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Extramural Training Opportunities

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National Human Genome
Research Institute

—
The **Forefront**
of **Genomics**
—

Training Mechanisms

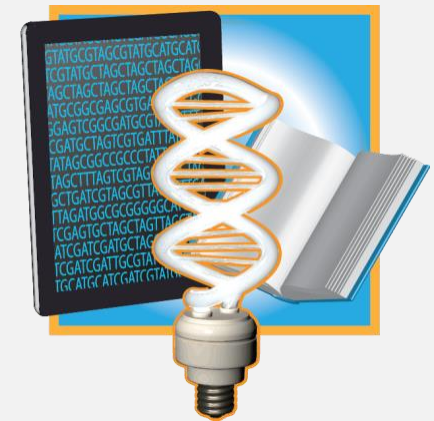
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- Institutional Training Grants (T32)
- Diversity Action Plan (R25)
- Course Development (R25)
- Career Awards (K01, K08, K99, K43)
- Fellowships (F30, F31, F32)
- Diversity supplements

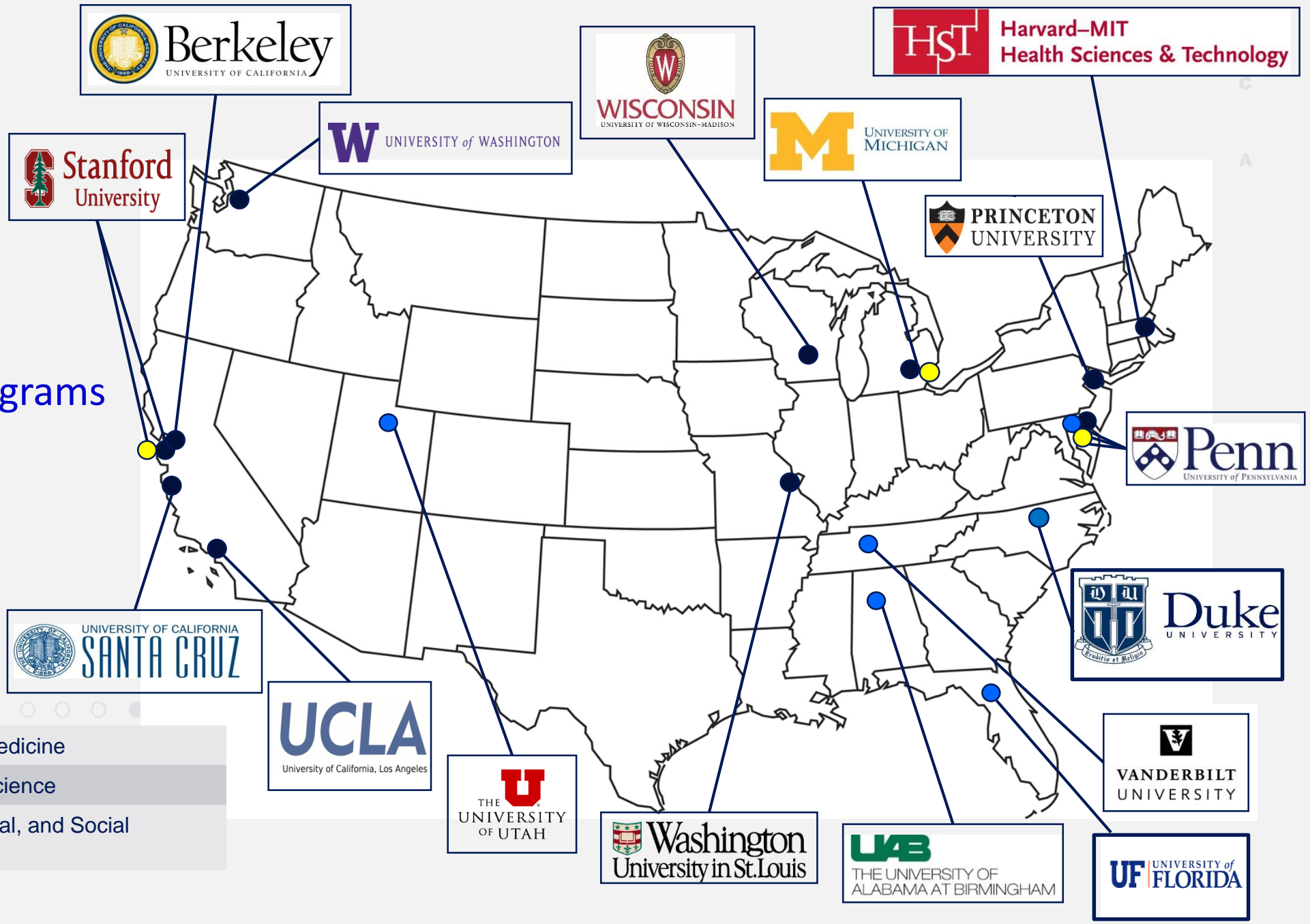


Genomic Medicine T32 Guidelines

- Trainee level: **Pre and Post-docs**
- MD, PhD or equivalent
- Up to 10 trainee slots per year
- Two tracks:
 - 1) Focus on basic research
 - 2) Focus on clinical research (not clinical care of patients)
- Flexible didactic curriculum, seminars, supervised research/training
- Team science approach
- Joint mentorship
- ELSI training is an essential component
- **PA-18-403 and NOT-HG-20-003**



20 T32 programs
160 slots



R25: NHGRI Diversity Action Plan

- Expose URM students to genomics
- Pursue a career biomedical sciences
- Educational activities
- Skills development for grad school
- Institution must have a strong genomics research program
- Limited to: undergrads, post-bacc, and graduate students



• **PAR-19-380**

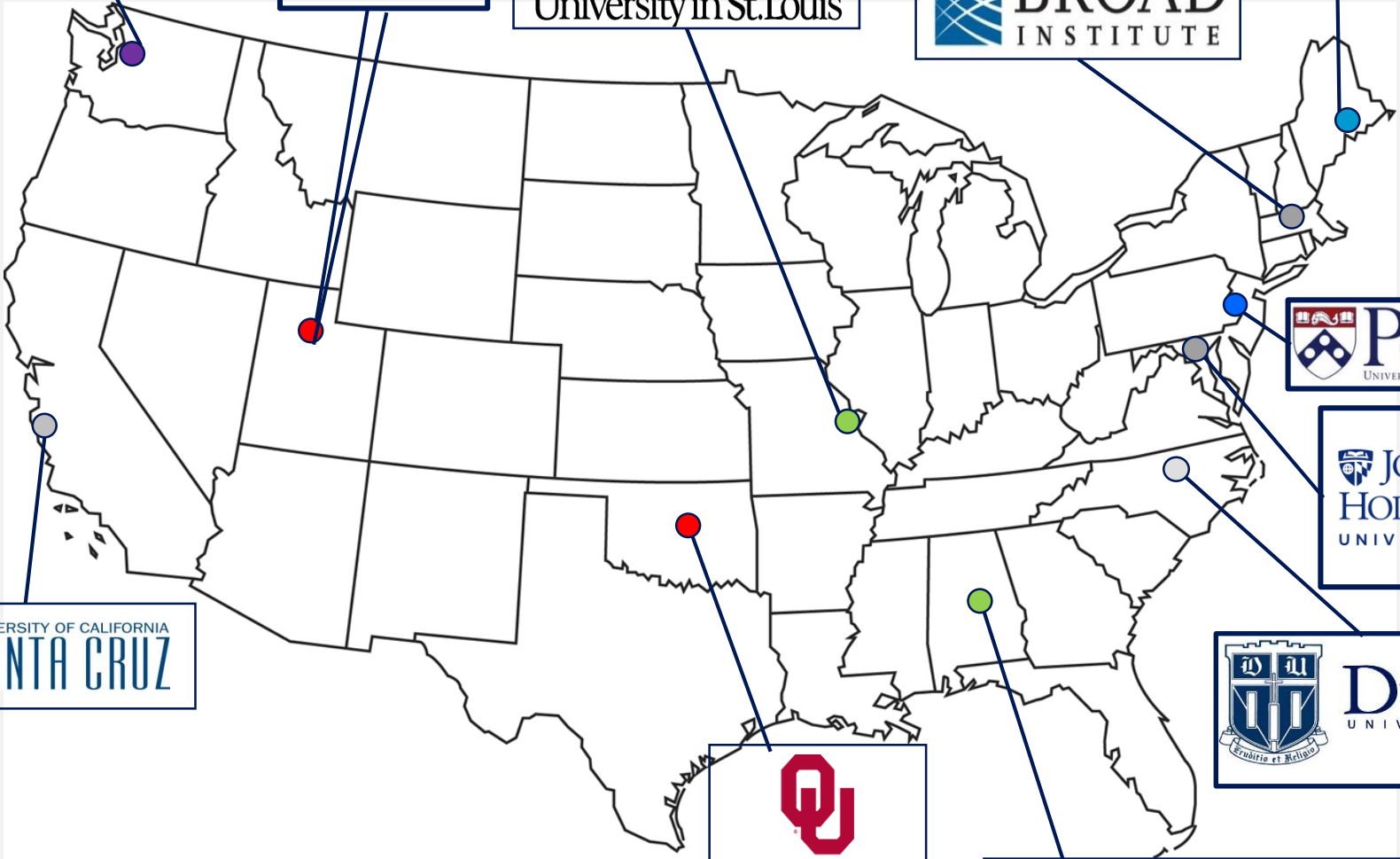
W UNIVERSITY of WASHINGTON

U
THE UNIVERSITY OF UTAH

 Washington University in St. Louis

 **BROAD** INSTITUTE

 The Jackson Laboratory



 UNIVERSITY OF CALIFORNIA SANTA CRUZ

 Penn UNIVERSITY of PENNSYLVANIA

 JOHNS HOPKINS UNIVERSITY

 Duke UNIVERSITY

 The UNIVERSITY of OKLAHOMA

UAB
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM

R25: Genomic Research Education Courses

- Supports:
 - Short-term advanced level courses (2 weeks or less)
 - Long-term skills development courses (>2 weeks but <1 year)
- Provide innovative, state-of-the-art, evidence-based education related to NHGRI mission
- Target career level: doctoral and beyond
- Format: in-person, online, or combo of both
- Syllabi, handouts, and videos **MUST** be made available and easily accessible to the public electronically
- Must be open to students and investigators nation-wide; cannot be used to develop an institution's course curriculum
- Budget: Short-term course (\$75K DC/yr) and long-term course (\$150K DC/yr)
- Up to 5 years of support can be requested

Protected Research Time

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- Clinical Investigator Development Award (K08)
*Focus on genomic medicine
- Research Scientist Development Award (K01)
*Focus on genome science & ELSI
- Pathway to Independence Award (K99/R00)
- Emerging Global Leaders Award (K43)
*Research scientists from LMIC countries



Fellowships

- **MD/PhD or other Dual Degree (F30)**
- **Pre-doctoral (F31)**
- **Post-doctoral (F32)**
- **Senior Fellows (F33)**



Promoting Workforce Diversity

- Eligible NHGRI awardees can apply
- Administrative supplements; Two years of support
- Recruit & support students, post-docs, and eligible investigators
- Underrepresented minorities
- Individuals with disabilities
- Individuals from disadvantaged backgrounds
- Research experience must be an integral part of funded parent award
- Potential to contribute significantly to career development of candidate
- **NOT-HG-19-010**



NHGRI Training Task Force

- Charge

- Evaluate the Institute's current extramural training efforts
- Identify potential growth areas

- Operation

- Formed in June 2019 and met by teleconference

- Presentation at NHGRI Advisory Council Meeting, February 10, 2020

- View presentation on GenomeTV at genome.gov

NHGRI Training Task Force

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- Input

- NHGRI's current portfolio
- Training-related info from strategic planning meetings
- Feedback from ~30 colleagues who work in the academic extramural research and industry environments to a set of questions that we posed to them

- Closed session discussion at Sep 2019 NHGRI Advisory Council meeting

Task Force Recommendations

- An increase of 2-3% to a total of ~ 6% of the extramural budget over the next 5-10 years would put NHGRI near the median of other ICs.
- \$6-\$8M (1.5-2%) increase over 5 years
- Re-evaluation and eventual increase of another \$2-\$4M (0.5-1%) within 10 years

Task Force Recommendations

- Increase funding for T32, F, and K grants and URM initiatives
- Doubling of F-awards (currently <\$500K/year)
- 50% increase in DAPs and K-awards
- 17% increase in T32s



- ~\$5.5M total increase

Task Force Recommendations

Develop/expand training of Laboratory Genetics and Genomics and other fellows, genetic counselors, nurses, and other groups in genomics and ELSI research methodology

Develop/expand efforts in data science and bioinformatics researchers, particularly among women and under-represented minority populations

- ~ \$1M pilot programs

Task Force Recommendations

Develop and disseminate modular training materials & genomics curricula for various career levels

- ~ \$1M pilot programs



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Task Force Recommendations

NHGRI should set ambitious goals and milestones both with regard to the number and size of awards, but also to increasing representation of women and under-represented minority populations.



Program Contacts

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- R25 Course: PAR-19-185
 - Tina Gatlin (gatlincl@mail.nih.gov)
- R25 Diversity Action Plan: PAR-19-380
 - Tina Gatlin (gatlincl@mail.nih.gov)
- T32 Institutional Training Grants: PA-18-403
 - Luis Cubano (luis.Cubano@nih.gov)
- K08 Mentored Scientist Career Award: PA-18-373
 - Heather Colley (junkinsh@mail.nih.gov)



Questions?

www.genome.gov
Search: Research Training