



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health



Grant Writing for Success

Anthony M. Coelho, Jr., Ph.D.

Review Policy Officer

Office of the Director, NIH

Office of Extramural Research



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health



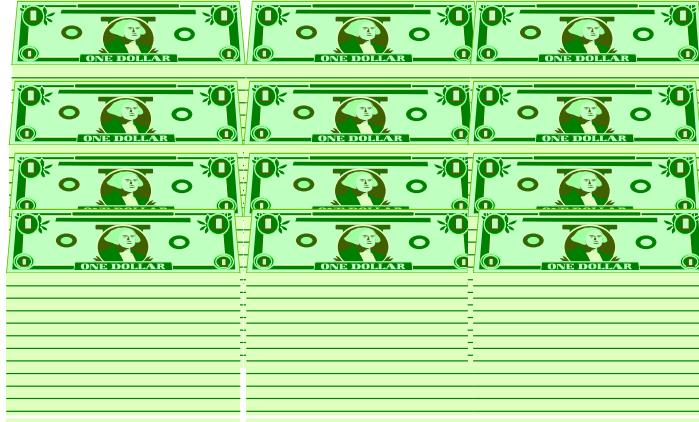
Objective: Help You Secure Funding for Research



What is available?

How to get some?

NIH 2003 Budget ~28 Billion



~25 Billion for Extramural Research

Anthony M. Coelho, Jr., Ph.D.

Previous Experience:

**Scientific Review Administrator and
Chief - Clinical Studies and Training**

Review Section - NHLBI **7 years**

Peer Reviewer **12 years**

NIH Funded Investigator **18 years**

DOE Funded Investigator **8 years**

and Other Federal and Non-federal Funding

Research Programs:

- Role of Diet, Exercise and Stress on Blood Pressure Regulation, Atherosclerosis and Cardiovascular Disease.
- Effects of Exposure to Electric and Magnetic Fields on the Central Nervous System

Collaborators and Co-Investigators

- 2 Biological Anthropologists**
- 2 Biostatisticians (and support staff)**
- 2 Experimental Psychologists**
- 3 Cardiovascular Physiologists (and labs)**
- 3 Pathologists (and labs)**
- 3 Lipid Biochemists (and labs)**
- 1 Nutritionists**
- 1 Exercise Physiologist (and lab)**
- 2 Electrical Engineers (and support staff)**
- 3 Veterinarians (and support staff)**
- Lots of technicians, Post-docs, Consultants**

Good Grantsmanship

Principles for Success:

- **Understand the Agency Mission**
- **Understand Peer Review**
- **Secure collaborators for areas in which you lack experience and training**
- **There are no competitors in science, there are only potential collaborators.**
- **Grant writing is a learned skill**
- **Grantsmanship is a full time job**
- **You are in control of your life**

Understanding the Agency Mission

Understanding the Agency Mission:

- NIH mission is based and defined in law
- Appropriations bills define expectations
- NIH must report to congress that it has complied with the legislative expectations
- NIH reports to congress on success
- NIH funding dependent on success and compliance with the legislative mandate
- NIH success based on the success of the scientists it supports
- NIH wants you to be a successful scientist

National Institutes of Health (NIH) - Netscape

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

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WHAT'S NEW

- ▶ [Brain Signal Boosts as Monkey Nears Reward](#)
- ▶ [Preventing Type 1 Diabetes](#)
- ▶ [Menstrual Irregularities Possible Forerunner of Osteoporosis](#)
- ▶ [Teens Often Choose Same Race Friends](#)
- ▶ [Combination Therapy for Prostate Enlargement](#)
- ▶ [Stem Cell Information Index](#)
- ▶ [More...](#)

Health Information
Publications & fact sheets, ClinicalTrials.gov, health hotlines, A-Z topic index, MEDLINEplus, other resources

Grants & Funding Opportunities
Grants news, Applications, grants policy, NIH Guide, award data, research training, research contracts, CRISP database

News & Events
In the News, press releases, calendars, radio & video, media contacts, special reports

Scientific Resources
Human Embryonic Stem Cell Registry, Intramural research, special interest groups, library catalogs, journals, training, labs, scientific computing

Institutes, Centers & Offices
The individual organizations that make up the NIH

About NIH
Visitor info, jobs, science education, employee directory, public involvement, policy issues, organization & mission, history, doing business with NIH, FOIA, Director's Page

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College Drinking Prevention

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National Institutes of Health (NIH)
Bethesda, Maryland 20892

Department of Health and Human Services

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NIH: Institutes, Centers & Offices - Netscape

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

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Institutes, Centers & Offices

Quick Links

- OD
- NCI
- NEI
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- NIDA
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- NCCAM
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- CC

NIH Directors
 Institute and Center leaders

Office of the Director (OD)
 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 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 >](#)

NIH Institutes

National Cancer Institute (NCI) - Established in 1937
 NCI leads a national effort to reduce the burden of cancer morbidity and mortality. Its goal is to stimulate and support scientific discovery and its application to achieve a future when all cancers are uncommon and easily treated. Through basic and clinical biomedical research and training, NCI conducts and supports programs to understand the causes of cancer, prevent, detect, diagnose, treat, and control cancer, and disseminate information to the practitioner, patient, and public. [more >](#)

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 how the eye functions in health and disease. [more >](#)

National Heart, Lung, and Blood Institute (NHLBI) - Est. 1948
 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 >](#)

cancer.gov - netscape

Location: http://www.nci.nih.gov/

cancer.gov

dictionary | site map | search

home | about NCI

cancer information | clinical trials | statistics | research programs | research funding

Cancer Survivorship

Research Programs

- NCI Research Priorities
- Research Portfolio
- Research Sponsored by NCI
- Research Conducted at NCI
- NCI Research Resources
- Partners in Research

Research Funding

- Funding Announcements
- Grant Application and Review
- Other Funding Organizations
- Scientific Programs and Contacts
- Training and Education Funding
- Research Policies

Cancer Information

- Types of Cancer
- Treatment
- Prevention, Genetics, and Causes
- Screening and Testing
- Coping with Cancer
- Support and Resources
- Cancer Literature
- PDQ

Clinical Trials

- Finding Clinical Trials
- Types of Cancer
- Conducting Clinical Trials
- Understanding Clinical Trials
- Recent Developments
- Clinical Trial Results
- Educational Resources

Statistics

- Understanding Statistics
- Data Sources
- Statistics by Cancer Type

Advanced search

Highlights from ASCO 2002

New U.S. Cancer Trends Announced

Past Highlights

news center

1-800-4-CANCER
 Cancer Information Service

help

- Cancer.gov Help
- FAQs
- Index of NCI Sites

resources

- Publications Locator
- NCI Calendar of Scientific

Cancer.gov - Research Programs - Netscape

File Edit View Go Communicator Help

Bookmarks Location: http://www.nci.nih.gov/research_programs/

NATIONAL CANCER INSTITUTE **cancer.gov** dictionary site map search

home about NCI cancer information clinical trials statistics research programs research funding

research programs

NCI Research Priorities

- Plans and Priorities for Cancer Research
- Progress in Cancer Research (Progress Review Groups)

Research Portfolio

- Directory of NCI supported research projects organized by type of cancer and scientific topic

Research Sponsored by NCI

- Extramural Research...
 - Behavioral Research
 - Cancer Biology
 - Cancer Centers Program
 - Cancer Control and Population Sciences
 - Drug Discovery and Development
 - Prevention
 - Treatment and Diagnosis

Research Conducted at NCI

- Intramural Research...
 - Basic Sciences
 - Clinical Sciences
 - Epidemiology and Genetics

NCI Research Resources

- Animal Resources
- Databases
- Drugs, Chemicals, Biologicals
- Human Specimen Resources

Partners in Research

- Industry
- Health Professional Organizations
- Consumers/Advocates

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resources

- Publications Locator
- NCI Calendar of Scientific

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Cancer.gov - Research Funding - Netscape

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research funding

Funding Opportunities

Funding Announcements

- Program announcements (PAs)
- Requests for applications (RFAs)
- Requests for proposals (RFPs)
- Research initiatives
- Technology development

Grant Application and Review Process

- Application forms, instructions
- Funding mechanisms
- Review process
- Program Project, Cancer Center, SPORE grants

Other Funding Organizations

- Government
- Private

Scientific Programs and Contact Persons

- NCI staff to contact about grant applications

Training and Education Funding

- Career awards
- Training grants/programs
- Fellowship opportunities

Research and Funding Policies

- Ethics, confidentiality, informed consent
- Guidelines for research at NCI
- Peer review policy/issues
- Funding policy

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Highlights from ASCO 2002

New U.S. Cancer Trends Announced

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news center

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help

- Cancer.gov Help
- FAQs
- Index of NCI Sites

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Cancer.gov - Funding Announcements - Netscape

Location: http://www.nci.nih.gov/research_funding/announcements/

cancer.gov

home about NCI cancer information clinical trials statistics research programs research funding

Funding Announcements

- * **Grants and Contracts**
 - * [Requests for Applications \(RFAs\)](#)
 - * [NCI/RCB Current Requests for Proposals](#)
 - * [Program Announcements \(PAs\)](#)
 - * [NCI Notices Related to Initiatives](#)
 - * [Recently Cleared Concepts](#)
- * **Disease-Specific Research Funding Opportunities**
 - * [Brain Tumor Research](#)
 - * [Breast Cancer Research](#)
 - * [Cervical Cancer Research](#)
 - * [Colorectal Cancer Research](#)
 - * [Endometrial Cancer Research](#)
 - * [Head and Neck Cancer Research](#)
 - * [Leukemia Research](#)
 - * [Lung Cancer Research](#)
 - * [Lymphoma Research](#)
 - * [Myeloma Research](#)
 - * [Ovarian Cancer Research](#)
 - * [Pancreatic Cancer Research](#)
 - * [Prostate Cancer Research](#)
- * **Research and Training Support for Underrepresented Minorities**

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Highlights from ASCO 2002

New U.S. Cancer Trends Announced

Past Highlights

news center

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Cancer Information Service

help

- * [Cancer.gov](#)
- * [Help](#)
- * [FAQs](#)
- * [Index of NCI Sites](#)

NIH Guide: INNOVATION GRANTS FOR RESEARCH IN HUMAN IMMUNOLOGY - Netscape

Location: http://grants.nih.gov/grants/guide/pa-files/PA-02-073.html

INNOVATION GRANTS FOR RESEARCH IN HUMAN IMMUNOLOGY

RELEASE DATE: March 7, 2002

PA NUMBER: PA-02-073

EXPIRATION DATE: January 3, 2003, unless reissued.

National Institute of Allergy and Infectious Diseases (NIAID)
(<http://www.niaid.nih.gov>)

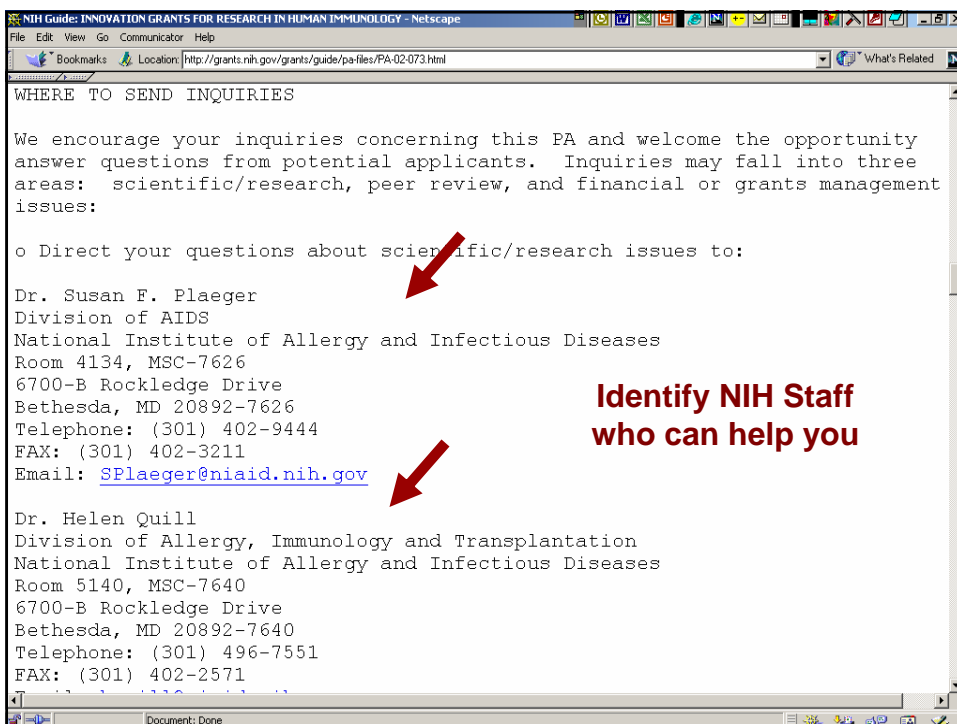
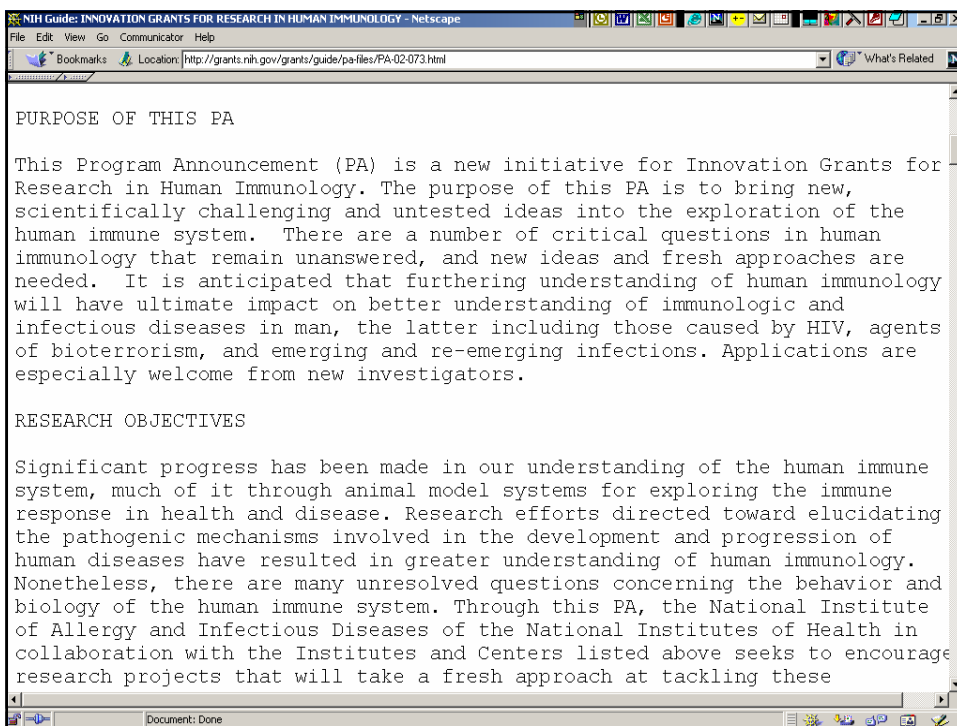
National Cancer Institute (NCI)
(<http://www.nci.nih.gov/>)

National Institute of Child Health and Human Development (NICHD)
(<http://www.nichd.nih.gov/>)

National Institute of Dental and Craniofacial Research (NIDCR)
(<http://www.nidr.nih.gov/>)

THIS PA CONTAINS THE FOLLOWING INFORMATION

- o Purpose of the PA
- o Research Objectives
- o Mechanism(s) of Support
- o Eligible Institutions
- o Individuals Eligible to Become Principal Investigators
- o Where to Send Inquiries
- o Submitting an Application
- o Peer Review Process



NIH Guide: INNOVATION GRANTS FOR RESEARCH IN HUMAN IMMUNOLOGY - Netscape

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Location: <http://grants.nih.gov/grants/guide/pa-files/PA-02-073.html>

Dr. Irene B. Glowinski
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 National Institute of Allergy and Infectious Diseases
 Room 3145, MSC-7630
 6700-B Rockledge Drive
 Bethesda, MD 20892-7630
 Telephone: (301) 496-1884
 FAX: (301) 480-4528
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Dr. John F. Finerty
 Cancer Immunology Branch
 National Cancer Institute
 Room 5060, Executive Plaza North
 6130 Executive Boulevard
 Rockville, MD 20852
 Telephone: (301) 496-7815
 FAX: (301) 480-2844
 Email: fin@nih.gov

Dr. Allan Lock
 Center for Research for Mothers and Children
 National Institute of Child Health and Human Development
 Room 4B01, Building 61E
 6100 Executive Boulevard
 Bethesda, MD 20892-7510
 Telephone: (301) 496-5541
 FAX: (301) 402-4083
 Email: al39o@nih.gov

Dr. Dennis Mangan
 Division of Basic and Translational Sciences

Identify NIH Staff who can help you

Cancer.gov - NCI Research Priorities - Netscape

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Location: http://www.nci.nih.gov/research_programs/priorities/

NATIONAL CANCER INSTITUTE
cancer.gov

home about NCI

cancer information | clinical trials | statistics | **research programs** | research funding

dictionary
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NCI Research Priorities

- Plans and Priorities for NCI Cancer Research
 - [Plans & Priorities for Cancer Research](#)
- Research Initiatives to Address NCI Priorities
 - [Genes and the Environment](#)
 - [Cancer Imaging](#)
 - [Preclinical Models](#)
 - [Defining Signatures of Cancer Cells](#)
 - [Molecular Targets](#)
 - [Tobacco](#)
 - [Cancer Communications](#)
- Assessing and Planning Cancer-Specific Research
 - [Progress Review Groups](#)
 - [Brain Tumor Progress Review Group](#)
 - [Breast Cancer Progress Review Group](#)
 - [Colorectal Cancer Progress Review Group](#)
 - [Gynecologic Cancers Progress Review Group](#)
 - [Kidney and Bladder Cancers Progress Review Group](#)
 - [Leukemia/Lymphoma/Myeloma Progress Review Group](#)
 - [Lung Cancer Progress Review Group](#)
 - [Pancreatic Cancer Progress Review Group](#)
 - [Prostate Cancer Progress Review Group](#)
 - [Stomach and Esophageal Cancers Progress Review Group](#)
 - [Schedule of Progress Review Groups](#)

Advanced search

Postmenopausal Hormone Use
 National Ovarian Cancer Awareness Month
 Past Highlights

Immune Cells Programmed to Attack Melanoma in Patients

news center

1-800-4-CANCER
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help

- [Cancer.gov Help](#)
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Identify Mission Priorities

2003 Plans and Priorities for Cancer Research - (Bypass Budget) - Home Page - Netscape

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Bookmarks Netsite: <http://plan.cancer.gov/> What's Related

The Nation's Investment in Cancer Research for Fiscal Year 2003

NATIONAL CANCER INSTITUTE **Plans & Priorities** for Cancer Research

Search

[Director's message](#)

[Executive summary](#)

[Highlights of progress](#)

2003 Budget Request

- Funding needed to conduct our research program
- Historical data

Infrastructure Needed for Cancer Research — NCI's Challenge

- Enhancing investigator-initiated research
- Centers, networks, and consortia
- National clinical trials program
- Studying emerging trends
- Improving the quality of care
- Reducing health disparities
- Informatics and information flow

Scientific Priorities for Cancer Research — Extraordinary Opportunities

- Genes and the environment
- Cancer imaging
- Molecular targets
- Tobacco and tobacco-related cancer research
- Defining the signatures of cancer cells
- Cancer communications

About NCI

- Who we are
- Our role in cancer research
- Spotlights on research
- Thirty years later...

Planning National Agendas in Disease-Specific Research

- Response and communication
- Highlights of Progress Review Group

"Our hope for the elimination of cancer is our nation's agenda, and it is the mission of the National Cancer Institute to lead and assure that agenda is fulfilled."

From the remarks of Andrew C. Von Eschenbach, M.D. at his swearing-in as Director of the National Cancer Institute. [Read the full text.](#)

NEWS and FEATURES

- [Protein Patterns May Identify Ovarian Cancer](#)

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National Cancer Institute Funding Opportunities - Netscape

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Bookmarks Location: <http://deainfo.nci.nih.gov/funding.htm> What's Related

NATIONAL CANCER INSTITUTE **Extramural Funding Opportunities**

Site map

Contact us

Home | **Funding** | Advisory | NCI Initiatives | Funded Awards | Research Resources | Events

NCI Sponsored Research Initiatives - Requests for Applications, Program Announcements and Contracts:

- Recently Cleared Concepts
- Program Announcements (PA) ([Show All PAs](#))
- Request for Applications (RFAs) ([Show Archived](#))
- Request for Proposals (Contracts)
- Small Business Coordination (SBIR/STTR)
- Modular Program Announcements
- Trans- NIH Program Announcements (PAs)
- Trans-NIH Modular PA
- Trans-NIH Request for Applications (RFAs)
- NIH Guide for Grants and Contracts

Cancer Research Training - Opportunities for US Citizens, Permanent Residents, and Fellowships for Foreign Nationals:

- Career Development and Education Opportunities
- Opportunities for Minorities in Cancer

Applications and Forms - Application Forms, and Quick Guides for Preparing Grant Applications:

- Grant Application Forms
- Preparing Grant Applications
- Quick Guide for Grant Applications
- Everything You Wanted to Know About...

Policies and Guidelines - Policies, Notices and Guidelines:

- NCI Grants Policies
- NCI Extramural Notices
- Funding Policy Letter, FY 2001
- Grant Mechanisms & Descriptions (P01 Guidelines; 5/02)
- Extramural Policy Notices from the NIH Guide for Grants and Contracts
- DHHS Guidance; Human Embryonic Stem Cells

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NCIDEA: Concepts for PAs and RFAs - Netscape

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NATIONAL CANCER INSTITUTE

Division of Extramural Activities

Site map
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NCI News

Recently Cleared Concepts for Requests for Applications (RFAs) and Program Announcements (PAs)

Quick Links

- Recently Cleared Concepts: June 24, 2002
- New & Reissued Concepts
- NIH Guide: Published RFAs
- NIH Guide: Published PAs
- Archived PAs/RFAs

Specific information on each initiative, including receipt date, will be available once the RFA or PA has been published. This page provides links to recently cleared concepts for upcoming solicitations and presents key information, including the objectives and descriptions of future solicitations and a direct link to NCI staff contacts. The NCI staff contacts can provide additional information on specific concepts, where available and appropriate. This listing of potential future initiatives is meant to provide the earliest possible alert to potential applicants in order to maximize application preparation time. While the NCI plans to proceed with these initiatives, their publication and timing is not certain and depends on sufficient funds being available. The titles and brief descriptions are consistent with the information available at the time of concept clearance. The resultant RFAs and PAs may differ from the concepts in the final wording of the titles or other aspects.

Concepts Cleared by the NCI Board of Scientific Advisors meeting held:

Document: Done

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

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.

Elements of Grant Success



Good Ideas



Good Reviewers



Good Timing



Good Luck



Good Presentations



Good Grantsmanship



Good Idea

SIGNIFICANT?

- Does it address an important problem?
- How will scientific knowledge be advanced?

INNOVATIVE?

- Builds upon or expands knowledge base
- Capable of making a difference

UNDERSTANDABLE?



Are These Good Ideas?

- Develop a vaccine to prevent HIV infection
- Develop a method to prevent HIV from replicating or mutating
- Produce a drug that will raise HDL and lower LDL without any toxic side effects
- Produce a drug that will lower blood pressure without any side effects
- Study the human genome



Are These Ideas Understandable?

What if you thought of these ideas in

1952? 1962? 1972? Are they still Good Ideas?

- Develop a vaccine to prevent HIV infection
- Develop a method to prevent HIV from replicating or mutating
- Produce a drug that will raise HDL and lower LDL without any toxic side effects
- Produce a drug that will lower blood pressure without any side effects
- Study the human genome



Good Timing

- Will the idea be understood by others?
- Does it build upon existing knowledge?
- Does it build upon similar ideas?
- Do you have preliminary data?
- How will the idea be received?



Good Timing is NOT

“I plan on submitting a grant application in two weeks can you tell me who might be a good program person for me to speak with before I send my application in?”



Good Presentation

Organize the Application

- What do you want to do?
- Why do you want to do it ?
- How are you going to do it?
- What is the expected outcome?
- Why is it a good thing?



Good Presentation: Organize the Application

- Develop a logical outline (presentation sequence)
- **Use Section Heading** - help reviewers “find things”
- **Use both major and minor section headings**
- **Make it easy for reviewers - Don't make them work**
- Use a detailed table of contents
- Do everything to help reviewers:
 - Understand your idea,
 - Why it is important and
 - Why it is reasonable and feasible



Good Presentation

Address Review Criteria:

Significance

Approach

Innovation

Investigator

Environment



Good Presentation: Address Review Criteria

(1) SIGNIFICANCE:

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



Good Presentation: Address Review Criteria

(2) 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 alternative tactics?



Good Presentation: Address Review Criteria

(3) INNOVATION:

- Does the proposed research employ novel concepts, approaches or method?
- Are the aims original and innovative?
- Does the project challenge existing paradigms or develop new methodologies or technologies?



Good Presentation: Address Review Criteria

(4) INVESTIGATOR:

- Is the investigator 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 (if any)?



Good Presentation: Address Review Criteria

(5) ENVIRONMENT:

- Does the scientific environment, in which the work will be done, contribute to the probability of success?
- Do the proposed experiments take advantage of unique features of the scientific environment or employ useful collaborative arrangements?
- Is there evidence of institutional support?



Good Reviewers

Reviewer → Good Reviewer

- Organize and make reviewers “Happy”
- Make it easy for them to understand things
- Make it easy for them to find things
- Make it easy for them to be your advocate
- Don't make them “work hard”



Good Reviewers

Factors Involved in Reviewer Assignment

- Abstract
- Specific Aims
- Methods Section
- Self Referral Letter - request specific study section
- Research the background of the review committee
- Letter to SRA recommending types of reviewers

TYPES OF REVIEWERS NOT NAMES OF REVIEWERS



Good Reviewers

Know who the potential reviewers are and do what you can to control the selection process.

Self Referral Letter - request specific study section

- **Research the background of the review committee**
 - **CRISP Database**
 - **Rosters of Committees**
- **Letter to SRA recommending types of reviewers**

TYPES OF REVIEWERS NOT NAMES OF REVIEWERS



Good Luck

The consequence of:

- **Good Ideas**
- **Good Presentation**
- **Good Timing**
- **Good Reviewers**
- **Good Grantsmanship**

COMMUNICATE WITH NIH

- **Program Staff**
- **Review Staff**
- **Grants Management Staff**

Improve your luck by preventing problems before they happen

COMMUNICATING WITH NIH

Before Submitting, Call Institute Program Staff

- **Assess scientific interest and match**
- **What do they want to fund?**

Submit Your Application With a Cover Letter

- **Institute interest**
- **Study Section Interest - Charter**

COVER LETTER

- **Suggest Key Areas of Expertise Required**
- **Do Not Suggest Specific Reviewer Names**
- **Suggest Institute(s) For Potential Funding**
- **Suggest Study Section(s) For Review**

COMMUNICATING WITH NIH

CONTACTS WITH REVIEW STAFF

Scientific Review Administrator answers

- **Questions about the review process**
- **Format and structure of application**
- **“Oops” missing material or late material**

COMMUNICATING WITH NIH

AFTER REVIEW, CONTACT PROGRAM STAFF

Institute Program Administrator

- Questions about the discussion of your application (after you have summary statement)
- Scores and percentiles
- Questions about the fundability of application

REVISE & RESUBMIT

Do Not Appeal Review Outcome

NIH Appeal Outcomes:

1. Council Denies Appeal (**bad outcome**)
2. Council Accepts Appeal: Original Application and Letter of Appeal is sent to the Same Study Section for a second examination and evaluation (**bad outcome**)
3. Council Accepts Appeal: Original Application be sent to a new Study Section but without the Letter of Appeal (**bad outcome**)

REVISION COVER LETTER

- For Revisions, Indicate Review History
- Request Same Or Different Study Section
- Provide Justification for your request
- **Don't be Argumentative ! Never!**
- **Don't be Abrasive ! Never!**

Q What if you know that you are “**Right**” and the reviewers are “**Wrong**”, is it appropriate to argue your position in your resubmission

A NO!

Remember

- An application for funding is not about the facts of your completed research.
- It is about ideas and potential research
- **Never be Argumentative !**
- **Never be Abrasive !**
- **Do not do longterm damage to yourself**

REVISING & RESUBMITTING

- Write A Clear Introduction Section
- Address All Criticisms Thoroughly
- Respond Constructively

- Accept the Help of Reviewer Comments
- **Don't Be Argumentative !**
- **Don't be Abrasive !**

REVISING & RESUBMITTING

- **Update Preliminary Results**
- Remember that Properly Revised applications can received fundable scores and subsequent \$\$
- Maintain communications with Scientific Review Administrator and Program Administrator

DO'S AND DON'TS

- **Do Pursue original science.** This is an area that study sections are most concerned about.
- **Do Provide a well focused research plan.**
- **Do not** let your ideas wander from the main theme.

“This application is characterized by ideas that are both original and scientifically important.

Unfortunately the ideas that are scientifically important are not original and the ideas that are original are not scientifically important.”

“In addition to proposing a research design that is a fishing expedition,

the applicant also proposes to use every type of bait and piece of tackle known to mankind.”

DO'S AND DON'TS (2)

- **Provide a critical approach to project.**
- **Discuss potential problem areas and alternative approaches.**
- **Never assume that the reviewers will know what you mean.**
- **Always be explicit about what you want the reviewers to know and what they need to know.**

DO'S AND DON'TS (3)

- Read the application instructions carefully.
- Read the application instructions carefully.
- Read the application instructions carefully.

DO'S AND DON'TS (4)

- Read the application instructions carefully.
- They may seem overwhelming but the effort is worth it and could spell the difference between success and failure.
- Supply sufficient detail.
- Stay within the page limitations.
- If you don't understand something in the instructions ask for help .
- Call the SRA call the PA.

DO'S AND DON'TS (5)



- **Do Secure collaborators for areas of research in which you lack experience and training.**

Point of View



- **There are no competitors in science,**
- **There are only potential collaborators.**

DO'S AND DON'TS (6)

- Secure collaborations for areas of research in which you lack experience and training.
- **“Independent Researcher”** does not mean that you working in isolation.
- **“Independent Researcher”** does mean that you set the direction of the research
- **Don't** give the impression of being intellectually “Isolated”.

DO'S AND DON'TS (7)

- Prepare a reviewer friendly application.
- It should be well organized and clear.
- Tables and figures should be easily viewed.
- Do not hand-draw structures.
- Do not photoreduce your application to an unreasonable size.
- Remember that Reviewers work late at night.

DO'S AND DON'TS (8)

- Do not be overly ambitious.
- Project a realistic amount of work.
- Provide a thorough literature search.
- Be sure you have found key references.
- Know your Reviewers - do literature searches of committee members.
- Minimize typographical errors.

DO'S AND DON'TS (9)

- If you are a new investigator, ask for 5 years.
- The sentiment at NIH is to award sufficient time and funds for new investigators to establish their programs.
- **Make sure that you have collaborators who can compensate for your deficiencies and who add credibility to your innovative ideas.**
- Don't appear intellectually isolated.

DO'S AND DON'TS (10)

- **If your application is a renewal or supplement request, be aware that study section members will not have the benefit of your previous application but rather only the previous summary statement.**
- **Be sure to explain your progress carefully in the current application.**
- **Publish, Publish, Publish - be productive.**

BEFORE YOU SUBMIT AN APPLICATION

- **Show your application to a colleague**
- **Show you application to a colleague who knows little to nothing about your area of research and ask them if they understand**
 - **What you are proposing to do?**
 - **How you are proposing to do it?**
 - **Why you are proposing to do it?**

If they do not understand Revise until they do

- **Get feedback on clarity**
- **Get feedback on scientific merit**

AFTER YOU RECEIVE SNAP-OUT MAILER

- **Contact the SRA who is listed on the mailer if there are potential problems of IRG assignment.**
- **Avoid additional material in support of your application,**
 - **Speak to the SRA first.**
 - **Keep the material brief - 1 to 3 page letter.**
 - **Send it at least one month before the review committee meeting.**
 - **Better yet Do NOT submit additional material**

AFTER REVIEW IS OVER

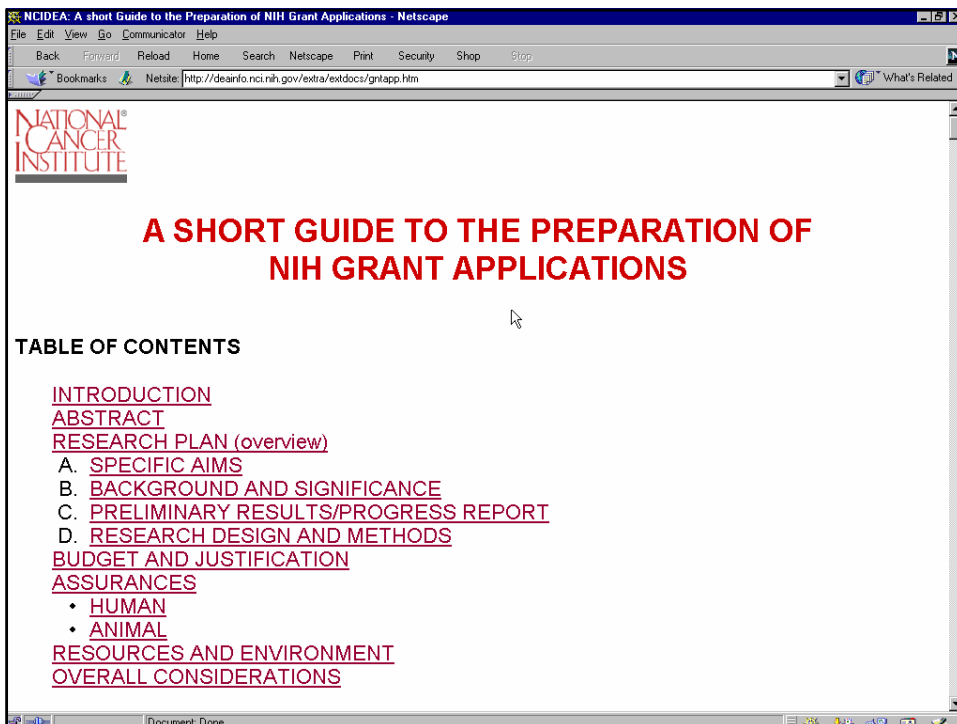
- **The Program Administrator at the Institute to which your proposal was assigned is the new contact point. Wait for the Summary Statement**
- **Address any concerns on review to them.**
- **Appeal letters are appropriate only if review was flawed (legal and procedural).**
- **More constructive use of your energy is amending and resubmitting the application and incorporating reviewer comments.**
- **Do not take the review comments personally.**

IF YOU RESUBMIT

- Answer previous critiques completely
- Supply an introduction section which explains the changes you have made
- **Leave your irritations with the review out of your resubmission**
- **Don't argue or be hostile**
- You will not be help yourself if you force the study section into a defensive posture
- **Accept Reviewers comments and suggestions as helpful and incorporate them in your revision**

IF YOU RESUBMIT

- Remember that the study section will have the previous summary statement, but not the previous application.
- Do not refer to the previous application for details.
- Remember that reviewers are generally trying to help you become a better research scientist



Hints for Writing Successful NIH grants

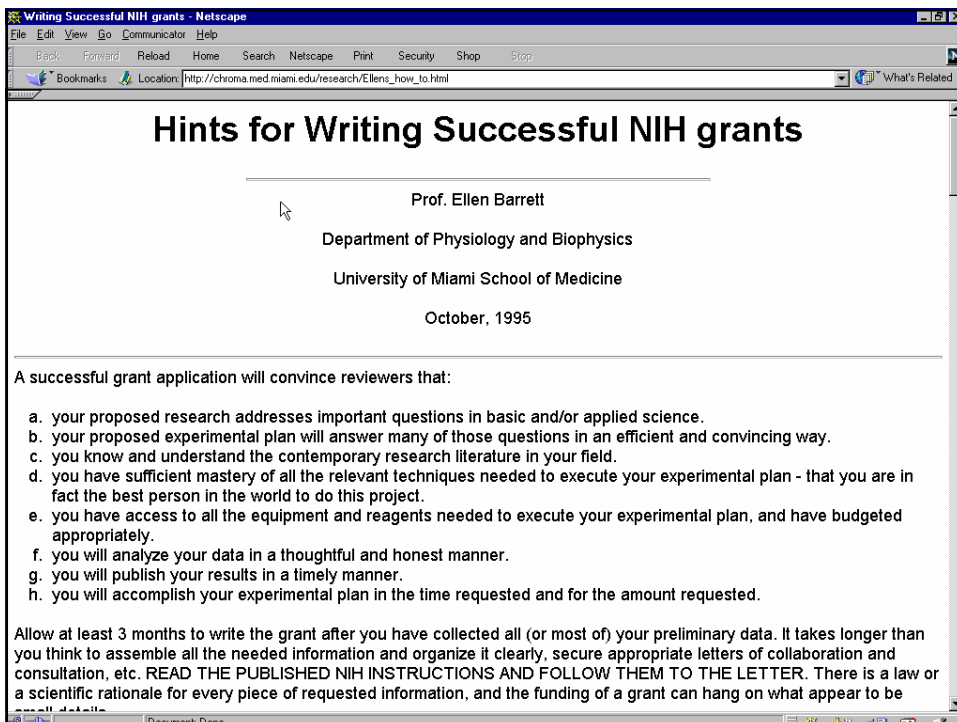
Prof. Ellen Barrett

Department of Physiology and Biophysics

University of Miami School of Medicine

October, 1995

http://chroma.med.miami.edu/research/Ellens_how_to.html



The screenshot shows a Netscape browser window with the title "Writing Successful NIH grants - Netscape". The address bar shows the URL "http://chroma.med.miami.edu/research/Ellens_how_to.html". The main content area displays the following text:

Hints for Writing Successful NIH grants

Prof. Ellen Barrett
Department of Physiology and Biophysics
University of Miami School of Medicine
October, 1995

A successful grant application will convince reviewers that:

- your proposed research addresses important questions in basic and/or applied science.
- your proposed experimental plan will answer many of those questions in an efficient and convincing way.
- you know and understand the contemporary research literature in your field.
- you have sufficient mastery of all the relevant techniques needed to execute your experimental plan - that you are in fact the best person in the world to do this project.
- you have access to all the equipment and reagents needed to execute your experimental plan, and have budgeted appropriately.
- you will analyze your data in a thoughtful and honest manner.
- you will publish your results in a timely manner.
- you will accomplish your experimental plan in the time requested and for the amount requested.

Allow at least 3 months to write the grant after you have collected all (or most of) your preliminary data. It takes longer than you think to assemble all the needed information and organize it clearly, secure appropriate letters of collaboration and consultation, etc. READ THE PUBLISHED NIH INSTRUCTIONS AND FOLLOW THEM TO THE LETTER. There is a law or a scientific rationale for every piece of requested information, and the funding of a grant can hang on what appear to be small details.

Faculty & Research: Writing a Grant Proposal: Application Forms and Writing Tips - Netscape

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Shop Stop

Bookmarks Netsite: http://cpmcnet.columbia.edu/research/writing.htm

SEARCH FEEDBACK HELP CPMCNET

Faculty & Research: Writing a Grant Proposal Writing Tips and Application Forms

| [Tips for Scientific/Technical Writing](#) | [Grant Application Forms](#) |
| [Columbia University's Health Sciences Division's Manual of Policies and Procedures](#) |
| [Courses, Seminars, and Slide Presentations on Preparation of Applications](#) |
| [Comprehensive Research Funding Information](#) |

Tips for Scientific/Technical Writing

- [Elements of Style by William Strunk, Jr. \(Bartleby\)](#)
- **NIH Publications**
 - [How to Apply for NIH Funding \(NICHD-slides\)](#)
 - [Preparation of NIH Grants Applications \(NIH - NCI\)](#)
 - [How to Write a Research Grant Application \(NIH - NIAID; PDF file\)](#)
 - [Common Mistakes in Grant Applications: A Review Perspective \(NIH - NIAID\)](#)
 - [Glossary of Confusing NIH Terms \(NIH - NIAID\)](#)
- **National Science Foundation**
 - [A Guide to Proposal Writing](#)

Document: Done

Glossary of Confusing NIH Terms, NIAID Council News, National Institute of Allergy and Infectious Dis - Netscape

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Shop Stop

Bookmarks Location: http://www.niaid.nih.gov/nrcn/gloss.htm

Toolbox

NIAID Council News
Extramural Information Center

Glossary of Confusing NIH Terms

Also see our [Acronym List](#)

Index tabs:

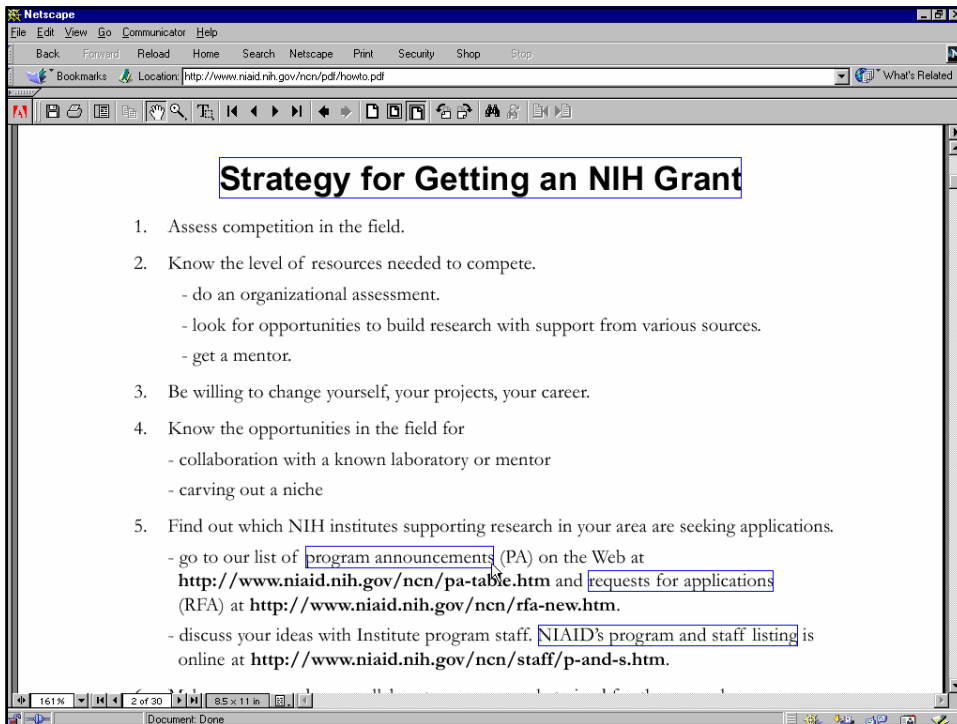
[A](#) | [B](#) | [C](#) | [D](#) | [E](#) | [F](#) | [G](#) | [H](#) | [I](#) | [J](#) | [M](#) | [N](#) | [O](#) | [P](#) | [R](#) | [S](#) | [T](#) | [U](#)

Last revised 03/02/00

-A-

Activity code
A three digit code identifying the type of award mechanism (e.g., R01 is a research project grant).
Major series are: F - fellowship, K - research career, N - research contracts, P - research programs and centers, R - research projects, S - research-related programs, T - training, U - cooperative

Document: Done



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

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.htm>

<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>

How to Write a Grant Application

<http://www.niaid.nih.gov/ncn/grants/>

The screenshot shows a web browser window displaying the NIAID Research Funding website. The page title is "Grants and Contracts -- NIAID Research Funding - Mozilla Firefox". The address bar shows the URL "http://www.niaid.nih.gov/ncn/grants/". The navigation menu includes "Funding Main", "Newsletter", "Opportunities, Budget", "Grants, Contracts", "Special Areas", "Training, Career", and "Small Business". The main content area features a circular logo with a cartoon character and the text "All About Grants". Below the logo, there is a paragraph of text explaining the purpose of the tutorials and a link to the "PHS 398 grant application kit". A table lists various tutorial web pages with links to MS Word and Adobe PDF versions, and translations in Spanish and French. At the bottom, there is a section for "Find more information on the main Grants Funding page, including:" followed by a list of links.

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 [PHS 398 grant application kit](#). 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
How to Write a Grant Application	MS Word	Adobe PDF	Español, Français
How to Manage Your Grant Award	MS Word	Adobe PDF	
How to Write a Human Subjects Application	MS Word	Adobe PDF	
How to Write an Application Involving Research Animals	MS Word	Adobe PDF	
Advice on Research Training and Career Awards	MS Word	Adobe PDF	
Advice for Small Business Grants (SBIR, STTR)		Adobe PDF	

Find more information on the [main Grants Funding page](#), including:

- [Annotated R01 Grant Application](#)
- [Quick Facts on Research Grant Applications](#)

How to Write a Grant Application

http://grants1.nih.gov/grants/grant_tips.htm

<http://www.niaid.nih.gov/ncn/grants/>

<http://www.nlm.nih.gov/scr/edn/grants-resources.htm>

http://grants2.nih.gov/grants/grant_tips.htm

<http://www.nigms.nih.gov/funding/tips.html>

http://www.nigms.nih.gov/funding/moregrant_tips.html

<http://deainfo.nci.nih.gov/EXTRA/EXTDOCS/gntapp.htm>

http://chroma.med.miami.edu/research/Ellens_how_to.html

<http://www.cfda.gov/public/cat-writing.htm>

<http://cpmnet.columbia.edu/research/writing.htm>



Rule #1

STUDY SECTIONS
DO NOT FUND!

INSTITUTES FUND!



Rule #2

You must satisfy the
needs of reviewers and
the needs of the funding
agency



Rule #3

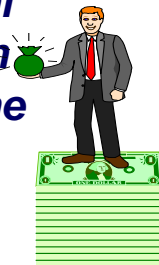
***Reviewers are never wrong,
Reviewers are never right;
they simply provide an
assessment of the material that
you provided to them in your
application***



Rule #4

***The comments in the summary
statements are never about you
as a person.***

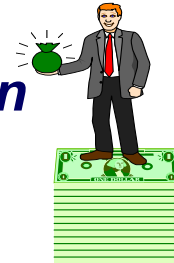
***The comments are about the material
that you provided in your application
and the way in which you provided the
information***



Rule #5

The comments in the summary statements 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.



Rule #6

Always contact NIH staff before you submit an application and preferably when you are in the planning stages.

Make sure that you give yourself and the NIH staffer enough time to work with together.



**Q. Do I really have to contact NIH
before I submit an application?**

A. Only if you want to get funded!

- Always contact program staff during application development
- Must contact & IC staff prior to a submission if you want them to agree to accept the application for any investigator-initiated competitive applications with \geq \$500,000 direct cost for any single year
- Request must be at least six weeks before deadline

Rule #7



DO NOT write the
application for the
“Specialist”

You **MUST** convince the
entire review committee

Rule #8



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

You **MUST** convince the entire
review committee
and the funding agency

Rule #9



Secure collaborators for
areas of research in which
you lack experience and
training and who can
complement you.
Let them help you prepare
the best possible application

Rule #10



**Secure a mentor
or mentors who can
help you succeed**



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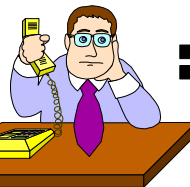
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NIH GRANT\$

Formula for Grant Success

Grantsmanship

*Knowing + Understanding

- What to do
- How to do it
- When to do it
- What to do when things don't go as planned

*Being willing to do what is needed

*Doing it- doing what is needed

Understanding Peer Review



+



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NIH GRANTS\$

Formula for Grant Success

 U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health  

Thank You