

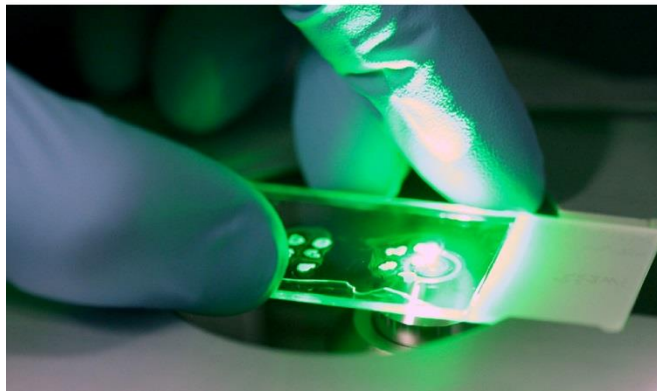


National Institute of  
Neurological Disorders  
and Stroke

# Meet The NINDS

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CNCDP webinar  
February 12, 2020



# Overview

- I. NIH 101
- II. Types of Training Awards
- III. Important Resources
- IV. (Hopefully) Helpful Tips

I.

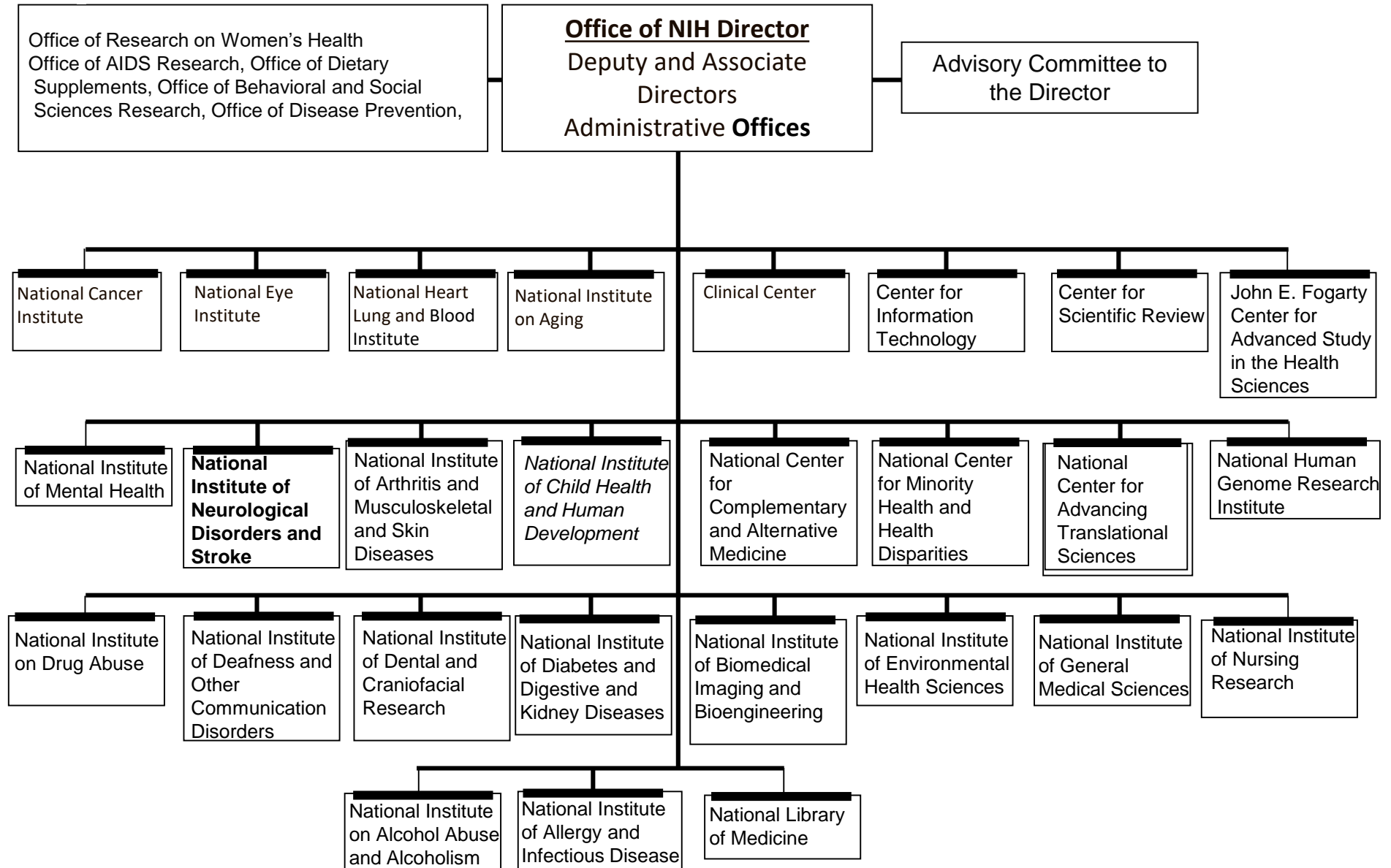
**NIH 101**

# What does NIH do?

NIH's mission is to **seek fundamental knowledge** about the nature and behavior of living systems and the **application of that knowledge** to enhance health, lengthen life, and reduce illness and disability.

(emphasis added)

# NIH Organization



# National Institutes of Health

- Intramural Research – Research laboratories and NIH Clinical Center on NIH campus in Bethesda, MD
- Extramural Research – Research done by investigators located at institutions outside NIH and located in USA and throughout the world, supported by NIH grant awards



II.

## Types of Training Awards



# NINDS Supports Clinician Researchers on their Path to Success

NINDS programs help to prepare the skilled, creative and diverse biomedical research workforce of tomorrow



## Predoctoral Training/Clinical Doctorate

- Fellowships (T32, F30/F31/F32)

## Postdoctoral Training/Clinical Residency

- Research Education Grants (R25)
- StrokeNet Training
- Loan Repayment Programs (LRP)

## Early Research Career Development

- Clinician Research Awards (K08/K23, K22, K01)
- Independent Scientist Award (K02)
- Career Development (K12)

## Independent Research

- Research Project Grant (R01)



# Early Career Funding Mechanisms

## FEEDING “THE PIPELINE:”

- T award: pre- and post-doctoral (institutional)
- F award: post-doctoral fellows (individual)
- R25 award: residents (institutional)
- K award: early faculty (institutional, national, individual)

# T Awards (Highlights)

- T32 - Institutional NRSA Training Grants
  - support advanced predoctoral students and postdoctoral fellows
- Candidates apply via their institution, may be reviewed by NINDS/NIH

# F grants

- F30 - Individual NRSA for MD-PhD or Other Dual-Doctoral Degree Students
- F31 - Individual NRSA for PhD Students
- F31 - Individual NRSA for Diversity PhD Students
- F32 - Individual NRSA for Post-Doctoral Fellows
- F99/K00 - NIH Blueprint Diversity Specialized Predoctoral to Postdoctoral Advancement in Neuroscience (D-SPAN) Award

# R grants

- R25 for Residents and Fellows – awarded to the institution
- Candidates apply via their institution, may be reviewed by NINDS/NIH
- Example (for neurologists, neurosurgeons, neuropathologists, neuroradiologists, ED in training )
  - Alex wants to do research in Dr. Smith's lab
  - Alex's institution has an R25 program
  - Alex submits an application to the institution's R25 committee, which then passes it along to NINDS for review

# NINDS K Awards: Post-doctoral to Faculty Transition

- K01: **Postdoctoral Career Development Award** (Individual)
- K22: **Advanced Postdoctoral Career Transition Award** to Promote **Diversity** in Neuroscience Research (Individual)
- K22: Career Transition Award for **NINDS Intramural Clinician-Scientists** (Individual)
- K99/R00: NIH **Pathway to Independence Award** (Individual)

# NINDS K Awards: Clinician Research Career Development

- K12: Child Neurology Career Development Program (National)
- K08: Mentored Clinical Scientist Research Career Development Award (Individual)
- K23: Mentored Patient-Oriented Research Career Development Award (Individual)

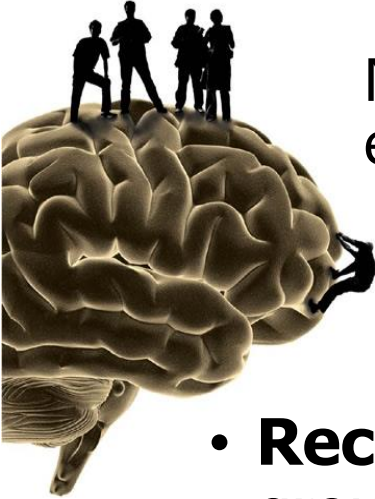
# NINDS K Awards: Additional Early Faculty Research Career Development

- Early Faculty Award
  - K01: **Faculty Development** Award to Promote **Diversity** in Neuroscience Research (individual)
- K02: **Independent** Scientist Award (individual)
  - NINDS treats this as a transition to an R01, unlike other Institutes



# Diversity

# Why Diversity Matters to NINDS



NINDS is dedicated to a biomedical research environment that reflects the nation's diversity

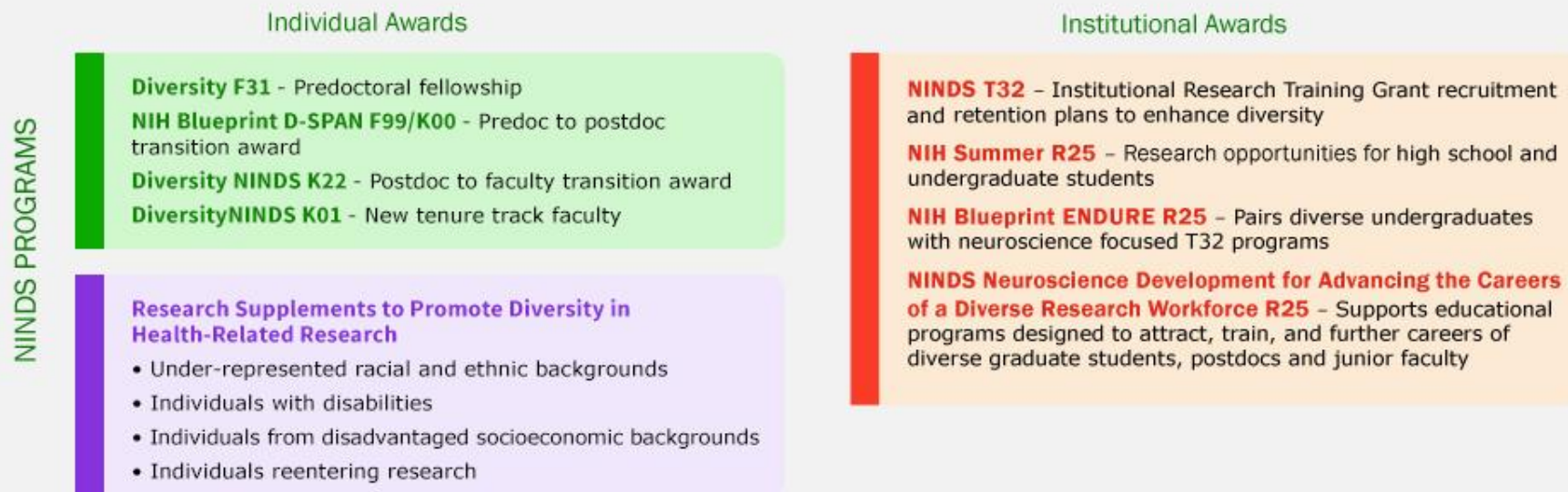
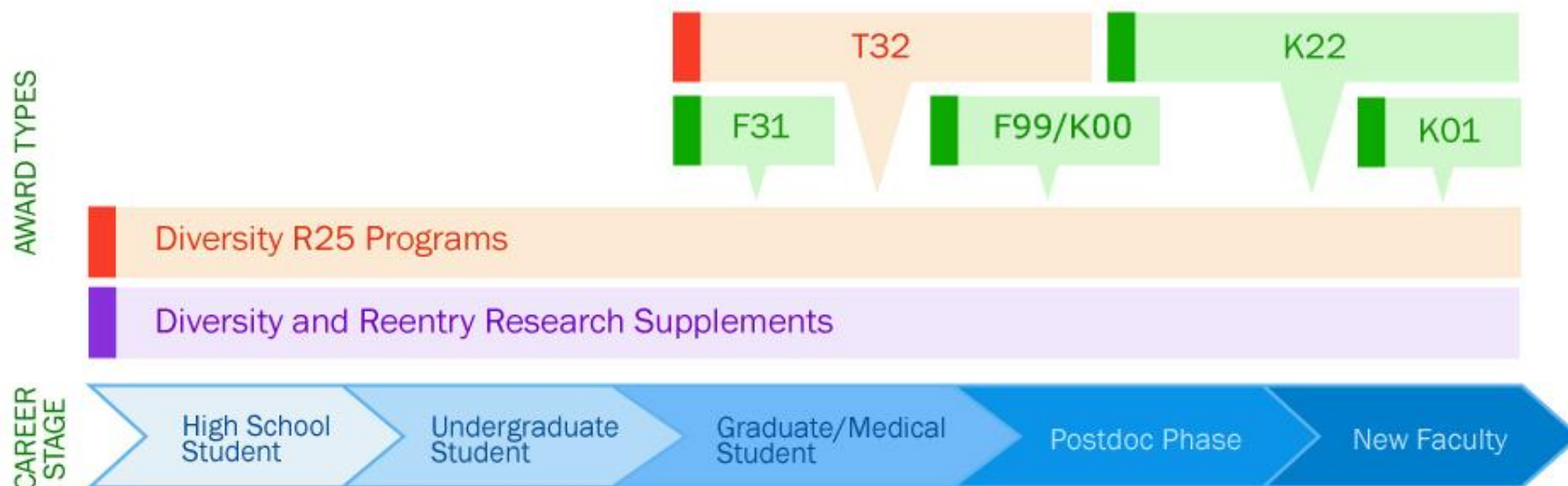
- **Recruitment** of most talented researchers from all groups
- **Improvement** in quality of training environment
- **Balanced perspective** in setting research priorities
- **Improvement** of capacity to recruit subjects from diverse backgrounds into clinical research protocols
- **Improvement** of capacity to address health disparities

# NIH Definition of “Diversity”

- Individuals from **underrepresented racial and ethnic groups**
- Individuals with **disabilities**, who are defined as those with a physical or mental impairment
- Individuals from **disadvantaged** backgrounds (socially, culturally, economically, or educationally)

Only applicable to high school and undergraduate candidates

# NINDS DIVERSITY SCIENTIFIC TRAINING AND CAREER OPPORTUNITIES



III.

## Important Resources

# <https://researchtraining.nih.gov/career-path>



About DBRW

Career Path

Programs

Institute/Program Matrix

Resources

Undergraduate

Graduate/Doctorate

Postdoctoral/Residency

Early Career

Established Investigator

## Career Path

[RTCD Home](#) > Career Path

NIH programs help to prepare  
the skilled, creative and diverse  
biomedical research workforce of  
tomorrow



Undergraduate and  
Postbaccalaureate  
Education

Predocutorial Training/  
Clinical Doctorate

Postdoctoral Training/  
Clinical Residency

Early Research Career  
Development

Investigator  
Development and



### Undergraduate Education

Engaging in research projects outside the classroom during undergraduate years is important.



### Early Career

The main goal for these early career researchers is to establish themselves and their teams as experts in their fields of research.

## Research Portfolio Online Reporting Tools

<https://report.nih.gov/index.aspx>

- Discover ongoing projects in your research area
- Know potential collaborators/competition in the field
- Determine which NIH study sections review applications in specific fields
- Determine if there are potential projects eligible for a supplement opportunities



# National Research Mentoring Network –<https://nrmnet.net>

## NRMN's Programs by Career Stage

● Program Available

● Program Under Development

Program statuses as of 2017

<b>MATCHING /LINKING</b>	Undergraduate	Graduate	Postdoc	Junior Faculty	Senior Faculty	Non-faculty Researcher	Administrator
Guided Virtual Mentorships	●	●	●	●	●	●	●
MyNRMN	●	●	●	●	●	●	●
Near Peer Mentoring	●	●	●				
Virtual Collaboratory			●	●	●	●	
<b>TRAINING</b>							
Career Coaching		●	●				
Facilitator Training				●	●	●	●
Grant Writing Coaching Groups			●	●	●	●	
Mentor Certifications				●	●		
Research Mentee Training	●	●	●	●			
Research Mentor Training		●	●	●	●	●	●
Shark Tank			●	●	●	●	
Institutional Mentoring Academy Planning							●
<b>REFERRING</b>							
Career Development Webinars	●	●	●	●	●	●	●
NRMNet Portal	●	●	●	●	●	●	●
<b>PROMOTING</b>							
NRMN Ambassadors	●	●	●	●	●	●	●

# NIH Loan Repayment Programs

## Loan Repayments for Clinical Researchers from Disadvantaged Backgrounds

### *Summary*

- Up to \$35,000 per year in educational loan repayment depending on debt level
- Coverage of most Federal taxes resulting from the NIH LRP
- 2 Year initial contracts with 1 or 2 year competitive renewal contracts
- NIH Institutes and Centers fund approximately 1,600 researchers each year
- Applicant success rate is 50 percent



# NIH CSR Early Career Reviewer (ECR) Program

- One of the best ways to build your grant writing skills is to serve as a reviewer
- The NIH Center for Scientific Review (CSR) [Early Career Reviewer \(ECR\) program](#) was developed to
  - train qualified scientists without prior CSR review experience so that they may become effective reviewers
  - help emerging researchers advance their careers by exposing them to peer review
  - enrich the existing pool of NIH reviewers by including scientists from less research-intensive institutions as well as those from traditionally research-intensive institutions
- Prior NIH funding is NOT a requirement

<https://public.csr.nih.gov/reviewerresources/becomeareviewer/ecr/pages/default.aspx>

# NINDS Clinical Trials Methodology Course

- **Identify promising junior investigators** in clinical neurosciences, **provide a rigorous foundation** in design, funding, conduct, monitoring/ oversight, ethical performance, reporting of patient-oriented clinical research
- **Promote ongoing professional career development** before, during, and after program
- Tracks: Foundations, Advanced, Biostatisticians

For more information:

<https://nett.umich.edu/training/ctmc>

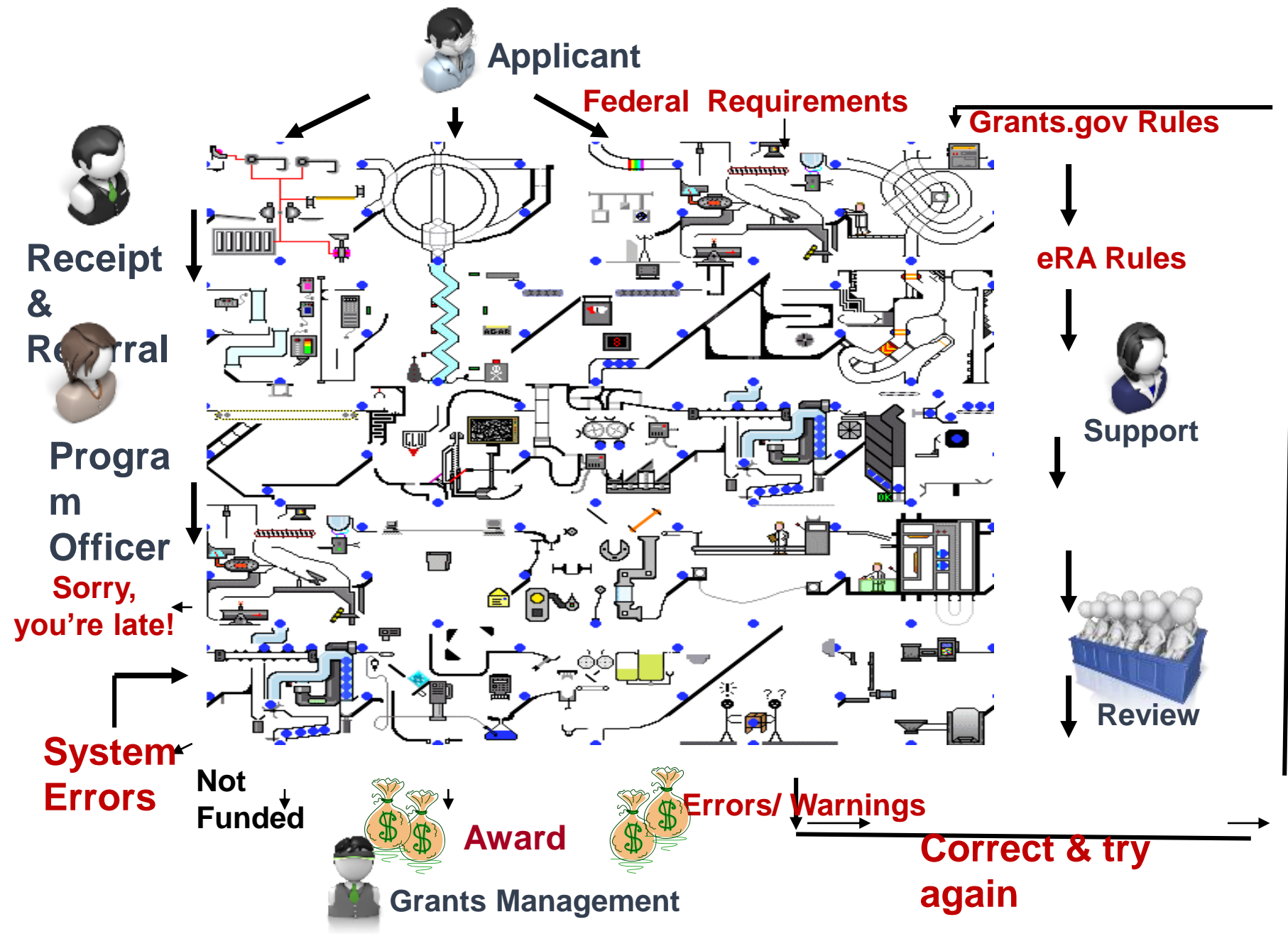


Supported by NIH/NINDS, administered by Univ. of Michigan, Univ. of Iowa, Los Angeles BioMed/UCLA and led by investigators & program directors from NETT/SIREN, StrokeNET, NeuroNEXT and ADAPT-IT

# Writing a grant application

# Definitions

- **Grant:** A support mechanism providing money, property, or both to an eligible entity to carry out an approved project or activity
- All applications are in response to a **Funding Opportunity Announcement:** RFA (Request for Applications) or PA (Program Announcement)





# NIH Funding - Reality



# Essential Ingredients

- Motivation
- A great mentor
- Some (really) good ideas
- Flexibility
- Motivation
- A great mentor

# First step: Questions

- **WHY** you want to do the work
- **WHAT** you want to do
- **HOW** you want to do it

???

# Basic steps

- Identify a mentor
- Identify an idea
- Figure out where to submit – lots of options
  - Intramural funds
  - Foundations
  - Government agencies

# Applications: general components

- Specific Aims page
- Research strategy
- Biosketches
- Facilities
- Budget & justification
- Personnel
- Human subjects
- Vertebrate animals
- Others

# What To Include In Grant Applications

- Develop premise
  - Foundation upon which current study is based
  - Evaluate the rigor of prior work
- Include statistics!!!!
- Report rigor
  - *Appropriate* controls
  - Blinding
  - Randomization
  - Sample size calculations
  - Inclusion/exclusion criteria
- Include sex as a biological variable

# Core Review Criteria

- Significance
  - Investigator
  - Innovation
  - Approach
  - Environment
- 
- For training grants: Training Plan





IV.

(Hopefully) Helpful Tips

# New and Early-Stage Investigators

*Definition of Early-Stage Investigator:* An individual who qualifies as a New Investigator and is within 10 years of completing his/her terminal research degree or is within 10 years of completing medical residency

*Early-Stage Investigator Applying for R01 or DP2 grants*

- ***Receive special attention at Review (career stage) and at National Advisory Council (high program priority)***
- ***No imposed reductions in duration and amount of awards (beyond the recommendations of the initial review group)***
- ***Increased payline for scored R01 applications from Early-Stage Investigators***

# What To Include In Grant Applications

- Develop premise
  - Foundation upon which current study is based
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http://ninds.buzzsprout.com/


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Suggested Sites

NIH NINDS



Building up the Nerve





# NINDS's Building Up the Nerve

NINDS

Building Up the Nerve is a podcast from the National Institute of Neurological Disorders and Stroke for neuroscience trainees that takes you through the life cycle of a grant from idea to award at NINDS with the people who make it happen. We know that


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## Episode 1: Get to Know NINDS

OCTOBER 18, 2019



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## Webinar on How to Get Involved in Clinical Research at any Stage of Professional Development



January 30, 2020 To January 30, 2020

Contact: Adam Hartman

Contact Email: [adam.hartman@nih.gov](mailto:adam.hartman@nih.gov)

[Related Resources](#)

<https://www.ninds.nih.gov/News-Events/Events-Proceedings/Events/pediatric-clinical-research-webinar>



**PLEASE CONTACT US!!!!**

*NIH Institutes use the basic NIH funding mechanisms in different ways*

- The NIH is organized into 27 Institutes and Centers (ICs), each of which is charged with sponsoring training and research in specific, albeit overlapping, areas of science relevant to their “**mission**”
  - **Different missions & priorities**
  - **Different budgets**
  - **Different ways of deciding which grants to fund**

# Take-home Points

1. There has never been a better time to be in your position (in terms of science).
2. Pay attention to the fundamentals: rigorous scientific thought processes, important scientific questions.
3. You can't get funded if you don't apply.
4. Focus on your work – ignore the noise (it's all cyclical anyway).
5. You are only in a protected environment for a limited amount of time. Enjoy it! Don't squander the opportunity.
6. Mentor “down” and “up.”
7. Try to build a sense of community amongst like-minded investigators.

Thank you! Thank you!

Thank you!

Thank you!

Thank you!