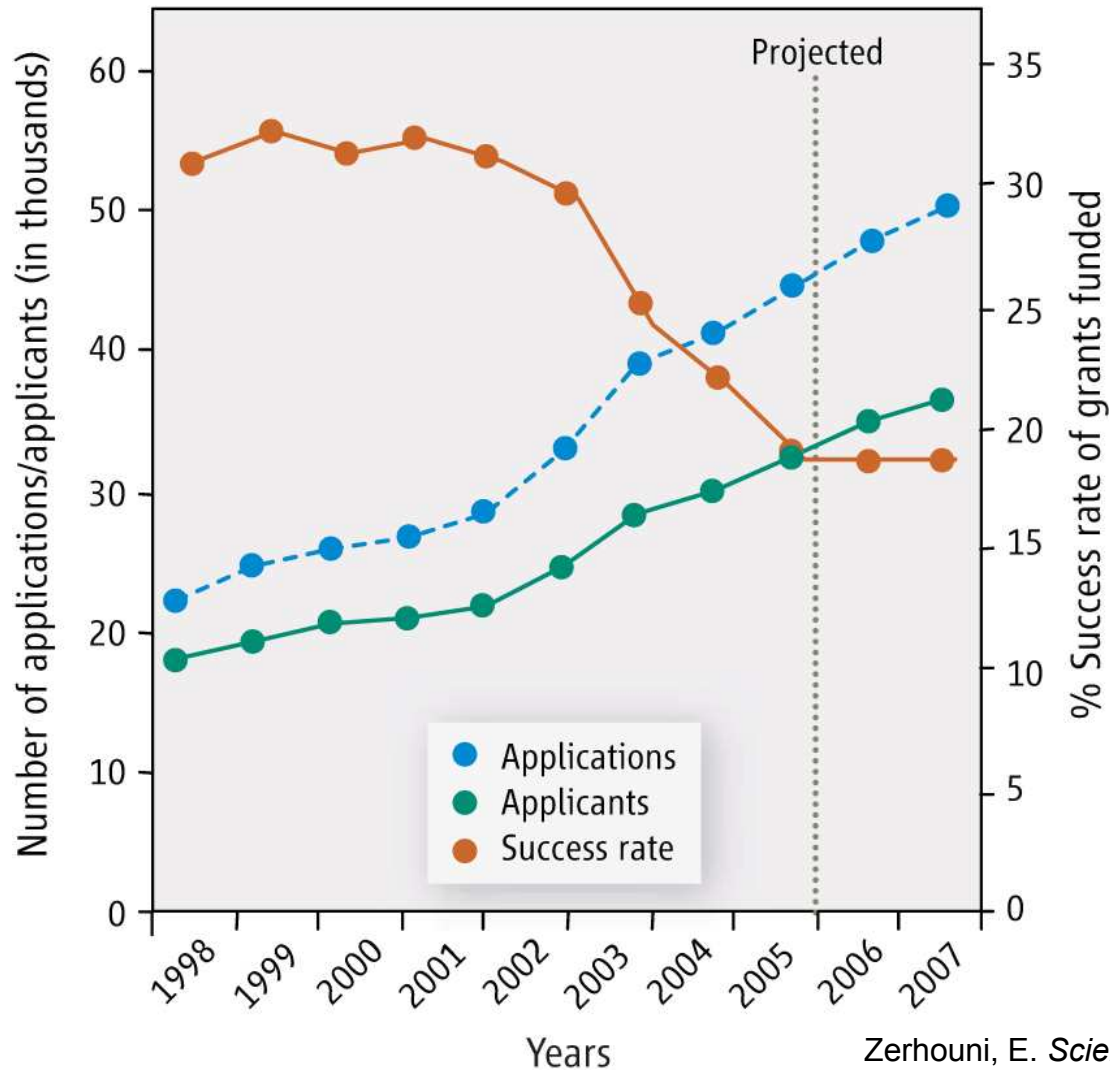


Criteria for Promotion

- Research = Scholarship
- Funding
- Visibility in the field
- Teaching
- Service



NIH: Funding in the Post-doubling Era



Zerhouni, E. *Science* **2006**, 354, 1088-1090





New Investigators Program



Pathway to Independence Award	NIH Director's New Innovator Award	NRSA Individual and Institutional Training Awards	Career Development Awards	Research Project Grant Program	NIH Institute and Center Practices	Resources for New Investigators
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[OER Home](#)

New investigators are the innovators of the future - they bring fresh ideas and technologies to existing biomedical research problems, and they pioneer new areas of investigation. Entry of new investigators into the ranks of independent, NIH-funded researchers is essential to the health of this country's biomedical research enterprise. NIH's interest in the training and research funding of new investigators is undeniably deep and longstanding.

The NIH Pathways to Independence Program employs multiple strategies to facilitate receiving an R01 award earlier in an investigator's research career. These involve:

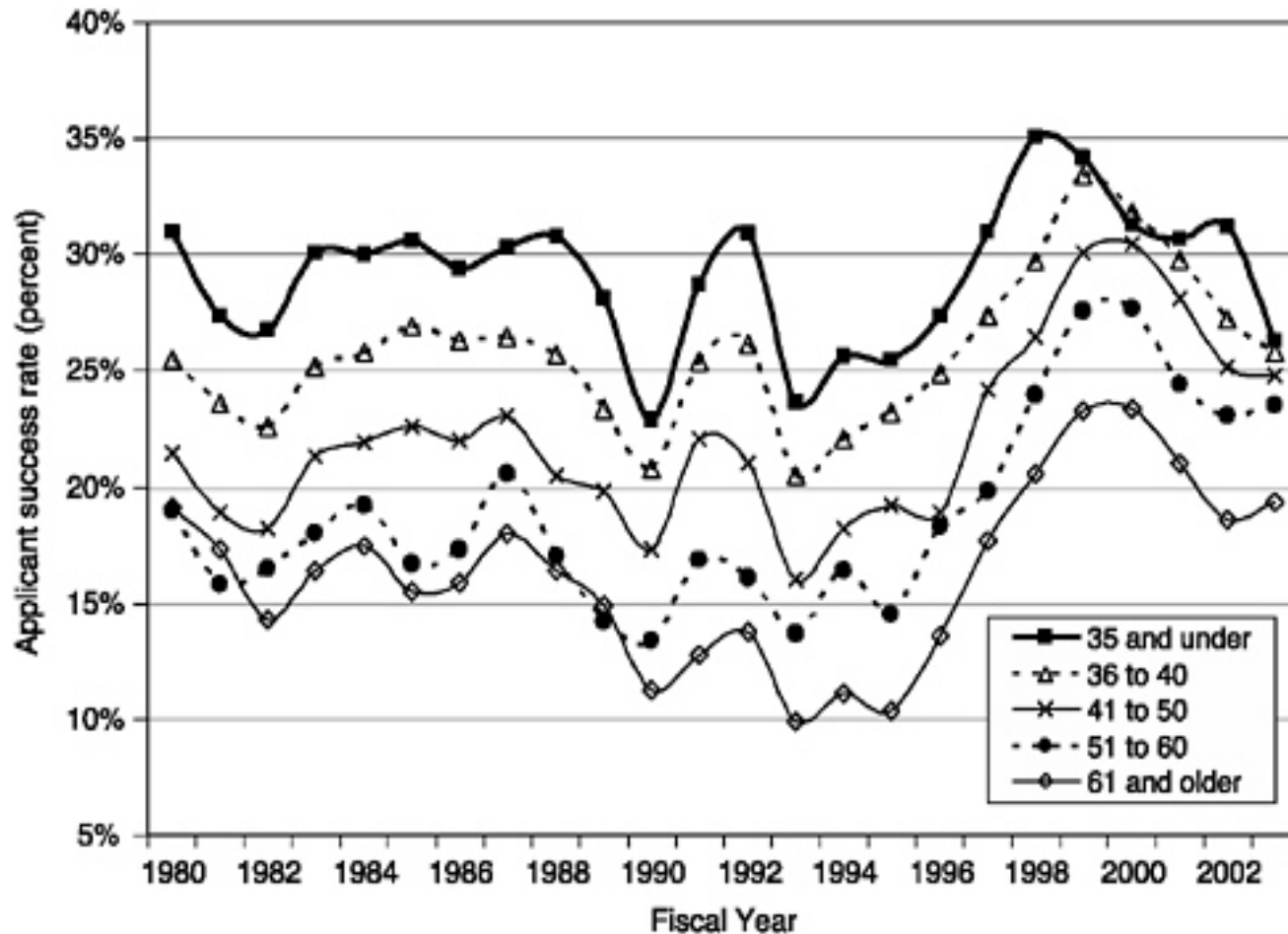
- [Pathway to Independence Award](#)
- [NIH Director's New Innovator Award](#) NEW
- [NRSA Individual and Institutional Training Awards](#)
- [Career Development Awards](#) - K Kiosk
- [Research Project Grant Program](#) - (R01)
- [NIH Institute and Center Practices](#)
- [Resources for New Investigators](#)

NIH Pathway to Independence Award

- An award program that provides 2 years of mentored research support (post-doc)
- An additional 3 years of transition support from the mentored phase to the independent phase as part of "an ongoing NIH effort to support new scientists as they transition to research independence"
- NIH plans to issue between 150-200 awards for this program in its initial year



Young Investigators have the Best Success Rates



Bridges to Independence, 2005



Career Development Paths

PhD

- Fellowship:NRSA (F32, T32)
- Transition (K01)
- Early independence (R03, R21)
- Independence (R01)

MD

- Fellowship:NRSA (F32, T32)
- Career Development (K08, K23)
- Transition to independence(R03, R21)
- Independence (R01)

<http://grants.nih.gov/grants/guide/index.html>



Funding Sources

NIH

NSF

ONR

DARPA

Foundation Funding



Resources

- Example of a funded R01,
<http://www.niaid.nih.gov/ncn/grants/app/app.pdf>
- CSR (Center for Scientific Review)-mock study section <http://www.drg.nih.gov/Video/Video.asp>
- NIH CRISP: a searchable database of federally funded biomedical research projects,
<http://crisp.cit.nih.gov>
- GrantsNet (AAAS), <http://www.grantsnet.org>



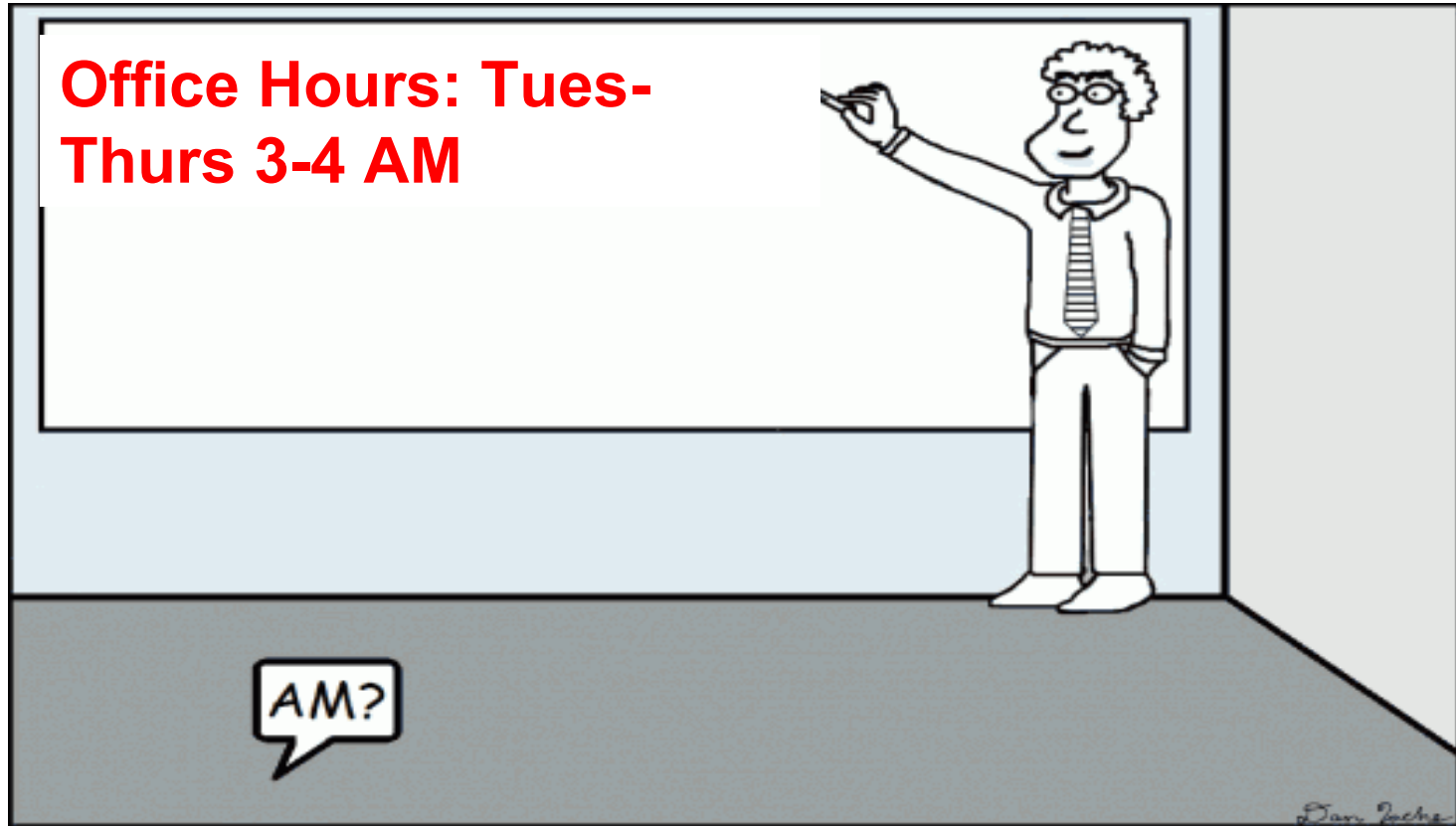
Scholarship: Quality vs. Quantity



“Only three publications and he expects to get tenure!”



Teaching



“Being a diligent faculty member, Professor Smith makes sure he provides ample office hours”



Visibility and Service

- Talks
- Study Sections
- Editorial Boards
- Professional Societies



Resources

- Menges, Robert J. Faculty in New Jobs: A Guide to Settling In, Becoming Established, and Building Institutional Support, Jossey-Bass (1999)
- Boice, Robert. Advice for New Faculty Members, Allyn and Bacon (2000)
- Barker, Kathy. At the Bench: A laboratory Navigator. Cold Spring Harbor Press (1998)

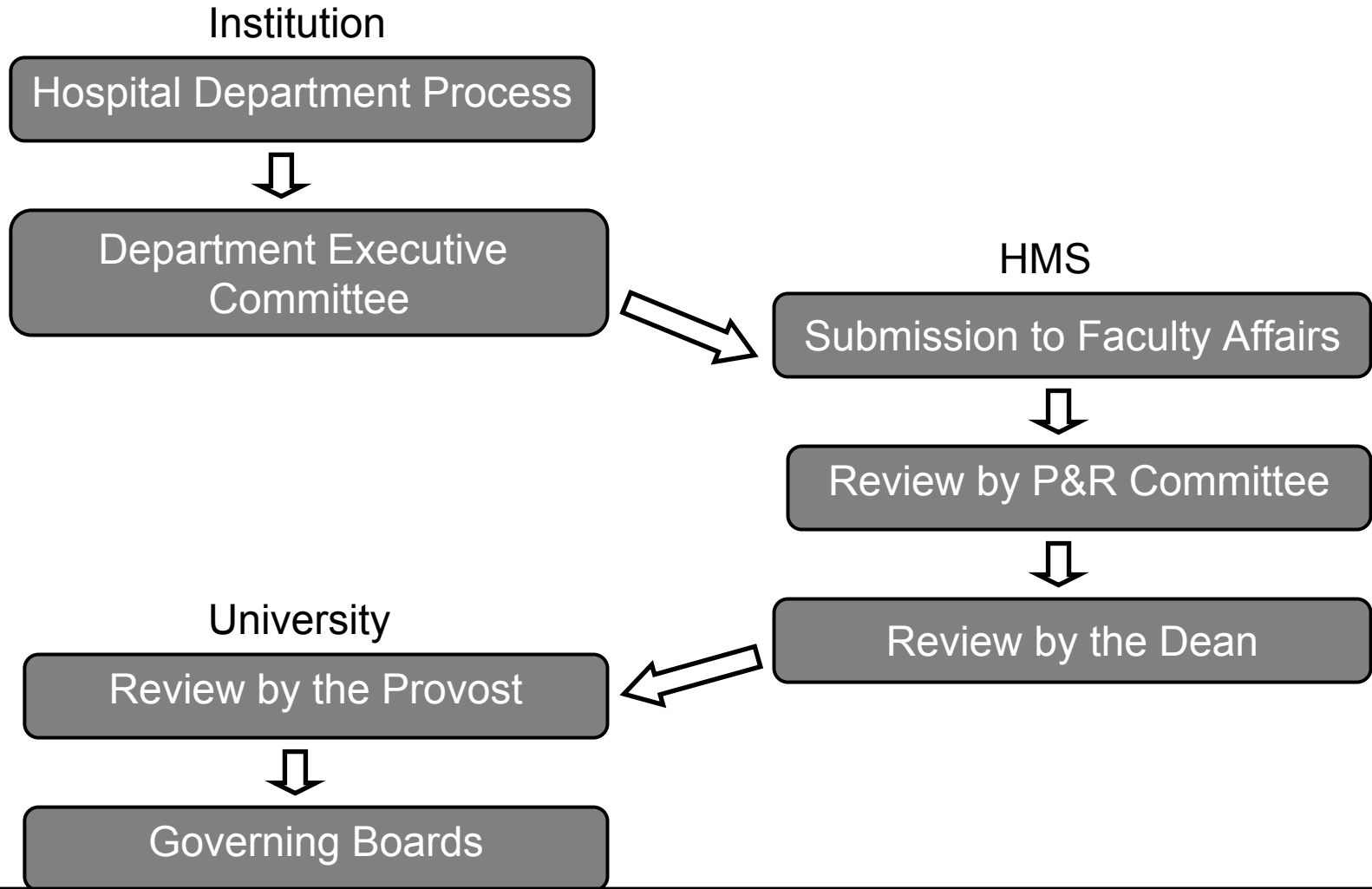


Appointments at HMS

Appointment Title	Length of Appointment	Recommended to the Dean by
Instructor	One year	Department Head
Assistant Professor	Three-year term	Promotions, Reappointments and Appointments Committee (P&R)
Associate Professor	Five-year term	
Professor	Permanent	Subcommittee of Professors (SOP)



Assistant and Associate Professor Promotion Process



Faculty Ranks at HMS

- **Instructor:** “Promise”
- **Assistant Professor:** “Demonstrated Promise”
 - Reputation may be “within the walls” of HMS and the local community only
- **Associate Professor:** “Promise Realized”
 - Broader reputation outside the local area (usually national)
 - Significant accomplishments since promotion to assistant professor
- **Professor:** “Extraordinary Accomplishment”



Promotion to Assistant Professor: Investigator Criteria

- Identifiable research focus
- Publication of first author papers that contribute new knowledge (not case reports or reviews)
- Invitations to speak about his/her research locally
- Usually has obtained funding
 - K-Award common
 - Funding may be other than federal (foundation, industry, institutional)
- Evidence of teaching



Promotion to Associate Professor: Investigator Criteria

- Clear independence from mentors
- First and senior author publications of original investigations in high impact journals for the field
- Invitations to speak nationally on research
- Ongoing research funding (usually federal) as Principal Investigator for research projects
- Evidence of national reputation such as serving on:
 - Journal editorial boards
 - Grant review committees
 - NIH consensus conferences
 - Awards for research
- Evidence of teaching
 - Mentorship of trainees



Resources

- <http://www.hms.harvard.edu/fa>
 - access to the Purple Book
 - list of standing committee members
- <http://ecommons.med.harvard.edu/>
 - access to FIRST (electronic CV)
- Office for Faculty Affairs: 617-432-1540

