University of Florida Clinical and Translational Science Institute
Translational Workforce Development Program
Diversity and Inclusion Working Group
Writing Workshop for
Diversity Grants and Grant Supplements
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Translational Workforce Development Program
University of Florida Clinical and Translational Science Award Program

Objectives

1. Review NIH definitions for underrepresented groups and the rationale for their inclusion in the scientific workforce.

2. Identify strategies and programs to obtain research and research training funds for underrepresented minority institutions and investigators.

3. Describe the process of applying for a Minority Supplement to an existing NIH grant.

Diversity in Research and Research Training

Race/Ethnicity
Disability
Disadvantaged Background
Language/Culture
Scientific Discipline
Profession

Groups Underrepresented in Health-related Sciences by National Science Foundation.
(PA-15-322)

A. Individuals from specific racial and ethnic groups
   1. Blacks or African Americans
   2. Hispanics or Latinos
   3. American Indians or Alaskan Natives
   4. Native Hawaiians or other Pacific Islanders
B. Individuals with disabilities, defined as those with a physical or mental impairment that substantially limits one or more major life activities (Americans with Disabilities Act, 1980)
C. Individuals from disadvantaged backgrounds (High School and Undergraduates only)

Diversity in research and research training is more than a moral issue; it is a scientific issue.

- Diverse research subjects increase diversity of research data.
- Diverse teams working together capitalize on innovative ideas and broader perspectives to outperform homogenous teams.
- Improved recruitment and retention of human subjects
- Broader interpretation and generalizability of findings.
- Prevention of errors in informed consent, cultural sensitivity, and interpretation of results.
- More effective dissemination of research results.

Why are racial, ethnic, and disability groups underrepresented in the scientific workforce?

- Rare role models from underrepresented groups.

- Fewer science experiences in elementary and high school.

- Undergraduates without exposure to science choose professional vs. scientific careers.

- Financial burdens of graduate and professional training drive students toward non-science careers.

- Graduate and postdoctoral positions are highly competitive in high performing laboratories.

- Career uncertainty leads to low retention of early career investigators.

- Others?

Strategies for a DIVERSE Research Workforce.

1. **D**evelop programs that encourage URM students to enroll in and graduate from masters and doctoral degree programs in biomedical and behavioral sciences.

2. **I**ntegrate URM persons at all career levels into existing research programs in meaningful ways.

3. **V**alue diversity as part of university culture.

4. **E**ngage and enhance the pipeline of URM high school/college students interested in bioscience.

Strategies for a DIVERSE Research Workforce (Cont.).

5. **R**etain URM early career investigators in science and academic careers.

6. **S**upport partnerships between research-intensive institutions and institutions with historical missions to serve URM students in the creation of high quality research training programs.

7. **E**ncourage URM trainees to obtain individual awards to **support** predoctoral and doctoral training.

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Awards for Individuals with a Research Doctorate (e.g., PhD)
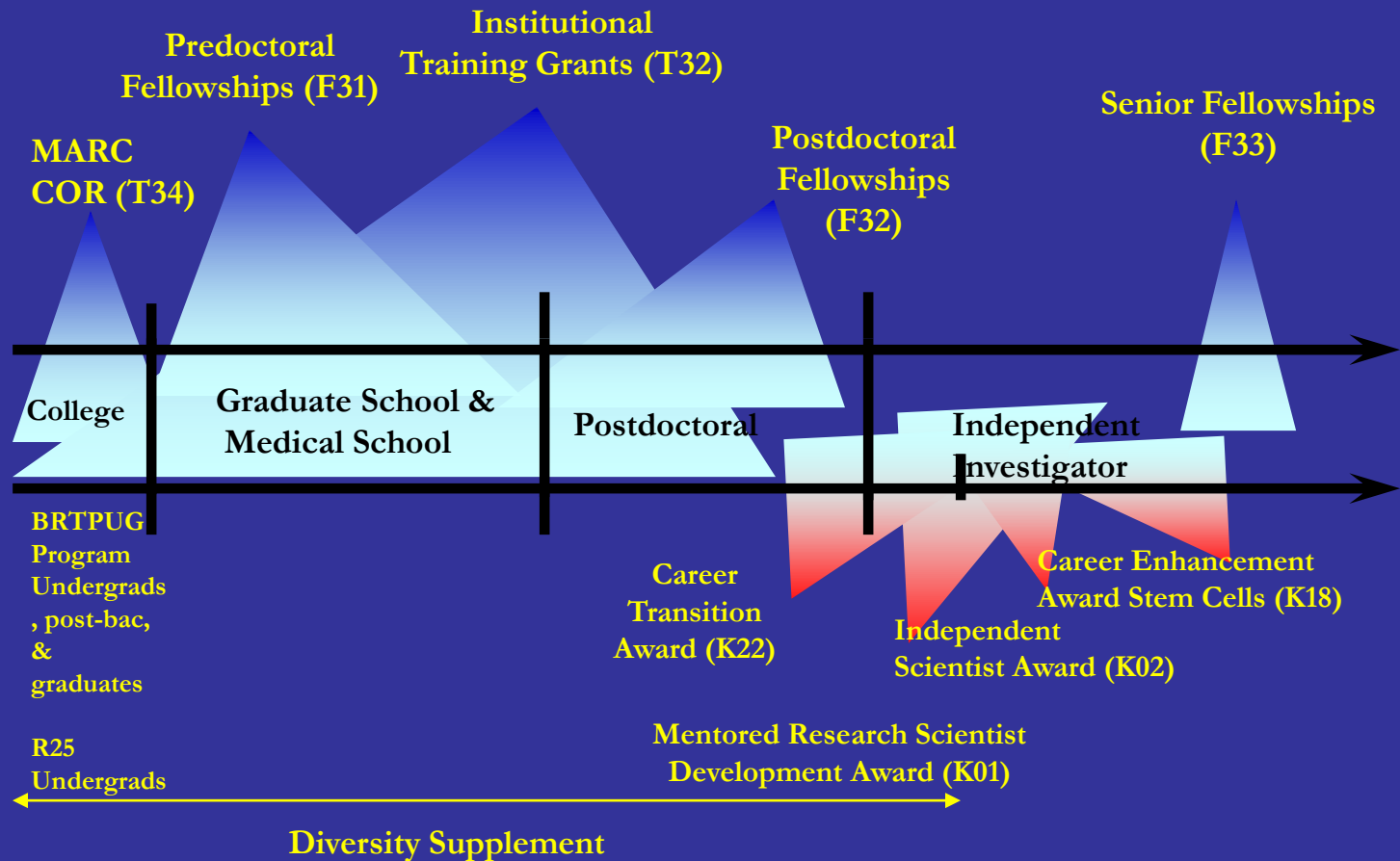
Career Development Awards For Underrepresented* Scientists

- **Mentored Career Award for Faculty at *Minority Institutions* (K01):** Postdoctoral Individuals/New Independent Researchers.

- **Mentored Career Development Award to Promote Faculty Diversity in Biomedical Research (K01):** Postdoctoral Individuals/New Independent Researchers (Unique to NHLBI).

- **Research Supplements to Promote Diversity in Health-Related Research**

*   Institution defined. Disabled and disadvantaged included.

NIH Grant Opportunities To Promote Diversity in Health-Related Research

Career Level	Institutional Award	Individual Award	Supplement
High School	-	-	Yes (>3mo./yr.)
Undergraduate Student	R25 (Bridge) MARC Program	-	Yes (>3mo./yr.)
BA and Master's Degree	R25 (Bridge)	-	1-2 years, Salary
Graduate and Health Professional Student	T32 Minority Institution R25	F31 Minority	Added Slot Salary, S&T
Postdoctoral Training	T32	F32 Minority	Added slot Salary, S&T
Early Independent Career	K12 K01 Minority SCORE (S06)	K01 Minority LR-Disparity LR-URM	Salary, S&T

NIH Grant Opportunities to Promote Diversity in Health-Related Research

- **Most NIH Institutes and Centers (IC's) participate in Minority Supplement Programs**

- **NIH IC's vary in their offerings of R, T, K, and F awards to support URM institutions and to support URM individuals.**

- **Use IC website to identify R, T, K, F Programs but also the Program Officer responsible. Contact this person to learn about all the URM offerings by that IC.**

Examples of NIH Research Education Programs (R25) to Enhance Scientific Workforce Diversity in High School and Undergraduate Students

- **NIDDK Short-term Research Experience Program for Underrepresented Persons (Step-Up); RFA-DK-16-021**

- **Short-term Research Education Program to Increase Diversity in Health-Related Research – RFA-H2-16-008**

- **Cancer Research Education Grants Program to Promote Diversity-Research Experience – PAR-16-138**

- **Bridges to the Doctorate – PAR-16-109**

- **Bridges to the Baccalaureate – PAR-16-110**

Maximizing Access to Research Careers Undergraduate Student Training in Academic Research (MARC U-STAR) (T34) (PAR-16-113)

- PI/PD – established investigator in the scientific area in which the application is targeted
- Preceptors/Mentors
- Trainees
  - Full-time honors students from URM groups majoring in STEM fields
  - U.S. Citizen or Permanent Resident
  - Two consecutive 12 month appointments during final two years of undergraduate training
- Support
  - Stipend, tuition, fees at NIH standards
  - Trainee travel (at least one summer) $3000 for 10-week training plus $500 travel to site.
  - Training-related expenses ($16,800/trainee/year in research intensive; $25,200/trainee/yr. in non-research intensive institution.
  - Salaries for PI/co-investigators up to 25%/yr.
  - Salaries for administrative personnel up to 50%/yr.
  - IDC of 8%

MARC U-STAR Application

Project Summary/Abstract

Tables

Training Program

Program Plan

     Administration

     Faculty

     Training

     Research Training

     Academic Enrichment and Skills Development

     Mentoring and Advising

     Program Evaluation

     Trainee Candidates

Institutional Environment and Commitment

Recruitment Plan

Instruction in Responsible Conduct of Research

Underrepresented Minority Appointments to T32 Pre-and Postdoctoral Training Grants

- Plan for recruitment of trainees from underrepresented groups required, including goals to be attained.

- Annual progress report and summary enrollment tables record progress toward goals.

- If recruitment goals for diversity met while filling allocated positions, and a qualified URM candidate applies, can petition Project Officer for a supplemental position for that candidate.

NIH Fellowship Awards for Minority Students

- **Minority Predoctoral (F31)**

- **Fellowship Awards (PA-00-069)**

- **T32 Training Programs for Institutions That Promote Diversity (RFA-HC-16-007)**

NIMHD Minority Health and Health Disparities International Research Training (T37) (RFA-MD-13-002)

- Research Training at a foreign site
- Qualified undergraduate, graduate, professional students w/o terminal degrees from URM groups in U.S.
- Annual direct costs: $250,000
  - Trainee stipends ($1200 - $2000/mo. depends on level)
  - Foreign Faculty Mentors (up to $500)
  - U.S. Faculty Mentors/Salary support up to 3 mo./yr. for 2 U.S. faculty)
  - Tuition and fees
  - Trainee travel to foreign site
  - Foreign site housing and housing expense
  - $1000/month research costs
  - Administrative support up to $50K for PI, staff
  - 8% indirect costs

K12 Institutional Research and Academic Career Development Awards (IRACDA) (NIGMS: PAR-16-103)

Strategy: Promote effective partnerships between research intensive-institutions and partner institutions that have a historical mission of educating students from groups underrepresented in biomedical research.

- **Develop research, teaching, and other skills needed by postdoctoral scholars to provide high quality independent research careers.**

- **Develop research-oriented science curricula at partnering institutions.**

- **Promote leaders between research-intensive and partner institutions leading to further collaboration.**

Resources from IRACDA (5 year awards)

- **3-4 Scholars/year x 3 years each with salary/fringe for 12 month, full-time appointment.**

- **Personnel Costs**
  - **10% FTE PI/PD or MPI**
  - **50% FTE Administrative Support**
  - **5% FTE for Program Coordinator per partner organization**
  - **20% FTE for Teaching Mentors per partner organization**

- **Skill Development Workshops up to $10K/yr.**

- **Tuition ($1000/yr.), teaching supplies ($5,000/yr.), travel ($2000/yr.) per scholar**

- **Evaluation Funds**

- **PI/PD and Staff Travel**

T36 MARC Ancillary Training Activities (NIGMS, PAR-11-243)

- **Facilities training and development of URM groups**
- **Ancillary training support for well-defined training activities**
  - **National Conferences**
    - **Research symposia for students**
    - **Workshops on research techniques attached to annual meetings**
    - **Workshops on research and teaching skills**
  - **Short Courses**
  - **Other Ancillary Training (Pipeline programs)**
- **Funds for professional personnel, assistants, and support staff salaries; travel funds for participants, equipment, supplies, speakers' fees. 8% IDC.**

NIH Loan Repayment Programs

For Health Disparities Research (NOT-OD-15-123)
For Individuals from Disadvantaged Backgrounds (NOT-OD-15-125)

- **Goal: Recruitment and retention of highly qualified health professionals as research investigators to careers in research.**

- **Repayment of educational loan debt of up to $35,000 annually for 2 years**

- **Renewable for 1-2 year**

Eligibility for LRP Program

- U.S. Citizens, or permanent residents

- Professional or Academic Doctoral Degree from accredited institution

- Total qualifying educational debt => 20% of institutional base salary at time of first award.

- Conduct qualifying research supported by non-profit organization or U.S. government agency

- Engaging in research > 20 hours per week.

- F32 or T32 grant recipients eligible during second year of NRSA support if extension of payback is granted.

Application for LRP Program to NIH Division of Loan Repayment

- Applicant information/NIH Biosketch
- Personal statement/career goals and academic objectives
- Source of applicant's research funding
- Citizenship verification
- Description of current or proposed research activities
- Three recommenders (one as supervisor/mentor)
- Institutional contact
- Loan information/statements/disclosure statement from lending institution

Application of LRP Program to NIH (Cont.)

Research Supervisor

- **Recommendation**
- **Biosketch**
- **Assessment of applicant's research activities**
- **Research environment**
- **Training/mentoring plan**

Institutional Contact

- **Dedication of necessary time and resources**
- **Assurance of $\geq$ 20 hrs./week in research**
- **Certification as domestic non-profit institution**
- **Confirms institutional base salary**

NIGMS Minority Biomedical Research Support of Competitive Research (SCORE) Program (S06)

- **Designed to improve the research competitiveness of faculty at minority-serving institutions (MSIs)**

- **$50 – 100K DC per year.**

- **Submitted by Dean for Research of MSI**

- **Application: PAR-06-490**

(http://www.nigms.nih.gov/Minority/MBRS)

7 Strategies for a DIVERSE Research workforce

1. **D**evelop masters and doctoral degree programs for URM trainees.

2. **I**ntegrate URM scientists into existing research programs.

3. **V**alue diversity.

4. **E**nhance URM pipeline.

5. **R**etain URM early career investigators.

6. **S**upport partnerships between universities.

7. **E**ncourage individual awards to URM students.

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Outline

- Program Goals

- PI Eligibility

- Trainee Eligibility

- Evaluation criteria

- Application Requirements
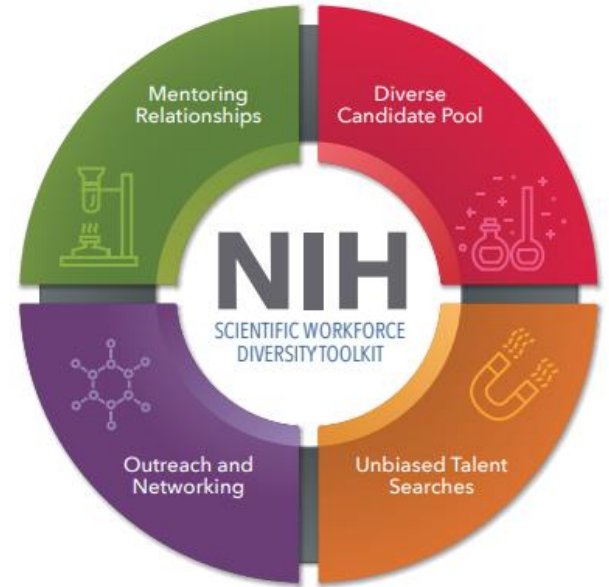
Program Goals

- Diverse workforce benefits the entire scientific enterprise

- Supplements designed to facilitate recruitment and training of individuals from diverse backgrounds

PI/Project Eligibility

Institute (IC)	Eligible Activity Codes
NCI	All listed in PA-16-288 except P30, SC1, SC2, SC3
NEI	R01, R24, R41, R42, R43, R44, RC2, RC3, RC4, U10
NHLBI	P01,P50,R00 phase of the K99/R00,R01,R03,R15,R21,R33,R35, R37,R41/R42,R43/44,R61/R33,U01,U10,U54,UG1,UG3/UH3,UH1, UH2/UH3,HHSN268
NHGRI	*
NIA	All listed in PA-16-288 except R41, R43
NIAAA	All listed in PA-16-288 except R03, R21
NIAID	R00, R01 (or RL1), R10, R18, R21/R33, R22, R24, R35, R37, P01 (or PL1), P20, P30, P40, P41, P50, P51, P60, R41, R42, R43, R44, U01 (or UL1), U10, U19, U41, U42, U54, DP1, DP2
NIAMS	*
NIBIB	*
NICHD	R01, R03, R10, R15, R18, R21, R22, R24, R35, R37, R41, R42, R43, R44, P01, P20, P30, P40, P41, P50, P51, P60, U01, U10, U19, U41, U42, U54, S06
NIDCD	*
NIDCR	*
NIDDK	All listed in PA-16-288 except R15, SC1, SC2
NIDA	DP1,DP2,DP3,DP4,DP5,G12,I01,I34,IP1,IU1,M01,P01,P20,P30,P40,P41,P42, P50,P51,P60,PL1,PM1,PN1,R00,R01,R03,R15,R21,R29,R33,R34,R35,R36,R3 7,R55,R56,R61,RC1,RC2,RC3,RC4,RF1,RL1,RL2,RM1,SI2,U01,U19,U1B,U34, U41,U42,U54,UA5,UC2,UC3,UC4,UC7,UC7,UF1,UG3,UH2,UH3,UL1,UM1,U M2,UP5
NIEHS	*

- Current PI of virtually any type of NIH research award
  - Eligibility varies by institute
- Parent project has ≥ 2 years of funding remaining
- Generally only one supplement per award

Trainee Eligibility

- High school students
  - Salary, but no supplies or travel*
- Undergraduate students
  - Salary, supplies and some travel*
- Post bac and post-master's students
  - Salary, supplies, travel*
- Graduate students
  - Salary, fringe, tuition, supplies, travel*
- Postdocs
  - Salary and fringe, supplies, travel*
- Young investigators (some institutes)
  - Salary and fringe, supplies, travel*

*Allowed amounts vary by type of trainee

Individuals from groups underrepresented in biomedical research

- African American or Black

- Hispanic or Latino

- American Indian/Alaska Native

- Native Hawaiian/other Pacific Islander

- Disabled

- Disadvantaged background (high school and undergrad only)

Trainee Eligibility

- Must be citizen, non-citizen national, or permanent resident

- Cannot be a co-investigator of parent grant

- Cannot be currently supported by parent grant/T32 (generally)*
  - Supplements not meant to "free up" slots

- Year in training may be a factor*

* check with program officer

- Biosketches**: must be catered to reflect the training objective of the award**

- Letter indicating trainee eligibility
  - Meets underrepresented/disability/disadvantaged background status
  - Citizenship
  - Signed by mentor and verified by university official

- Budget

- IACUC and IRB documentation

- Candidate's academic transcripts

- Candidate's career goals
  - Short and long term

- Research Plan

Application Requirements

Application Components	NIAID (pg. 2)	NIGMS (pg 3)	NCI (pg. 5)	NHGRI (pg. 6)	NHLBI (pg. 8)
Education, Training & Career Development Plan OR Mentoring and Career Development Plan (be sure to include ongoing RCR training and IDP development)	✓	✓	✓	✓	✓
Statement of PI's Mentoring Track Record	✓	Not Required	Not Required	Not Required	✓
PI's Biosketch & Personal Statement	✓	✓	✓	✓	✓
Statement of Candidate's Career Goals	✓	Not Required	Not Required	Not Required	✓
Candidate's Biosketch & Personal Statement	✓	✓	✓	✓	✓
Statement of Candidate Eligibility	✓	✓	✓	✓	✓
Budget	✓	✓	✓	✓	✓
Applications Accepted	Anytime	Anytime	Oct1-Dec1 and Feb1-Mar30	Anytime (at least 90 days before start date)	Anytime (at least 3 mos before start date)

Always check requirements with appropriate Institute and Program Officer

Application Requirements

Research Plan: Six pages

- Summary or abstract of funded parent grant
- Career Development Plan
- Timeline table for the research and career development activities
- Mentorship plan
- Candidate's career goals

Review Criteria

- Candidate's qualifications
  - Research experience, potential, career goals, achievements, interest in science (if HS/undergrad)
- Potential to promote diversity at institutional and national levels
- Evidence that proposed activities will enhance potential, knowledge and skills of candidate
- Evidence that research activities are integral to parent grant
- Evidence of mentoring experience and success, and adequate plan

Proposed Research:

- Summary/abstract of parent grant

- Specific research project to be undertaken by candidate, and how it relates to parent grant

- How experience enhances research potential of candidate

Mentoring and career development:

- Candidate-specific plan that addresses goals of training

- Description of skills to be gained, benchmarks to be reached (abstracts, papers, grant submissions)

- Detailed plan that will help candidate transition to next educational/professional stage
    - Include plans for applying for fellowships/grants

- Roles and qualifications of mentor(s), outcomes from previous diversity supplement recipients

Timeline:

- Proposed Research and Career Development activities
  - Courses, meetings, data collection, analyses, paper writing, collaborations, new skill development, etc.
- Indicate how each activity addresses the research and/or career development aims

- **This is a professional/career development proposal**
  - Science is solid—grant has already been awarded
  - <u>Detailed, candidate-specific</u> training and mentoring plans are very important
- **Talk to your program officer**
  - Proposal is reviewed by Institute only, not peer-reviewed
  - Requirements/preferences vary

- Josue Cardoso

  Research Assistant, College of Dentistry

- Roger B. Fillingim, PhD

  Distinguished Professor, College of Dentistry

  Director, Pain Research and Intervention Center of Excellence

- Margaret O. James, PhD

  Jack C. Massey Professor, College of Pharmacy

- Ed Squirewell, PhD

  Postdoctoral Researcher, College of Pharmacy