Most of us have served as instructors where we teach nursing students the basics of the ABCs airway, breathing, and circulation in patient care. This first presentation is designed to share with you the basics of NIH Funding Mission, Mechanisms, and Science

First, find a fit with the mission of NINR or another institute or center commonly referred to in the land of government acronyms as IC.

Second identify the appropriate funding mechanism for your application

Third get your team and your science together and ready for submission
In this presentation, we will be

Identifying the NINR Mission Statement – all grants supported by NINR must fit with the mission of NINR. For example, a study of burnout among nursing hospital staff DOES NOT fit the NINR mission – it is more appropriate for another Federal agency, the Agency for Healthcare Quality and Research. You will learn throughout this workshop about the roles of PD one of which is to assist in determining the “mission fit” of your study’s specific aims.

List NINR Research and Training Mechanisms. In this presentation, we will review the research and training mechanisms through which NINR $ are awarded; moreover, during our time together today you will have the opportunity to determine which research or training mechanism might be most appropriate for you and your idea you submitted.

Describe the basic lifecycle of an NINR Grant Application. In this presentation we will also have a brief overview of the grants process and subsequent presentations will provide additional detail.
NINR is one of the 27 Institutes and Centers, aka IC, institutes and centers at the National Institutes of Health. Each IC has a specific mission, you can view the mission of any IC on the IC website.

This is NINR’s mission.

–any application supported by NINR, must fit the current NINR mission. One of the roles of the PD is to assist you in determining whether your research fits the mission of NINR.

Mission Fit, the first of our ABCs
These are a few of the areas of research emphasis within the current NINR strategic plan.

Within these areas NINR’s science offers a rich mix of topic areas that can be viewed in the context of diseases and disorders, phases of the lifespan, as well as population groups. Health promotion and disease prevention form the keystone of our science, reflecting our current scientific understanding of effective approaches to maintaining optimal health.

Improving quality of life is the ultimate goal of research in the fields of self-management, symptom management, and caregiving. Self-Management includes the Early identification of symptoms as well as Behaviors that support adherence and self-care.

Symptom Management studies work to identify Causative mechanisms - including but not limited to genetic biomarkers – and Interventions to improve response to treatments and symptom management.

Eliminating health disparities is essential if the entire population is to benefit from improved promotion and prevention strategies, as well as new interventions. NINR supported studies investigate how Inequities in access to treatment and differences in response to treatment present challenges to the well-being of our nation’s individuals, families and communities.

Also, research on the end of life – an important field for which NINR has been designated the lead Institute of all 27 IC at NIH – is unique and in many ways a cross-cutting, area of research and clinical science that is ripe for young
Training & Education

Graduate Partnerships Program (GPP) NINR Summer Genetics Institute (SGI)

F32 Ind. Post-doc Awards T32 Inst. Post-doc Awards R01 support under PIs NINR SGI K99/R00 Pathway to Independence Awards

Career Development (K) Awards NINR SGI

F31 Individual Pre-doctoral Awards T32 Institutional Pre-doc Awards R01 support under PIs NINR SGI

Career Development (K) Awards NIH Research Awards targeted to New Investigators NINR SGI

Bachelor’s Degree (senior year) Pre-Doctorate Post-Doctorate New Investigators Career Researchers
NINR is one of the IC within NIH. NINR, like the other IC solicits applications through funding opportunity announcements, aka FOA.

First Funding Opportunity Announcement (FOA) is an umbrella term for the award mechanisms. So you will always be responding to an FOA no matter the type. The FOA is going to detail the information you need to submit an application as well as the review criteria the reviewers will use in evaluating your application. An FOA will include the application due date, the approximate amount of set-aside funds (if applicable), any restrictions for cost or years of support, any special terms and conditions that may be placed on the award if the application is selected for funding, whether or not you can submit a multiple pd/pi application in response to the FOA. It will also list the contact information for scientific, review or fiscal questions.

Parent announcements cover standing interests and are investigator initiated – they include – many of the Research Project Grants or rpg mechanisms, and training grants including fellowships and career development awards

Applications submitted in response to parent announcements don’t cover all of the science NINR like to support. So NINR will issue additional FOAs to fill in the gaps. Program Announcements (PAs) describe new, continuing or expanded program interests of an Institute or Center (IC), or announce the availability of a new mechanism of support. Program announcements call for applications with a specific scientific focus. These are usually open for applications for a couple of years.

NINR will also narrow the requests even further, using for example a Request for Applications or RFA. Requests for Applications (RFAs) are solicited applications in a well-defined scientific area to accomplish a scientific program purpose for the IC. RFA generally have a set aside of money, are in effect for a specific receipt date, and list in the announcement or FOA, an estimate of the number of awards which are anticipated to be made under the RFA. They are often reviewed by a special review panel convened to review these applications in the specific science area.

For both the PA and the RFA you have a program director listed whom you can contact for additional guidance and information.
This is a screen shot of NINR website where you can find PA.
This is a screen shot of FOA.
Taking a brief look at the NIH Grant Cycle of a grant which subsequent presentations will go into much greater detail about. Essentially, you as the PI of your grant work with your research team, consult a program officer, to develop and institutional business office to submit the grant to NIH for scientific review. Once the grant is reviewed the review group writes a summary of the discussion or summary statement. The second level of review for RPG occurs at council, while F Series awards are reviewed in the Office of the Director. If an award determination has been made GM send you a Notice of Award and you will begin managing your grant. It sounds simple and we will review the nuances of these three major steps throughout our time together today. When you think of the review staff and program and grants management, think of the prototypical venn diagram with overlapping responsibilities.
Training Awards

- Ruth Kirschstein Individual National Research Service Award (NRSA)
  - F31 Pre-doctoral
  - F32 Post-doctoral
- NRSA Institutional Training (T32) allows institutions to provide financial support for pre and post doctorates

Let's begin by talking about the training and career development awards, then discuss the research project grants…

The F31 is designed to help ensure that highly trained nurse scientists are available in adequate numbers and in appropriate research areas to carry out the NINR mission.

The F32 supports developing scientists with a doctoral degree who want to broaden their scientific background and extend their potential for research.

The T32 is designed to enable institutions to make NRSA awards to individuals for predoctoral and postdoctoral research training in specified areas. There is a distinction between individual and institutional training awards. With an individual or F award, you are the PI, work with a mentor to write the application. With an institutional or T award, the institution writes the application gets the $$ and appoints you to the grant.
Individuals who are early in their postdoctoral research career may be eligible for one of the K Series or career development awards.

The overall goal of NIH-supported K Series career development programs is to help ensure that a diverse pool of highly trained scientists are available in adequate numbers and in appropriate research areas to address the Nation's biomedical, behavioral, and clinical research needs.

The K01 is designed to provide for a period of additional mentored research experience with an expert investigator for career enhancement or to gain expertise in a new area. The trainee *Must spend a minimum of 75% effort on research and research career development. An additional award mechanism has been set up for individuals from underrepresented or disadvantaged backgrounds, K01* The purpose of the NINR Mentored Research Scientist Development Award for Underrepresented or Disadvantaged Investigators (K01) is to provide support and protected time of three years for an intensive, supervised career development experience in the biomedical, behavioral, or clinical sciences leading to research independence.

**K01: Mentored Research Scientist Award**

- Additional mentored research experience specialized in nursing research
- Career enhancement or learn new area of science for 3 years
- 75% of full-time professional effort years
- Must have Bachelor’s degree or higher in nursing

Award for underrepresented or disadvantaged Investigators
NINR’s K23: Mentored Patient-Oriented Research Career Development Award

Is designed to support the career development of investigators for 3 years of supervised study focusing on patient-oriented research. Patient oriented research is research in which the investigator directly interacts with human subjects.

This award is also designed to increase the pool of clinical researchers who can conduct patient oriented Studies.

Please note that former recipients of R01s are ineligible; however, those who have held R03s and R21s are eligible

75% of professional time must be devoted to goals of this award; up to $75,000 provided for full-time salary support
The objective of the NIH Pathway to Independence Award (K99/R00) initiative is to assist postdoctoral investigators in transitioning to a stable independent research position with NIH or other independent research funding.

NIH believes that the creativity and innovation of new independent investigators in their early career stages play an integral role in addressing our Nation’s biomedical, behavioral, and clinical research needs. The K99/R00 award will provide up to 5 years of support consisting of two phases. The initial mentored phase will provide support for up to 2 years for the most promising and exceptionally talented new investigators who have no more than 5 years of postdoctoral research training experience at the time of initial application or subsequent resubmission(s) and do not already have a full-time tenure track assistant professor position (or equivalent). This initial phase of mentored support will allow the candidate time to obtain additional training, complete research, publish results, and bridge to an independent research position. The candidate must propose a research project that will be pursued during the K99 phase and transition into an independent project during the R00 phase of the award. The candidate and mentor(s) together will be responsible for all aspects of the mentored (K99 phase) career development and research program. An individual may submit an application from an extramural or intramural sponsoring institution/organization that has a rich and extensive research program in the area of interest as well as the faculty, facilities and resources to support the proposed research endeavor. The individual must select an appropriate mentor with a track record of funded research related to the selected research topic and experience as a supervisor and mentor. The sponsoring institution must ensure that the candidate has the protected time needed to conduct the proposed research.

Following the mentored phase, the individual may request up to 3 years of support to conduct research as an independent scientist at an extramural sponsoring institution/organization to which the individual has been recruited, been offered and has accepted a tenure-track full-time assistant professor position (or equivalent). This support is to allow the individual to continue to work toward establishing their own independent research program and prepare an application for regular research grant support (R01). Support for the independent phase, however, is not automatic and is contingent upon being accepted by an appropriate extramural institution and the successful NIH programmatic review of the individual’s mentored phase of the award.

Information describing all NIH Career Development Award programs can be found at the OER Website we will view at the end of this presentation.
## R15: Academic Research Enhancement Award

- Stimulates research in institutions that have not been major recipients of NIH funding
- Support small health-related projects
- Up to 3 years funding with maximum of 300,000 in direct costs per period
- Renewable through competitive renewal mechanisms.

R15, is designed to stimulate research in educational institutions that provide baccalaureate or advanced degrees that have not been major recipients of NIH support, to support small-scale health-related research projects. Eligible institutions are those that have less than $6 million from NIH – students must be a part of the grant application.

All $ up front and must parse out.

http://grants.nih.gov/grants/funding/area.htm is the URL FOR INELIGIBLE INSTITUTIONS
R21, is designed to encourage exploratory and developmental research projects in early stages of development. Are highly innovative and lead to a major impact. The R21 may to an R01. It is for 2 year awards with maximum of $275,000 in direct costs. Not renewable.
The R01 is the original and historically the oldest grant mechanism used by the NIH to support health-related research and development. R01s can be investigator-initiated or can be in response to a Funding Opportunity Announcement (FOA).

The Research Project Grant (R01) is an award made to an institution/organization to support a discrete, specified, circumscribed project to be performed by the named investigator(s) in areas representing the specific interests and competencies of the investigator(s). The R01 research plan proposed by the applicant institution/organization must be related to the stated program interests of NINR.

The NIH awards R01 grants to organizations of all types (universities, colleges, small businesses, for-profit, foreign and domestic, faith-based, etc.). Although the Project Director/Principal Investigator writes the grant application and is responsible for conducting the research, the applicant is the research organization.

NINR is especially interested in applications from individuals who are designated as new investigators to consider submitting smaller budget R01 applications - especially those which use a modular budget, which Mr. Albertini will discuss.

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<th>R01: Research Project Grant</th>
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<td>• Support of a discrete project with a potential major impact</td>
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<td>• Maximum 5 years</td>
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<td>• Requires data based on experience of investigator</td>
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<td>• Applications can be renewed by competing for additional project period</td>
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A **New Investigator** is an NIH research grant applicant who has not yet been awarded a substantial, competing NIH research grant. For example, a Program Director/Principal Investigator (PD/PI) who has previously received a competing NIH R01 research grant is **NOT** a New Investigator. However, a PD/PI who has received a small grant (R03) or an Exploratory, Developmental Research Grant Award (R21) retains status as a New Investigator. The New Investigator and Early Stage Investigator designations are only applicable for R01 applications. A new investigator who is within 10 years of receiving their doctoral degree is called an early stage investigator or ESI. ESI is essentially a New Investigator who is early within their career.

Applications from ESIs and New Investigators are identified to reviewers so that appropriate consideration of their career stage can be applied during review.

Applications from ESIs and New Investigators are “clustered” during review to enable evaluation as a group and distinguish from Established Investigators.

An application with more than one Principal Investigator is identified for consideration of ESI/NI by reviewers only if ALL of the listed Principal Investigators qualify as New Investigators.

Staff in the NIH institutes and centers are apprised of ESI and New Investigator status and this factor is considered when applications are selected for award.

If questions….

**Significant independent NIH research grant:** Any NIH research project grant other than the following small or early stage research grants:

- Pathway to Independence Award-Research Phase (R00)
- Small Grant (R03)
- Academic Research Enhancement Award (R15)
- Exploratory/Developmental Grant (R21)
- Clinical Trial Planning Grant (R34)
- Dissertation Award (R36)
- Small Business Technology Transfer Grant-Phase I (R41)
- Small Business Innovation Research Grant-Phase I (R43)
- Shannon Award (R55)
- NIH High Priority, Short-Term Project Award (R56)

Current or past recipients of non-mentored career awards that normally require independent research support (K02, K05, K24, and K26) are not considered new investigators.

Instrumentation, Construction, Education, or Meeting Awards

- G07, G08, G11, G13, G20
- S10, S15
- X01, X02
- R25
- C06, UC6
- R13, U13

In order to address both the duration of training and to protect the flux of new investigators, the NIH announced a new policy in fiscal year 2009 involving the identification of Early Stage Investigators (ESIs) (see the Section on Early Stage Investigators below). ESIs are New Investigators who are within 10 years of completing their terminal research degree or within 10 years of completing their medical residency at the time they apply for R01 grants. Applications from ESIs will be given special consideration during peer review and at the time of funding. Peer reviewers will be instructed to focus more on the proposed approach than on the track record, and to expect less preliminary data than would be provided by an established investigator.

**ESI is essentially a New Investigator who is early within their career.**
Principal Investigators on NIH research grants may apply for administrative supplements to existing grants for the support and recruitment of underrepresented or disabled minority investigators and students. These supplements typically pay salaries with some funds available for supplies and travel. Funding decisions for these "Minority Supplements" are made approximately three months from receipt of a complete application. Applicants are encouraged to contact the program director of the existing R01 prior to submission.

Underrepresented minority students and investigators are defined as individuals belonging to a particular ethnic or racial group that has been determined by the grantee institution to be underrepresented in biomedical or behavioral research. Nationally, individuals found to be underrepresented include, but are not limited to, United States citizens who are African American, Hispanic American, Native American, and natives of the U.S. Pacific Islands.

The proposed research experience must be an integral part of the approved ongoing research of the parent grant. The minority individual must be given the opportunity to interact with individuals on the parent grant, to contribute intellectually to the research, and to enhance research skills and knowledge regarding the particular area of biomedical science. The Principal Investigator must demonstrate a willingness and understanding that the purpose of the award is to enhance the research capability of the minority student or faculty member and that the research experience is intended to provide opportunities for minority individuals to develop as independent, competitive research investigators.
My hope is that you are now able to identify the mission of NINR, list several NINR research and training mechanisms as well as describe the general process of a grant application. Other PD, as well as SRO, and GM staff will get in greater depth with their presentations, but first are there any brief general questions about anything that may need clarification before Dr. Lois Tully comes forward to share additional details in her Tips for Writing a Successful Grant Application?

Great questions, Dr. Lois Tully, will share her presentation on writing a successful Grant application. Dr. Tully.