

#### **JAN 21**

Crash Course: Grant Resources, Funding Opportunities, and Finding Funding

PACE #2

University of Memphis



#### **GRANT RESOURCES**



## **Agency Grant Writing Workshops**

- Regional Workshops
  - ■NSF Regional Grants Conference
  - □NIH Regional Seminars in Program Funding and Grants
    Administration
- **■NSF CAREER Workshop**
- Humanities
  - ■NEH Regional Seminar
  - □IL Humanities Council Resource Workshops



## **Agency Grant Writing Workshops**

- Other NIH workshops
  - ■NIH Grant Preparation Workshops for
  - Rehabilitation Research
  - ■National Animal Welfare Workshops
  - Office for Human Research Protections (OHRP) Workshops
  - □ Small Business Research Conferences
  - Office of Research Integrity Workshops and Conferences



#### **Print Resources**

- ☐ How to Write and Publish a Scientific Paper, 7th ed (inexpensive)
- The Grant Application Writer's Workbook (reasonable)
- NIH R01/NSF Grant Application Mentor: An Educational How-to Manual (expensive)
- ☐ Funding Your Research in the Humanities and Social Sciences: A Practical Guide to Grant and Fellowship Proposals
- Writing the NIH Grant Proposal
- Writing the Winning Grant Proposal
- ☐ Funding Your Research in the Humanities and Social Sciences: A Practical Guide to Grant and Fellowship Proposals
- The Chicago Guide to Your Career in Science: A Toolkit for Students and Postdocs
- Guide to Effective Grant Writing: How to Write a Successful NIH Grant Application
- Academic Scientists at Work, 2nd ed
- Grantsmanship: Program Planning & Proposal Writing
- ☐ The Foundation Center's Guide to Proposal Writing, 6th ed
- The Ultimate Grants ToolKit
- ☐ Winning Strategies for Developing Proposals and Managing Grants
- Collaboration in Grant Development and Management



#### **Professional Organizations**

- ■National Organization of Research Development Professionals (NORDP)
- □ National Council of University Research Administrators (NCURA)
- □ Society of Research Administrators Int'l (SRA)
- ☐ Grant Professionals Association (GPA)
- ■National Grants Management Association (NGMA)
- ■Association of Proposal Management Professionals (APMP)
- □ Association of Fundraising Professionals (AFP)
- □ American Medical Writers Association (AMWA)



#### **OMB Uniform Guidance**

- □ From the federal Office of Management and Budget (OMB)
  - OMB A-81 Mega-circular, 2 CFR § 200 (2 CFR 200), Uniform Guidance, effective 12/26/2014
  - □ Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards, Final Rule
  - □ Supersedes and streamlines requirements from previous circulars: A-21, A-87, A-110, and A-122, A-89, A-102, A-133, and the guidance in Circular A-50 on Single Audit Act follow-up



# Federal-Wide Research Terms and Conditions (RTC)

- Address and implement the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards
- □A single set of revised (Mar '17) RTCs as they apply to research and research-related grants made to institutions of higher education and non-profit organizations
  - DOC/NOAA, DOE, EPA, NASA, NSF, DHHS/NIH, USDA/NIFA, DOT/FAA, DHS
  - ■NSF is sponsor
- Agency Implementation Statements updated on May 4



## **NIH Grant Policy Documents**

- NIH Grants Policy Statement (NIHGPS)
  - ☐ Fiscal Policy for Grant Awards
  - Electronic Submission of Grant Applications
  - Recent Notices of Policy Changes
  - ☐ SciENcv: Science Experts Network Curriculum Vitae
- Summary of major policy changes on OER blog
- □NIH Forms & Applications SF424 (R&R) and other mechanisms
  - Notable Changes Made to SF424 (R&R) Application Guides





# NIH Policy Supporting the Next Generation Researchers Initiative

The policy requires ICs to prioritize awards that will fund Early Stage Investigators (ESIs) and Early Established Investigators (EEIs):

- DESI is a PD/PI who has completed their terminal research degree or end of post-graduate clinical training, whichever date is later, within the past 10 years and who has not previously competed successfully as PD/PI for a substantial NIH independent research award.
- □EEI is a PD/PI who is within 10 years of receiving their first substantial, independent competing NIH R01-equivalent research award as an ESI.



## NIH Rigor & Transparency Policy

Updates focus on four areas deemed important for enhancing rigor and transparency:

- □ Rigor of Prior Research\* forming the basis of the proposed research (1)
- ■Scientific Rigor
  - □Rigorous experimental design for robust and unbiased results (2)
  - □Consideration of relevant biological variables (3) Authentication of key biological and/or chemical resources (4)



## NIH Rigor & Transparency Policy

NIH research grant and career development award application instructions and review language focus on four key areas:

#### 1. The rigor of the prior research

- A careful assessment of the rigor of the prior research that serves as the key support for a proposed project helps to identify weakness or gaps in a line of research. NIH
  expects applicants to describe the general strengths and weaknesses in the rigor of the prior research (both published and unpublished) that serves as the key support for
  the proposed project. It is expected that this consideration includes attention to the rigor of the previous experimental designs, as well as the incorporation of relevant
  biological variables and authentication of key resources. Applicants are expected to include plans to address any weaknesses or gaps identified.
- See related FAQs Blog Post

#### 2. Rigorous experimental design for robust and unbiased results

- Scientific rigor is the strict application of the scientific method to ensure robust and unbiased experimental design, methodology, analysis, interpretation and reporting of
  results. NIH expects full transparency in proposing and reporting experimental details so that reviewers may assess the proposed research and others may reproduce and
  extend the findings.
- See related FAQs Blog Post

#### 3. Consideration of relevant biological variables

- Biological variables, such as sex, age, weight, and underlying health conditions, are often critical factors affecting health or disease. In particular, sex is a biological
  variable that is frequently ignored in animal study designs and analyses, leading to an incomplete understanding of potential sex-based differences in basic biological
  function, disease processes and treatment response.
- NIH expects that sex as a biological variable will be factored into research designs, analyses, and reporting in vertebrate animal and human studies. Strong justification
  from the scientific literature, preliminary data or other relevant considerations must be provided for applications proposing to study only one sex.
- See related FAQs Blog Posts Reviewer Guidance Article 

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#### 4. Authentication of key biological and/or chemical resources

- Key biological and/or chemical resources include, but are not limited to, cell lines, specialty chemicals, antibodies and other biologics. Key biological and/or chemical resources may or may not be generated with NIH funds and:
  - may differ from laboratory to laboratory or over time;
  - · may have qualities and/or qualifications that could influence the research data;
  - · are integral to the proposed research.
- The quality of resources used to conduct research is critical to the ability to reproduce the results. Each investigator will have to determine which resources used in their research fit these criteria and are therefore key to the proposed research.
- See related FAQs Blog Post



#### **NSF PAPPG**

- Proposal and Award Policies and Procedures Guide
- ■Significant Changes and Clarifications to the PAPPG
- Introduction
  - About the National Science Foundation
  - Foreword
  - ☐ Listing of Acronyms
  - ☐ Definitions & NSF-Grantee Relationships
  - NSF Organizations
- ■Part I Proposal Preparation and Submission Guidelines
- ■Part II Award, Administration and Monitoring of Grants and Cooperative Agreements



#### **NSF PAPPG**

- ☐ Latest version of PAPPG is NSF 19-1
- ☐ Effective for proposals submitted, or due, on or after January 29, 2019
- □ Review the by-chapter summary of changes provided in the Introduction section of the PAPPG. Significant changes include:
- Addition of Research.gov as an option for proposal preparation and submission, and proposal file updates;
- Specification that conference proposals over \$50,000 and all equipment proposals must include the Collaborators and Other Affiliations information in the proposal submission;
- Revision of resubmission guidelines for NSF programs that accept proposals at any time;
- ☐ Implementation of NSF's policy on sexual harassment and other forms of harassment, or sexual assault.
- Coming in 2020: New NSF-approved Biosketch format will be that from SciENcv



## **NASA Proposers' Guidebook**

- NASA Research Announcement (NRA) and Cooperative Agreement Notice (CAN) Proposers' Guidebook
- Updated annually, but not necessarily on a recurring schedule



# Resources for New & Early-career Investigators

- ☐ HHMI-BWF Making the Right Moves
- Office of Research Development (ORD)
- NSF Faculty Early Career Development (CAREER) Program
  - Presidential Early Career Award for Scientists and Engineers (PECASE) Program
- EU Horizon 2020 Funding
- NIH
  - Early Stage Investigator Status/Policies
  - New Investigators Program
  - New Investigator Guide to NIH Funding

- Early-career Stage Investigator Portal
- Advice to Investigators Submitting Clinical Research Applications
- NRSA Training Awards Kiosk
- Career Development (K) Awards Kiosk
- ☐ Pathway to Independence (K99/R00)

  Award
- Director's New Innovator Award(DP2)
- Director's Early Independence Award (DP5)
- Early Career Reviewer (ECR) Program



#### Clinical Research Resources

- Clinical Trials Networks Best Practices: NIH Roadmap
- ■Advice to Investigators Submitting Clinical Research Applications
- ■NHLBI Clinical Research Guide
- NHLBI Pediatric Clinical Research Website
- ☐ Investigator-Initiated, Multi-site Clinical Trials
- Clinical Research Skills Development Core
- □ An Evidence-Based Guide to Writing Grant Proposals for Clinical Research



## Clinical Research Budget Support

- NUCATS Institute Regulatory Support Program (RSP)
  - Budget preparation for clinical trials
  - Review of financial section of the clinical trial agreement
  - □ Completion of the OSR-CT form/submission to OSR
  - Negotiation of the study budget with sponsor
  - ☐ Invoice for initial start-up costs
  - Provide training on the process of creating a clinical trial budget and helpful negotiating points
  - Explaining the contract submission process with OSR
  - ☐ Help with overall financial administration with studies
  - □ Handle work on backend to ensure all revenue has been collected and accounted for on closed out projects



# **Clinical Protocol Writing**

- Cancer Center Clinical Research Office
- Medical Writer
- ■Facilitate development and activation of NU investigator-initiated trials
- Collaborate with PIs to draft and modify protocols
- Point person throughout the project submission and approval process
- Assist with revisions and distribution of new versions throughout life cycle of the study
- Does not independently write the scientific or clinical aspects of a study



#### **NEH Application Advice**

- ■Advice on proposal drafts available
- ■Submit drafts of a proposals to NEH by e-mail at least 6 wks before deadline
- ■Enables an applicant to receive staff comments about substance and format of the application
- ■More complete the draft, more helpful the response
- ■Staff comments in response to draft proposals are not part of the formal review process and have no bearing on the final outcome of the proposal
- ■Avail yourself of a program officer's willingness to comment on an initial draft by submitting it in a timely manner



#### When You Can't Talk With a PO

- ☐ If your research shows that what your program/institution offers and the funder wants to support are a good match but you have no opportunity to talk with them or to meet in person, then:
  - ☐ In the proposal, quickly address how your program relates to their grantmaking strategy
  - ■Neither moan about how terrible things are for your group nor, on the other hand, imply you'd be doing the funder a favor by accepting their grant
  - ■Never trash competing organizations or funders that have turned you down
  - ■Be grammatically correct and error-free



#### **FUNDING OPPORTUNITIES**



#### **Federal Award Types**

- ☐ Grants: When no substantial programmatic involvement is anticipated between the funder and the recipient during performance of the assisted activity.
- ■Cooperative Agreements: When substantial programmatic involvement is anticipated between the funder and the recipient during performance of the assisted activity.



#### **Federal Award Types**

- ■Contracts: When the principal purpose of the transaction is the acquisition of property or services for the direct benefit or use of the funder.
- ■Prizes: To stimulate individuals and often involve monetary awards to one of more individuals, or entities external to the funder.
- ■Other Transactions (OT): Not grants, cooperative agreements, or contracts; this funding mechanism targets non-traditional sources and allows the Federal government a high degree of flexibility and how the agreement is awarded and managed



# **Funding Announcement Types**

- Omnibus Solicitation/Parent Announcement
- RFA Request for Applications
- PA Program Announcement
- NOSI Notice of Special Interest
- PS Program Solicitation
- PD Program Description
- RFP Request for Proposals
- BAA Broad Agency Announcement
- NRA NASA Research Announcement
- CAN Cooperative Agreement Announcement
- → FFO Federal Funding Opportunity
- □ FOA Funding Opportunity Announcement
- RFI Request for Information
- NOT Notice
- SEN Special Emphasis Notice
- Dear Colleague Letter



# **NIH Announcement Types**

<u>Type</u>	Receipt Date	Money Set Aside	Peer Review	Specificity of Topic	Advantage to Applicant
Parent Announcement	Standard receipt dates, usually open for three years	None	In Center for Scientific Review (CSR) or in an IC, by one of many review committees	Non-specific, investigator- initiated. Not all ICs participate in all parent FOAs.	May submit any topic within the breadth of the NIH mission. Compe tition tied mainly to an IC's overall payline
IC- specific Program Announcement s (PA)	Standard receipt dates, usually open for three years	No set asides (unless PAS); high- priority applications may be funded beyond the payline	In CSR or in an IC, by one of many review committees (unless <b>PAR</b> )	Often broadly defined or a reminder of a scientific need; investigator-initiated	Competition tied mainly to the IC's overall payline
Request for Applications (RFA)	Single	Specifies funds and targets number of awards	Usually in and IC, but sometimes in CSR. Same review committee for all applications. Usually reviewed by a Scientific Review Group, called a Special Emphasis Panel, that is convened on a one-time basis	Well-defined scientific area	Competition depends on number of applicants and dollars set aside



#### **NIH NOSI**

- ☐ This Notice informs the extramural community that NIH is expanding and formalizing the use of Notices of Special Interest (NOSI)
  - Succinctly highlight a specific topic of interest, for example a specific area of research or program
  - □ Direct applicants to one or more active FOAs (often parent announcements) for submission of applications for the initiative described
- Non-parent program announcements (PAs) with standard submission and review requirements that vary from one another only in the scientific topics highlighted will be phased out over time and replaced with NOSIs that direct applicants to use one of the parent or other existing announcements for submission.
- □ Continue to post full funding opportunity announcements (FOAs) for requests for applications (RFAs), program announcements with special receipt/referral/review considerations (PARs), and program announcements with set-aside funds (PASs).



#### **NIH Clinical Trial FOAs**

- All applications involving one or more clinical trials must be submitted through a FOA specifically designed for clinical trials.
- ► FOAs specify the allowability of clinical trials in the FOA title with the following designations.

Clinical Trial Not Allowed	Only accepts applications that do not propose clinical trial(s)		
Clinical Trial Required	Only accepts applications that propose clinical trial(s)		
Clinical Trial Optional	Accepts applications that either propose or do not propose clinical trial(s)		
Basic Experimental Studies with Humans (BESH) Required	Only accepts applications that propose clinical trial(s) that also meet the definition of basic research		



## **NIH Activity Codes**

R-series - Research Project Grants ■ R01 Individual research grants, most common ■ R03 Small Research Grant R13 Conference/Meeting/Workshop Grant ■ R15 Academic Research Enhancement Award □ R21/R33 Exploratory/Development Grants R37 Method to Extend Research in Time (MERIT) Award T-series –Training Grants T32 Institutional NRSA ☐ F-series - Fellowships F31/F32 – Pre/Postdoc NRSA □ K-series - Career Development Awards ■ K01 Mentored Res Scientist Development Award ■ K02 Independent Scientist Award ■ K08 Mentored Clinical Scientist Development Award K22 Career Transition Award P-series - Program Grants ■ P01 Program Project Grants ■ P50 Research Center Grants U-series - Cooperative Agreements □ U54 Specialized Center-Cooperative Agreements N-series - Contracts



# NCI Predoctoral to Postdoctoral Fellow Transition Award (F99/K00)

- □ Just as the NCI was the leader in establishing the K99/R00 postdoc-faculty transition award, they've established this new transition award for earlier career scientists
- Outstanding graduate students who have demonstrated potential and interest in pursuing careers as independent cancer researchers
- ■The K00 portion of the award is superior to an F33 NRSA fellowship award



# Pathway to Independence (PI) Award (K99/R00)

- ☐ Provides up to 5 years of support consisting of two phases
- Phase I will provide 1-2 years of mentored support for highly promising, postdoctoral research scientists
- ☐ Phase II up to 3 years of independent support contingent on securing an
- independent research position
- Award recipients will be expected to compete successfully for independent R01 support from the NIH during the career transition award period
- Eligible Principal Investigators include outstanding postdoctoral candidates who have terminal clinical or research doctorates who have no more than 4 years of postdoctoral research training
- Foreign institutions are not eligible to apply
- PI does not have to be a U.S. citizen
- More information:
  - New Investigators Program (http://grants.nih.gov/grants/new\_investigators/index.htm)



# Research Project Grant Program (R01)

- ■Support for a discrete, specified, circumscribed research project
- ■NIH's most commonly used grant program
- ■No specific dollar limit unless specified in FOA
- □ Advance permission required for \$500K or more (direct costs) in any year
- ☐Generally awarded for 3 -5 years
- □ Very important: preliminary data, innovation, impact



# **Exploratory/Developmental Research Grant Award (R21)**

- Encourages new, exploratory and developmental research projects by providing support for the early stages of project development
- Project period of up to 2 years
- □ Combined budget for direct costs for the two year project period may not exceed \$275,000, no more than \$200,000 may be requested in any single year
- Cannot be renewed
- □ No preliminary data are required but may be included if available
- Scope:
  - Exploratory, novel studies that break new ground or extend previous discoveries toward new directions or applications
  - ☐ High risk high reward studies that may lead to a breakthrough in a particular area, or result in novel techniques, agents, methodologies, models or applications that will impact biomedical, behavioral, or clinical research
  - ☐ Projects should be distinct from those supported through the traditional R01 mechanism
  - Projects of limited cost or scope that use widely accepted approaches and methods are better suited for the R03 small grant mechanism



## **Small Grant Program (R03)**

- □Support small research projects that can be carried out in a short period of time with limited resources
- □ A project period of up to 2 years and a budget for direct costs of up to \$50,000/yr
- Cannot be renewed
- □Preliminary data are not required but may be included Scope:
  - ■Pilot or feasibility studies
  - ■Secondary analysis of existing data
  - □Small, self-contained research projects
  - Development of research methodology
  - Development of new research technology



## New ESI R01: Stephen Ira Katz Award

□ Next Generation Researchers Initiative (NGRI): This Working Group delivered its final report in December, and the ACD made several recommendations which we have fully embraced, with most in various stages of implementation. An update was presented at the June meeting about these implementation efforts. After instituting the NGRI policy in fiscal year 2018, NIH awarded the highest number of Early Stage Investigator (ESI) grants in its history (1,287). As part of its effort to help at-risk investigators, OER also instituted a process of flagging to NIH Institute and Center (IC) Directors meritorious, established investigators whose applications for new grants scored well but fell outside the payline, putting them at risk for losing NIH funding. The IC Directors can choose to prioritize funding of these investigators. NIH also is increasing the level of post-doctoral support by increasing the stipends for Ruth L. Kirschstein National Research Service Award recipients. Finally, NIH will be launching a new ESI award called the Stephen Ira Katz Award in memory of the longtime director of the National Institute of Arthritis and Musculoskeletal and Skin Diseases who passed away unexpectedly in December. Still in development, this award will issue R01 grants to fund deserving ESIs who are designated on meritorious applications with no preliminary data, enabling them to propose and address highly innovative ideas that may represent entirely new research directions from the work they did as trainees.

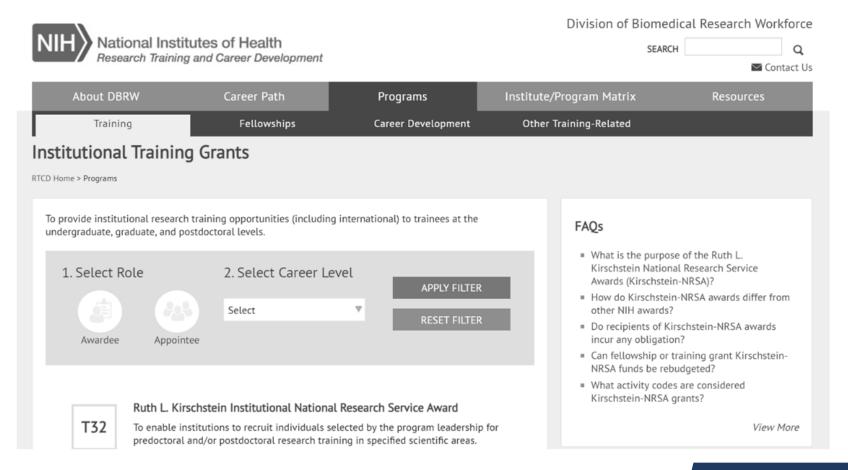


# NIH Trainee Funding by Career Stage

#### Career Path RTCD Home > Career Path NIH programs help to prepare the skilled, creative and diverse biomedical research workforce of tomorrow Undergraduate and **Early Research Career** Predoctoral Training/ Postdoctoral Training/ Investigator Postbaccalaureate Clinical Doctorate Clinical Residency Development **Development and** Mentoring Education



### NIH Trainee Funding by Program





### **NIH Trainee Institute/Program Matrix**

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- ◀	Individual Awards																					
	Individual Fellowships						Career Development Awards												DS*			
	F05	F30	F31	F32	F33	F99/K00	K01	K02	K05	K07	K08	K12	K18	K22	K23	K24	K25	K26	K99/R00	R36	D43	C
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### **NSF** Funding Opportunities Types

- ☐ Dear Colleague Letter ("Dear Colleague Letter:")
  - Opportunities or special competitions for supplements to existing awards
  - ☐ General information to the community, clarify or amend an existing policy/document
- ☐ Program Descriptions (PD 10-123)
  - Broad, general descriptions of programs and activities in NSF Directorates/Offices and Divisions
  - Investigator-initiated proposals for fundamental and basic research
- Program Announcements (PA 10-123)
  - Formal publications that announce NSF programs
- ☐ Program Solicitations (NSF 10-123)
  - ☐ Formal publications that encourage the submission of proposals in specific program areas of interest to NSF
  - Generally more focused than program announcements, and normally apply for a limited period of time



### **NSF Proposal Types**

- □ Research□ Rapid Resp
- Rapid Response Research (RAPID)
- ☐ Early-concept Grants for Exploratory Research (EAGER)
- □ Research Advanced by Interdisciplinary Science and Engineering (RAISE)
- ☐ Grant Opportunities for Academic Liaison with Industry (GOALI)
- ☐ Ideas Lab
- ☐ Facilitation Awards for Scientists and Engineers with Disabilities (FASED)
- Conference
- Equipment
- Travel
- Center
- Research Infrastructure
- ☐ Fellowship



#### **NSF Solicited Programs**

Solicited proposals have a published Program

#### Solicitation:

- CAREER Faculty Early Career Development Program
- NRT NSF Research Training Program
- ☐ FASED Facilitation Awards for Scientists and Engineers with Disabilities
- □ I/UCRC Industry/University Cooperative Research Centers Program
- □ RCN Research Coordination Networks
- MRSEC –Materials Research Science and Engineering Centers
- □ STC Science and Technology Centers
- CREATIV –Creative Research Awards for Transformative Interdisciplinary Ventures



### **NSF** "Unsolicited" Program Areas

Found in Guide to Programs (GTP): Programs Areas Biology Computer and Information Science and Engineering Crosscutting and NSF-wide Cyberinfrastructure Education Engineering ■ Environmental Research & Education Program Geosciences International Science & Engineering Math, Physical Sciences ■ NSF-wide Social, Behavioral, Economic Sciences Special Programs For Undergraduate Students ■ For Graduate Students ■ For Postdoctoral Fellows ■ For K-12 Educators

Small Business Programs



### **NEH Funding Opportunities**

- ☐ Bridging Cultures
- ☐ Challenge Grants
- Education Programs
- ☐ Federal/State Partnership
- Office of Digital Humanities
- Preservation and Access
- Public Programs
- Research Programs
- We the People



#### **AHRQ Portfolios of Research**

#### Comparative Effectiveness

to provide health care decision makers with up-to-date evidence-based information about their treatment options to make informed health care decisions.

#### Prevention and Care Management

to improve the quality, safety, efficiency, and effectiveness of the delivery of evidence-based preventive services and chronic care management in ambulatory care settings.

#### Value

- to help assure that consumers and patients are served by health care organizations that reduce unnecessary costs (waste) while maintaining or improving quality.
- by developing measures, data, evidence, tools, and strategies and strategies that health care organizations, systems, insurers, purchasers, and policymakers use to reduce unnecessary costs while maintaining or improving quality

#### Health Information Technology

to identify challenges to health information technology (IT) adoption and use, solutions and best practices for making health IT work, and tools that will help hospitals and clinicians successfully incorporate new health IT.

#### Patient Safety

to identify risks and hazards that lead to medical errors and find ways to prevent patient injury associated with delivery of health care.

#### Innovations/Emerging Issues

to identify and support research that has the potential to lead to significant advances in health care.



### **AHRQ Funding Mechanisms**

Research Career Development Program ■ K02 Independent Research Scientist Development Award ■ K08 Mentored Clinical Scientist Development Award ■ Research Program Projects and Centers □ P01 Research Program Project (RFA Only) ■ P20 Exploratory Grants (RFA Only) Research Projects ■ R01 Research Project ■ R03 Small Research Project Grants R13 Conference Grants □ R18 Research Demonstration and Dissemination Projects ■ R21 Exploratory/Development Grants □ R24 Resource-related Research Project ■ R36 Dissertation Grants Fellowship Programs ☐ F31 Predoctoral Individual National Research Service Award (Minority Program ☐ F32 Postdoctoral Individual National Research Service Award **Training Programs** ☐ T32 Institutional National Research Service Award (RFA Only) Cooperative Agreements □ U01 Research Project/Cooperative Agreements (RFA Only) ☐ U18 Research Demonstration/Cooperative Agreements (RFA Only)



#### **DOE Grant Program Areas**

- ■Office of Science (SC) Program Areas
  - □ Advanced Scientific Computing Research (ASCR)
  - □ Biological and environmental Sciences (BER)
  - ☐ Basic Energy Sciences (BES)
  - ☐ Fusion in Energy Sciences (FES)
  - ☐ High Energy Physics (HEP)
  - □Nuclear Physics (NP)
  - ■Workforce Development for Teachers & Scientists (WDTS)



#### **ED Grant Offices and Institutes**

- Office of Special Education and Rehabilitative Services (OSERS)
- ☐ Institute of Education Sciences (IES)
- ☐ Hispanic-Serving Institutions (HSI) Program

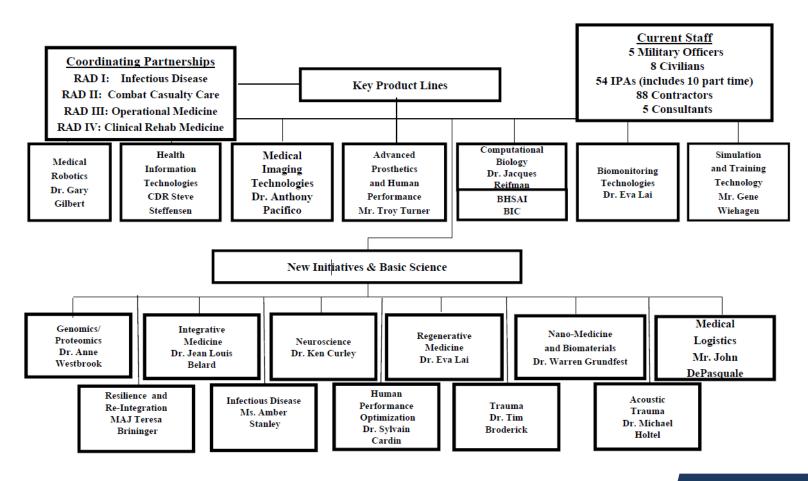


#### **DoD Funding Opportunities**

- Congressionally Directed Medical Research Programs (CDMRP)
  - Defense Medical Research and Development Program Basic Research Award
  - Defense Prostate Cancer Research Program (PCRP)
  - Applied Research and Advanced Technology Development Award
  - □ Orthopaedic Research Program (PRORP)
- ☐ Telemedicine & Advanced Technology Research Program
- Army Research, Development and Engineering Command (RDECOM)/Army Research Laboratory
- Defense Advanced Research Projects Agency (DARPA)
- Special Operations Forces (SOF) Basic and Applied Biomedical Research Topics



# DoD Telemedicine & Advanced Technology Research Program





### **Army Funding Mechanisms**

#### Research Relationships with U.S. Army Research, Development and Engineering Command (RDECOM)

The ARL Single Investigator (SI) Program entails grants with one or two faculty and graduate students and / or postdocs.

- ~\$110K/yr for 3 yr periods
- Continually open BAA Solicitation
  - ~120 new grants / year
- All States, >240 Universities

The Multidisciplinary University Research Initiative (MURI) Program supports university teams whose research efforts intersect more than one traditional science and engineering discipline.

- ~\$1.25M per year
- 3 year period
- 10 new initiatives annually
- Annual BAA Solicitation

CTA

The Collaborative Technology Alliances (CTAs) are partnerships established between consortia of academic and industrial concerns working collaboratively with ARL in an alliance.

- \$5 8M range
- 8 10 years in duration
- Consortia of academic and industrial concerns
- Potential New Areas: Robotics, Cognition and Neuroergonomics, and Network Science

COE

Centers of Excellence (COEs) are comprised of University-lead, focused initiatives and competitive contracts.

- 3 centers
- \$1 2M per year
- 3-5 years in duration
- No new centers planned at this time

HBCU/MI ARO Core Grants

This program supports STEM initiatives at HBCU/MIs through building infrastructure, instrumentation, scholarships, fellowships, and technical assistance . programs.

- Topics from ARO BAA
- ~\$110K/yr for 3 year periods



The Battlefield Capability Enhancement (BCE) Centers of Excellence are Historically Black College executed basic research programs with topics that focus on TRADOC-defined Warfighter Outcomes (previously Technology Gaps).

- Limited to HBCUs
- New competition in FY09
- ~\$400K per year

SBIR / STTR

The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs were established by Congress to provide small businesses and research institutions with opportunities to participate in government-sponsored research and development.

- Small Business Research
- Phase I and Phase II efforts
- www.armysbir.com for more information

University Affiliated Research Centers (UARCs) are large centers associated with the U.S. Army

- 4 centers 5 year efforts
- ~\$5 10M per year
- No new UARCs anticipated

#### DEPSCoR

The Defense Experimental Program to Stimulate Competitive Research (DEPSCoR) program is designed to expand research opportunities in states that have traditionally received the least federal funding for university

- For states receiving least amt of federal funds
- 3 year support
- Annual BAA Solicitation

The objectives of the Short Term Innovative Research (STIR) program are to provide rapid, short-term investigations to assess the merit of innovative concepts in basic research.

- \$50K Limit
- Short-term, proof-of-principle research
- Part of SI Continual BAA Solicitation



#### **Air Force Research Laboratory**

- ■Applied Biosciences
  - ■Nano-Bio Interaction/Effects
  - Bioinformatics
  - ■Toxicology
  - Predictive Modeling
  - ■Biomarker Discovery/Assay Development
  - Molecular Foundations



#### **VA Grant Centers and Programs**

- Center for Health Equity Research and Promotion (CHERP)
  - Health Disparities and Minority Health
- Medical and Prosthetics Research Program
  - Mental health
  - ☐ Traumatic brain injury
  - □ Spinal cord injury
  - ■Burn injury
  - □Polytrauma injuries
  - ☐Sensory loss



#### **VA Grant Centers and Programs**

- ■VHA Research & Development
  - ■VA Office of Research & Development (ORD) Research Programs
    - ■Merit Review Award Program (akin to NIH R01)
    - Career Development
    - Cooperative Studies Program (Clinical trial consortia)
    - Others



### NASA Science and Technology Programs

## NASA | FOR RESEARCHERS

**▼** Science and Technology Programs

Astrophysics Explorers

Astrophysics Research

Cosmic Origins

Discovery

Earth System Science Pathfinder

Earth Systematic Missions

**Exoplanet Exploration** 

**Explorers** 

GOES / POES

Heliophysics Explorers

Heliophysics Research

Living With a Star

Mars Exploration

Missions of Opportunity

**New Frontiers** 

Outer Planets Flagship

Physics of the Cosmos

Radioisotope Power Systems

Robotic Lunar Exploration

Solar Terrestrial Probes



#### FINDING FUNDING



#### Resources

- ■Searchable dBs and Resources
  - Commercial Search Engines
  - ■Government Funding
  - Foundation and Corporate Resources
  - Domain/Group-specific Funding
  - Others
- Lists of specific funding opportunities
- ■Awards made dBs



#### **Commercial Search Engines**

- Elsevier Funding Institutional (prev SciVal Funding): A large funding and awards made database that contains awards from the government, philanthropic, and industrial sectors in all fields, email notifications can be sent weekly
- InfoEd SPIN: A large funding database that contains awards from the government, philanthropic, and industrial sectors in all fields, email notifications can be sent weekly
- □ ProQuest Pivot (prev COS): A large funding database that contains awards from the government, philanthropic, and industrial sectors in all fields, email notifications can be sent weekly
- □ GrantForward (prev IRIS): A large funding database that contains awards from the government, philanthropic, and industrial sectors in all fields, email notifications can be sent weekly
- \*Research Professional (prev ResearchResearch): A complete funding opportunities alert service for researchers
- ☐ **GrantScoop**: Private and government funding opportunities for basic and clinical researchers focused on human health
- ☐ Grant Search: Run by AASCU, includes 2,000 private and federal funding opportunities



- □Grants.gov Find Opportunities service: Official federal grants and contracts search site, provides daily email service
- ■National Science Foundation Update: A weekly email alert service with subscription options that include new research opportunities, upcoming deadlines, and other content categories
- ■NIH Guide for Grants and Contracts: A weekly email compilation of new research opportunities from across the NIH



- ■NIH Behavioral and Social Sciences Research Grants Guide: Recent publications in the "NIH Guide to Grants and Contracts" relevant to Behavioral and Social Science Research compiled and distributed by the Office of Behavioral and Social Sciences Research.
- □NIH NIBIB Listserv: A periodic email alert for programs through NIBIB and other related funding agencies.
- ■NIH News Releases: A daily news bulletin of new programs and findings from the NIH.



- NEH Grant Opportunities: View grant programs alphabetically or by activity area
- ■Guide to U.S. Department of Education Programs: The Guide describes the grant programs administered by the Department and provides a telephone number for further information about each program.
- □ The Federal Register: The Federal Register is the official daily publication for rules, proposed rules, and notices of Federal agencies and organizations, as well as executive orders and other presidential documents. To subscribe to the Federal Register Table of Contents LISTSERV electronic mailing list, go to <a href="listserv.access.gpo.gov">listserv.access.gpo.gov</a> and select Online mailing list archives, FEDREGTOC-L, Join or leave the list (or change settings); then follow the instructions.



- □ Illinois Department of Human Services (IDHS) Grant Alert System: Serves as a resource and provides general information pertaining to funding opportunities of interest to the non-profits serving the citizens of Illinois.
- □ Faith-based and Community Initiatives: Access to links to current Federal funding opportunities at various Federal agencies for faith-based and community initiatives.



#### **Domain Specific Opportunities**

- Fund Source: A tool designed to help behavioral and social scientists find research funding. It has been designed to be specific to behavioral and social science research. The database includes short descriptions; contact information; and web links to programs in federal agencies, foundations, and international organizations that fund behavioral and social science research.
- Scan Grants: is designed to facilitate the search for funding sources to enhance individual and community health. The funding sources listed here may be of interest to virtually anyone associated with the health field —medical researchers, social workers, nurses, students, community-based health educators, academics and others.



#### **Domain Specific Opportunities**

- Directory of Grants and Fellowships in the Global Health Sciences: It includes nearly 500 funding opportunities related to biomedical and behavioral sciences, with a special emphasis on researchers in the developing world and their collaborators. An addendum listing 100 grants specifically for short term travel and externships
- National Association of Children's Hospitals and Related Institutions: Funding (Federal and private) information for pediatric research and research at children's hospitals and affiliated research institutes



#### **Domain Specific Opportunities**

Alert: This weekly publication highlights federal technology development financing opportunities for technology entrepreneurs and lists funding opportunities offered by the federal government, foundations and other agencies derived from various sources, including the State Science and Technology Institute (SSTI)



#### Other dBs

- ☐ **Grant Spy:** Grant Spy does the legwork for grant seekers in non-profits, government agencies, schools, police and fire departments, special districts, and other public organizations across the nation. Free 30dy trial for GPA members.
- ☐ GrantsWire Editor: Thompson Publishing's weekly intelligence on the latest grant opportunities and rules
- ☐ <u>GrantDomain:</u> The Grantsmanship Center's user-friendly, affordable tool that gives grantseekers instant access to databases containing the full range of funding opportunities available to them.
- ☐ <u>Grantsweb:</u> For government funding and resources, general research administrator resources, private funding information, policy information & regulations, SRA international foundation list.



### **Funding Finds You**

- Online Partnership to Accelerate Research (OnPAR)
  - Launched in March 2016 by NIH and Leidos
  - 7 private foundation funders to start
- □ Check with sponsored research and tech transfer offices before submitting



#### Office of Foundation Relations

- ■Coordinate interactions with foundations across the university/hospital
- Conduct research on foundations and offer strategic advice on application process in concert with research development
  - http://www.Memphis.edu/development
- Provide required documentation and other support services
- ■Assist in tracking, reporting, and stewardship



### **Foundation Funding**

- Foundation Directory Online: The Foundation Center's online searchable dB of grantmaker and grants data.
- The Foundation Center: Philanthropy News Digest posts requests for proposals (RFPs) submitted by grantmakers everyday. Each RFP listing provides a brief overview of a current funding opportunity offered by a foundation or other grantmaking organization. You can subscribe to RFP Bulletin, a free listing of new RFPs delivered weekly by e-mail by visiting the Newsletters page
- <u>FOUNDATIONSearch</u>: Fully searchable, online database of foundations for the serious prospect researcher, containing vital information about the funding history, preferences and contacts of over 100,000 US foundations
- □ <u>Illinois Funding Source:</u> Forefront (prev Donors Forum) online dB of Illinois grantmaker profiles and grant lists.



### **Foundation Funding**

- Chronicle of Philanthropy Grant Search FoundationSearch America: Comprehensive source of foundation funding information for non-profits, including analytics
- Bank of America Philanthropic Management: Free tool to search foundations and grants managed through Bank of America
- □ Illinois Attorney General Charitable Database: Allows you to search for public charities and private foundations that are registered in Illinois
- ☐ Guide Star: Free 990 search dB



#### **Corporate Relations**

Facilitates corporate engagement with the university across campuses

- ☐ Initiate & Develop corporate relationships that contribute to the education, scientific, and scholarly mission of the university.
- Maximize the flow of corporate resources to support the university's endeavors.
- □ Connect industry needs with university assets
- ☐ **Promote** corporate engagement...on all levels
- At the UofM this is handled by the FedEx Institute of Technology, the Office of Corporate Relations in Development, and Research Development
  - ☐ If you are interested in working with a company, please contact research@Memphis.edu



#### **Grants vs Gifts**

- □A **grant** provides support for a specific purpose of project as outlined in a proposal.
- ☐Grants require a budget and time period to be followed.
- Reporting is required.
  The majority of private foundation awards are grants

- □ A gift is given for unrestricted use or for support of a specific project. Funds are given voluntarily without expectation of any tangible benefit.
- No deliverables are expected and no line item budget is included.



### **Internal Grant Programs**

- □ UofM Gap Funding Progam, Launching this week
- ☐ FedEx Institute of Technology Innovation Calls for Proposal
- ☐ Tech Transfer Grants (Hai Trieu, UofM Tech transfer)
- ■Talk to your department chair about college level opportunities



### **Predoc Opportunities**

- National Science Foundation Graduate Research Fellowships
- □DoD Nat'l Defense Science & Engineering Graduate Fellowships Program (NDSEG)
- Homeland Security Scholarship and Fellowship Program
- NIH National Research Service Awards (NRSA; ind or instit)
- EPA Science To Achieve Results (STAR) Fellowships for Graduate Environmental Study
- American Association of University Women American Dissertation Fellowships
- ■Ford Foundation Predoctoral Fellowships for Minorities



#### **Postdoc Opportunities**

- ■Helen Hay Whitney Foundation
- Damon Runyon Cancer Research Foundation
- ■Jane Coffin Childs Memorial Fund for Medical Research
- ■Life Sciences Research Foundation
- ■American Cancer Society
- American Heart Association
- □NIH National Research Service Awards (NRSA; ind or instit)
- ■NIH K awards
- DHS Research Associateship Program



#### **Postdoc Opportunities**

- **UC Berkeley Compilations**
- ■Postdoctoral Fellowships in the Social Sciences
- ■Postdoctoral Fellowships in the Humanities



#### **Transition Awards**

- ■NIH K99/R00 Awards
  - ■NIH NCI Temin Award
- NIH Director's Early Independence Award
- □ American Gastroenterological Association Foundation for Digestive Health and Nutrition Fellowship to Faculty Transition Awards
- □ American Heart Association National Fellow-to-Faculty Transition Award



#### **Early Career Faculty Opportunities**

#### Federal & Foundations:

- ■NSF Faculty Early Career Development (CAREER) Program & Presidential Early Career Awards for Scientists and Engineers (PECASE) Program
- □ Library of Congress
  - ☐ Humanistic and social science research
  - Kluge Center Fellowships
- David and Lucile Packard Fellow
- Camille Dreyfus New Faculty Award & Teacher-Scholar Award
- ■Beckman Young Investigators
- ■Searle Scholars Program
- □ Pew Scholars Program in Biomedical Sciences



### **Early Career Faculty Opportunities**

#### **Professional Societies:**

- Protein Society Irving Sigal Young Investigator Award
- □ American Society for Cell Biology Women in Cell Biology Career Recognition Junior Award
- □American Chemical Society Eli Lilly Award in Biological Chemistry
- ■American Society for Biochemistry and Molecular Biology
- American Society for Microbiology
- ■Biophysical Society



### **Medical Professional Opportunities**

- ■Nursing Research, NINR
- Opportunities for PharmDs
- □ Environmental Health, NIEHS





## Questions?

**PERSON TITLE** 

Email Phone

