Background

The extramural research program of the National Human Genome Research Institute (NHGRI) is developed and guided by periodic planning processes that involve many scientists in the extramural community, and are overseen and approved by the National Advisory Council for Human Genome Research. The results of the most recent program planning effort are described in “A Vision for the Future of Genomics Research” (http://www.genome.gov/11007524), and a new planning process is currently under way (http://www.genome.gov/10001307).

Within the scope of this overall guidance, a plan for funding NHGRI’s research and training and career development programs is developed for each Fiscal Year. There are several factors that affect this annual funding plan, including commitments from prior years, Request for Applications (RFAs) and other solicitations implementing special initiatives that address the objectives described in the strategic “Vision” document, emerging scientific opportunities, and available funds. The NHGRI strongly encourages prospective applicants and grantees to discuss their research ideas with the appropriate staff as soon as possible during the earliest stages of preparing an application to ensure that any submitted application is responsive to the NHGRI’s mission.

Commitment to New Investigators

NHGRI is highly supportive of NIH’s initiatives to encourage the support of new investigators, particularly those in the early stages of their careers (http://grants.nih.gov/grants/guide/notice-files/NOT-OD-08-121.html). To facilitate the implementation of this NIH-wide policy, NHGRI pays particular attention to applications from early stage investigators (ESIs) by: (1) special consideration of applications that might have a priority score beyond the range of those applications from established investigators; (2) not reducing Council-recommended budgets beyond what is required by the NIH fiscal year grants policy; (3) providing support to ESIs for four or five years, if requested, unless specific circumstances require otherwise; (4) supporting ESIs who are applying for their first competitive renewal; and (5) encouraging the use of the Pathway to Independence Awards to support postdoctoral fellows preparing for a career in academia. With respect to point (3), it should be noted that, most NHGRI grants awarded to established investigators are for three years, to increase NHGRI’s flexibility to support new developments in the rapidly developing field of genomics.
Beyond these policies, NHGRI staff is aware that the early career years and career transitions are fraught with uncertainties, so we make special efforts to work with trainees and young investigators. Our contact with potential new investigators begins with postdoctoral fellows and career development awardees. In the initial phases of the fellowship or career award, NHGRI staff discusses with fellows and awardees the importance of obtaining strong mentorship, learning from peer relationships and generating quality publications. During the last year of the award, staff counsels fellows and awardees about the various options for furthering their research careers, whether through a career development award or an investigator-initiated grant. In addition, staff is always available to answer their questions about program priorities, how to prepare a meritorious grant application, how the peer review process works, and how to work within the NIH system.

Research Project and Center Grants

The following policy is in effect for the National Human Genome Research Institute’s fiscal budget for 2010.

Non-Competing Applications:

The FY 2010 appropriation allows NIH and NHGRI to support investments in research by funding research grants within an overall 2 percent inflationary increase (See http://grants.nih.gov/grants/guide/notice-files/NOT-OD-10-012.html). Consistent with NIH-wide policies, NHGRI’s non-competing applications will generally receive a 1 percent reduction in FY 2010, with future fiscal year commitments adjusted by the same reduction factor, unless otherwise noted below.

- No reductions will be applied to R03, R13, R15 and R21 projects, projects supported by the Recovery Act, Career Awards, SBIRs/STTRs, and Ruth L. Kirschstein-National Research Service Award (NRSA) Individual Fellowships and Institutional Training Grants.
- Non-competing awards previously issued in FY 2010 at reduced levels will be revised to restore funds to the level indicated above. (See http://grants.nih.gov/grants/guide/notice-files/NOT-OD-10-012.html).
- The budgets of center and resource applications may receive additional reductions to allow new activities in areas of higher program priority.

Competing Applications:

- The Institute will pay special attention to applications from early stage investigators by providing support for four or five years, by funding at requested levels whenever possible, and by considering stage of career in making funding decisions.
The Institute is aware that Principal Investigators who submit their first renewal applications may be at risk for funding, so special consideration will be given to such applications.

Innovation, impact/priority score, timeliness of the project, program priorities, and whether the applicant is an early stage investigator or a first-time competing renewal principal investigator will be major considerations in funding applications that are taken out of priority score order.

Applications that receive highly meritorious scores for innovation, but otherwise have overall impact/priority scores beyond what is currently being funded may be given special consideration.

Applications that focus on (1) technology development and methods development and (2) ELSI topics relevant to the Institute’s objectives will be accorded high priority.

Institute-negotiated cost reductions for new and competing RPG and Center awards, beyond those recommended by peer review, will be handled on a case-by-case basis.

The budgets of new competing applications will be evaluated to assess the appropriateness of the budget to the timeliness of the research goals.

For renewal applications, significant increases over the previous year’s budget will need to be particularly well justified.

In general, most projects will be funded for three years; exceptions will be made based on factors such as career stage of the Principal Investigator, program priorities, needs of the specific research project, how fast the field is changing, the level of risk, etc.

Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs

Non-competing Applications:

SBIR and STTR applications will generally be awarded at the 2010 commitment levels, but may be adjusted by staff based on program priorities.

Competing Applications:

- Applications that focus on (1) technology development and methods development in the area of genomics and proteomics and (2) ELSI topics relevant to the Institute’s objectives will be accorded high priority.
- The impact/priority score, timeliness of the project, and program priorities will be major considerations in funding applications that are taken out of priority order.
- Institute-negotiated cost reductions for new and competing awards, beyond those recommended by peer review, will be handled on a case-by-case basis.
Research Career and Research Training Awards

Non-competing Applications:

• Ruth L. Kirschstein National Research Service Awards (NRSA) applications (fellowship (F) and training (T), will be awarded with a one (1) percent increase of all stipend levels.
• Career Development (K) will be awarded at the full 2010 commitment levels.
• Supplements for diversity and re-entry candidates will be awarded at the full 2010 commitment levels.

Competing Applications:

Research Career Development Awards

• Funding priority will be given to individuals in: (1) non-biological sciences such as chemistry, computer science, engineering, math, physics and other quantitative sciences who wish to pursue multi-disciplinary approaches to problems in genomics research or and (2) physicians who wish to pursue genomics or proteomics research.
• Innovation, impact/priority score, timeliness of the project, mentor and research resources, and the program priorities will be major considerations in funding applications that are taken out of priority order.

Research Training (Ts and Fs)

• Priority will be given to institutional training grants that propose to develop scientists who can work as intellectual contributors to interdisciplinary teams developing technologies for genomics and proteomics.
• Priority for funding of individual fellowships will be given to individuals wishing to pursue (1) the development of genomics and proteomics technologies and (2) Institute-relevant ELSI topics in interdisciplinary research environments.
• The impact/priority score, timeliness of the project, and the program priorities will be major considerations in funding applications that are taken out of priority order.
• Institute-negotiated cost reductions for new and competing awards, beyond those recommended by peer review, will be handled on a case-by-case basis.

Conferences and Courses

The National Human Genome Research Institute is committed to disseminating the latest information and technologies through courses and conference grants. However, our investment in this type of research will be limited (in research areas and dollars) and will be targeted to activities that seek to increase the capabilities of US scientists, especially those who are seeking to significantly enhance their
skills in genomics and proteomics and scholarly studies of the ethical, legal and social implications of research (ELSI).

**Adherence to NIH Policy:**

Applications Requesting $500,000 or More in Direct Cost for Any One Year

- NIH requires pre-approval for single applications or for multi-site collaborative studies requesting $500,000 or more in annual direct costs in any year. Applicants are encouraged to interact with NHGRI staff during the concept development of applications that request $500,000 or more in direct costs. Applicants planning large grants should request approval from NIH staff at least six weeks in advance of the planned receipt date. The NIH “Revised Policy On The Acceptance For Review of Unsolicited Applications That Request $500,000 Or More In Direct Costs” (NOT-OD-02-004) may be found at: http://grants.nih.gov/grants/guide/notice-files/not-od-02-004.html.

- The NIH expects and supports the timely release and sharing of final research data from NIH-supported studies for use by other researchers. All investigator-initiated applications with direct costs greater than $500,000 in any single year will be expected to address data sharing. Applicants are encouraged to discuss their data sharing plan with their program contact at the time they negotiate an agreement with the Institute/Center (IC) staff to accept assignment of their application as described above.

Data Obtained in NIH-Supported or Conducted Genome-Wide Association Studies.

The NIH believes that the full value of GWAS to the public can be realized only if the resulting genotype and phenotype datasets are made available as rapidly as possible to a wide range of scientific investigators. Rapid and broad data access is particularly important for GWAS because these studies generally require significant resources, present challenges in analyzing the large datasets, and provide extraordinary opportunities for making comparisons across multiple studies. Additional information about this policy can be found at: http://grants.nih.gov/grants/guide/notice-files/NOT-OD-08-013.html.