

National Institutes of Health



Grant Writing for Success

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2011 NIH Regional Seminars, Phoenix

"Anatomy" of Grant Process



Grant Writing for Success

Writing the Application:

Start early



- Seek advice from colleagues
 Start with a good idea
- Talk to your NIH Program Official(s)
- Use the NIH webpage (www.nih.gov)
- Remember review criteria
- Follow instructions carefully

What Determines Which Grants Are Funded?



Components of a Successful Grant Application

Strong Idea Strong Science Strong Application

Principles of Success

Understand the peer review process Understand the agency mission - Every IC is different! Secure collaborators (mentors) to complement your expertise and experience – Don't compete ... *collaborate!* Learn and practice the skills of writing applications for grant funds



Understanding the Mission

- Mission of each NIH IC is based and defined in law
 - Authorizations (create/continue an agency
 periodic)
- Appropriations (\$ for the agency annual)
 ICs establish specific research emphases

 Legislative mission
 Current state of science

 Use the Web to find out!

www.nih.gov



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Home				Email this page				
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Quick Li	nks	Offices						
OD	NIDA	SUAL INCO	The Office of the Director (OD)					
NCI	NIEHS		The Office of the Director is the central office at NIH for its 27 Institutes and Centers. The OD is responsible for setting policy for NIH and for planning, managing, and coordinating the programs and					
NEI	NIGMS	* HEND	activities of all the NIH components. OD's program offices include the Office of AIDS Research and the Office of Research on Women's Health, among others. more >					
NHLBI	NIMH							
NHGRI	NINDS	NIH Institu	Ites					
NIA	NINR	NATIONAL	National Cancer Institute (NCI) - Est. 1937 NCI leads a national effort to eliminate the suffering and death due to cancer. Through basic and clinical biomedical research and training, NCI conducts and supports research that will lead to a future in which we can prevent cancer before it starts, identify cancers that do develop at the earliest stage, eliminate cancers through innovative treatment interventions, and biologically control those cancers that we cannot eliminate so they become manageable, chronic diseases. more >					
NIAAA	NLM	institute.						
NIAID	CIT							
NIAMS	CSR							
NIBIB	FIC							
NICHD	NCCAM		National Eye Institute (NEI) - Est. 1968 NEI conducts and supports research that helps prevent and treat eye diseases and other disorders of vision. This research leads to sight-saving treatments, reduces visual impairment and blindness, and improves the quality of life for people of all ages. NEI-supported research has advanced our knowledge of					
NIDCD	NCMHD							
NIDCR	NCRR							
NIDDK	CC		how the eye functions in health and disease. more >					
NIH Directors			National Heart, Lung, and Blood Institute (NHLBI) - Est. 194	itute (NHLBI) - Est. 1948				
Institute and Center leaders		National Heart	NHLBI provides leadership for a national program in diseases of the heart, blood vessels, lung, and blood; blood resources; and sleep disorders. Since October 1997, the NHLBI has also had administrative responsibility for the NIH Woman's Health Initiative. The Institute plans, conducts, fosters, and supports an integrated and coordinated program of basic research, clinical investigations and trials, observational studies, and demonstration and education projects. more >					
Mailing Addresses for NIH Institutes and Centers		Lung and Blood Institute						

^ top



National Human Genome Research Institute (NHGRI) - Est. 1989

NHGRI supports the NIH component of the Human Genome Project, a worldwide research effort designed to analyze the structure of human DNA and determine the location of the estimated 30.000 to 😜 Internet

🕄 100% Ŧ ^

Identifying NIH Initiatives

 Most NIH Institutes establish specific research Initiatives and Priorities

 Funding Opportunity Announcements (FOAs)

Must respond to a FOA via Grants.gov

NIH Guide for Grants and Contracts

 Official publication listing NIH funding opportunities and policy notices

- Request for Applications (RFA)
- Program Announcements (PA, PAR, PAS)
- Request for Proposals (RFP)
- Notices (NOT)
- Published weekly

NIH Guide for Grants and Contracts



Funding Opportunities and Notices

The **NIH Guide for Grants and Contracts** is the official publication for NIH medical and behavioral research grant policies, guidelines and funding opportunities. <u>Definitions and More Information</u>...

Search the NIH Guide for:

- Active RFAs (Requests for Applications)
- Active PAs (Program Announcements)
- Recent Notices (Released in Last 12 Months)

Inactive & Active Announcements (use Advanced Search)

With Announcement # or Keywords: (Optional)

Search Advanced Search

Search Help

http://grants.nih.gov/grants/guide/index.html

Identify NIH Funded Grants

See what Research Projects the NIH or any Institute has funded

Find Potential Collaborators for your Project

<u>Research Portfolio Online</u> <u>Reporting Tool (RePORT)</u> <u>http://report.nih.gov/index.aspx</u>

- A searchable database of federally supported biomedical research
- Access reports, data, analyses, expenditures, results of NIH supported research activities
- Identify, analyze IC research portfolios, funding patterns, funded investigators:
 - Identify areas with many or few funded projects
 - Identify NIH-funded investigators and their research
 - Identify potential mentors/collaborators







NIH RePORTer

U. S. Department of Health & Human Services											
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Reports, data and analyses of nih research activities RePORT EXPENDITURES & RESULTS (RePORTER)											
	HOME	FREQUENTLY REQUESTED REPORTS	REPORTS C	ATEGORICAL SPENDING	RePORTER	GLOSSARY	FAQs	LINKS			
Home > RePORTER > Query Form											
NIH 5/16/10 Release Note: All subproject records now bear the name of the organization to which the parent multi-project grant was awarded. <u>View Release Note</u> ABOUT RePORTER Image: Comparison of the organization of the parent multi-project grant was awarded. <u>View Release Note</u>									R 🕜		
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http://projectreporter.nih.gov/reporter.cfm

Application Development Strategy Act (Plan)



Think





So WHY Plan?

You're more likely to get ... A compelling scientific question Appropriate NIH Institute Appropriate review committee Adequate time to complete – A major stress reducer! ...a better grant application

Pre-Submission Planning Timeline



Remember ... Before you start

Talk to Program Staff at appropriate IC
 Read instructions for application form
 SF 424 R & R

Know your audience

– Which Integrated Review Group (IRG) is most likely to get your application?

 Propose research about which you are passionate and totally committed to doing







Does it address an important problem?
Will scientific knowledge be advanced?
Does it build upon or expand current knowledge?

Is it feasible ...

- to implement?
- to investigate?



Grant writing is a learned skill

- Writing grant applications, standard operating protocols and manuals of procedures that get approved are learned skills
- Writing manuscripts that get published in peer reviewed journals is a learned skill
- Grantsmanship is a full time job
 - Learn about the grant application process



Searching NIH web sites is a good start ... but follow up with personal contact Contact NIH program staff early Ask what information would help them advise you about IC interest & "goodness of fit" Are there related FOAs?



 Collaborate with other investigators - Fill gaps in your expertise and training - Add critical skills to your team "Team Science" can be powerful



Multiple Principal Investigators

Single PI model does not always work well for multi-disciplinary, collaborative research
Recognizes contributions of full team
In place for most submissions to *Grants.gov*Implications for "New Investigator" status
A complex issue – *Talk to NIH program staff if you are considering multiple Pls !*

grants1.nih.gov/grants/multi_pi



Show your draft application to a colleague

 Show your draft application to a colleague who does not already know what you intend to do

 Show your draft application to a colleague who is not your best friend



Your draft reviewers need to understand – What you intend to do – Why you believe it is important to do - Exactly how you are going to do it If they don't get it, you must revise your application Leave enough time to make revisions



Good Presentation

3 Simple Steps:

 Read the application instructions carefully

- Read the application instructions carefully
- Don't forget …

... read the application instructions carefully

- Good ideas, clearly presented
- Align your application with the new review guidelines to maximize impact:
 - Significance
 - Investigator
 - Innovation
 - Approach
 - Environment



Specific Aims

Grab the reader immediately
 State long-term objectives AND expected impact
 Explicitly state hypotheses and research question



Preliminary Studies/Progress Report

- How previous work -- by you, your team, and others -- leads to this study
- Demonstrate your experience, competence and likelihood of continued success
- Must flow logically from literature review and major themes of the problem area



Approach

- Does your plan flow logically from the literature review and prior studies?
- How will each hypothesis be evaluated?
- Do your measures capture the variables needed to test hypotheses?
- Why did you choose those measures?
- Methods and analyses must match



Approach

- For clinical studies be explicit and thorough in discussing
 - intervention or system to be studied
 - target population
 - inclusion and exclusion criteria
 - independent and dependent variables
 - all measures and instruments
 - power analyses



Some Common Miscues:

Failure to ...

Document why the problem is important

Distinguish empirical findings from speculation

Critically analyze key themes in literature

Consider alternative perspectives

Read, understand, and cite the crucial studies



Align with Review Criteria

1) Overall Impact (Address on Specific Aims page)

2) The 5 core review criteria:

- Significance
- Investigator
- Innovation
- Approach
- Environment

http://grants.nih.gov/grants/guide/n otice-files/NOT-OD-09-025.html



Good Presentation

OVERALL IMPACT

- The likelihood for the project to exert a sustained, powerful influence on the research field(s) involved:
 - in consideration of the following five core review criteria, and
 - additional review criteria (as applicable for the project proposed)

Alignment of Application Format with Scored Review Criteria

Scored Review Criteria	Application
Significance	Research Strategy
	a. Significance
Investigator(s)	Biosketch
	Personal Statement
Innovation	Research Strategy
	b. Innovation
Approach	Research Strategy
	c. Approach
Environment	Resources
	Environment


SIGNIFICANCE Does this study address an important problem? If the aims are achieved, how will scientific knowledge be advanced? What will be the effect on concepts or methods that drive this field?



INVESTIGATOR

Are the investigators appropriately trained and well suited to carry out this work?
Is the work proposed appropriate to the experience level of the principal investigator and other researchers?
Does the investigative team bring complementary and integrated expertise to the project (if applicable)?



INNOVATION Does the project employ novel concepts, approaches or methods? Are the aims original and innovative? Does the project challenge existing paradigms or develop new methodologies or technologies?



APPROACH

 Are the conceptual framework, design, methods, and analyses adequately developed, well-integrated, and appropriate to the aims of the project?

Does the applicant acknowledge potential problem areas and consider alternatives?



ENVIRONMENT

Ooes the scientific environment in which the work will be done contribute to the probability of success?

On the proposed experiments take advantage of unique features of the scientific environment or employ useful collaborative arrangements?

Is there evidence of institutional support?



Be realistic ... not overly ambitious Discuss potential problem areas Discuss possible solutions - Explain rationale for your decisions Be explicit Reviewers cannot read your mind ... Don't assume they know what you intend

Other Review Considerations Human subjects Animal care and use Select agents Model organism sharing plan Data sharing plan



Good Review

Get to the right review group

- Title, abstract, specific aims all point to the main goals of your project
- Attach a cover letter for the Center for Scientific Review Division of Receipt and Referral
 - suggest IC and review group assignment*
 - outline areas of key expertise needed for appropriate review
 - do not name specific reviewers

Consult with Program Official



Good Review

Understand the dynamics of peer review: Reviewers will review many applications Make your application easy to read and easy to understand The impact and significance should be clear throughout the application Convince them to be your advocate - Get them on your side!

Common Reasons Cited for a Weak Application Lack of or weak impact Significance not obvious or weak Too ambitious, lacking focus Unclear or flawed hypothesis Feasibility unsupported Poor writing Applicant track record weak or lacking appropriate expertise Approach flawed

Hallmarks of an Outstanding Grant Application

- Strong significance to an important problem in public health: IMPACT is high
 - High degree of novelty and innovation
- Strong track record by a well qualified applicant
- Clear rationale
- Relevant and supportive preliminary data
- Clear and focused approach that provides unambiguous results
- Careful attention to details
 - Fonts, clarity of data, error bars, spelling, etc

How to assure that your grant gets funded? Good ideas, well presented always win Think clearly Write clearly Be complete but not verbose Never lose sight of the significance Point to the impact Pay attention to details

Where Do I Get More Information?

NIH homepage: <u>http://www.nih.gov/</u>

NIDDK (or any Institute): http://www.niddk.nih.gov/

CSR website: <u>http://www.csr.nih.gov/</u>



Additional supporting material

WHEN THE GRANTS GO AWAY

nature

PROFILE SLEEPEDWEA

Top 10 Common Reviewer Concerns

....or How Not To Get DINGED!





There is not a CLEAR HYPOTHESIS, or WELL DEFINED GOALS

Provide a focused hypothesis, objectives

- Describe the importance and relevance of your problem
- Be clear on how your project will move the field forward



Hypothesis: The proposed research seeks to examine the relationship between neurotransmitter A and neurotransmitter B signaling in Brain Region of Interest and in vivo electrophysiological measures of Brain ROI output during the transition from chronic morphine exposure to morphine withdrawal... additionally seeks to determine whether putative Brain **ROI** projection neurons exhibit altered basal and behaviorally-correlated firing profiles during these states... finally seeks to determine whether the observed behavioral, neurochemical, and neurophysiological indices associated with morphine dependence and withdrawal are dependent on Neurotransmitter A projections to the Brain ROI.



SA #1: Examine alterations in Brain ROI neurotransmitter A and neurotransmitter B efflux in response to acute morphine challenge and withdrawal in morphine-dependent rats

SA #2: Examine alterations in *Brain ROI* single-unit neuronal activity in response to acute morphine challenge...

SA #3: Determine the sensitivity of withdrawalassociated *neurotransmitter A* efflux, single unit neuronal activity, and withdrawal-associated behaviors to lesions of the *neurotransmitter A* afferent inputs



Grant 1



Reviewer Comments:

- 1. This application appears to lack a hypothesis driven from a specific mechanism.
- 2. Enthusiasm ... dampened by the lack of a specific mechanism

3.the proposal begins to look more like a collection of experiments where the applicants are simply listing experiments according to their expertise in specific techniques

4.overambitious nature of the project



The specific aims do NOT TEST the Hypothesis, or the specific aims DEPEND on results from previous aims

The best proposals are those with independent specific aims that address your hypothesis using different approaches



Hypothesis: The increase in brain receptor subunits after chronic morphine is an adaptation to reduced tonic neurotransmitter release in the brain region of interest and elevates the threshold for opioid analgesia.

Objective: Study is to design opioid-based pain relief paradigms with extended analgesic efficacy and reduced risk of abuse.

Purpose: To determine whether these brain receptors are good targets for "antitolerance" drugs





SA #1: Determine the anatomical location(s) of chronic morphine-induced changes in *brain receptor* subunit levels

SA #2: Examine the role of *brain receptor subunits* in opioid-induced behaviors other than analgesia

♦ R01

Requested \$225,000 direct costs / 5 years







Reviewer Comments:

- 1. Unfortunately, several of the experiments proposed do not directly test the hypothesis and may or may not aid in our further understanding of opioid tolerance.
- 2. ..it is not clear whether such changes would correlate with anti-nociceptive function
- **3.** ...there is a lack of preliminary data determining whether such studies can be accomplished and whether any significant changes can be measured
- 4. ..the literature reports 15 to 20 different mechanisms demonstrating the inhibition of opioid anti-nociceptive tolerance, yet none of these are addressed
- 5. ...studies proposed in aim 2 lack rationale



The proposal is NOT MECHANISTIC, or NOT SCIENTIFICALLY RELEVANT

 Do not propose correlative studies, propose strong associations

 Do not propose general observations, propose specific manipulations



Hypothesis: Sustained electrical activity enhances neuronal process X activity, targeting select proteins essential for synaptic vesicle neurotransmitter release and downregulating presynaptic output in neurotransmitter A neurons

Objective: To define the cellular pathways initiated during periods of increased electrical activity to induce subsequent decreases in synaptic output

Propose: Signal Transduction pathway 1 acts ultimately to phosphorylate and protect the key presynaptic targets of the process X structure





SA #1: Investigate the interplay between process X function and Signal Transduction 1 signaling in persistent neuronal plasticity

SA #2: Validate roles for the presynaptic proteins ABC1 and ABC2 in persistent neuronal plasticity

♦ R01

Requested \$225,000 direct costs / 5 years





- 1. ..the investigator presents an unrealistically simplistic picture of *Signal Transduction 1* signaling in neurons
- 2. The general experimental design relies on correlative studies of signaling systems that are highly complex, and which act at multiple levels.
- **3.** The anticipated outcomes are discussed only superficially and assume only that the experiments will turn out to support the investigator's hypothesis...many outcomes can be imagined
- 4. The paradigms still place the neurons in unnatural (nonphysiological) environments for extraordinarily long periods of time....this model system (cultured cells) reduces the significance of the project because the relevance to more realistic neuronal networks remains unclear
- ..experiments have been added which are outside the technical expertise of the investigator and for which preliminary data are not in hand



Hypothesis: Combined Treatment A/B group will have a greater reduction in substance use and better outcomes three months after study entry, and lower HIV risk from drug or sexual behaviors

Purpose: Examine the utility of a Combined Treatment A/B protocol in the [hospital] emergency department with persons at risk for drug addiction and its associated health consequences

SA #1: Determine the impact of a Combined Treatment A/B protocol on substance use, HIV risk reduction, health care utilization, and health status among persons at moderate or high risk for substance abuse seeking treatment in a [hospital] emergency department



Grant 4



Reviewer Comments:

- 1. The initial model of care is not different from the current practice....thus, it is not clear that this *Combined Treatment A/B protocol* will have an impact of identifying new patients who need counseling.
- 2. ..the significance of this *Combined Treatment A/B* application is compromised by the failure to integrate the intervention into existing practice.
- 3. The recruitment process is not based on a uniform screening protocol (lack of specifics on subject recruitment, interview process, support personnel, follow-up strategy).



This application is not APPROPRIATE for the GRANT MECHANISM

 A R21 is NOT a R01
 A Career Development Award (K) is NOT a Research Project Grant (R)



Hypothesis: Amphetamine-induced Behavior A targets Transcription Factor X to dendritic structures such as the spines of pyramidal cells or the dendrites of interneurons of the Brain ROI

SA #1: Amphetamine-induced *Behavior A* alters *Transcription Factor X* immunoreactivity in pyramidal neurons and/or interneurons

SA #2: Amphetamine-induced *Behavior A* targets *Transcription Factor X* to dendrites and spines that receive excitatory synapses







Reviewer Comments:

1. This proposalis somewhat novel, although mainly in the sense that no one previously has examined this issue before in the *Brain ROI*. However, in essence this question reflects more of an incremental advance in our knowledge as opposed to the novel ideas targeted by the R21 mechanism.



The proposal is **OVERLY AMBITIOUS**

 Set realistic goals for the budget and project period you propose



PRELIMINDARY DATA is lacking

 Include preliminary data for all aims
 Use preliminary data to show knowledge of methods and data analyses

 But DO propose more than just confirming preliminary results



I'm not sure that the Investigator can do the PROPOSED EXPERIMENTS

 Don't propose what you can't do
 Include Collaborators and Consultants on your project

 Describe the value of datasets and experimental models


The background section is MISSING KEY publications and experimental findings

Thoroughly describe the literature, especially controversies, but

Support your views and ideas

Be sure you have found key references



Grant 6

Objective: Study is designed to revise and evaluate Intervention Model A for homeless adolescents

Purpose: Intervention Model A has been thoroughly developed and standardized for adults, but not as well for adolescents, and certainly not within existing services. This will be a stage I, early treatment development project, with the aim of refining *Intervention Model A* for homeless adolescents



Grant 6

SA #1: Refine the existing Intervention Model A [for adults] program to develop an integrated Intervention A and Intervention B treatment program for homeless adolescents presenting symptoms of substance use disorders and self-injury/suicidality

SA #2: Examine the feasibility of delivering the *new* Integrated Intervention program within the context of the [currently used] youth Intervention program recently developed for homeless adolescents

SA #3: Conduct a pilot study, comparing the new Integrated Invention program to Treatment-as-Usual in a randomized two group repeated measures design, assessing clients enrolled in [the currently used] homeless adolescent Intervention program who are experiencing substance abuse use disorder symptoms and suicidality/self-injurious behaviors



Grant 6

Reviewer Comments:



- 1. ..the application does not provide a balanced, critical review of *Intervention Model A* with substanceabusing adults, and why this approach would, in turn, be promising with homeless youth
- 2. ..there is an almost complete absence of focus on substance abuse or the integration of *Intervention Model A* [*previously*] adapted for this problem
- 3. Other more serious design problems include different assessment schedules, attendance burden, and discharge rules between the two conditions
- 4. ..inclusion criteria ...are extremely broad...would seem to introduce enormous heterogeneity to the sample selected
- What is not well-specified in the application is how the team will decide if the results of the trial warrant the move to a large efficacy trial.

#9 Concern

Experimental details, alternative approaches, or interpretation of data are INADEQUATELY DESCRIBED

Don't assume the reviewers know the methods
 Provide other experimental directions you might use should you encounter problems
 Show the reviewers that you have thought about your research plan



The Proposal is NOT RELEVANT to the MISSION of the Institute

 Don't try to make your application FIT the Mission of a particular Institute

Funded Applications





Hypothesis: Chronic drug exposure upregulates the expression of Factor X, which triggers and sustains the exocytotic trafficking and surface expression of functional Receptor A

Purpose: To investigate the molecular mechanisms for *Factor X*-induced *Receptor A* trafficking



SA #1: Determine the signaling pathways mediating *Factor X*-induced Receptor A trafficking

SA #2: Determine *Factor X* involvement in *drug*induced *Receptor A* trafficking

SA #3: Determine the synaptic sites of Receptor A trafficking and Receptor A-B interactions

SA #4: Determine the behavioral significance of emergent *Receptor A* and behavioral *Receptor A-B* interactions



Reviewer Comments:



- 1. Strengths are numerous and include novel and innovative hypotheses, sound experimental design using multidisciplinary approaches, a highly qualified investigator and research team, and a high likelihood of meaningful findings
- 2. Strengths include the significance of the central hypothesis, the well-designed experimental plan, supportive preliminary data
- 3. ..the rationale for the studies are clearly delineated, appropriate controls are in place, scope of the studies is appropriate, and there is ... complete discussion of possible limitations of some approaches and how findings will be interpreted



Objective: To use ... conceptual and statistical models to address challenges in the development of practical strategies for measuring the quality of community treatment programs

Purpose: To extend previous approaches to casemix adjustment for performance measurement, and the feasibility of valid outcomes-based performance measurement systems for *community treatment*.



SA #1: Test whether Treatment Program A demonstrates efficacy under experimental conditions relative to community-based care programs, can be translated to a set of community-based care programs, and is effective relative to a set of community-based care programs

SA #2: Identify program features associated with good client outcomes which might serve as indicators of the quality of community-based treatment programs

SA #3: Identify candidate quality indicators appropriate for assessing the performance of community-based care programs in serving key client subgroups



Reviewer Comments:



- The evaluation of Treatment Program A .. in real world settings, and the examination of efficacy, translational, and effectiveness outcomes in a single study represents a highly significant endeavor.
- 2. ..the approach to aim 1 is elegant
- 3. The study has the potential to address a major gap in treatment services research, and to guide diffusion of research-based practices to real world settings
- 4. The solid design and measurement aspects of the study and the innovative analytical approach ...make this an exciting application with the potential for high impact on the field

Three Simple Rules to remember when planning, writing and submitting your application



DO NOT write the application for yourself unless you are going to fund it yourself.

You MUST convince the <u>entire</u> review committee and the functing agency.



Reviewers are never wrong. Reviewers are never right. They simply provide an assessment of material that you provided in your application.

Don't take it personally!



The comments in the summary statement only list some of the weaknesses... not all of the weaknesses.

When you revise your application use the time as an opportunity to improve the entire application.





Funding Opportunities - sites with important information:

http://grants.nih.gov/grants/index.cfm

http://grants.nih.gov/grants/welcome.htm#introduction

http://deainfo.nci.nih.gov/funding.htm

http://deainfo.nci.nih.gov/extra/extdocs/grantrevprocess.h tm

http://www.niaid.nih.gov/ncn/grants/default.htm

http://www.niaid.nih.gov/ncn/grants/charts/default.htm

http://www.niaid.nih.gov/ncn/glossary/default.htm



Office of Extramural Research National Institutes of Health

About Grants Home

Funding Forms & Deadlines

just a few.

Grants Policy

News & Events

Many NIH Institutes put out guides and tip sheets on their Web sites. These guides can be useful resources. Here are

About OER

NIH Home

Search:

Grants Process & Data Grant Application Basics Grants Process Overview Types of Grant Programs How to Apply Peer Review Process Award Management **NIH Financial Operations**

Award Information & Data

Electronic Grants

Electronic Research Admin (eRA Commons)

- Applying Electronically
- Global OER Resources
- Glossary & Acronyms Frequently Used Links
- Frequent Questions

- All About Grants Including Grant Application Basics, How to Plan a Grant Application and How to Write a Grant Application.
 - Applying for an NHGRI Grant
 - <u>Choosing an Appropriate NIH Funding Instrument and Funding Mechanism</u> (MS Word 209 KB)
 - NIH Grants Information CD (PDF 51 KB)

Grant Writing Tips Sheets

- Peer Review Guidelines and Information
- Peer Review Meetings Meeting dates, descriptions, rosters, guidelines, etc.
- Preparing Grant Applications
- Quick Guide for Grant Applications
- Quick Guide for the Preparation of Grant Applications (Complementary and Alternative Medicine)
- SBIR/STTR Policy and Grantsmanship Information
- Tips for New NIH Grant Applicants
- Writing a Grant

Note: For help accessing PDF, RTF, MS Word, Excel, PowerPoint or RealPlayer files, see <u>Help Downloading Files</u>.

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Page Last Reviewed: April 12, 2007 Content Manager: GrantsInfo@nih.gov Technical Issues: E-mail OER Webmaster

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😜 Internet

grants1.nih.gov/grants/grant_tips.htm

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Glossary & Acronym List

For a complete list of acronyms only, go to Acronym List.

To Search this Page, use the Find Command (Ctrl-F).

Funding Opportunities Funding Opportunities (RFAs, PAs) & Notices

Unsolicited Applications (Parent Announcements)

Research Training & Career Development

Small Business (SBIR/STTR)

Contract Opportunities

grants.nih.gov/grants/glossary.htm

- A -

NIH Wide Initiatives	Term	Definition				
New Investigators Program	Academic Research Enhancement Award	Grant award that stimulates research at health professional academic institutions with less than \$3 million of NIH support in total costs in four or more of the last seven years.				
Multiple Principal	(AREA)	Go to <u>AREA</u>				
Genome-Wide Association Studies (GWAS)	Accession Number	Related to electronic submission of applications, the Accession number is the Agency tracking number provided for the application after Agency validations.				
NIH Roadmap for Medical Research	Account	The term "account," as used by the <u>NIH eRA Commons</u> , is a personal account that an individual would use to log into the NIH eRA Commons. An account is identified by a unique combination of username and password.				
NIH Blueprint for Neuroscience Research						
	Account Administrator	An Account Administrator (AA) is designated by an SO at a grantee organization to				
Global OER Resources	(AA)	facilitate the administration of <u>NIH eRA Commons</u> accounts. The AA can create, modify and/or remove the necessary accounts for these types: AO, AA, FSR, PI or ASST. Although the AA can create additional accounts, the AA cannot modify institutional				
Glossary & Acronyms						
requently Used Links		profile (IPF) information. The AA typically will be in the central research administration				
Frequent Questions	[once.				
	Acquisition	Obtaining supplies or services by the federal government with appropriated funds through purchase or lease. See <u>Contract - R&D</u> .				
	Active Grant	A grant that meets the following criteria is defined as an "active grant":				
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GAB Related Links

National Cancer Institute

http://www3.cancer.gov/admin/gab/links.htm

Office of Grants Administration (OGA)

(formerly the Grants Administration Branch)

http://www3.cancer.gov/admin/gab/links.htm

Grants Information:

- NCI's publication <u>"Everything you Wanted to Know About the NCI Grants Process But Were Afraid to Ask"</u> describes, in a
 general way, how a grant is awarded and administered. Although the discussion relates to the <u>National Cancer Institute</u> (NCI),
 the grants process is similar in the other <u>National Institutes of Health</u> (NIH) awarding components.
- A wealth of Information for NIH's New Grantees may be found in <u>NIH's Office of Extramural Research's (OER's)</u> "<u>Welcome</u> <u>Wagon" Letter</u>. The intent of this memorandum is to highlight key requirements, provide referrals to important sources of information available from <u>NIH</u>, and identify <u>NIH</u> and <u>Department of Health and Human Services (DHHS</u>) offices having responsibility for certain administrative functions.
- The <u>National Institutes of Health Grants Policy Statement (NIHGPS)</u> is intended to make available to NIH grantees, in a single document, up-to-date policy guidance that will serve as the terms and conditions of NIH awards.
- <u>NIH's Electronic Research Administration (ERA) Commons</u> is a virtual meeting place where NIH extramural grantee organizations, grantees, and the public can receive and transmit information about the administration of biomedical and behavioral research. The ERA Commons is divided into both unrestricted and restricted portions that provide for public and confidential information, respectively.
- <u>NIH Grant Funding Opportunities</u> <u>NIH's Office of Extramural Research (OER)</u> provides web accessible information about
 ongoing grant programs and special initiatives. <u>OER's funding opportunities web site</u> includes application kits, guidelines for
 applications for various types of grants and identification of appropriate contacts at the <u>NIH institutes and centers</u> that make
 awards.
- The <u>NIH forms and applications for Grantees</u> which are available online are maintained by <u>NIH's Office of Extramural Research</u> (OER).
- The <u>NIH Guide for Grants and Contracts</u> contains NIH notices, program announcements (PAs) and requests for applications (RFAs) and is maintained by <u>NIH's Office of Extramural Research (OER)</u>.
- DHHS's GrantsNet is a tool for finding and exchanging information about HHS and selected other Federal grant programs. It is part of the much publicized national movement toward providing government resources to the general public in a more



CONSUMER GUIDES FOR PEER REVIEW

Complete Guide Book to Peer Review

The NCI Consumers' Guide to Peer Review has been prepared to serve first as an introduction and orientation to the National Cancer Institute (NCI) and its Research Programs and second to define your role as a consumer in the Peer Review of applications that support extramural clinical/population-based research conducted by Cancer Centers, Cooperative Groups, Program Projects, and projects submitted in response to Requests for Applications (RFAs) and Program Announcements (PAs).

Cancer Dictionary for Peer Review

The NCI Consumers' Cancer Dictionary for Peer Review is deigned to provide concise definitions of technical terms frequently used in applications for NCI-sponsored investigator-initiated research. The terms include those commonly associated with the molecular biology of cancer, immunology, and clinical oncology. These definitions, in association with the review process, will increase your familiarity and understanding of the biology and clinical aspects of cancer. We hope this will facilitate and make your participation in the Peer Review process more meaningful.



National Institutes of Health (NIH)

Department of Health & Human Services (DHHS)



deainfo.nci.nih.gov/consumer.htm



deainfo.nci.nih.gov/extra/extdocs/gntapp.htm



Quick Links

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NIH RESOURCES Guide for Grants & Contracts Office of Extramural Research

OTHER LINKS

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OTHER CONTACTS Program Director's Roster

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These "All About Grants" tutorials help biomedical investigators, especially new ones, plan, write, and apply for the basic NIH research project grant, the R01. Our advice comes from the experience of NIAID staff, including former NIH grantees, and should be considered as opinion only. Differing opinions may exist.

We do not repeat instructions in the <u>PHS 398 grant application kit</u>. Before preparing an application for an NIH grant, read all instructions, and follow the directions.

Tutorial Web pages	MS Word	Adobe PDF	Translations
Grant Application Basics	MS Word	Adobe PDF	Español, Français
How to Plan a Grant Application	MS Word	Adobe PDF	Español, Français
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Find more information on the main Grants Funding page, including:

- Annotated R01 Grant Application
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The electronic Research Administration (eRA) provides information technology solutions and support for the full life cycle of grants administration functions for the National Institutes of Health (NIH), Operating Divisions of the Department of Health and Human Services and other federal agencies. eRA is in use by over 100,000 individual researchers and about 9,500 research institutions worldwide.

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<u>NIH will require electronic</u> <u>submission of FSRs.</u> July 27, 2007

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on the COMMONS COMMONS ALERT: Alert (7/20/2007): NIH Extends Deadline for R01 New Investigator, PAR-07-345 and PAR-06-294 Applications in Response to July 20, 2007 Submission Deadline These opportunities with submission deadlines of Friday, July 20, 2007 will have two extra business days (until Tuesday, July 24) to submit their applications. This extension applies to the July 20, 2007 submission deadline and these opportunities only. The change is being made to accommodate applicants that were unable to submit their applications due to a Grants.gov system failure that began late Thursday, July 19 and extended into Friday, July 20.

Version 2.10.1.4

Support Tip: We encourage you to take advantage of our new web support at <u>http://ithelpdesk.nih.gov/eRA/</u>. When requesting support please supply as much of the requested data as possible for faster service.

Electronic Submission Tip: Learn about the most frequent application errors at Avoiding Common Errors.

Primary Features of Commons include: About the Commons Status - Allows Principal Investigators to review the current status of all their grant applications and Commons Login 😮 Scope and Purpose review detailed information associated with their grants. Institution Officials (i.e., Signing Official (SO) or * indicates required field. Frequently Asked Questions Administrative Official (AO) associated with the institution) can see a summary view of grant Grantee Organization Registration Username * applications, review the Notice of Grant Award, and access the Progress Report face page. eRA Contacts eSNAP - Allows an institution to review non-competing grant data and submit a progress report Enter eRA NIH Commons Demo online. Password * NEW For Directors Pioneer Applications only. To submit a reference letter when requested by an Links applicant, please follow this link: Submit Reference Letter Commons Support Page Internet Assisted Review (IAR) - Allows reviewer to submit critiques and preliminary scores for CRISP Login Reset applications they are reviewing. Allows Reviewers, SRAs, and GTAs to view all critiques in preparation eRA Home Page Forgot Password? for a meeting. IAR creates a preliminary summary statement body containing submitted critiques for the Electronic Application Submission SRA or GTA. Grants.gov System Notification Financial Status Reports (FSR) - Allows electronic submission of financial information associated iEdison with a grant. Loan Repayment Program Administration - Provides the ability for an institution to create and manage user accounts National Institutes of Health associated with its institution. Additionally, it allows the institution's Signing Official (SO) to maintain the Public Access Policy Page institution information on file at the NIH. Demo Facility - Demo Facility allows you to try most of the capabilities of the NIH eRA Commons in a https://commons.era.nih.gov/commons/ the NIH Helpdesk which does not support the eRA Commons. Our contact information is as follows: Web: http://era.nih.gov Email: commons@od.nih.gov Phone: 301-402-7469/866-504-9552 (Toll Free) 301-451-5939 (TTY) Business hours M-F 7am-8pm EST. This will help us to help you better, thanks. [Contact Us/Help Desk | Privacy Notice | Disclaimer | Accessibility] National Institutes of Health (NIH) Department of Health © 2007 NIH All Rights Reserved 😜 Internet 🕄 100%

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