Understanding NIH:

WHOS WHO IN THE ZOO

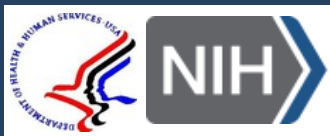**Rosemarie Hunziker, PhD**
Tissue Engineering/Regenerative Medicine and ImmunoEngineering
Program Director
National Institute of Biomedical Imaging and Bioengineering (NIBIB)
National Institutes of Health (NIH)

hunzikerr@mail.nih.gov
301-451-1609

Today's Agenda:
A guide to NIH

- **Find your NIH Niche**
  - How is NIH different?
  - Unique IC missions, characters
- **Get Help from the Inside**
  - Comb the NIH websites
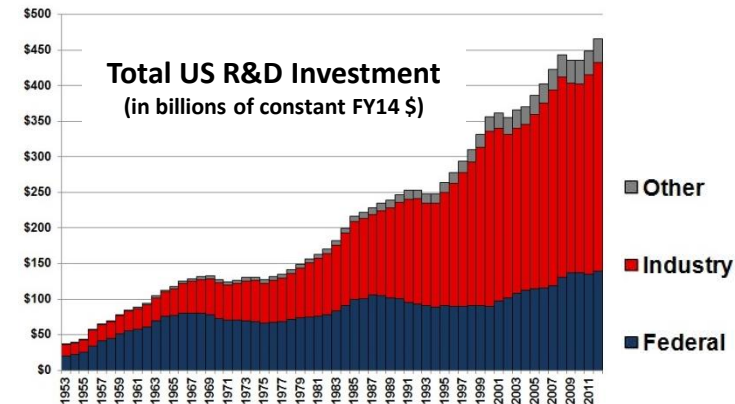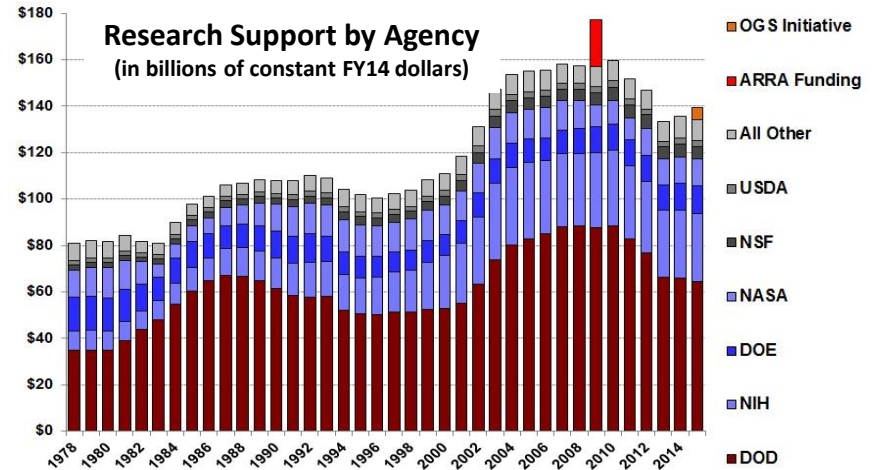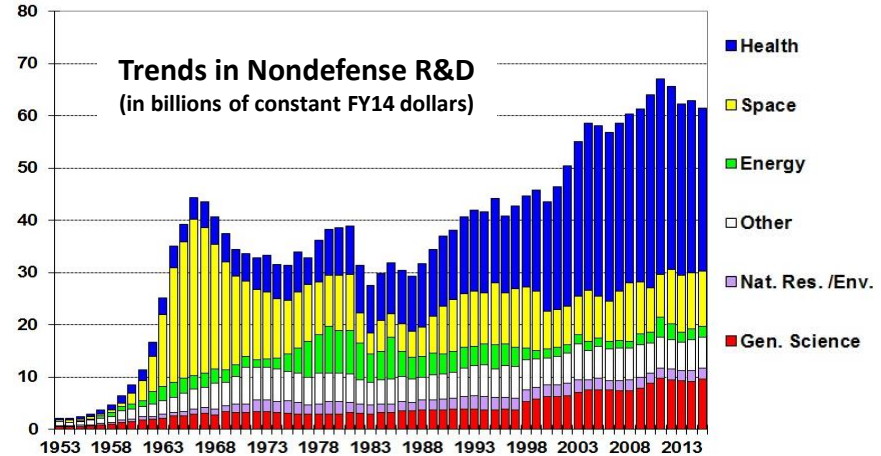 - Find the right people

Federal Agencies in Science and Technology have different
- ✓ **missions**
- ✓ **cultures**
- ✓ **rules**
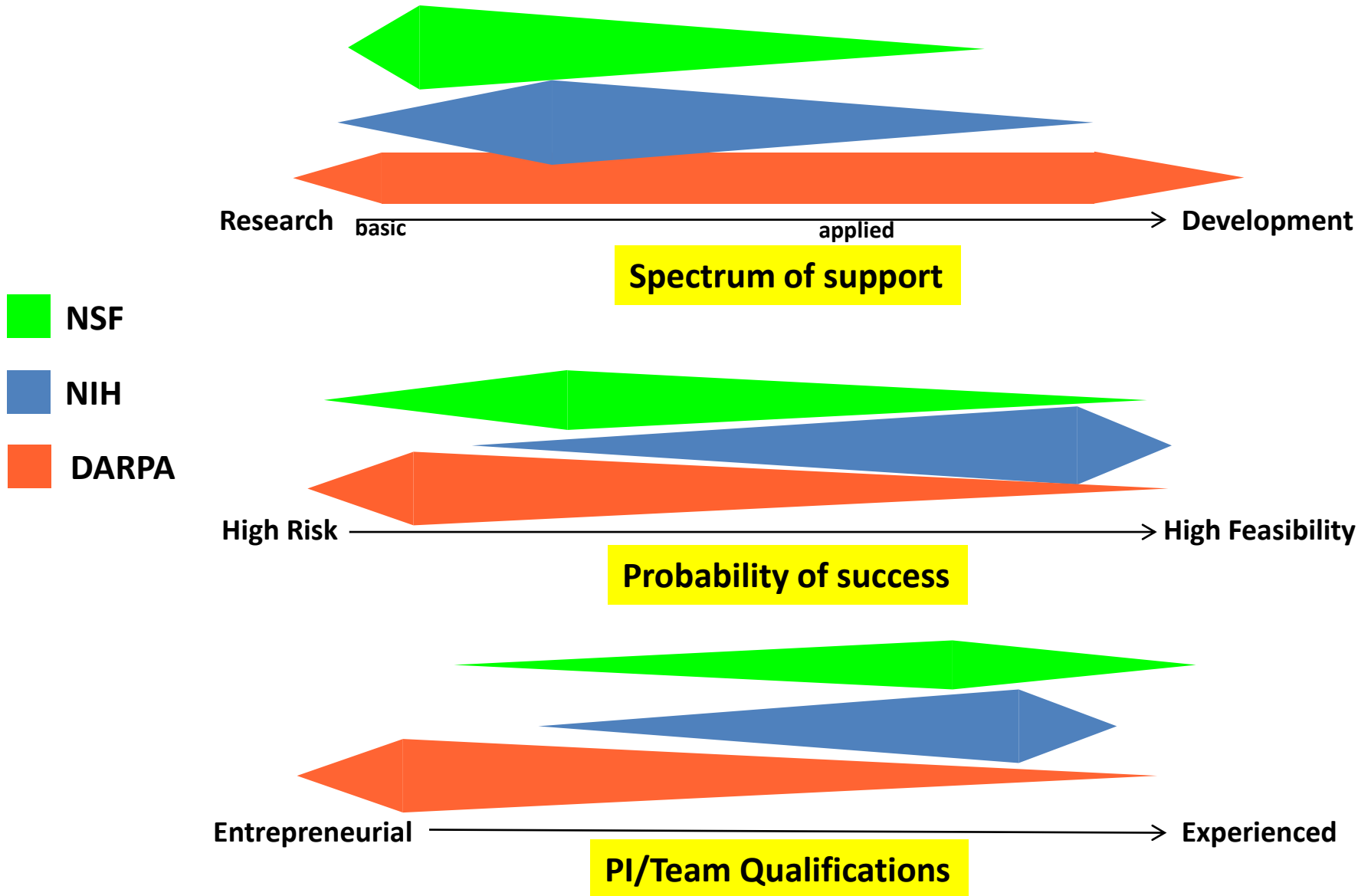- ✓ **levels of support**
- ✓ **expectations**

But the same overall goal
- ✓ **protect the security, health, and well being of Americans**
- ✓ **maintain knowledge and application superiority**
- ✓ **fuel the engine of US economic growth**

Trends in Nondefense R&D (in billions of constant FY14 dollars)
Legend: Health, Space, Energy, Other, Nat. Res./Env., Gen. Science

Research Support by Agency (in billions of constant FY14 dollars)
Legend: OGS Initiative, ARRA Funding, All Other, USDA, NSF, NASA, DOE, NIH, DOD

Total US R&D Investment (in billions of constant FY14 $)
Legend: Other, Industry, Federal

Source: AAAS http://www.aaas.org/page/historical-trends-federal-rd

Different Agencies: Different Cultures

Research   basic ⟶ applied   Development

Spectrum of support

NSF

NIH

DARPA

High Risk ⟶ High Feasibility

Probability of success

Entrepreneurial ⟶ Experienced

PI/Team Qualifications

NIH is the steward of **medical and behavioral research** for the Nation. Its mission is science in pursuit of **fundamental knowledge** about the nature and behavior of living systems **and the application of that knowledge** to extend healthy life and reduce the burdens of illness and disability.

NIH "hot topics"

- **Cancer Moonshot**
  - Vaccines
  - Early detection
  - Single-cell genomic analysis
  - Immunotherapy
  - Pediatric cancer
  - Data sharing
- **Precision Medicine Initiative**
  - Risk assessment based on environment, genetics
  - Large-scale pharmacogenomics
  - Biomarker discovery
  - Mobile health
  - Platforms for targeted therapy trials
- **BRAIN Initiative**
  - Fundamental science
  - Neuroimaging and mapping
- **HIV vaccines, therapies, cure**
- **Antimicrobial Resistance**
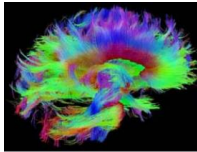- **Alzheimer's Disease**
- **Strengthen/sustain the biomedical research workforce**
  - High-risk/high-reward programs through Common Fund
  - Diversity programs

21st Century Cures Act
Additions:
- FDA and regulatory science
- Clinical Regenerative Medicine w/ (adult) stem cells
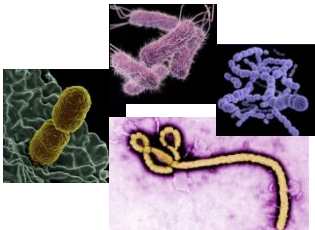
How Does NIH Solicit Applications?

- **Federal Opportunity Announcements (FOA) published through**
  - **the NIH Guide (http://grants.nih.gov/grants/guide/)**
  - **grants.gov**

- **Parent Announcements cover basic activity codes**
  - **investigator-initiated applications**

- **Special Opportunities to fill gaps**
  - **Requests for Applications (RFA),** a one-time call with set aside funds
  - **Program Announcement (PA)** highlights areas of focus
  - **Program Announcement with Special Review (PAR)** for special consideration and "protected" review
  - **Program Announcement with Set Aside (PAS)** essentially, an RFA with multiple receipt dates

NIH FY16 Budget

NIH Divides most of its investment according to the interests of the component parts (i.e. Institutes or Centers), with 5% allocated to trans-NIH initiatives.

Total = $32 B
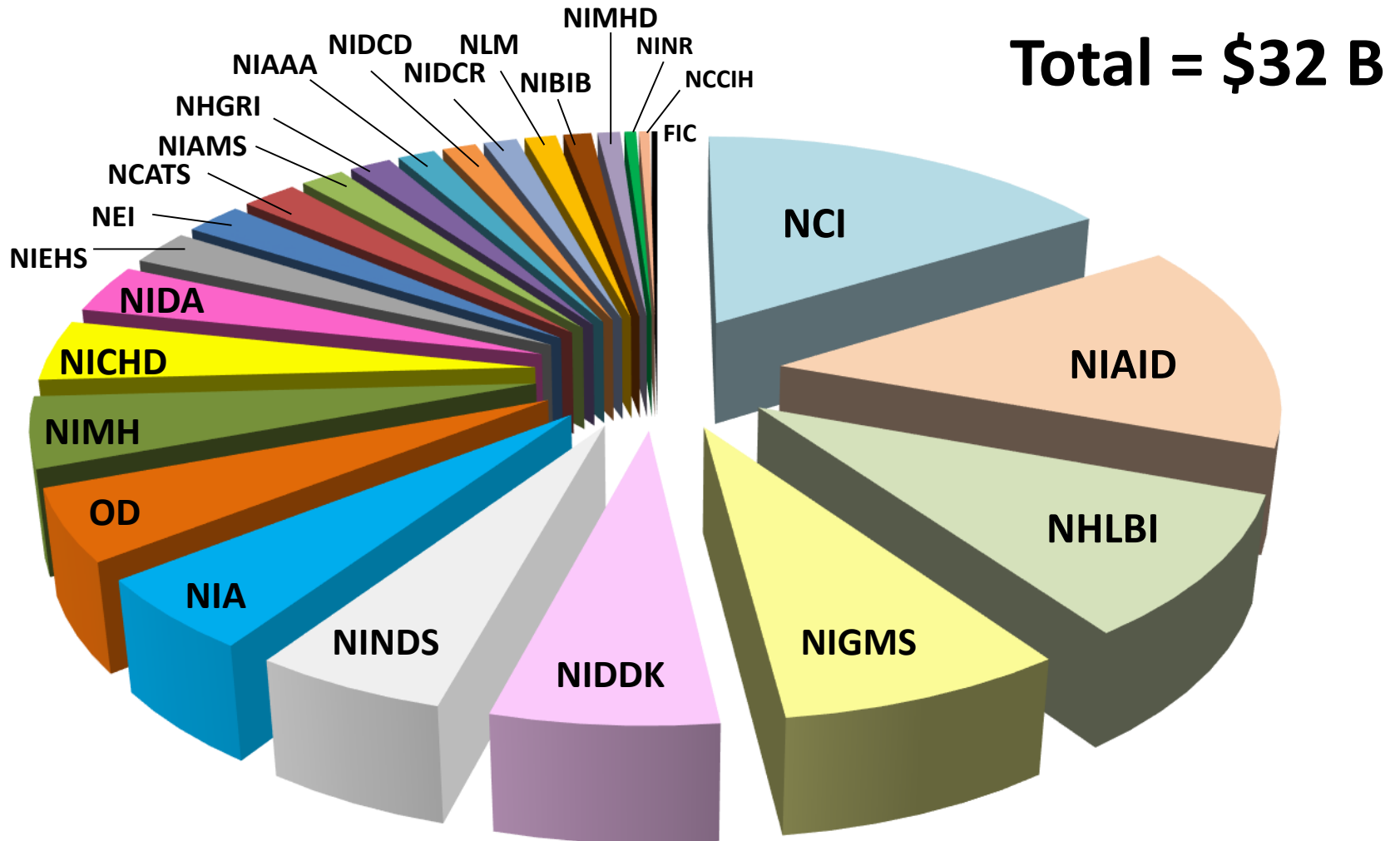
About 85% distributed via Extramural grants, contracts, cooperative agreements

Targeting IC Priorities: an example

NIBIB mission

accelerating the **application of biomedical technologies**…
[via] integrating the physical and engineering sciences with the life sciences to advance basic research and medical care.

NINDS mission

seek **fundamental knowledge about the brain and nervous system** and to use that knowledge to reduce the burden of neurological disease.

Novel polymer scaffold for tissue regeneration

Neural progenitor cells in biomimetic matrix in rat brain

Pivotal large animal studies for stroke therapy

??? **Neural differentiation of stem cells**

Imaging cells transplanted to the brain ???

NIH Supports Non Hypothesis-Driven Research

There are two kinds of scientific revolutions, those driven by new tools and those driven by new concepts... The effect of a concept-driven revolution is to explain old things in new ways. The effect of a tool-driven revolution is to discover new things that have to be explained.

-Freeman Dyson, 1997

Does NIH Already Support My Interest Area?

U.S. Department of Health & Human Services

Printer Friendly | Text Size A A A

NIH Research Portfolio Online Reporting Tools (RePORT)

Search

HOME | ABOUT RePORT | FAQs | GLOSSARY | CONTACT US

QUICK LINKS | RESEARCH | ORGANIZATIONS | WORKFORCE | FUNDING | REPORTS | LINKS & DATA

QUICK LINKS

Home > Quick Links

RePORTER

The Report Expenditures and Results tool allows users to search a repository of NIH-funded research projects and access publications and patents resulting from NIH funding.

More Details

NIH Data Book

The NIH Data Book (NDB) provides basic summary statistics on extramural grants and contract awards, grant applications, the organizations that NIH supports, the trainees and fellows supported through NIH programs, and the national biomedical workforce.

More Details

Report Catalog

The Report Catalog is a menu driven interface geared for the NIH familiar user to provide customized reporting. A graphic depiction of some major funding mechanisms, and activity codes gives a hierarchical view of project organization.

More Details

Success Rates

Computed on a FY basis, success rates are defined by the percentage of
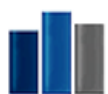
Funding Facts

Quick access to statistics from the NIH Data Book and annual reports produced

The Research, Condition, and Disease Categorization

http://report.nih.gov/quicklinks.aspx

NIH Searchable Databases Contain Abstracts of All Funded Projects

RePORTer Delivers a Treasure Trove...

There were **10** results matching your search criteria.
Click on the column header to sort the results

Show/Hide Search Criteria

T: Application Type; Act: Activity Code; Project: Admin IC,Serial No.; Year: Support Year/Supplement/Amendment

T	Act	Project	Year	Sub #	Project Title	Contact PI/ Project Leader	Organization	FY	Admin IC	Funding IC	FY Total Cost by IC	Similar Projects
1	R01	CA166111	01A1		TUMOR ANTIGEN-SPECIFIC T-CELLS AND HEPATOCELLULAR CARCINOMA	KAPLAN, DAVID E	UNIVERSITY OF PENNSYLVANIA	2013	NCI	NCI	$249,000	
5	R01	AR055993	03		TISSUE REGENERATION BY BIOPHYSICAL SIGNALING	KAPLAN, DAVID L et al.	TUFTS UNIVERSITY MEDFORD	2012	NIAMS	NIAMS	$323,395	
5	R01	AR061988	02		ELECTROTHERAPEUTIC STRATEGIES FOR CONNECTIVE TISSUE REPAIR	KAPLAN, DAVID L et al.	TUFTS UNIVERSITY MEDFORD	2012	NIAMS	NIAMS	$645,728	
3	P41	EB002520	09S1		TISSUE ENGINEERING RESOURCE CENTER	KAPLAN, DAVID L	TUFTS UNIVERSITY MEDFORD	2013	NIBIB	NIBIB	$40,625	
5	P41	EB002520	09		TISSUE ENGINEERING RESOURCE CENTER	KAPLAN, DAVID L	TUFTS UNIVERSITY MEDFORD	2012	NIBIB	NIBIB	$1,152,600	
5	R01	EB011620	03		BIOMATERIAL APPLICATIONS OF RECOMBINANT BACTERIAL COLLAGENS	KAPLAN, DAVID L et al.	TUFTS UNIVERSITY MEDFORD	2012	NIBIB	NIBIB	$324,245	
1	R01	EB014283	01A1		MULTIFUNCTIONAL TROPOELASTIN-SILK BIOMATERIAL SYSTEMS	KAPLAN, DAVID L	TUFTS UNIVERSITY MEDFORD	2012	NIBIB	NIBIB	$305,288	
1	U01	EB014976	01		MODELS TO PREDICT PROTEIN BIOMATERIAL PERFORMANCE	KAPLAN, DAVID L et al.	TUFTS UNIVERSITY MEDFORD	2012	NIBIB	NIBIB	$646,995	
1	R01	EB016041	01		IN VITRO BIOREACTOR SYS FOR PLATELET FORMATION	KAPLAN, DAVID L	TUFTS UNIVERSITY MEDFORD	2012	NIBIB	NIBIB	$337,137	
5	R01	EY020856	03		TISSUE ENGINEERING CORNEA REPLACEMENTS	KAPLAN, DAVID L	TUFTS UNIVERSITY MEDFORD	2012	NEI	NEI	$369,557	

Click for Abstract

… of Useful Information.

Even broader functionality from Federal RePORTER

Participating agencies

http://federalreporter.nih.gov/

How to Use RePORTER When Preparing New Grant Applications

Posted by Dr. James Onken on December 3, 2012

Post a Comment | View Comments (1) ↓

NIH offers two tools that can help you search for projects similar to the one you're thinking about. In this post, I'll take you on a quick tour of the NIH RePORTER tool, a repository of information about NIH-funded research projects, and show you how to find information that may be useful to know before you start writing a grant application. A future *Feedback Loop* post will cover the thesaurus-based search tool called Like This.

Main Query Form

From RePORTER's Main Query Form, you can search by principal investigator name, project number, organization, text term(s) and many other criteria.

View larger image

If you want to know which NIH institutes or centers fund projects like yours, or which study section would be most appropriate to review your application, then searching by text term(s) would probably be the best approach.

Grant Basics

Funding Initiatives

Due Dates, Templates

Grants: A to Z

http://grants.nih.gov/grants/oer.htm

Need Help with Your Proposal… Who Ya' Gonna' Call?

✓ **about the scientific and technical aspects of your application…**

- Find them on the solicitation
- See also the IC's programmatic descriptions (http://www.nih.gov/icd/index.html).

✓ **for questions during the review…**

- Listed on the eRA Commons link to your submitted proposal
- See also the review group rosters at the CSR web site

✓ **for help with the business aspects of a proposal…**

- Listed on the eRA Commons link to your submitted proposal
- See also the IC's programmatic descriptions (http://www.nih.gov/icd/index.html).

Program Director   **Scientific Review Officer**   **Grants Specialist**

NIH Program Officials: your primary contact

Pre-Application
- Assess the "fit" to the IC, Program(s)
- Start the conversation early: develop your ideas together
- Choose the right activity/mechanism
- Brief on Review Issues: Dos/Don'ts

Post Review
- Analyze the Summary Statement: deeper insights from the Review
- Understand the rating and assess the likelihood of funding
- BEWARE! Nothing is certain until you have it in writing

During the Award
- Discuss problems in execution (rebudgeting, re-scoping, extensions...)
- Find an administrator to address unusual issues
- Brag about important discoveries

Anytime
- Arrange introductions so you can serve on advisory boards, workshop panels, etc.
- Discover what's New and Coming Soon in Funding Opportunities

Application ⟶ Review Award ⟶

Each NIH **Institute/ Center** *has a HOME PAGE*

NIBIB
National Institute of Biomedical Imaging and Bioengineering
National Institutes of Health

ENGINEERING & IMAGING FOR THE FUTURE

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CTC Microchip: A One-in-a-Billion Technology
With enough sensitivity to detect and trap a single at-large cancer cell from among a billion blood cells, the impressive new Circulating Tumor Cell (CTC) microchip is showing much promise as it points the way to a new era in the fight against cancer.

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Model: http://www.xxxxx.nih.gov

http://www.nibib.nih.gov/

NIBIB

National Institute of Biomedical Imaging and Bioengineering
National Institutes of Health

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Research

- **Labs At NIBIB (Intramural)**
- **Scientific Program Areas (Extramural)**
- **Biotechnology Resource Centers**
- **Quantum Grants**
- **Resources for Researchers**

Biomaterials Program Area

Staff Contact

Rosemarie Hunziker, Ph.D.

Description

This program supports the research and development of new or novel biomaterials that can be use for a broad spectrum of biomedical applications such as implantable devices; tissue engineering imaging agents; and biosensors and actuators.

Research that is supported includes the design, synthesis, characterization, processing and manufacturing of these materials as well as the design and development of devices constructed o these materials and their clinical performance.

Relevant Study Sections

Biomaterials and Biointerfaces (BMBI)

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Rosemarie Hunziker, PhD

Program Director

Tissue Engineering/Regenerative Medicine ImmunoEngineering

National Institute of Biomedical Imaging and Bioengineering (NIBIB)

National Institutes of Health (NIH)

301-451-1609

Rosemarie.Hunziker@nih.gov

www.nibib.nih.gov

NIH National Institute of Biomedical Imaging and Bioengineering

Creating Biomedical Technologies to Improve Health