

# DIVISION OF TRAINING, WORKFORCE DEVELOPMENT, AND DIVERSITY (TWD)

TWD programs foster the training and development of a strong and diverse biomedical research workforce. The division funds research training, career development and diversity-building activities through programs at the undergraduate, graduate, postdoctoral, faculty and institutional levels.



<https://www.nigms.nih.gov/training>

Dr. Alison Gammie, TWD Division Director

## Undergraduate and Predoctoral Training Branch

Dr. Shiva Singh, Branch Chief

### **Bridges to the Baccalaureate (T34)** | [PAR-19-299](#); Sydella Blatch; Patrick Brown

The goal of this program is to promote the successful completion of baccalaureate degrees by students from groups that are underrepresented in the biomedical sciences. The strategy is to support comprehensive science education and research-readiness student development programs that help students from diverse groups and backgrounds at community colleges transition to baccalaureate degree programs at research-intensive partner institutions.

### **Bridges to the Doctorate (T32)** | [PAR-19-300](#); Sydella Blatch

This program's goal is to promote the successful completion of doctoral degrees by students from underrepresented groups. The strategy is to support comprehensive science education and research-readiness student development programs that help students from diverse groups and backgrounds who are in M.S. degree programs transition to Ph.D. degree programs at research-intensive partner institutions.

### **Individual Predoctoral National Research Service Award (NRSA) (F30/F31 Diversity) Fellowships** | [PA-20-251](#); Anissa J. Brown; Patrick Brown | [PA-20-245](#); Donna Krasnewich

NIGMS provides predoctoral fellowships to eligible individuals who seek advanced predoctoral research training in basic biomedical sciences through the NRSA Individual Predoctoral Fellowships to Promote Diversity in Health-Related Research (F31) and the NRSA Individual Predoctoral M.D./Ph.D. or Other Dual-Doctoral Degree Fellowships for Students at Institutions Without NIH-Funded Institutional Predoctoral Dual-Degree Training Programs (F30). These fellowships, which generally provide up to 3 years of support, promote fundamental, interdisciplinary, and innovative research training and career development leading to independent scientists who are well prepared to address the nation's biomedical research needs. The strategy is to provide support to outstanding predoctoral students to obtain individualized, mentored training leading to the Ph.D. and M.D.-Ph.D. or other dual-degree.

### **Initiative for Maximizing Student Development (IMSD) (T32)** | [PAR-19-037](#); Sailaja Koduri; Veerasamy Ravichandran

IMSD is a graduate student training program for institutions with research-intensive environments. Eligible institutions must have a 3-year average of NIH research project grant (RPG) funding greater than or equal to \$7.5 million in total costs. The goal of the IMSD program is to develop a diverse pool of scientists earning a Ph.D., who have the skills to successfully transition into careers in the biomedical research workforce. The overarching objective of this institutional research training program is to develop a pool of well-trained Ph.D. biomedical scientists from diverse groups and backgrounds.

### **Institutional Predoctoral National Research Service Award (NRSA) (T32)** | [PAR-20-213](#) (Basic Biomedical Sciences) 12 Program Officers | [PA-19-036](#) (Medical Scientist Training Program); Joe Gindhart; Stefan Maas

NIGMS supports predoctoral research training grants at eligible institutions to enhance graduate (Ph.D.) research training in 12 broad areas of basic biomedical sciences relevant to the NIGMS mission. In addition, NIGMS supports the integrated medical and graduate research training through the Medical Scientist Training Program (MSTP).

### **Maximizing Access to Research Careers (T34) Undergraduate Student Training in Academic Research (U-STAR)** | [PAR-19-219](#); Sydella Blatch; Patrick Brown

The goal of this program is to increase the nation's pool of students from underrepresented groups who have the research experience and science preparation to matriculate and succeed in biomedical Ph.D. programs. The institutional program supports comprehensive research training, career development, and mentoring activities for undergraduates, including up to 3 years of support of sophomores, juniors, and seniors, and at least one summer research experience at a research-intensive institution.

### **Postbaccalaureate Research Education Program (PREP) (R25)** | [PAR-20-066](#); Kenneth Gibbs

The goal of PREP is to develop a diverse pool of well-trained postbacs who will transition into and complete rigorous biomedical, research-focused biomedical doctoral degree programs (e.g., Ph.D. or M.D./Ph.D.). The strategy is to support institutional programs that provide extensive research training and academic preparation at research-intensive institutions through 1-year research apprenticeships.

### **Undergraduate Research Training Initiative for Student Enhancement (U-RISE) (T34)** | [PAR-19-218](#); Anissa J. Brown; Edgardo Falcón-Morales

U-RISE is a training program that seeks to diversify the pool of students who complete a Ph.D. degree in biomedical research fields.

### **Graduate Research Training Initiative for Student Enhancement (G-RISE) (T32)** | [PAR-19-102](#); Sydella Blatch; Anissa J. Brown

G-RISE is a graduate student training program for institutions with research-active environments. Eligible institutions must have a 3-year average of NIH research project grant (RPG) funding less than \$7.5 million in total costs. The program seeks to diversify the pool of students who complete a Ph.D. degree in biomedical research fields.

By providing support to eligible, domestic institutions to develop and implement effective, evidence-based approaches to student training and mentoring, NIGMS expects that the proposed research training programs (**U-RISE & G-RISE**) will incorporate didactic research, mentoring, and career development elements to prepare trainees for the completion of research-focused Ph.D. programs in biomedical fields.

POSTDOCTORAL TRAINING BRANCH	Dr. Michael Sesma, Branch Chief
<p><b>Career Development Awards</b>   (K08) <a href="#">PA-19-117</a>; (K23) <a href="#">PA-19-118</a>; <a href="#">PA-19-119</a>; (K25) <a href="#">PA-19-124</a>; Sarah Dunsmore; Martha Garcia; Zuzana Justinova; Rochelle Long; Michael Sesma; Xiaoli Zhao</p> <p>The K08 Mentored Clinical Scientist and the K23 Mentored Patient-Oriented Research awards support individuals with M.D. degrees through mentored research career development experiences in anesthesiology, clinical pharmacology, trauma and burn injury or wound healing. The K25 Mentored Quantitative Research Development Award supports investigators from quantitative science and engineering disciplines who seek to focus on questions of health and disease.</p>	
<p><b>Individual Postdoctoral National Research Service Award (NRSA) (F32)</b>   <a href="#">PA-19-188</a>; 10 Program Officers</p> <p>Postdoctoral fellowships support advanced and specialized training in basic and/or clinical research through an intensive, mentored research project experience that encourages the development of independence, innovation and creativity in a highly productive research setting.</p>	
<p><b>Institutional Postdoctoral National Research Service Award (NRSA) (T32)</b>   <a href="#">PA-20-142</a>; Martha Garcia; Jianhua Xu; Zuzana Justinova; Xiaoli Zhao</p> <p>Institutional training programs support research training for clinician-scientists in four clinically relevant research areas within the mission of NIGMS: anesthesiology; clinical pharmacology; medical genetics; and trauma, burn and peri-operative injury. Trainees receive at least 2 years of research training in basic, clinical and/or translational science areas and engage in activities to promote research career development.</p>	
<p><b>Institutional Research and Academic Career Development Award (IRACDA) (K12)</b>   <a href="#">PAR-19-366</a>; Edgardo Falcón-Morales; Desirée Salazar</p> <p>IRACDA supports postdoctoral training to prepare for independent research and teaching careers in academia and strengthens and modernize science educational offerings at partner institutions with significant enrollments of students from underrepresented groups. Postdoctoral scholars are supported for a 3-year mentored research, teaching and career development experience in a research-intensive institution and regional, primarily teaching institutions with significant underrepresented student populations.</p>	
<p><b>Innovative Programs to Enhance Research Training (IPERT) (R25)</b>   <a href="#">PAR-19-383</a>; Edgardo Falcón-Morales; Desirée Salazar; Michael Sesma</p> <p>The goal of this program is to support educational activities that complement and/or enhance the training of a workforce to meet the nation's biomedical research needs. The strategy is to fund activities with a primary focus on courses for skills development, structured mentoring activities and outreach programs.</p>	
<p><b>National Research Service Awards (NRSA) for Individual Senior Fellows (F33)</b>   <a href="#">PA-19-187</a>; Michael Sesma</p> <p>These fellowships are intended to support experienced investigators seeking opportunities to undertake short periods of mentored research training that will allow them to redirect, revitalize or restart a research program upon returning to their home institutions.</p>	
<p><b>Pathway to Independence Award (K99/R00)</b>   <a href="#">PA-20-188</a>; Oleg Barski, Paula Flicker; Daniel Janes; Michael Sesma</p> <p>The goal of this program is to shorten and facilitate the transition from a postdoctoral researcher to an independent investigator capable of leading a research team. The strategy is to support highly promising postdoctoral researchers in 2-year mentored research positions followed by 3 years of independent research support when the grantee obtains an independent position.</p>	
<p><b>Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC) Postdoctoral Career Transition Award to Promote Diversity (K99/R00)</b>   <a href="#">PAR-19-343</a>; Kenneth Gibbs</p> <p>The goal of the MOSAIC Postdoctoral Career Transition Award to Promote Diversity (K99/R00) is to enhance workforce diversity by facilitating a timely transition of promising postdoctoral researchers from diverse backgrounds from their mentored, postdoctoral research positions to independent, tenure-track or equivalent faculty positions at research-intensive institutions. MOSAIC K99/R00 scholars will be part of organized scientific cohorts and will be expected to participate in mentoring, networking, and professional development activities coordinated by MOSAIC Institutionally-Focused Research Education Award to Promote Diversity (UE5) grantees.</p>	
<p><b>Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC) Institutionally-Focused Research Education Award to Promote Diversity (UE5)</b>   <a href="#">PAR-19-342</a>; Kenneth Gibbs</p> <p>The goal of the MOSAIC institutionally-focused research education cooperative agreement (UE5) is to equip MOSAIC K99/R00 scholars with professional skills and provide them with the appropriate mentoring and professional networks to facilitate their transition into, advancement, and success in independent academic research careers at research-intensive institutions.</p>	
<p><b>Research on Interventions (R01)</b>   <a href="#">PAR-19-295</a>; Sydella Blatch; Michael Sesma.</p> <p>The goal of this program is to understand the social and behavioral factors that increase the interest, motivation and preparedness of students from underrepresented groups for biomedical research careers. The strategy is to support research that tests assumptions about these factors and that can inform and guide new, evidence-based interventions for research training. MIRA R35 applications may also be submitted in this research are: <a href="https://www.nigms.nih.gov/Research/mechanisms/MIRA/Pages/default.aspx">https://www.nigms.nih.gov/Research/mechanisms/MIRA/Pages/default.aspx</a></p>	
<p><b>Science of Science Policy Approach to Analyzing and Innovating the Biomedical Research Enterprise (SCISIPBIO)</b>   <a href="#">NSF 19-547</a>; Dorit Zuk</p> <p>A joint initiative between NIGMS and the Science of Science and Innovation Policy (SciSIP) program in the Directorate for Social, Behavioral and Economic Sciences at the National Science Foundation (NSF). The program will support research that advances the scientific basis of science and innovation policy, with a focus on the biomedical sciences, including the development of models, analytical tools, data, and metrics that can inform science policy and the optimization of the scientific enterprise.</p>	
<p><b>Research Supplements to Promote Diversity in Health-Related Research (Admin Supp.)</b>   <a href="#">PA-20-222</a>; Desirée Salazar</p> <p>This program employs the research project grant as the platform for intensive mentored research experiences within the scope of the grant during the continuum from high school to the postdoctoral level. The goal is to increase the nation's pool of students from underrepresented groups by preparing them to continue their training in biomedical research.</p>	
<p><b>Research Supplements to Promote Re-Entry into Biomedical and Behavioral Research Careers (Admin Supp.)</b>   <a href="#">PA-18-592</a>; Desirée Salazar</p> <p>This program employs the research project grant as the platform for intensive, mentored research experiences that facilitate re-entry and the establishment of a full-time, independent research career for individuals at the postdoctoral or early faculty level who have high potential to re-enter an active research career after taking time off to care for children or parents or to attend to other family responsibilities.</p>	

<p><b>The Diversity Program Consortium: An NIH Common Fund Initiative: Enhancing the Diversity of the NIH-Funded Workforce</b></p>	<p>Consortium contact: Alison Gammie, Ph.D., TWD Director</p>
<p><b>Enhancing the Diversity of the NIH-Funded Workforce, also known as the Diversity Program Consortium (DPC)</b>, is a trans-NIH program funded by NIH's Common Fund and managed by NIGMS. Through this national collaborative, NIH works together with institutions to advance the DPC's overarching goal of developing, implementing, assessing and disseminating innovative, effective approaches to research training and mentoring. The DPC consists of the following initiatives: BUILD, CEC, NRMN, SPAD, and DPC DaTA.</p> <div style="display: flex; align-items: center; justify-content: flex-end;">  <div style="margin-left: 20px;"> <p><b>DIVERSITY PROGRAM CONSORTIUM</b> <small>Supported by the National Institutes of Health</small></p> </div> </div>	
<p><b>Building Infrastructure Leading to Diversity (BUILD) (U54)</b> <a href="#">RFA-RM-18-006</a>; Sydella Blatch; Anissa J. Brown, Edgardo Falcón-Morales, Desirée Salazar BUILD is a set of experimental training awards designed to implement and study innovative and effective approaches to engaging and retaining students from diverse backgrounds in biomedical research and preparing students to become future contributors to the NIH-funded research enterprise.</p>	
<p><b>Coordination and Evaluation Center (CEC) (U54)</b> <a href="#">RFA-RM-18-005</a>; Michael Sesma The CEC coordinates consortium activities and evaluates the efficacy of the training and mentoring approaches developed by BUILD and NRMN awardees in order to disseminate effective approaches to the broader research and mentoring communities.</p>	
<p><b>National Research Mentoring Network (NRMN) Phase II</b> NRMN Coordination Center (U24) (<a href="#">RFA-RM-18-003</a>); NRMN Resource Center (U24) (<a href="#">RFA-RM-18-002</a>); The Science of Mentoring, Networking, and Navigating Career Transition Points – Independent research projects (U01s) (<a href="#">RFA-RM-18-004</a>); Michael Sesma; Alison Gammie NRMN develops mentoring and networking opportunities for biomedical researchers from diverse backgrounds, from undergraduates through early career faculty. NRMN Phase II is organized as a consortium of independent research projects, a Resource Center, and a Coordination Center. The research projects explore three primary areas of interventions intended to enhance mentoring and networking: science of mentorship; professional networks; and navigation of critical transition points. The NRMN Coordination Center and the NRMN Resource Center work with the independent research projects to enhance dissemination and to promote synergies to provide evidence and resources for effective mentoring.</p> <p><i>NRMN Phase I, FY2014 – FY2019 (U54):</i> <a href="#">RFA-RM-13-017</a></p>	
<p><b>Diversity Program Consortium Dissemination and Translation Awards (DPC DaTA) (U01)</b> <a href="#">RFA-RM-19-003</a>; Anissa J. Brown; Edgardo Falcón-Morales DPC DaTA provides an opportunity for institutions not currently part of the Diversity Program Consortium to apply for funding to take a rigorous scientific approach to understanding the effectiveness of a biomedical research training, mentoring, or research capacity building intervention by employing DPC experimental methods.</p>	
<p><b>Diversity Program Consortium Sponsored Programs Administration Development (SPAD) Program (UC2)</b> <a href="#">RFA-RM-19-004</a>; Sydella Blatch; Alison Gammie The SPAD program aims to increase the productivity of sponsored programs activities to enhance biomedical research and/or research training. SPAD focuses on establishing Offices of Sponsored Programs (OSPs) or enhancing the services of existing OSPs or similar entities at domestic institutions of higher learning.</p>	