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# NHGRI Training Opportunities

**Tina Gatlin**

Program Director, NHGRI

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National Human Genome  
Research Institute

The **Forefront**  
of **Genomics**<sup>®</sup>

# Extramural Training Portfolio

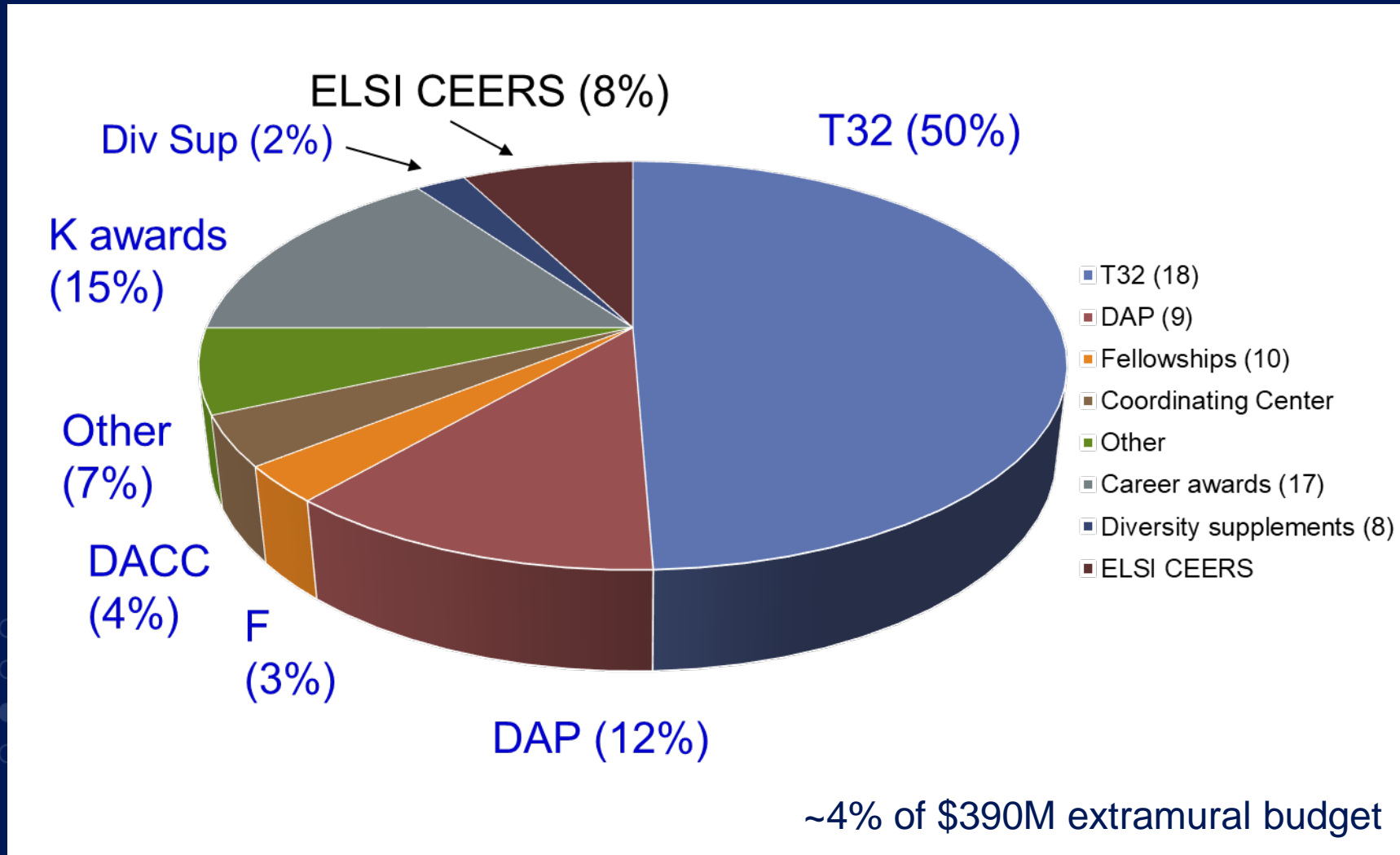
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- Institutional Training Grants (T32)
- Diversity Action Plan (DAP) (R25)
- Fellowships (F30, F31, F32)
- Career Awards (K01, K08, K99)
- Re-entry and Diversity Supplements
- Loan Repayment Program (LRP)

Institutional

Individual

# FY17 Training Program Awards = \$16.0M



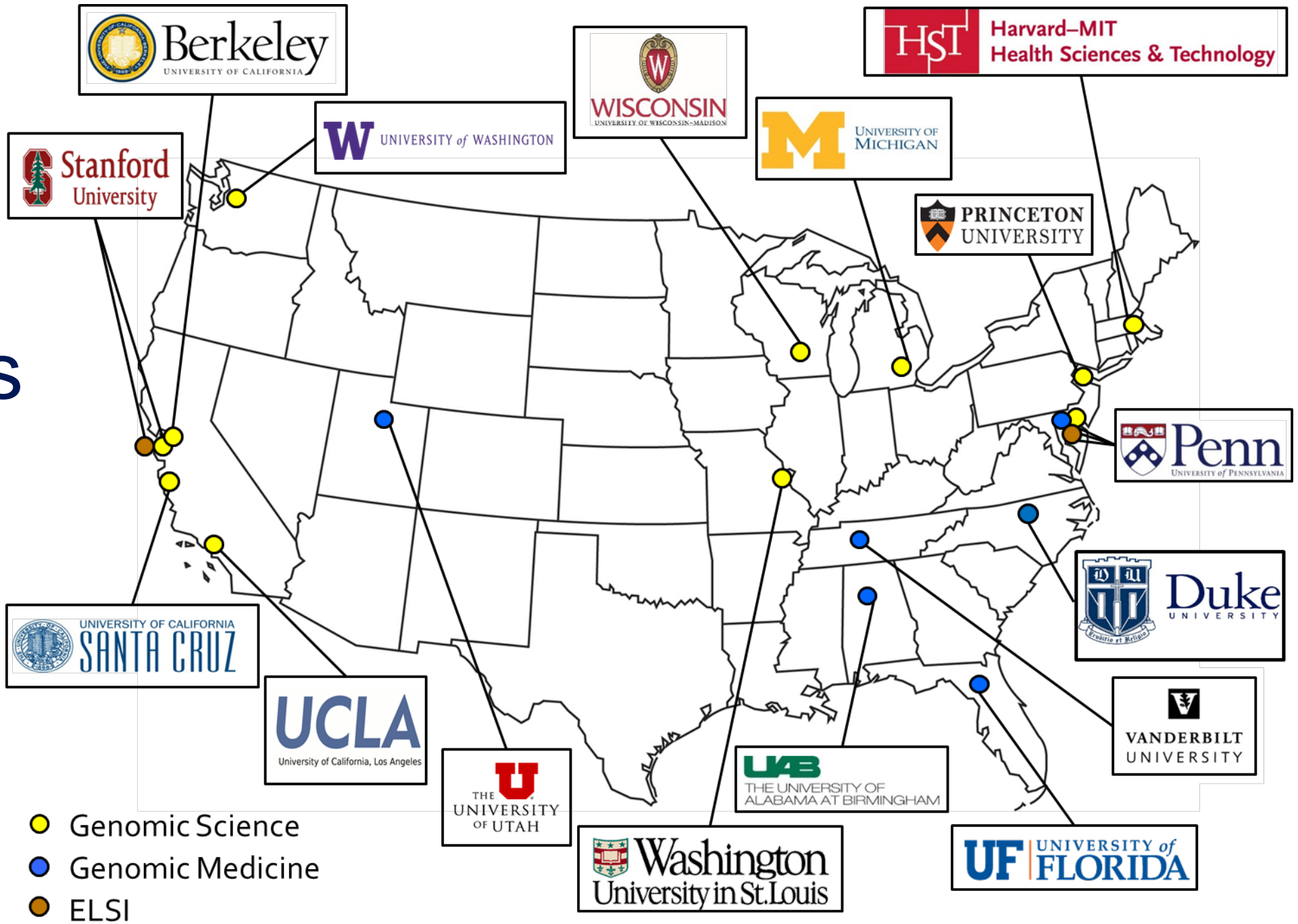
# T32 Grants

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- Institutional award ~ 5 years
- Program Director and Faculty Mentors
- Research training experience in specified areas of research (genomic sciences, genomic medicine, ELSI)
- Full-time predoctoral, postdoctoral trainees
- Trainees - US citizens, permanent US residents



# T32s (19)



# Diversity Action Plan (DAP)

- First launched in 2002
- Certain large HG grant classes (seq centers, DBs, CEGS) mandated to offer research experiences to underrepresented minorities (URMs).
- 2016, R25 program re-issued under PA-16-345
- Open competition, no longer limited to certain HG grant classes
- Undergrad, Postbacc, and Grad students career levels only
- Goal: Attract URMs into genomics-related scientific career; Increase the number of URMs pursuing a PhD or MD/PhD in genomics research

# DAP Program Elements

- Research should be at the cutting edge of NHGRI scientific mission areas
  - Differentiated from other minority training programs at Institute
- PI(s) should have significant NIH support, preferably from NHGRI
- Rich research environment – variety of genomic experiences & mentors to choose from
- R25 - focus on research experiences; courses limited to those that prepare participants for graduate school
- Max \$300,000 direct costs
- 1 DAP per institute per science area (GenSci, GenMed, ELSI)

# Current DAP programs (8)

PI	Institute	Career Levels
Bruce Birren and Eric Lander	Broad Institute	Undergrad (UG)
Susanne Haga & Greg Wray	Duke University	UG
Norbert Perrimon	Harvard-UNM	Postbacc
Carol Bult	Jackson Laboratories	UG
Mike Snyder	Stanford University	UG
James Kent	UC, Santa Cruz	UG
Willie Swanson	University of Washington	UG, Grad
Susan Dutcher	Washington University	UG, Postbacc



# Supplements to Research Awards

- Diversity Supplements: provide opportunities for groups underrepresented in health-related research for graduate students, postdocs, and eligible investigators.
- Re-Entry Supplements: support individuals with high potential to re-enter an active research career after an interruption for family responsibilities or other qualifying circumstances.

**High Success Rate!**

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# Fellowship Awards (F awards)

- F31 – Predoctoral
- F31D – URM Predoctoral
- F32 – Postdoctoral
- F30 – MD/PhD



# Career Development (K) Awards

- K99/R00: To facilitate a timely transition from a mentored postdoc to an independent, tenure-track or equivalent position. K99 = 2 years, salary + research support. R00 = 3 years at \$249K TC/year.
- K01: provide 3-5 yrs of support and protected time to pursue a supervised experience in **genomic sciences or ELSI** leading to research independence.
- K08: provide 3-5 yrs of support and protected time to pursue a supervised experience in **genomic medicine** leading to research independence.

# What Questions Should I Consider Before Applying for a Mentored (F/K) Award

- What is my vision for the type of research I would like to pursue in the next 5 to 10 years?
- Will this experience provide me with the necessary intellectual framework and skills?
- Do I have the necessary background and experience to succeed in this research area?
- Does the prospective mentor have a good track record in mentoring?
- Does the prospective mentor have adequate research funds?
- How much time does the mentor spend with students and postdocs?
- Are current students and postdocs publishing manuscripts of sufficient quality and quantity?
- Where have previous students and postdocs gone after their stint in this lab?

# What Should I Consider When Preparing a F or K Application?

- Have a good academic and publication record.
- Discuss project with proposed mentor(s).
- Be frank in evaluating the significance of your proposed project.
- Select a training/career development experience consistent with your long-term goals.
- Have a good training/career development plan.
- Have your proposed mentor and other experts review your application.
- Give references adequate time to respond.
- Know the requirements of the FOA and review criteria

# NIH LRPs

*A lifeline for researchers drowning in debt*



**\$160,000 average educational debt**

of individuals with graduate degrees in medicine and health sciences

**Over \$68 million invested** in five NIH mission critical research areas

- Clinical
- Clinical for Individuals from Disadvantaged Backgrounds
- Contraception & Infertility
- Health Disparities
- Pediatric

**Awards up to \$70,000**

in student loan repayment, for a 2-year research commitment



**50% success rate**

provides nearly 1,400 researchers' debt reduction each year

**APPLY FOR YOUR LIFELINE**

SEP 1 - NOV 15

## Loan Repayment Program (LRP)

### Eligibility:

- U.S. Citizen, U.S. National or perm. resident
- Hold an MD, PhD, PsyD, PharmD or equivalent
- Educational debt  $\geq$  20% salary
- Qualifying research by a domestic non-profit
- Two years of research service

### More information:

[www.lrp.nih.gov](http://www.lrp.nih.gov)

Heather Colley, NHGRI

# Overall Timeline from Submission to Award

Generally, there are three overlapping review cycles per year

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
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## Cycle 1



## Cycle 2



## Cycle 3



# Receipt and Referral

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- Must fit NHGRI scientific mission.
- Contact an NIH Program Officer early in the process.
  - provide Aims page, CV, research goals in initial email
  - Do not rely on your mentor to interpret NHGRI's mission
- Preference for F/K applications:
  - that emphasize the quantitative sciences, bioinformatics, or technology development in genomics; or high priority ELSI issues
  - whose mentor(s) are funded by NHGRI.



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# Training Program Officers

- Tina Gatlin – Genomic Sciences
- Heather Colley – Genomic Medicine
- Joy Boyer - ELSI



# What is Appropriate Follow-up?

- Discuss the results of the review with the Program Officer after receiving the Summary Statement.
- Discuss potential for funding with Program Officer after the National Advisory Council meeting (Rs, Ts, Ks; not Fs).
- If not funded seek advice about: (1) whether to revise and resubmit, (2) send in response letter, or (3) pursue another idea.

# How are Funding Decisions Made?

- Scientific Merit of the Application (and training plan)
- Programmatic Priorities
- Programmatic Balance
- Availability of Funds



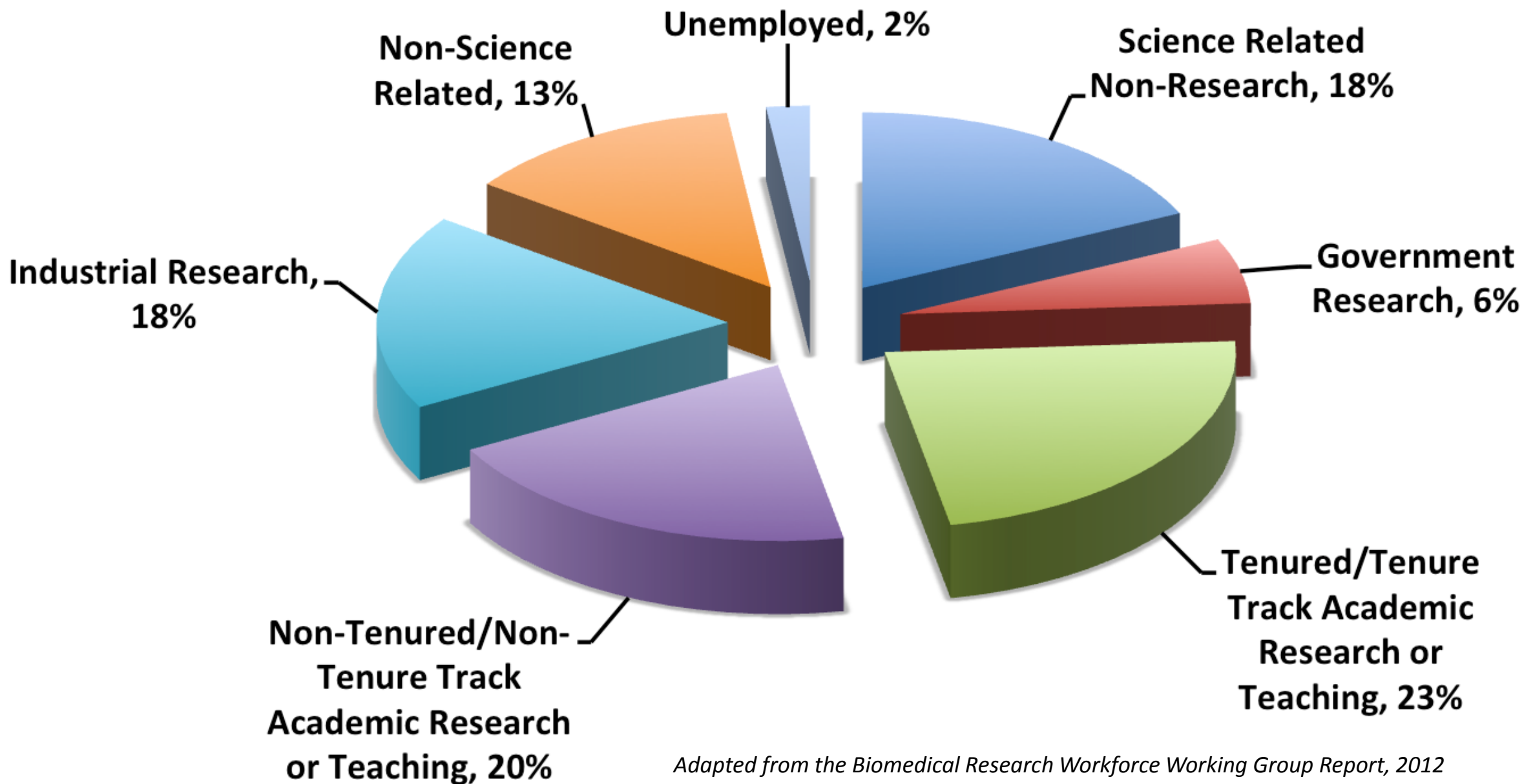
# NHGRI Trainee Annual meeting

2018 Meeting at UCLA



2019 Meeting – April 7-9<sup>th</sup> in St. Louis

# Snapshot of the US-trained PhD Biomedical Research Workforce



*Adapted from the Biomedical Research Workforce Working Group Report, 2012*

# Questions?

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Thank you  
Joy Boyer  
Heather Colley  
Sarah Gould

