



## **The American Recovery and Reinvestment Act of 2009** **Summary of NIH funding and implementation**

The Act provides \$10.4B for NIH. Major goals of NIH funding include spending within two years, achievement of tangible scientific and health outcomes, and creation and retention of jobs. Funds must be committed between now and September 2010. Most awards must be spent by February 2011. The NIH has planned its implementation of the Act without assumptions as to its level of funding in the final FY2008-09 budget or in FY2009-10. Implementation plans generally avoid creation of longer-term commitments.

The Act provides funding in the following categories:

- \$8.2B Scientific research
  - \$7.4B to Institutes and Centers and Common Fund, proportionate to their overall budgets, to be used for partial funding of certain meritorious but unfunded R01 and K applications from the 2008-09 pool and supplements to existing R01 and U grants.
  - \$800M to the Office of the Director
- \$1B Extramural construction and alterations, via NCRR
- \$300M Shared Instrumentation and other capital equipment, via NCRR
- \$500M Construction and renovation of NIH facilities
- 400M Comparative effectiveness research (provided through AHRQ)

The NIH is confident of its ability to use the funds wisely, making use of its review and decision making structures. Awards may be made administratively by program offices for work within the scope of recent, positive, peer review, or with peer review using rapid review mechanisms that the NIH has been developing in recent years.

There will be unprecedented individual grant-level transparency and accountability measures, including additional reporting requirements, posting of expenditures and outcomes on [recovery.gov](http://recovery.gov), and reporting by the NIH to the Institute of Medicine.

On the following pages we provide information on each of the funding opportunities provided by the Act, along with campus contact information. For every opportunity,

- **Be on time.** This opportunity means a lot of work for your department and institute staff and for your grant and contract officers in Research Affairs. A flurry of submissions is likely to tax the [grants.gov](http://grants.gov) submission system. As work is funded, the IRB, IACUC and Biosafety may be similarly taxed. Every office involved is planning for rapid handling of their work, including extra review meetings as needed. Please be sure your work is ready to go on time and we will do everything possible to support you.
- **Share ideas.** Please share ideas with your colleagues about how you can make best collective use of supplements. Think creatively about how multiple partially-funded efforts might be organized to lead to future success in future competitive grant processes.
- Use the contact list at the end of this document for questions or to share ideas.

### **Partial funding of unfunded applications from the 2008-09 pool**

A portion of the \$7.4B allocated to institutes and centers for research will be devoted to partial funding of meritorious but unfunded grant applications from recent review cycles. The primary focus is on approximately 14,000 R01 applications from recent cycles that are ready to be funded and for which good progress can be made with 18 months to two years of funding. Institute staff must make these judgments. Institute staff are also permitted to fund the first two years of training grant (K) awards if they have confidence in their ability to fund ensuing years from their regular budgets.

#### **What you can do**

R01 grants, those most likely to get support will have

- Excellent peer review in a recent (2008-2009) review cycle
- One or more Specific Aims that can be completed in less than two years

Applications having clear timelines, and very positive peer review comments on activities scheduled for the first 1-2 years are likely to be selected.

If your ability to make significant progress in a short time might not be apparent from the way you structured your application, you should consider contacting your program officer, being sure to make efficient use of his or her time. Grants on no-cost extension may be eligible; stimulus funding may provide an ideal opportunity to get data that you need for renewal. Before making contact, remember the following:

- Prepare in advance with a clear, concise description of how you would make significant progress in 18 months.
- Remember that your proposed work must remain within the scope of the peer review.

### **Administrative supplements to currently funded grants**

A portion of \$7.4B allocated to institutes and centers for research is being used to expand and accelerate the pace of existing funded projects. R01 and U grants are eligible. Both administrative processes, for work within the scope of prior peer review, and competitive processes for expansion of funded work, can be used by individual institutes and centers. Supplements cannot be used for restoration of budget reductions.

#### **Eligible expenses**

- Postdoctoral fellows, graduate students, undergraduate students, and summer interns
- Equipment under \$100,000
- General expansion or acceleration of the project

#### **What you can do**

For each R01 grant, think about how you would make productive use of short-term funding for items such as equipment, support of short-tenure trainees, and experiments that were deemed to be too expensive at the time of your original application. NIH program officers have great pride in their grant portfolios and need your help in putting funds to the best possible use. Before contacting your program officer, remember the following:

- Prepare in advance with a clear, concise description of how you would make significant progress in 18 months.
- Remember that, unless your institute is considering peer review of supplement applications, your proposed work must remain within the scope of the peer review.

Discuss with your colleagues any equipment you plan to request. Seek to identify complementary requests that will bring collective benefit.

## The Challenge Grant Program

<http://grants.nih.gov/grants/guide/rfa-files/RFA-OD-09-003.html>

Challenge Grants are a new program created specifically for use of stimulus funds. These grants provide one-time support for novel research efforts to overcome barriers in health, health-related sciences, and conduct of research, and healthcare. The NIH has defined fifteen broad "Challenge Areas," areas in which knowledge gaps, scientific opportunities, and needs for new technologies and research methods can be addressed using a rapid influx of funding. Within each Challenge Area, each institute and center has developed a list of specific topics of importance to its mission. **NIH expects to fund a minimum of 200 of these \$1M awards. Individual institutes may increase this number, and additional numbers may be awarded using comparative effectiveness funding.**

The Challenge Grant program uses a new "RC1" grant mechanism with specific application format requirements including different required sections, page limits and biosketch content. These are clearly described in the RFA.

### Some program details

- Application format
  - One-page Specific Aims
  - 12-page Research Plan
  - **NO** Background and Significance or Preliminary Data
- Budget limit: \$500,000 per year for two years
- Initial review at ORA for special NIH RC1 requirements: April 13, 2009
- Final review at ORA: April 22, 2009
- Final submission at ORA dropbox: April 24, 2009
- Application receipt date: April 27, 2009
- Anticipated start date: September 30, 2009

### Broad Challenge Areas

The following list of Challenge Areas reflects the breadth of the program. **There is opportunity here for projects that you might not have previously thought to be attractive to the NIH.** In addition to opportunities in current and emerging scientific fields, there are new opportunities relating to comparative effectiveness; ethical and methodological challenges in clinical research, personalized medicine and quality improvement; and information technology.

- Behavior, Behavioral Change, and Prevention
- Bioethics
- Biomarker Discovery and Validation
- Clinical Research
- Comparative Effectiveness Research (CER)
- Enabling Technologies
- Enhancing Clinical Trials
- Genomics
- Health Disparities
- Information Technology for Processing Health Care Data
- Regenerative Medicine
- Science, Technology, Engineering and Mathematics Education (STEM)
- Smart Biomaterials - Theranostics
- Stem Cells
- Translational Science

Within each of these areas, individual Institutes and Centers have developed detailed descriptions of specific research topics, including indications of their major priorities. **Each Challenge Grant application must cite one of these specific topics.**

### Important web resources

- NIH Challenge Grant program home page  
[http://grants.nih.gov/grants/funding/challenge\\_award/](http://grants.nih.gov/grants/funding/challenge_award/)
- Detailed descriptions of broad Challenge Areas (pdf)  
[http://grants.nih.gov/grants/funding/challenge\\_award/High\\_Priority\\_Topics.pdf](http://grants.nih.gov/grants/funding/challenge_award/High_Priority_Topics.pdf)
- Links to individual Institute and Center Challenge Topics  
[http://grants.nih.gov/grants/funding/challenge\\_award/IC\\_ChallengeWebPage.htm](http://grants.nih.gov/grants/funding/challenge_award/IC_ChallengeWebPage.htm)

### What you can do

These Challenge Areas and Topics reflect the priorities of each NIH institute and center, the Office of the Director, and the Administration. You should look at this program as an opportunity to gain a foothold in an area that's likely to be of high priority in the next several years. Download the pdf of Topic descriptions at [http://grants.nih.gov/grants/funding/challenge\\_award/High\\_Priority\\_Topics.pdf](http://grants.nih.gov/grants/funding/challenge_award/High_Priority_Topics.pdf) to better understand the NIH intent in each area, then explore the specific topics identified and prioritized by the individual institutes and centers.

Many of these topics call for new partnership among biological, physical, computational and social scientists, as well as scholars in the humanities. We enjoy the benefit of faculty expertise in many of these areas on campus, as well as the depth of talent at University Park. All of the institute directors and research deans work together to support collaborative teams. Please don't hesitate to ask for help in identifying collaborators. We do expect this program to be very competitive. Each team should include a PI who has significant NIH grant experience. The NIH multiple-PI option applies to the Challenge Grant program.

### Information for Grant Preparation

Required Components of SF424 application:

- SF424 R&R cover page; R&R Project/Performance Site Locations; R&R Other Project Information; R&R Senior/Key Person; PHS398 Cover Page Supplement; PHS398 Research Plan; PHS398 Checklist; R&R Detailed budget

Special Instructions for Other Project Information:

- Project Summary/Abstract: **One** page limit stating the broad Challenge Area and specific Challenge Topic
- Bibliography and Literature cited: **One** page limit

Special Instructions for Senior/Key Person Profile

- Biographical Sketches: **Two** page limit with the number of publications cited limited to **Ten**.

Special Instructions for PHS 398 Research Plan Component:

- Introduction section: **Not** allowed
- Specific Aims: **One** page limit
- Background and Significance: **NO**
- Preliminary Studies/Progress Report: **NO**
- Research Plan limited to Twelve pages, including tables, graphs, figures, charts, uploaded as a **single** .pdf document, containing the following four elements:
  - Challenge Area and Challenge Topic
  - The Challenge and Potential Impact
  - The Approach
  - Timeline and milestones

R&R Detailed Budget:

- \$500,000 **total cost** limit per year for two years. If there are no MTDC exclusions in the direct cost base, then direct costs are limited to \$322,372 per year.
- Reporting of expenditures will be quarterly

Appendices – Not allowed

Supplemental data – **Not** accepted

Quarterly reporting on expenditures and jobs created/retained are a requirement of award.

**NCRRC Shared Instrumentation, High-End Instrumentation, and Facilities Programs**

NCRRC is applying stimulus funds to instrumentation and facilities improvement programs as follows:

Program	Purpose	Funds in program	Due date	Application limit
Shared Instrumentation Grants (\$10 with added ARRA funds) <a href="http://grants1.nih.gov/grants/guide/pa-files/PAR-09-028.html">http://grants1.nih.gov/grants/guide/pa-files/PAR-09-028.html</a>	Shared instruments costing \$100,000 - \$500,000	\$43M plus ARRA funds*	March 23	None
ARRA High-end Instrumentation Grants (\$10) <a href="http://grants.nih.gov/grants/guide/pa-files/PAR-09-118.html">http://grants.nih.gov/grants/guide/pa-files/PAR-09-118.html</a>	Shared instruments and equipment costing \$600,000 - \$8,000,000	\$160M	May 6 (LOI April 6)	None
ARRA Core Facility Renovation, Repair, and Improvement (G20) <a href="http://grants.nih.gov/grants/guide/rfa-files/RFA-RR-09-007.html">http://grants.nih.gov/grants/guide/rfa-files/RFA-RR-09-007.html</a>	Upgrades to core facilities, centralization of dispersed instrumentation, and upgrades to general small equipment. \$1M - \$10M	\$1B total for G20 and C06*	Sept 17	Two per campus
ARRA Extramural Research Facilities Improvement Program (C06) <a href="http://grants.nih.gov/grants/guide/rfa-files/RFA-RR-09-008.html">http://grants.nih.gov/grants/guide/rfa-files/RFA-RR-09-008.html</a>	Expand, remodel, renovate or alter biomedical or behavioral research facilities. \$2M - 15M  Five-year spending period (but "expeditious" spending).		\$2-5M: May 6  \$5-10M: July 17  \$10-15M: June 17	Three per campus
* \$140M ARRA funds divided between additions to the regular annual SIG program and small equipment purchased under the G20 core renovation program.				

Facilities, Comparative Medicine and Research Resources are compiling a comprehensive list of needs and pending projects and matching these to our opportunity to apply for two core facility and three facilities improvement grants. Department chairs will be involved in review and prioritization prior to preparation of our campus proposals.

What you can do

**Shared Instrumentation and High-End Instrumentation Grants** require full documentation of similar equipment on campus, whether or not housed in core labs, along with utilization data showing the need for new capacity or capabilities to support at least three, and preferably five, currently-funded NIH grants. PIs and departments will be expected to invest in technical support and management of the shared resource.

Please take note of the following:

- NCRRC requires that there be no overlap between requests made under the SIG and High-End Instrumentation programs. Should you have the option of requesting mid-level or high-end versions of the same equipment under the two programs, please confer with Bruce Stanley.
- Remember that equipment under \$100,000, including add-ons to existing instruments, can be acquired through supplements to individual R01 grants.

Contact Bruce Stanley with your shared instrumentation needs. He will provide materials to support your application, including samples of successful applications and templates for required sections. **Please note the March 23 deadline for Shared Instrumentation Grants and the April 6 deadline for High-End Instrumentation Grant letters of intent.**

## Campus Contacts

Alan J. Snyder, Ph.D.  
Interim Vice Dean for Research and Graduate Studies, College of Medicine  
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### Grant applications

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### Identifying grant opportunities

Ernest Johnson, Ph.D.  
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### Core resources

Bruce A. Stanley, Ph.D.  
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Kent Vrana, Ph.D.  
Chair, Core Laboratory Faculty Advisory Committee  
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### Animal care facilities

Ronald Wilson, DVM  
Chair, Comparative Medicine  
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### Research Integrity

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