

DISCUSSION OF CENTERS OF EXCELLENCE IN GENOMIC SCIENCE (CEGS) PROGRAM
NATIONAL ADVISORY COUNCIL FOR HUMAN GENOME RESEARCH
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When the CEGS program was started in 2001, it was planned to bring it up with Council after the first couple of years for an initial assessment: a first discussion about whether the program was meeting its objectives, whether adjustments were necessary, and whether the program should be extended beyond its original term. This agenda item is the fulfillment of that commitment and an opportunity for the Council to provide NHGRI with its first impressions about the prospects for the CEGS program to achieve its goals, and whether the program should continue. There is still one more receipt date for applications from the original announcement of the program; that will be on June 1, 2004. If the CEGS program is to continue beyond this first round of grants, NHGRI will have to issue a new announcement by this autumn, with a first receipt date of June 1, 2005. Thus, staff proposes that the Council discuss at the February meeting all of the issues that it thinks need to be addressed, following which staff will use the advice provided by the Council at this meeting to develop a proposal that will be presented at a future Council meeting.

The current definition of the CEGS program has been refined during several Council discussions over the past three years. As currently implemented, the program has several goals. It is, at heart, a program to support highly creative, investigator-initiated, potentially large-scale research projects that have substantial potential to develop the next generation of genomic approaches to the solution of important biological and biomedical research problems. We have used the advent of microarrays as an example of the intended impact of successful CEGS projects. One of the hallmarks of a CEGS project is a very high degree of novelty, with innovation coming from either the development of new analytical methods or technologies or of new biological concepts based in genomics. CEGS projects are also necessarily interdisciplinary. To achieve its goals and justify the establishment of a P50, a CEGS must assemble a group of investigators from several distinct disciplines to work in interactive and novel ways to achieve goals that could not be achieved through standard R01 research grants or P01 program projects. A CEGS must have a distinct focus and its research plan should not only be highly innovative, but also somewhat risky with the potential for great payoff. The research plan must be highly integrated and interdependent. Management of all of these factors must be clearly planned and articulated.

The CEGS program and each CEGS grant should establish outreach to the scientific community, so that more of the research community will be able to “think genomically” in their development of experimental design and formulation of scientific questions. A CEGS is expected to be an excellent training ground for students, postdocs and the other investigators who participate explicitly in the research project, and to also establish programs with broader influence within the home institution.

Coincident with initial implementation of the CEGS program, NHGRI developed a Minority Action Plan to increase the number of individuals from underrepresented minority groups who are able to participate, as lead investigators, in genomics research. As the CEGS are a flagship component of NHGRI’s grants program, they will also will have a key role in implementing the MAP.

The CEGS program is an experiment in which NHGRI has a substantial investment. In May, it will be four years since the program was announced and almost three years since the first award was made. There are currently a total of 7 CEGS, and the FY2003 investment was \$23.4 M.

For the Council meeting, we will review what has been set in place so far and present two specific examples of CEGS programs. After that, we would like the Council to discuss how to proceed in the future. Specific questions that we would like the Council to consider include (but are not limited to):

- Is the CEGS program as currently formulated likely to achieve its intended goals?
- Should the CEGS program continue?
- How large should the CEGS program become?
- Is the size of individual projects (in dollars and scope) appropriate?
- Should the CEGS program announcement be modified/reformulated?
- Should the PA specify scientific areas that need more attention?
- Should P20 developmental CEGS continue to be offered? If so, should expectations be reformulated?
- Should renewals of current CEGS grants pursue goals as originally set forth, or should grantees be asked to reformulate, based on a new understanding/articulation of NHGRI's needs?
- Is the current, flexible approach to training, that asks investigators to propose and implement what makes sense for their science and approach, likely to work, or should additional requirements be imposed? Are we likely to achieve sufficient outreach and seeding of "thinking genomically" through the current program? Is it productive to mandate a formula?
- The MAP program is new and under constant evaluation. Assuming that CEGS grantees will continue to be responsive, as they have been at the beginning of the program, to suggestions from staff and advisors, what changes if any should be made in rules or requirements for CEGS participation in the MAP?