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https://pollev.com/twd1

@NIGMStraining
#TWD2019PDM

Mobile friendly meeting link:
Thanks to the Organizers!

Organizers
Edgardo Falcón-Morales (NIH/NIGMS)
Jacquie Roberts (FASEB)
Alison Gammie (NIH/NIGMS)
Barry Komisaruk (Rutgers University)
Eduardo Rosa-Molinar (The University of Kansas)
Desirée Salazar (NIH/NIGMS)
Michael Sesma (NIH/NIGMS)
Cordelia Smith (FASEB)
Henry H. Wortis (Tufts University School of Medicine)

NIGMS Consultants
Rashada Alexander (Research Capacity Building)
Alison Cole (Pharmacology, Physiology, and Biological Chemistry)
Joe Gindhart (Genetics and Molecular, Cellular, and Developmental Biology)
John Laffan (Office of Scientific Review)
Lisa Newman (Office of Scientific Review)
Haluk Resat (Biophysics, Biomedical Technology, and Computational Biology)
NIGMS Training Programs - Overarching Themes

• **Trainee skills development** – use evidence-based approaches to provide technical, operational and professional skills
• **Specific Aims** - obtainable and measurable training objectives
• **Rigor & transparency, responsible & safe conduct** of research throughout the training experience
• **Commitment to diversity & inclusion**
• **Mentor training and oversight** of trainee/mentor matches
• **Career preparedness** – provide knowledge of and skills to transition into the range of careers in the biomedical research workforce
• **Strong institutional support** for research training
• **Evaluation** - the collection and dissemination of data on the success/failure of educational aims; make career outcomes publicly available
Meeting Details


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Food on your own – restaurants nearby
Posters

- Over 100
- A broad range of topics at each session
- Up for the duration of the meeting
Let your opinions be counted in real time

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https://pollev.com/twd2

Edgardo
twd1

Desirée
twd2
What are you hoping to gain from this meeting?
TWD Program Directors’ Meeting Goal:
Enhancing Training, Mentoring, Diversity and Professional Development

Exchange information, ideas, and innovations – share outcomes, tools, strategies, and successes/failures

Network – establish new connections and strengthen existing relationships

Communicate – share training challenges and opportunities, and learn about current NIH policies and priorities
Overview of NIGMS Training, Workforce Development and Diversity Programs

Director of the Division of Training, Workforce Development and Diversity

Alison Gammie
August 6, 2019
NIGMS Administers ~1,000 Research Training and Diversity Enhancing Awards at ~300 Institutions
~$340,000,000 per year
TWD Administered Programs

Community College  Undergraduate  Postbac  Graduate MS  Graduate PhD  Postdoctoral

- Innovative Programs to Enhance Research Training
- NIGMS Diversity Supplement Program
- National Research Mentoring Network
- BUILD
- U-RISE
- MARC
- PREP
- Bridges to the Doctorate
- G-RISE
- IMSD
- NRSA Fellowships
- T32 NRSA
- IRACDA
- K Awards
- MOSAIC – coming soon
What’s new?
All NIGMS Training Programs Should -

- Have strong institutional support
- Develop Program Director/Principal Investigator teams to broaden program leadership and provide complementary expertise
- Build a diverse faculty cohort with a strong commitment to training and mentoring
- Display coordinated interactions and synergies with other NIGMS-funded training programs at the institution
All NIGMS Training Programs Should -

- Focus on technical, operational and professional skills development
- Promote rigor and reproducibility in research
- Teach the responsible and safe conduct of research
- Promote diversity, equity and inclusion
- Encourage inclusive, safe, and supportive research environments
- Use evidence-based educational and mentoring practices
- Employ cohort-building activities and interventions that enhance the trainees’ science identity and self-efficacy
- Provide individualized mentoring and oversight throughout
- Introduce trainees to a variety of scientific research areas and careers
- Collect and disseminate data on the success/failure of educational aims; make career outcomes publicly available
Restructured the Diversity Enhancing Programs

NIH has been asked to address issues of overlap and evaluation

NIGMS was asked to move from Research Education (R25) activity code to Training (T) activity codes
Restructuring NIGMS Diversity Training Programs

- MARC
- PREP
- U-RISE
- BRIDGES to DOC (B2D)
- IMSD
- Research Intensive Partner
- Research Active Partner
- MOSAIC
- IRACDA
- U-RISE
- G-RISE

≥ $7.5 M RPG Research-Intensive
< $7.5 M RPG Research-Active

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- Prevent overlap
- Activity codes aligns with program goals
- Ensure equity of trainee support
- Improve fairness by separating into two tracks
- Allows for enhanced capacity for evaluation
Six Recent NIGMS Formal Evaluations

PreK-12 | Undergraduate | Postbac | Graduate MS | Graduate PhD | Postdoctoral

- MARC
- PREP
- BRIDGES to DOC
- Diversity Supplement Program
- IRACDA
- T32 NRSA

Evaluation Reports

Current Reports

- Evaluation of Postdoctoral NRSA T32 Institutional Training Grant Program [PDF, 890KB]
  June 27, 2018
- Evaluation of the NIGMS R25 Bridges to the Doctorate Program [PDF, 392]
  June 15, 2018

https://www.nigms.nih.gov/about/opae/Pages/reports.aspx
NIGMS Training Program Goals

Undergraduate Programs
Emphasize the development of a diverse pool of undergraduates that complete their baccalaureate degree and transition into and complete a research-focused, biomedical higher degree program (e.g., Ph.D. or M.D./Ph.D).

Post-baccalaureate Program
Emphasize the development of a diverse pool of scientists with a baccalaureate degree, who transition into and complete a research-focused, biomedical higher degree program (e.g., Ph.D. or M.D./Ph.D).

Graduate Programs
Emphasize the development of a diverse pool of scientists earning a biomedical Ph.D., who have the skills to successfully transition into careers in the biomedical research workforce.

Postdoctoral Programs
Emphasize the development of a diverse pool of scientists, who have the skills to successfully transition into biomedical research careers.
Enhancing data collection and retrospective analyses

• NIGMS has entered into a collaboration with the Office of Extramural Research and eRA Commons to systematically collect outcome data from current programs
  o Require on-line data entry for Training Tables (no longer accept PDF version) – first roll out in FY2020
  o Develop features for auto-filling from NIH databases (trainees, subsequent grants/publications), drop-downs for standardization (e.g., degrees earned, career taxonomy), and fill-ins only when warranted
  o Develop mechanism to capture and aggregate the data to conduct periodic analyses of training programs

• NIGMS is improving the mechanism to conduct retrospective analyses of past and present programs
  o Establishing a secure, centralized location with trainee information to allow for periodic outcomes analyses with large federal data sets.
  o Storing outcomes analyses in a centralized, secure location
NIGMS intends to enhance the evidence base for effective, high-impact, scalable interventions, and to improve our understanding of the factors contributing to success, including the social and behavioral factors involved in the advancement of individuals pursuing independent academic biomedical research careers.

- Interventions must be practical, realistic, scalable and sustainable across a range of institutions
- Will fund robust experiments (e.g., randomized control trials, case controls, matched pair design)

Potential areas for investigation:
- Training Program Related
- Psychosocial Factors (must be linked to outcomes)
- Navigation of Critical Transition Points
- Institutional Factors

http://understanding-interventions.org/lead-consortium/
Science of Science Policy Approach to Analyzing and Innovating the Biomedical Research Enterprise (SCISIPBIO)

Supports research to provide scientific analyses of important aspects of the biomedical research enterprise and efforts to foster a diverse, innovative, productive, and efficient scientific workforce, from which future scientific leaders will emerge.

NSF 19-547
NIH NOT-19-011

NIH Contact:
Dorit Zuk
Innovative Programs to Enhance Research Training (IPERT – R25)

Skills, mentoring, outreach – broad national reach, innovation, and sustainability
TWD will fund technologies that:

- enhance research skills (e.g., web-based resources, instructional software, interactive media, research-focused curriculum materials, and active learning toolkits)

- increase the efficiencies of the NIGMS training programs (technologies to track career outcomes of students and trainees and/or assist in the evaluation of workforce development programs)

**Small Business Innovation Research (SBIR)**
**Small Business Technology Transfer (STTR)**

TWD Contact:
Luis Cubano
TWD funds meetings

Achieving Widespread Improvement in Undergraduate Education
June 23 - 28, 2019

Fostering Diversity in Biostatistics
March 22, 2020
10:30 am - 6:30 pm
JW Marriott Nashville
201 8th Avenue South
Nashville, TN 37203
2019 Highlights

Recipient of the 2019 AIMBE Excellence in STEM Education Award

ABRCMS Online (offering year round webinars)

More scientific sessions - increase from 12 in 2018 to 30 in 2019

www.abrcms.org | abrcms@asmusa.org
Deadlines

We need your help!

Sign up to mentor students on-site when you register by indicating your willingness be a judge.

August 20: Student Travel Award*

September 6: Abstract Submission

October 18: Discount Registration

October 25: Hotel Reservations

*Student cannot be a part of a NIGMS program that has funding to travel to conferences

www.abrcms.org | abrcms@asmusa.org
Program Director Meetings

Wednesday, November 13
PREP Scholars Meet & Greet
8:45 p.m. – 10:00 p.m.

Thursday, November 14
PDO Steering Committee Meeting
8:00 p.m. – 9:45 p.m.

NIGMS Program Director Discussions (session 1)
10:00 a.m. – 11:15 a.m.

NIGMS Program Director Discussions (session 2)
10:00 a.m. – 11:15 a.m.

Friday, November 15
TWD-PDO Meeting
2:00 p.m. – 3:00 p.m.

PREP Program Director Meeting
8:00 p.m. – 9:00 p.m.

www.abrcms.org | abrcms@asmusa.org
The DPC: A Highly Integrated National Consortium

Coordination and Evaluation Center

Building Infrastructure Leading to Diversity

National Research Mentoring Network

Coordination Center
Research on mentoring interventions

Resource Center
myNRMN
Guided Virtual Mentoring Portal for Resources

10 DIVERSE SITES
The long term impact of the Diversity Program Consortium will be in the broad dissemination of evidence-based effective training and mentoring strategies.
Sponsored Programs Administration Development (SPAD) Program (UC2)

RFA-RM-19-004
Deadline: June 26, 2020
Contact: Luis Cubano

Goal: To establish Offices of Sponsored Programs (OSPs) or enhance the services of existing OSPs or similar entities at domestic institutions of higher learning. Program priorities include funding primarily undergraduate institutions with emerging biomedical research and/or undergraduate research training programs.

Eligibility: Domestic associate’s degree granting and baccalaureate degree granting institutions with <$7.5 M research project grants, 25% Pell eligible students
Diversity Program Consortium Dissemination and Translation Awards (DPC DaTA) (U01)

RFA-RM-19-003
Deadline: October 8, 2019
Contact: Anissa J. Brown

Goal: Broaden the DPC’s national impact by providing an opportunity for institutions not currently part of the DPC to apply for funding to employ the consortium’s experimental methods to understand the effectiveness of a biomedical research training, mentoring, or research capacity building interventions.

Eligibility: Domestic associate’s degree granting and baccalaureate degree granting institutions with <$7.5 M research project grants, 25% Pell eligible students
Research: Decoupling of the minority PhD talent pool and assistant professor hiring in medical school basic science departments in the US

Kenneth D Gibbs Jr, Jacob Basson, Imam M Xierali, David A Broniatowski

National Institute of General Medical Sciences, United States; Association of American Medical Colleges, United States; The George Washington University, United States
Participation of Women and Underrepresented Minority Scientists in the Biomedical Professoriate Does Not Reflect Available Talent Pool

<table>
<thead>
<tr>
<th>Training</th>
<th>Doctoral</th>
<th>57%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Career</td>
<td>Lecturer/Instructor</td>
<td>36%</td>
</tr>
<tr>
<td>Assisstant Professor</td>
<td>23%</td>
<td></td>
</tr>
<tr>
<td>Tenured Faculty</td>
<td>Full Professor</td>
<td>23%</td>
</tr>
</tbody>
</table>

UR, underrepresented: Hispanic/Latinx, African American/Black, Native American/Alaska Native
WR, well represented: White, Asian

Valantine, Lund & Gammie
CBE Life Sciences Education (2016)
Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC): Postdoctoral Career Transition Award to Promote Diversity (K99/R00) Institutionally Focused Research Education Cooperative Agreement to Promote Diversity (UE5)

• Award UE5’s to “neutral” organization such as scientific societies

• Competition for K99/R00

• Cohort 1 assembles (~15 K99/R00) organized by scientific areas within the mission of NIGMS

Contact: Kenny Gibbs
MOSAIC Overview Cohorts 1 and 2

Cohorts 1 & 2 (~30 K99/R00)

Contact: Kenny Gibbs
Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC)

K99/R00 to enhance diversity (15 per year – 75 at steady state in 5 years)

- Independent funding & path to professoriate (5 years of funding in 2 phases)
  - Mentored research experience as postdoctoral fellow (K99) 1-2 years
  - Independent research support as faculty (R00) (up to 3 years)
- Research focus – within the mission of NIGMS
- US citizens/permanent residents
- Enhance the diversity of the biomedical research professoriate (e.g., individuals from underrepresented groups – certain racial/ethnic groups, women, persons with disabilities, institutionally defined, see NOT-OD-18-210)
- Commitment to enhancing diversity, equity and inclusion
Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC)

For the MOSAIC UE5, NIGMS intends to fund independent organizations other than institutions of higher education (e.g., scientific societies) with:

- A membership of scientists conducting research within the mission of NIGMS
- Experience serving as a centralized entity to enhance scientific communication and networking among scientists conducting research within the mission of NIGMS
- Established record of providing professional development and networking activities for the next generation of biomedical researchers.
- A demonstrated commitment to enhancing the diversity of the biomedical research workforce.
Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC)

UE5 – Research Education Cooperative Agreement (up to 3 awards). Fund independent scientific organizations composed of NIGMS scientists (e.g. scientific societies) to:

- Assemble **cohorts** of MOSAIC K99/R00 fellows based on scientific areas
- Facilitate the development of **strengths-based individual development plans** for MOSAIC fellows that will allow them to progress toward academic and research independence
- Provide courses for **skills development** around topics such as job search strategies, proposal preparation, scientific publishing, enhancing laboratory management, budgeting, hiring, managing career challenges and expectations, academic advancement, and balancing teaching, research, and service.
- Enhance the **scientific and professional networks** of MOSAIC fellows beyond their local institutions
- Identify and **connect fellows with additional mentors** who can facilitate appropriate career advancement
- **Convene regular meetings with appropriate leaders** at the institutions where MOSAIC fellows conduct research (e.g., postdoctoral research advisors during the mentored phase; department chairs, deans, or provosts during the independent phase) to exchange ideas, and employ evidence-based approaches to **mitigate bias and enhance equity**
- Enhance **institutional accountability** for the fellows’ career advancement
- **Track and publicize outcomes** (e.g. publicly available websites)
Training is a collaboration across NIGMS
NIGMS Leadership

Jon Lorsch
Director

Judith Greenberg
Deputy Director
Training is a collaboration across NIGMS
Core TWD Team

Patrick Brown  Anissa Brown  Luis Cubano  Edgardo Falcón Morales  Alison Gammie  Kenny Gibbs  Sailaja Koduri  Christa Reynolds

Mercedes Rubio  Desirée Salazar  Mike Sesma  Chrissy Shaw  Vince Sabol  Shiva Singh  Melissa Wan
Training is a collaboration across NIGMS
TWD Program Officers in Other Divisions
Training is a collaboration across NIGMS Office of Scientific Review

Stephanie Constant  Rebecca Johnson  Tracy Koretsky  John Laffan  Lisa Newman  Brian Pike  Lee Slice  Isaiah Vincent
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Comments?
Questions?

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Training is a collaboration across NIGMS
Office of Program Planning Analysis, and Evaluation
Budget

Tony Moore  Paula Powell  Millicent Williams
Training is a collaboration across NIGMS Extramural Activities

Robert Altieri
Kelly Aubrecht
Adam Barnhart
Rachel Benz
Jennifer Billington
Julie A Chang
Kimberly Cornwell
Jessica Dean
Glenda Edmonds
Samantha Farrell
Christina Fleming
Stephaine Foster
Ilene Glassman
Anna Hahn
Lisa Hildred
Brian Iglesias
Arina Kramer
Jennifer Lynch
Michael P Mace
Lisa Moeller
Jun Moy
Connie Murphy
Lan Nguyen
Julie Peoples Orlando
Laura Preston
Susan South
Courtney Tardd-Wright
Romeo Tengey
Emily Tran
Maricela Trujillo
Angela Urdaneta
Laverne Waybright
Erica West
Karen Whitaker
Dina Wilson

Acting Director
Extramural Activities
Erica Brown

Chief Grants Management
Grace Olascoaga

Grants Management
TWD Lead
Justin Rosenzweig

TWD PD Meeting July 2019 | #TWD2019PDM