

# NIGMS Feedback Loop

*A catalyst for interaction with the scientific community*



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The National Institute of General Medical Sciences (NIGMS) is one of the National Institutes of Health in the U.S. Department of Health and Human Services. By supporting basic biomedical research and training nationwide, NIGMS lays the foundation for advances in disease diagnosis, treatment, and prevention.

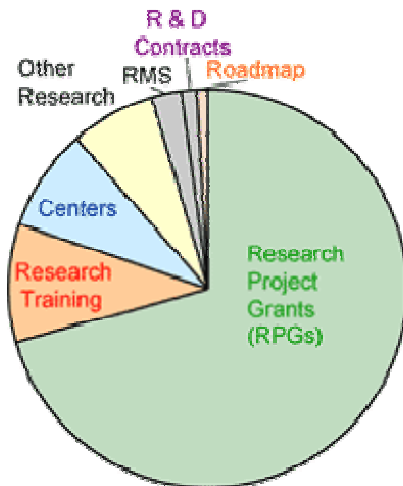
The *NIGMS Feedback Loop* is an e-mail newsletter alerting researchers to NIGMS [funding opportunities](#), trends, and plans. We encourage your [input and feedback](#) on Institute activities.

All NIGMS grantees are automatically subscribed to the *NIGMS Feedback Loop*; other interested individuals are encouraged to subscribe themselves. To subscribe, change your subscription options, or unsubscribe, visit the *NIGMS Feedback Loop* [subscription page](#) on the NIH LISTSERV Web site.

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## A Message from the NIGMS Director

As I have interacted with scientists from around the country over the past few months, many of our conversations have quickly turned to budget and success rate matters. Often, when I describe how much of the NIGMS budget is devoted to research grants, I am asked, "What are the other components of the NIGMS budget?" My response is captured in the NIGMS budget overview shown in Figure 1.



**Figure 1. NIGMS Budget Overview, Fiscal Year 2006**

This figure reveals that over 70% of the budget is devoted to **Research Project Grants**, or RPGs. Within the RPG pool, approximately 86% of the budget supports R01 grants (including MERIT awards), 1.1% supports R21 grants, 0.7% supports R15 (AREA) grants, 4.5% supports P01 (program project) grants, 3.2% supports Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) grants, and 1.7% supports U01 (cooperative agreement) grants associated with the Pharmacogenetics Research and the Models of Infectious Disease Agent Study (MIDAS) networks.

The next largest component of the budget—approximately 10%—is devoted to **Research Training**. Within this category, 86% of the funds support institutional training grants while 14% support individual fellowships.

**Centers** make up 8% of the budget. Most of these centers are associated with initiatives such as the Protein Structure Initiative, the Large-Scale Collaborative Award (glue grant) program, the NIGMS National Centers for Systems Biology program, the Chemical Methodologies and Library Development program, centers for basic research on human embryonic stem cells, and centers devoted to specific studies of trauma, burn, perioperative injury, and wound healing.

The next largest budget category, called **Other Research**, makes up 7% of the budget. The Minority Biomedical Research Support (MBRS) program accounts for 76% of this category, with research career awards representing another significant component.

The remaining categories include **Research Management and Support**, or RMS, which supports administrative costs such as NIGMS staff salaries and scientific review expenses (2.4% of the budget); **Research and Development Contracts**, which supports activities such as the NIGMS Human Genetic Cell Repository (1.2%); the NIGMS contribution to the **NIH Roadmap for Medical Research** (0.9%); and **Intramural Research** (<0.1%).

It is important to note that the distribution of funds across these mechanisms has been almost completely stable since Fiscal Year 2003. During the period of the NIH budget doubling, in addition to increases in the size and number of investigator-initiated research grants, the distribution of funds did change somewhat as several new

initiatives were started with input from the National Advisory General Medical Sciences Council and others in the scientific community.

**Success Rates**

As I have noted in previous issues of the *Feedback Loop* (see the [October 2005 issue](#), for example), a parameter that captures the balance between the number of grants funded and the number of applications received in a given year is the success rate. The success rate is defined as the number of competing applications funded divided by the total number of competing applications reviewed, regardless of whether or not they were scored or streamlined. Amended applications reviewed in the same fiscal year are only counted once in success rate calculations.

Success rates vary from year to year, from mechanism to mechanism, and from institute to institute. [Data on success rates](#) are publicly available on the NIH Office of Extramural Research Web site. For example, the overall success rate for Research Project Grants for NIGMS for Fiscal Year 2005 was 26.8%. The overall success rate for RPGs for all of NIH for the same year was 22.3%, with a range of 14.0% to 30.5% over the different institutes and centers. Success rate data for selected mechanisms for NIGMS in Fiscal Year 2005 are shown in Table 1.

<b>Table 1. Success Rates for Selected Mechanisms, NIGMS, Fiscal Year 2005</b>	
<b><i>Research</i></b>	
R01	821/3104 = 26.4%
R15	49/142 = 34.5%
R21	43/261 = 16.5%
P01 (Program project)	6/28 = 21.4%
R43 (Phase I SBIR)	73/316 = 23.1%
<b><i>Research Training</i></b>	
T32 (Institutional training)	70/130 = 53.8%
F32 (Individual postdoctoral fellowship)	193/511 = 37.8%

Note that the relatively high success rate for T32 training grants reflects the large fraction of these applications that are competing renewals.

The overall success rates for NIGMS RPGs were 37.9% for Fiscal Year 2003 and 29.7% for Fiscal Year 2004, and, as noted above, 26.8% for Fiscal Year 2005. What

about Fiscal Year 2006? We are anticipating a success rate quite similar to that for Fiscal Year 2005, approximately 26%.

### ***I Welcome Your Feedback***

I hope that this information is useful with regard to considering your own situation, that of your institution, and the policies and priorities of NIGMS.

As always, feel free to contact me with questions and comments, either by using my new [Ask the Director Web page](#) or by sending e-mail to me at the address below. I have been pleased with the level of response that I have received stemming from earlier issues of the *Feedback Loop*, and I invite you to continue the dialogue. If your topic is of broad interest and you give us permission, we may post your message on the NIGMS Web site along with my response so that others can benefit from the additional information.

Jeremy M. Berg  
Director  
National Institute of General Medical Sciences  
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## **Advisory Council Concept Clearances**

Proposed new NIGMS research and training programs are made public at the open session of National Advisory General Medical Sciences Council meetings. Council approval of new initiatives (and major changes to existing initiatives) is called "concept clearance." Concept clearance authorizes NIGMS staff to develop plans, publish announcements in the [NIH Guide for Grants and Contracts](#), and fund grants. During the initiative planning stages that follow concept clearance, NIGMS welcomes comments and suggestions from the community.

At its May 2006 meeting, the Council discussed the concept clearances summarized below. For additional details, see the [Council minutes](#) or contact the identified NIGMS staff member.

### ***Training at the Interface of the Behavioral and Biological Sciences***

The Council approved a program to develop basic behavioral scientists with rigorous, broad-based training in biology and biomedical science who can assume leadership roles related to the Nation's biomedical, clinical, and research needs. The program will

involve faculty from multiple departments spanning the behavioral and biological sciences to provide students with cross-training and interdisciplinary thesis opportunities. For more information, contact NIGMS program director Alison Cole at [colea@nigms.nih.gov](mailto:colea@nigms.nih.gov) or 301-594-3827.

### ***Minority Student Training Program***

The NIGMS Minority Access to Research Careers (MARC) program supports undergraduate biomedical research training to increase the preparation of underrepresented minority students for Ph.D. programs. The Council approved a proposal to refocus this program emphasizing developing and enhancing the scientific and academic skills of MARC students rather than simply interesting and motivating potential trainees. NIGMS may use an outcomes-based funding approach and will encourage participating institutions to develop both strong curricula that are rich in the quantitative sciences and collaborative partnerships with existing predoctoral research training (T32) programs. For more information, contact NIGMS program director Shawn Drew at [drewl@nigms.nih.gov](mailto:drewl@nigms.nih.gov) or 301-594-3900.

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## **Funding Opportunities**

### ***Determination of Structures of HIV/Host Complexes (P50)***

This request for applications is for research centers to determine the high-resolution structures of complexes between components of HIV and the host cell. The centers also will engage in collaborative research with the larger community involved in HIV-cell complex research. Up to \$10 million will be available to fund applications received in response to this RFA. NIGMS anticipates making two to three awards. For more information, see [RFA-GM-07-001](#) and contact NIGMS program director Ravi Basavappa at [basavapr@nigms.nih.gov](mailto:basavapr@nigms.nih.gov) or 301-594-0828.

### ***High-Accuracy Protein Structure Modeling (R01)***

This is a reissue of a 2004 request for applications to develop novel technologies that will significantly improve the accuracy of comparative modeling methods for protein structure prediction. NIGMS intends to commit approximately \$1.6 million (total cost) during FY 2007 to fund up to five new grants in response to this RFA. The maximum project period will be 3 years with direct cost support of up to \$225,000 per year. For more information, see [RFA-GM-07-003](#) and contact NIGMS program director Jiayin (Jerry) Li at [lij@nigms.nih.gov](mailto:lij@nigms.nih.gov) or 301-594-0828.

### ***Molecular Probes for Microscopy of Cells (R01)***

The purpose of this program announcement is to evaluate promising but unproven general-purpose enabling technologies for the routine detection by microscopy of single molecules and single molecular events inside cells. Topics include new classes of high-signal-output molecular imaging probes and methods for the delivery and targeting of probes. For more information, see [PAR-06-288](#) and contact NIGMS program director James Deatherage at [deatherj@nigms.nih.gov](mailto:deatherj@nigms.nih.gov) or 301-594-3828 or NIGMS division director Catherine Lewis at [lewisc@nigms.nih.gov](mailto:lewisc@nigms.nih.gov) or 301-594-0828.

### ***Basic Research on Human Embryonic Stem Cells (P01)***

This request for applications is to fund program project grants on the basic biology of human embryonic stem cells and promote the use of these cells as a model system for addressing significant questions in the basic biomedical sciences. NIGMS has set aside \$6 million in FY 2007 to support up to three awards. Funds may be used only for research involving cell lines listed in the [NIH Human Embryonic Stem Cell Registry](#). For more information, see [RFA-GM-07-002](#) and contact NIGMS program director Marion Zatz at [zatzm@nigms.nih.gov](mailto:zatzm@nigms.nih.gov) or 301-594-0943.

### ***Research Supplements to Promote Diversity in Health-Related Research***

Principal investigators holding active NIGMS research grants can request supplemental funds to recruit and support individuals from groups that are underrepresented in biomedical research. NIGMS now will consider requests to support more than one graduate student or postdoctoral fellow per grant. For more information, see [NOT-GM-06-111](#) and contact Anthony René, NIGMS assistant director for referral and liaison, at [renea@nigms.nih.gov](mailto:renea@nigms.nih.gov) or 301-594-3833.

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## **NIGMS-Sponsored Events**

### ***Protein Structure Target Selection***

NIGMS will hold a workshop on protein structure target selection on June 26-27, 2006, in the NIH Natcher Conference Center, Bethesda, MD. Space is limited; advance registration is required. For more information, contact NIGMS program director Charles Edmonds at [edmondsc@nigms.nih.gov](mailto:edmondsc@nigms.nih.gov) or 301-594-0828.

## ***Functional Genomics of Critical Illness and Injury***

Investigators using genomic and proteomic approaches to study critical illness are encouraged to participate in a November 13-14, 2006, symposium featuring sessions on topics such as the biology of stress, new advances in pharmacogenomics and metabolomics, and recent progress across several multidisciplinary research networks. The meeting will be held in the NIH Natcher Conference Center, Bethesda, MD. Submit research abstracts for consideration by September 8; register to attend by October 19. For more information, see the [symposium Web site](#) and contact NIGMS program director Scott Somers at [somerss@nigms.nih.gov](mailto:somerss@nigms.nih.gov) or 301-594-3827.

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## **Research Administration Notes**

### ***Electronic Grant Submission Update***

If you plan to apply for funding during the next year, now is the time to learn about the new [NIH electronic grant submission process](#) to ensure that your application arrives properly and on time.

**E-submissions now use local time:** Electronic applications now must be submitted to Grants.gov no later than 5:00 p.m. in the local time zone of the applicant's organization on the date specified in the relevant funding opportunity announcement. For more information, see [NOT-OD-06-050](#).

**Implementation deadlines extended:** The timeline for moving from paper to electronic applications now provides an additional 4 months before the changeover for R01s and other funding mechanisms. For more information, see the [updated timeline](#) (31 KB PDF, requires [free Acrobat Reader](#)).

**Is your application on track?** The simplest and most effective way to establish that your electronic application has been properly received and processed is to check whether it is accessible through your NIH eRA Commons account no later than 2 days after you have submitted it to Grants.gov. The eRA Commons provides the only opportunity to see your grant application just as a reviewer will see it. Once the 2-day window has elapsed, any changes to the application must be made through your scientific review administrator and could delay processing. For more information, see [NOT-OD-06-055](#) and contact NIGMS deputy director for extramural activities Paul Sheehy at [sheehyp@nigms.nih.gov](mailto:sheehyp@nigms.nih.gov) or 301-594-4499.

**Stay informed with e-mail updates:** The NIH Office of Extramural Research offers two electronic mailing lists to provide periodic updates on its electronic grant application program to scientists and administrators. To subscribe, see [NOT-OD-06-047](#).

### ***Multiple PI Pilot Program***

NIH will allow multiple principal investigators (PIs) on grant applications within a selected set of grant programs starting in September 2006. This effort is intended to complement, and not replace, the traditional single-PI model. The policies and procedures pertaining to multi-PI applications and awards will differ in some ways from those for traditional single-PI research grants. For more information, including a list of relevant funding opportunities, see the [Multiple Principal Investigators page](#) on the NIH Web site.

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## **Resources**

### ***NIGMS Funding Opportunities Directory***

The NIGMS Web site now offers an [interactive directory](#) allowing you to easily locate Institute-supported funding opportunities. Search by keyword or phrase, filter by grant mechanism, or browse by areas such as research funding, training and career development, minority programs, research and administrative supplements, and small business opportunities.

### ***New Minority Programs Publication Available***

The publication [21st Century Scientists: Research Training Opportunities for Underrepresented Minorities](#) is now available on the NIGMS Web site. This brochure provides an overview of the Institute's minority programs and includes a chart of these programs by career stage. Printed copies also are available from the NIGMS Office of Communications and Public Liaison at [info@nigms.nih.gov](mailto:info@nigms.nih.gov) or 301-496-7301.

### ***NIH Pathway to Independence Award Q&A***

[Questions and answers about the new Pathway to Independence Award program \(PA-06-133\)](#) are available on the NIH Web site. The program helps investigators receive R01 awards earlier in their research careers by providing highly promising postdoctoral scientists with up to 2 years of mentored support, followed by up to 3 years of additional support contingent on securing an independent research position.



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## Job Announcement

### ***Director, NIGMS Center for Bioinformatics and Computational Biology***

The [NIGMS Center for Bioinformatics and Computational Biology](#) (CBCB) supports research on bioinformatics, modeling of complex biological systems, and mathematical biology. It also manages the [NIH Biomedical Information Science and Technology Initiative](#) (BISTI), an agency-wide effort to stimulate and coordinate the use of computer science and technology to address problems in biology and medicine. In addition, CBCB plays a major role in coordinating and directing the [Bioinformatics and Computational Biology component of the NIH Roadmap for Medical Research](#). See the USAJOBS Web site for the [full job announcement](#) (NIGMS-06-131381). The application period ends on Friday, August 4. If you are interested in this position or know of others who might be strong candidates, please contact NIGMS Director Jeremy Berg at [bergj@mail.nih.gov](mailto:bergj@mail.nih.gov) or 301-594-2172.

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