


## The funding landscape for Women in AAPM: Trends and Outlook

**Carri Glide-Hurst, Ph.D.**  
 Director of Translational Research, Radiation Oncology  
 Henry Ford Health System  
 Associate Professor FTA, Wayne State University

all for you




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## Disclosures

- Research funding provided by:
  - NIH R01CA204189
  - Philips Healthcare
  - HFHS Internal Mentored Grant
- Collaborations with Modus Medical Devices, MedSpira Medical, ViewRay

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## Learning objectives

- To share my own journey toward grant funding
- To review three decades of federal funding for female AAPM members and highlight overall trends
- To learn about the barriers and opportunities in increasing research funding support for female medical physicists

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## 1<sup>st</sup> (2013) and 2<sup>nd</sup> (2015) NIH Ro1 grant I submitted: Both “Not Discussed”

- Several key areas were missing:
  - My publication record was not in the area that I was proposing
  - I was seen as too junior for the proposed work
- The PI seems to have no publication record on MRI.
- While the list of collaborators is long (see above) and is a strength of the proposal, it seems that many of the co-investigators were listed for symbolic reasons to boost the PIs reputation for this
- The principle investigator has limited experience and has not led a project of this complexity before.

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of all time

- Although she m  
doubt about her  
amount of data



to cover all areas, there is a  
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## After eating a gallon of chocolate ice cream in one sitting, I got to work...

I took 1.5 years off from grant writing to:

- Study grant writing, attend seminars (RSNA), watch webinars
- Build outside collaborations with others who would later become co-investigators
- Hire a talented Research Scientist (Weili Zheng, PhD) who was instrumental in my productivity and data analysis
- Produce manuscripts to prove my expertise: Published three 1<sup>st</sup> author, three co-author, & three senior author during this timeframe
- Submitted June 5, 2015 and importantly, continued working toward the specific aims

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And then... Nov, 2015, I got a score!!

Application Number: 1 R01 CA204189-01

Principal Investigator  
GLIDE-HURST, CARRI KAYE PHD

Applicant Organization: HENRY FORD HEALTH SYSTEM

Review Group: ZR01 SBIB-D (57)  
Center for Scientific Review Special Emphasis Panel  
PARI Panel: Academic Industrial Partnership

Meeting Date: 10/15/2018 RFA/PA: PAR15-075  
Council: JAN 2018 PCC: PDI  
Requested Start: 04/01/2016 Dual IC(s):

Project Title: Development of Anatomical Patient Models to Facilitate MIR-only Treatment

SRG Action: **Impact Score: 44 Percentile: 37** [View http://www.nih.gov/grants/amsr/amsr\\_steps.htm](#)

Next Steps: [View http://www.nih.gov/grants/amsr/amsr\\_steps.htm](#)

Human Subjects: 30-Human subjects involved - Certified, no SRG concerns

Animal Subjects: 10-No live vertebrate animals involved for competing app

Gender: 12-Male genders, scientifically acceptable

Minority: 1A-Minorities and non-minorities, scientifically acceptable

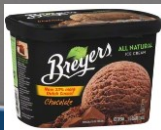
Children: 2A-No children included, scientifically acceptable

Research Category: Research - not NIH-defined Phase III Trial

The score came with a caveat...

If you choose to submit a resubmission application for the next review cycle under this policy for new investigators, your amended application must be received at NIH no later than Thursday, December 10, 2015.

**<1 month!! To recover from a 37<sup>th</sup> percentile!!**




Principal Investigator  
GLIDE-HURST, CARRI KAY

Applicant Organization: H&M  
Review Group: ZRG1

Review Group: ZRG  
Center  
PAR

Meeting Date: 02/18  
Council: MAY  
Requested Start: 03/04

Project Title  Plant

Biggest day of my career!!!! My R01 is officially funded by the NIH for the next 5 years!!! God bless

183 47 Comments

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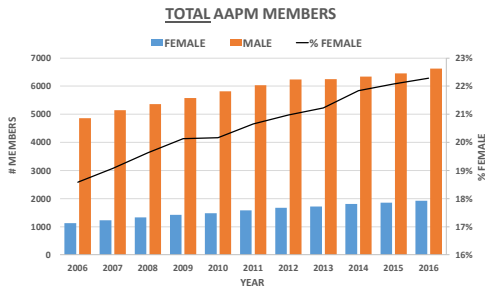
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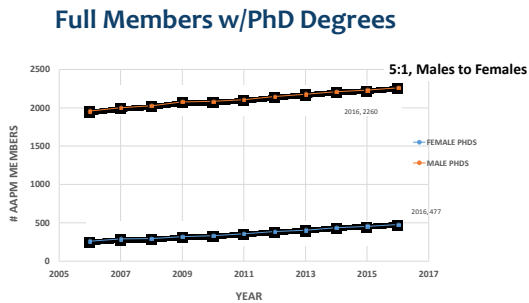
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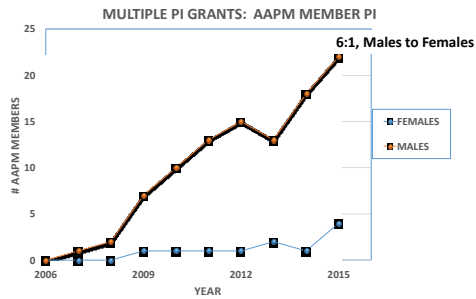
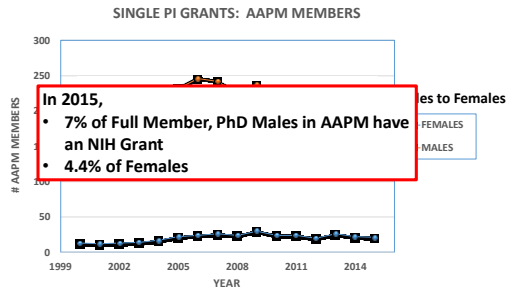
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The Profession

**National Institutes of Health Funding in Radiation Oncology: A Snapshot**

Michael Steinberg, MD, William H. McBride, PhD, DSc, Erina Vlashi, PhD, and Frank Pajonk, MD, PhD

Department of Radiation Oncology, David Geffen School of Medicine at University of California, Los Angeles (USCA), and Jonsson Comprehensive Cancer Center at UCLA, Los Angeles, California

Received May 26, 2015; revised June 22, 2015; accepted for publication Jan 27, 2016

Currently, pay lines for National Institutes of Health (NIH) grants are at a historical low. In this climate of fierce competition, knowledge about the funding situation in a small field like radiation oncology becomes very important for career planning and recruitment of faculty. Unfortunately, these data cannot be easily extracted from the NIH's database because it does not discriminate between radiology and radiation oncology departments. At the start of fiscal year 2013 we extracted records for 952 individual grants, which were active at the time of analysis from the NIH database. Proposals originating from radiation oncology departments were identified manually. Descriptive statistics were generated using the JMP statistical software package. Our analysis identified 197 grants in radiation oncology. These proposals came from 134 individual investigators in 43 academic institutions. The majority of the grants (118) were awarded to principal investigators at the full professor level, and 122 principal investigators held a PhD degree. In 79% of the grants, the research topic fell into the field of biology, 13% in the field of medical physics. Only 7.6% of the proposals were clinical investigations. Our data suggest that the field of radiation oncology is underrepresented by the NIH and that the current level of support does not match the relevance of radiation oncology for cancer patients or the potential of its academic work force.

## National NIH Statistics

- ~90,000 NIH applications per year
- ~30% of submitted NIH applications are from females, 30% of awarded to females
- 30% of all CSR reviewers are females
- 38% of only chartered study section members are females
- Success rates for men and women track similarly

all for you

Data courtesy of Maryellen Giger, PhD




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## What about within the AAPM?

- **2017 Research Seed Funding Grant:** \$25,000, 1-year grants
- "To provide funds to develop exciting investigator-initiated concepts, which will hopefully lead to successful longer term project funding from the NIH or equivalent funding sources."
- Junior investigators <5 years from PhD Degree
- Since 2005, AAPM has awarded \$550,000 to 22 Junior Investigators through this mechanism
- Only 3 of the 22 have been to female members
- Caveat: need to mine data to determine the number of women who have applied

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## Career advice from one of the highest funded women in the AAPM: Maryellen Giger, PhD

1. Start early: Apply for predoctoral grants, student grants, etc. to get grant writing practice
2. Use rejections/critiques to improve your work
3. Bring your children into your career. Her 4 children grew up attending AAPM meetings and it helped them gain an appreciation for her career
4. Find mentors at each stage of your career




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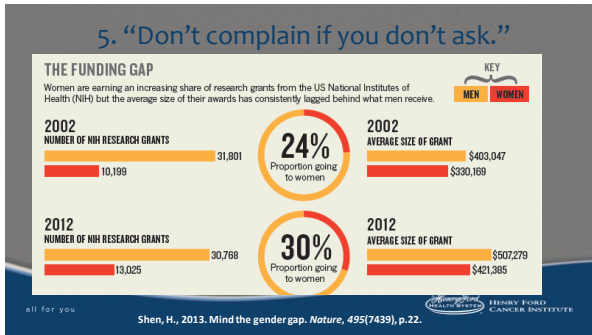
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### What can we do as Medical Physicists?

- Learn the art (and science) of grant writing
- AAPM: Commit resources to train grant writing skills
- Share our grant writing experiences and knowledge to help others
- Find a mentor, be a mentor



Indrin Chetty, PhD



Stephen Brown, PhD



Geoffrey Hugo, PhD



Amit Sawant, PhD

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### Thank You!

If everyone is moving forward together, then success takes care of itself.

(Henry Ford)

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