

Advance Medical Research without Picking Up a Pipette: Careers for PhDs in Science Policy and Foundations

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My career path

- Ph.D. in Vision Science, 1999-2004 (research)
- National Academies, 2003 (science policy)
- FASEB, 2004-2008 (science policy)
- International Life Science Institute 2008-2009 (science programs)
- Melanoma Research Alliance, 2009-present (science programs, philanthropy)

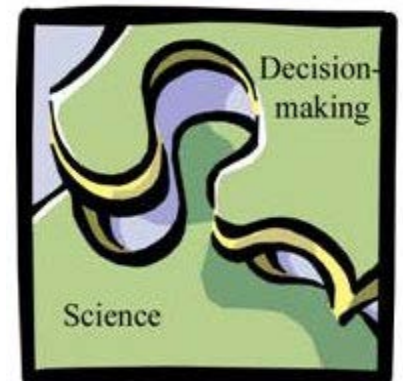


Science Policy

Advancing medical research through
advocacy, legislation, and policy

What is science policy?

- An area of public policy that affects the science and research enterprise – laws, regulations, rules and other government actions, e.g.,
 - How much the government funds research (NIH, NSF)
 - How scientists can use animals and human subjects in research



Opportunities in science policy

- Inside government
 - White House
 - Congress
 - Agencies
- Outside government
 - Advisory organizations
 - Institutions
 - Companies
 - Disease, patient, and consumer organizations
 - Think tanks
 - Trade and professional associations
 - Media
- All of these organizations employ scientists!

National Academies



NATIONAL ACADEMY
OF SCIENCES



NATIONAL ACADEMY
OF ENGINEERING

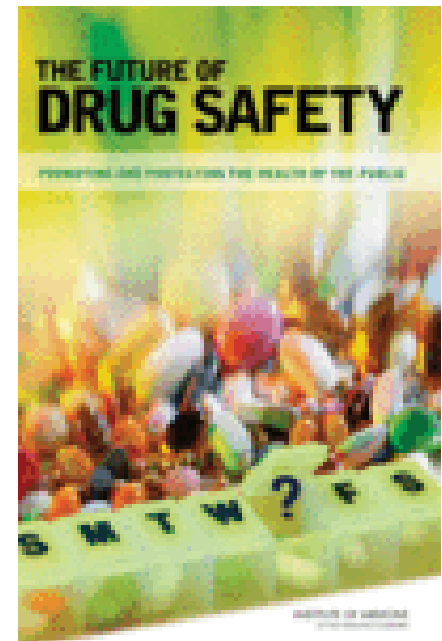
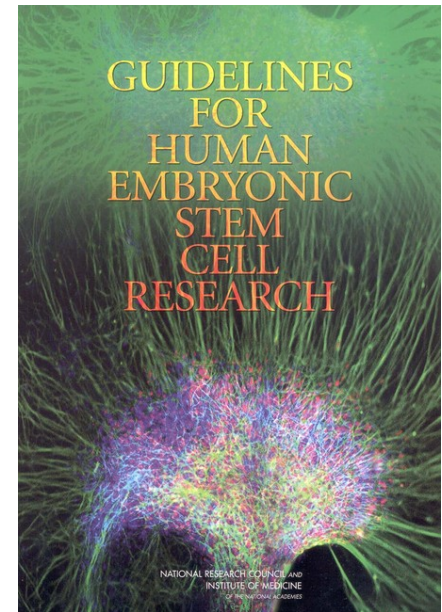


INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

NRC

Science policy at NAS

- Topic is assigned by government (funded) or identified by leadership/staff (funds raised)
- Well-structured study process run by staff
 - Committee created
 - Committee deliberations, public meetings
 - Report writing, review, release
- Examples: Drug safety at FDA, hESCs



FASEB



Science policy at FASEB

- Stakeholders: Represent the views of medical and life science researchers in the policy process
- Consensus-based
- Outcome-oriented: Giving policy recommendations “feet” through advocacy, lobbying

Science policy fellowships

- AAAS Science and Technology Policy Fellowship, fellowships.aaas.org/
- EPA Internship Program, www.epa.gov/epapages/epahome/intern.htm
- Presidential Management Fellowship Program <http://www.pmf.gov/>

Foundations

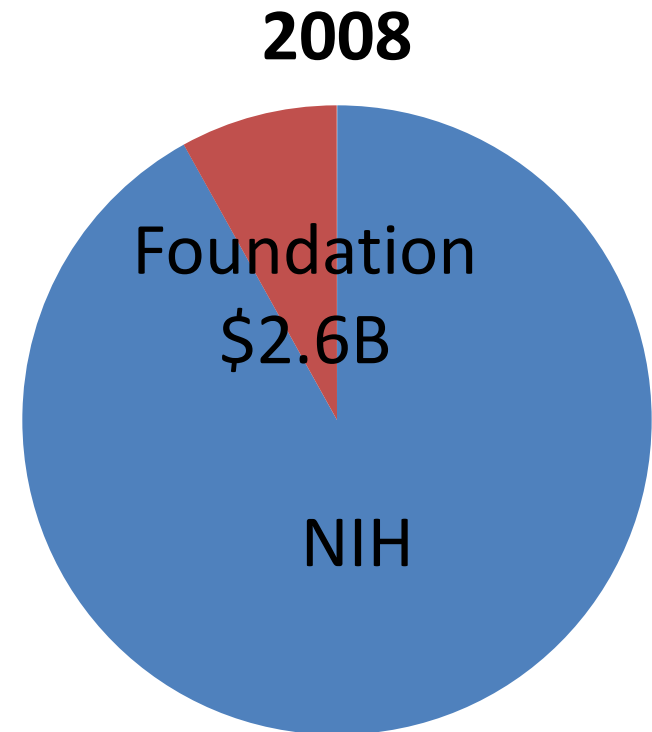
Advancing medical research through
philanthropy

Foundations big and small



Scope and impact

- Increasingly important source of funds for medical research
- NIH +3% vs. Foundations +20% from 2006-2008



MRA

#1

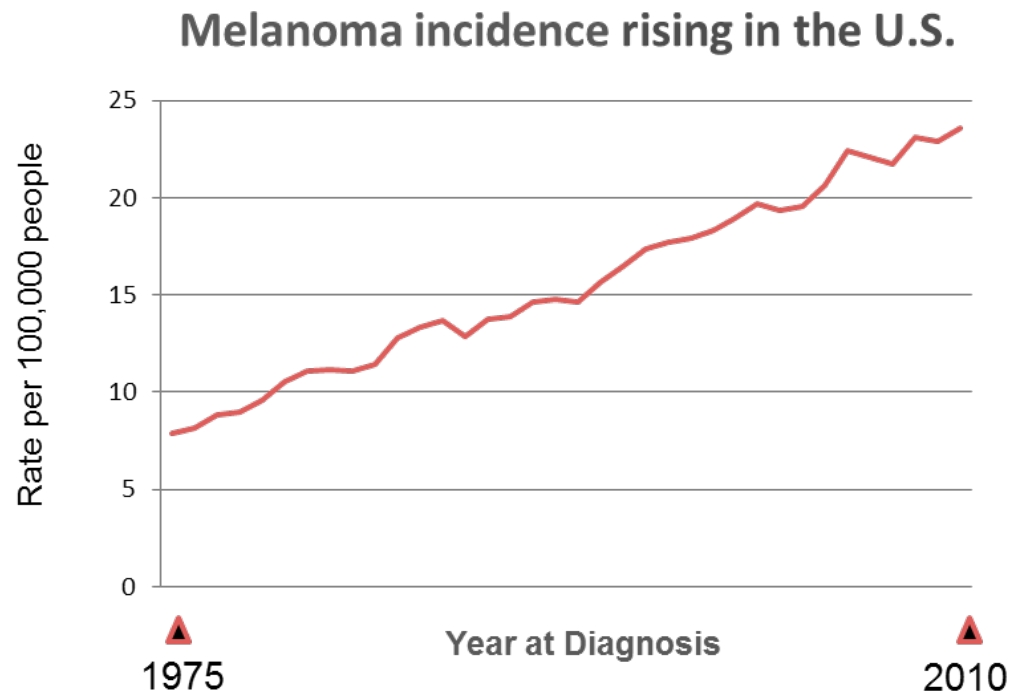
GRANT-GIVING
DISEASE FOUNDATION
IN 2014



- **“Venture philanthropy”** model
- **Founded in 2007** with the generous support of Debra and Leon Black
- **Mission** to accelerate the pace of scientific discovery and clinical translation to eliminate suffering and death due to melanoma
- **\$60M awarded** to date to 145 projects at >90 institutions in 14 countries; \$8-10M in new research per year

Melanoma

- Deadliest form of skin cancer; **incidence is rising**, 5th most common cancer in U.S.
- Highly treatable with surgery when detected early but **median survival less than one year** at Stage 4
- **Six new drugs** FDA approved since 2011; more than 100 agents in trials



Awareness and outreach

Protect your skin. Protect your beauty. Protect your life.

Help the **Melanoma Research Alliance** and **L'Oréal Paris Advanced Suncare** stop melanoma. Lend your social reach by joining the **It's THAT Worth It Thunderclap** to raise melanoma awareness and trigger a donation of up to **\$250,000** for melanoma research in 2014.



IT'S THAT WORTH IT™

JOIN THE THUNDERCLAP



Laura Linney
Head up to Cancer Awareness

**WEAR YOUR BEAUTY
BRILLIANTLY**

Love your skin. Protect it. Be kind to it. Save it.

If truth is beauty, then the facts speak for themselves. It takes only 15 minutes for the sun's UV rays to damage your skin. So protect your skin every chance you get. Wear sunscreen whenever you're outdoors, even on cloudy days. Find shade. Wear a hat to protect your face and head. Watch for changes in your skin. Every eight minutes someone is diagnosed with melanoma. Caught early, the five-year survival rate for melanoma is 90%. Healthy living begins with healthy skin. Protect the one thing that protects you. And be brilliant.

Melanoma Research Alliance
TO LEARN MORE, VISIT CUREMELANOMA.ORG/PROTECTYOURSKIN
OR STANDUPTOCANCER.ORG/PROTECTYOURSKIN

STAND UP TO CANCER

MEN
are almost
TWICE
as likely to die from
MELANOMA
as women, though...

only 9 percent of men consider melanoma a health concern!!!

LEARN MORE AT:

Melanoma Research Alliance and COOLA

COOLA SUNCARE @COO... 24 May
RT to enter a drawing at 8PM PST for
a COOLA SPF 35 Spray for

Scientific program

- Ensure MRA resources are strategic and impactful
- Find and fund the most promising research:
 - Administer grants program
 - Oversee investments
 - Outreach
- Encourage collaboration
 - Scientific Retreat
 - Industry engagement
- Communicate about funded research

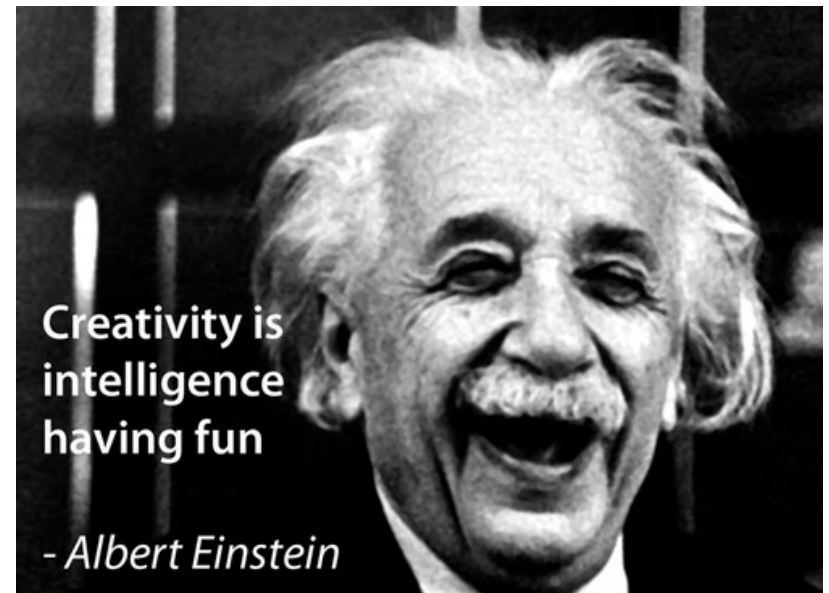
Scientific Retreat

- Engages global leaders in the field
- ~300 participants from academia, industry, government & philanthropy
- Highly interactive discussions of data, trends & policy issues



Conclusion

- There are many fun and rewarding careers for scientists that allow you to advance research outside of the lab
- Learn about new areas of science and interact with a wide variety of people
- Have fun!



Making the transition from the lab

- ✓ Self-assessment
- ✓ Self-education and stay connected to current issues
- ✓ **Informational interviews and networking**
- ✓ Leadership and committee work experience
(Association, community organization, etc.)
- ✓ Internship/fellowship or volunteer
- ✓ Non-technical writing
- ✓ Write a resume (not a CV!)
- ✓ Communicate with your mentor

Web resources

- Science Careers by *Science* Magazine:
sciencecareers.sciencemag.org/
- General job search resources:
www.Job-Hunt.org
- Career Journal of the *Wall Street Journal*:
www.CareerJournal.com
- On-line Networking: www.Linkedin.com

Books

- *Put Your Science to Work: The Take-Charge Career Guide for Scientists* by Peter S. Fiske
- *Alternative Careers in Science: Leaving the Ivory Tower* by Cynthia Robbins-Roth
- *So What Are You Going To Do With That? Finding Careers Outside Academia* by Susan Basalla