2023

CHARTING A FUTURE IN MEDICINE & RESEARCH: NIH/NIDA OPPORTUNITIES FOR ASPIRING PHYSICIANS AND RESEARCHERS

NIH

Biomedical Besearch

Christie Brannock, MBA

Director, Office of Education & Career Development National Institute on Drug Abuse, Intramural Research Program

AGENDA

- 1 NIH & NIDA, IRP
- **2** RESEARCH OPPORTUNITIES
 - NIH
 - NIDA IRP
- **3 BEST PRACTICES**
- **4** UTILIZING NIH RESOURCES
- **5** QUESTIONS





National Institutes of Health

https://www.nih.gov/





To seek fundamental knowledge about the nature and behavior of living systems and to apply that knowledge to optimize health and prevent or reduce illness for all people

https://www.nih.gov/



NIH Main Campus covers more than 300 acres



NIH is comprised of 27 institutes and centers across multiple campuses

https://www.nih.gov/







NIH Main Campus Bethesda, MD





Bayview Campus Baltimore, MD



National Laboratory for Cancer Research Frederick, MD



Research Triangle Park North Carolina



Rocky Mountain Laboratories Montana



Phoenix Epidemiology & Clinical Research Branch Arizona



NIH is the largest public funder of biomedical research in the world

https://www.nih.gov/













If you're interested in learning more about NIH funding data and access to reports and summary statistics on NIH funding or the organizations and people involved in NIH research and training--check out NIH RePORTER



https://obssr.od.nih.gov/research-resources/nihreporter



NIH RePORTER is an electronic tool that allows users to search a database of NIH-funded research projects and access publications and patents resulting from NIH funding

https://obssr.od.nih.gov/research-resources/nihreporter





https://irp.nida.nih.gov/





General Information @ NIDA IRP:

- Located in Baltimore, MD on Johns Hopkins Bayview Medical Campus
- Share the BRC with the National Institute on Aging's Intramural Research Program

https://irp.nida.nih.gov/



Mission:

Our mission is to better understand substance use disorders and the factors that may contribute to this enormous medical, public health and societal problem

https://irp.nida.nih.gov/

Molecular Targets & Medications Discovery Branch



Amy Newman, PhD Scientific Director

The Molecular Targets and Medications Discovery Branch investigates behavioral, pharmacological and molecular mechanisms underlying the reinforcing and subjective effects of drugs, such as the opioids, cocaine and methamphetamine that lead to their abuse and dependence. Novel, small molecules are designed and synthesized as pharmacological tools to study neurochemical targets in the brain, and how actions at those targets are related to the behavioral effects of abused drugs.

https://irp.nida.nih.gov/organization/mtmdb/

Translational Addiction Medicine Branch



Lorenzo Leggio, MD, PhD Clinical Director Dep. Scientific Director

The mission of TAMB is to conduct translational clinical studies and execute cutting-edge human research that contributes to the understanding of addiction (e.g., deep, ecological momentary assessment and/or digital phenotyping) and the development of novel treatments (e.g., medications, behavioral interventions, technology-based modalities). Working under one roof, the TAMB team employs diverse approaches and levels of analysis across multiple platforms (wet-lab, animal program, outpatient and inpatient units, big data, and surveys) and study different species (mice, rats, non-human primates, and humans, the latter including both healthy volunteers and patient populations).

https://irp.nida.nih.gov/organization/tamb/

Molecular Neuropsychiatry Research Branch



Jean Lud Cadet, MD Chief

The Molecular Neuropsychiatry Research Branch investigates cellular and molecular mechanisms of neurodegeneration and regeneration. Studies have focused on the role of oxidative stress, ER stress, and mitochondrial pathways in the pathogenesis of psychostimulant toxicity as well as in models of Parkinson's disease and strokes. The Branch also investigates the potential role of specific agents in the treatment of these disorders. We are also investigating the role of epigenetic modifications in methamphetamine (METH) addiction.

https://irp.nida.nih.gov/organization/mnrb/

Cellular & Neurocomputational Systems Branch



Geoffrey Shoenbaum, MD, PhD Chief

Cellular and Neurocomputational Systems Branch studies central nervous system (CNS) function at the cellular, behavioral and neural systems level, spanning from mice, to rats, to humans, focusing on basic science and clinical questions. This includes physiological properties of cells, biochemical mechanisms and pathways, effects of drugs and neurotrophic factors, neuroanatomical methods, electrophysiology, neuroimaging, neuromodulation, and computational techniques.

https://irp.nida.nih.gov/organization/cnsb/

Behavioral Neuroscience Research Branch



Yavin Shaham, PhD Chief

The mission of the Behavioral Neuroscience Branch is to characterize the behavioral and neurobiological mechanisms of drug reward and relapse to drug use, as assessed in animal models.

https://irp.nida.nih.gov/organization/bnrb/

Neuroimaging Research Branch



Yihong Yang, PhD Chief

The goal of the Neuroimaging Research Branch (NRB) is to better understand the neurobiological antecedents of illicit drug use and addiction, the neuronal consequences of short and long-term drug use and the potential reversibility of these neuroadaptations. The major paradigm employed towards this goal is the development and application of novel neuroimaging tools, predominantly MRI and PET based, applied together with behavioral, cognitive and pharmacological manipulations and genetic investigations in both preclinical and human based protocols.

https://irp.nida.nih.gov/organization/nrb/

Integrative Neuroscience Research Branch



Marisela Morales, PhD Chief

The Integrative Neuroscience Branch conducts research at the cellular, molecular, and systems levels to identify the neural substrates upon which drugs of abuse act to produce long-term alterations in behavior and brain function.

https://irp.nida.nih.gov/organization/inrb/



CORE Facilities

- Confocal and Electron Microscopy Core
- Genetic Engineering and Viral Vector Core
- Histology & Imaging Core



Shiliang Steven Zhang, PhD CORE Manager



Christopher Richie, PhD CORE Mnager

https://irp.nida.nih.gov/organization/core-facilities/____



National Institutes of Health

https://www.nih.gov/research-training



are available with all 27 research institutes and centers

including



https://www.nih.gov/research-training

The Clinical Center (Residents/Fellows)

Clinical Fellowships

 NIH provides clinical fellows with the opportunity to be mentored by world renowned physicians, participate directly in cutting-edge investigational protocols, and rotate to some of the nation's finest academic medical centers within the Washington, DC region for additional clinical training

https://www.cc.nih.gov/training/gme1.html

The Clinical Center (Residents/Fellows)

NIH Residency Elective Rotations (REP)

- This program is open to residents and clinical fellows enrolled in an ACGME-accredited training program in the United States (e.g., Rutgers)
- Participants gain direct experience in the care of patients enrolled in investigational protocols in a variety of disciplines (listed on the website)
- Participants also gain exposure to the design, conduct, and management of investigational protocols, including clinical trials

https://www.cc.nih.gov/training/physician_electives.html

The Clinical Center (Residents/Fellows)

FDA Rotations

 Provides clinical research fellows at the NIH with a short-term training experience at the FDA that includes: educational modules on FDA regulations related to drug development, tutorials on how to prepare an Investigational New Drug (IND) application, and tutorials on therapeutic area-specific drug development guidelines

> www.cc.nih.gov/sites/nihinternet/files/internetfiles/training/pdfs/fdarotation.pdf

The Clinical Center (Medical Students)

Medical Research Scholars Program

- A year long research immersion program for future clinicianscientists that advances health by inspiring tomorrow's leaders in medicine and biomedical research
- Students engage in basic, clinical, or translational research investigations, and are offered diverse professional development opportunities, mentorship, and advisement

https://www.cc.nih.gov/training/mrsp

Graduate Partnerships Program (Graduate Students)

- This program focuses on students pursuing degrees in: PhD, DPhil, PharmD, DrPH, PsyD, MD/PhD, or DVM/PhD
 - Eligibility requirements vary by IC
- Graduate students work within one of the NIH Institutes or Centers (ICs) in the NIH Intramural Research Program while in a professional or graduate school program

https://www.training.nih.gov/research-training/grads/gpp/

Academic Internship Program (Graduate Students)

- This program allows students to train at NIH during the school year
- These are research positions within one of the NIH Institutes and Centers (IC) in the NIH Intramural Research Program
- Students often work part-time while going to school, but participants may work full-time under some circumstances

https://www.training.nih.gov/researchtraining/pb/aip_pb/

Lasker Clinical Research Scholars Program (Early Career)

- An intramural-extramural partnership that supports a small number of exceptional, next generation clinical researchers in the early stages of their career
- Lasker Scholars can receive clinical research funding for up to 10 years
 - **PHASE 1**: Scholars will receive appointments for 5-7 years as tenure-track investigators within the NIH Intramural Research Program with independent budgets
 - **PHASE 2:** Scholars can receive up to 3 years of NIH support for their research at an extramural research facility or they can remain as an investigator within the intramural program
 - www.nih.gov/research-training/lasker-clinical-research-scholars

NIH Postdoctoral Fellowships (Early Career)

- This program is for recent doctoral degree recipients interested in further developing their research skills while exploring research and research-related careers. These are full-time research positions in one of the NIH Institutes and Centers (IC) in the NIH Intramural Research Program.
- Postdocs work in research groups directed by a Principal Investigator (PI)
- NIH offers research opportunities in the biomedical, behavioral, and social sciences with opportunities to explore basic, translational and clinical research

https://www.training.nih.gov/research-training/pd/
NIH RESEARCH OPPORTUNITIES

NIH Postdoctoral Fellowships (Early Career)

The Office of Intramural Training and Education (OITE) recommends that

you learn more about:

- The Intramural Research Program
- The mission of each NIH IC
- Their campuses
- And the specific focus of work performed

...before applying for Intramural Research Training Award

https://www.training.nih.gov/research-training/pd/



National Institute of General Medical Sciences

MOSAIC Program to Promote Faculty Diversity

NIH RESEARCH OPPORTUNITIES

National Institute of General Medical Science

The MOSAIC program (Postdocs)

- Part of NIH's efforts to enhance diversity within the academic biomedical research workforce
- Designed to facilitate the transition of promising postdoctoral researchers from diverse backgrounds, including individuals from groups underrepresented in the biomedical research workforce at the faculty level, into independent faculty careers in research-intensive institutions

https://www.nimhd.nih.gov/programs/extramural/training-career-dev/mosaic-program.html



There are many more research opportunities available at NIH

Check out individual ICs for more information

https://www.nih.gov/research-training



Talk to NIH investigators and program officers at meetings and conferences

Anyone going to SfN?

https://www.nih.gov/research-training



Not attending SfN... but still want to check out NIH?

Consider the OSNAP Award

- Designed to recognize those who are conducting exceptional neuroscience research across the nation and have great academic potential in their scientific training.
- Directors of graduate or postdoctoral fellowship programs nominate candidates from their programs for consideration
- Mentors may also nominate candidates from their research groups



OSNAP is sponsored by:

- National Center for Advancing Translational Sciences (NCATS)
- National Eye Institute (NEI)
- National Institute on Drug Abuse (NIDA)
- National Institute on Deafness and Other Communication Disorders (NIDCD)
- National Institute of Dental and Craniofacial Research (NIDCR)
- National Institute of General Medical Sciences (NIGMS)
- National Institute of Mental Health (NIMH)
- National Institute of Neurological Disorders and Stroke (NINDS)



The OSNAP Award includes:

- An invitation to visit NIH in person at the Bethesda, MD campus for an Award Symposium where awardees share their science, meet with NIH leadership, investigators, program staff and research trainees to learn about the unique resources and research conducted in the Intramural Research Program (IRP)
- The opportunity to give a brief talk and present a poster about their own research
- The opportunity to meet Program Officers from institutes of interest to learn about extramural funding opportunities



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- National Institute on Drug Abuse (NIDA)
- National Institute on Deafness and Other Communication Disorders (NIDCD)
- National Institute of Dental and Craniofacial Research (NIDCR)
- National Institute of General Medical Sciences (NIGMS)
- National Institute of Mental Health (NIMH)
- National Institute of Neurological Disorders and Stroke (NINDS)

NIH NIDA IRP RESEARCH OPPORTUNITIES

Scientific Director's Fellowship for Diversity in Research (Recent Graduates)

- Supplements the NIH Postbac Fellowship Program
- The SDFDR is a research fellowship experience that prepares a diverse group of scholars for the demands of research so that they excel in graduate or professional (medical, dental, pharmacy) school and are highly competitive for future opportunities in the field of addiction science
- Applications are open all year

https://irp.nida.nih.gov/diversity-initiatives/sd-fellowship-diversity/

NIH NIDA IRP RESEARCH OPPORTUNITIES

Scientific Director's Fellowship for Diversity in Research (Recent Graduates)

- The program utilizes a cohort design and is tailored to meet each group's needs
- SDFDR Fellows meet monthly--they choose the topics and guest presenters
 - Opportunities for group outreach projects

https://irp.nida.nih.gov/diversity-initiatives/sd-fellowship-diversity/



Explore the NIH website Check out each IC Look at the labs



If a lab or PI interests you, email them,



Think about what you love to do

A Conversation with a PI



What type of environment do you need to thrive?







What type of environment do you need to thrive?

...Not what you want

...Not what you think you need

...What do you actually need to be successful?



Be professional



View failure as a learning opportunity



Understand what you need to be successful

NIH RESOURCES

- Office of Intramural Training & Education
- NIH Library
- Employee Assistance Program

https://www.training.nih.gov/





Careers ~

Research Training ~

Professional Skills ~

Well-being ~ Events ~ About OITE ~

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Office of Intramural Training and Education

Helping trainees and fellows develop scientific, professional, wellbeing, and resilience skills.





Professional Skills >

- Career readiness
- Communication
- > Ethics and responsible conduct

- > Teaching and mentoring
- > Leadership and management
- > Well-being and resilience

fellows develop scientific, professional, wellbeing, and resilience skills.





Careers →

- Career counseling
- > Educational advising
- Career exploration & readiness
- > Online career resources

- > Job listings
- Post a job
- Create an account to book an appointment

Career counseling or educational advising

Book a career counseling or educational advising appointment







Well-being →

- > Becoming a Resilient Scientist series
- Mental Health and Well-being of Biomedical Researchers series
- Skills and discussion groups

- Individual well-being advising
 - > NIH trainee affinity groups
 - Other OITE well-being activities
 - > More NIH programs and resources
- scientific, professional, wellbeing, and resilience skills.

UVUUUN





<u>Home</u> > Upcoming OITE events



NIH Library nihlibrary.nih.gov

RESOURCES

Databases Databases List Micromedex ^I Lexicomp 🗗 PubMed @ NIH Scopus 🗗 Embase 🖻 UpToDate 🗹 Web of Science □^{*} Journals

Journals Search

JAMA 🗗

Journal of Biological Chemistry [□]

NEJM 🗗

Nature 🖻

PNAS 🖻

Science 🗹

Other Research Tools

Browse by Subject

eBooks Search

Online Catalog

Subject Guides

Equipment, Software, & Tools

HHS Digital Library

Renew Books

NIH Library

nihlibrary.nih.gov

SERVICES

Library Services	Facilities
3D Printing	Green Efforts
Bibliometrics	Library Workspaces
Bioinformatics Support	Log In and Remote Access
Data	
Document Delivery	Self-Service Photocopy
Editing	
Informationist Program	
Literature Search	
Multimedia	
Protocol Support	
Systematic Reviews	
Training Program	
Translations	





https://ors.od.nih.gov/sr/dohs/HealthAndWellness/EAP/Pages/index.aspx

HEALTH AND WELLNESS

There are many dimensions to a healthier you

We all possess an abundance of personal and professional potential waiting to be unleashed. EAP takes a holistic view of the individual, helping you to examine lifestyle choices so you can maximize your physical, emotional and occupational wellbeing. Our Consultants collaborate with you to establish a commitment toward change, set specific goals and suggest appropriate resources to meet your needs.

We provide consultation on issues including:

- ✓ Addictions (chemical and behavioral)
- ✓ Assertiveness and Communication Skills
- ✓ Financial Wellness
- ✓ Mental Health
- ✓ Motivation Enhancement
- ✓ Personal Etiquette
- ✓ Self Care
- ✓ Stress Management

WORKING EFFECTIVELY

Give your career a boost

Are you seeking more satisfaction in your work? Perhaps you could be better organized, more focused and productive. EAP can partner with you to target the most effective strategies for change, help you develop a plan and provide support to reach and sustain your career goals, ultimately increasing work satisfaction.

We provide consultation on issues including:

- ✓ Assertiveness Skills
- ✓ Being a New Manager
- ✓ Career Transition
- Communication Strategies
- ✓ Managing Conflict
- ✓ Return to Work
- ✓ Time Management
- ✓ Workplace Etiquette

WORK/LIFE BALANCE

Life can pull you in many directions

Your wellbeing, health and happiness depend on balancing your responsibilities at work and at home. Improving your work/life balance can be a challenge as issues can occur unexpectedly and generate added stress in your life. EAP can provide strategies and resources to help you define priorities, improve assertiveness skills, make tough decisions and identify personal goals that can enhance the balance in your life. 5

We provide consultation on work/life issues including:

- ✓ Assertiveness Skills
- ✓ Caregiver Issues
- Family and Significant Relationships
- ✓ Financial Stress
- ✓ Parenting
- ✓ Stress Management
- ✓ Time Management

LIFE'S TRANSITIONS

EAP helps you navigate life's transitions

Adapting to transition is a normal part of life. Change has become so rapid today that navigating personal or work-related transitions can be increasingly complex. Rapid change naturally increases anxiety and stress. EAP Consultants are here to assist you in working through challenging circumstances and emotions at any stage of your professional or personal life.

EAP provides consultation on a variety of transitions including:

- ✓ Career Transition
- ✓ Family Transitions (birth, marriage, school, work)
- ✓ Grief and Loss
- ✓ Human Development and Aging
- ✓ Relocation Stress
- ✓ Retirement-Life Planning

CONTACT INFO



443-695-4734

irp.nida.nih.gov

cbrann@intra.nida.nih.gov

NIH Biomedical Research Center 251 Bayview Blvd, Suite 200 Baltimore, MD 21224







QUESTIONS

https://irp.nida.nih.gov/





THANK YOU

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