

### ASHG Receives \$1.1 Million NSF Grant

Early in 2006, the National Science Foundation issued a solicitation for their Math and Science Partnership (MSP) Program that specifically requested proposals from disciplinary scientific societies. Preliminary work coming from other MSP researchers suggests that institutions of higher education do not find significant merit in the scholarship of teaching and learning, particularly when these activities take scientists from their laboratory and into the K-12 classroom. Our proposal, entitled "The Geneticist-Educator Network of Alliances (GENA) Project," was selected for funding. The GENA partnership between the American Society of Human Genetics (ASHG), the Genetics Society of America (GSA), the National Science Resources Center (NSRC), and the National Association of Biology Teachers (NABT) will use the broad theme of genetics to build a framework to form long-term collaborations between educators and scientists and a sustainable infrastructure to support meaningful scholarship by scientists in the high school science classroom. GENA will provide the scientific societies involved with tools to instruct, facilitate, and measure the meaningful engagement of science, technology, engineering, and mathematics (STEM) faculty members in secondary science education.

#### Intellectual Merit of the GENA Project

The GENA Project will explore ways in which a professional society-monitored secondary science education outreach effort can play a positive role in the career development of both junior (pre-tenure) and senior (post-tenure) level genetics faculty. Exemplary inquiry-based educational materials in genetics will be utilized to design methods to facilitate meaningful interactions between scientists and their local educational community. A network of geneticist-educator alliances will be used to design teaching strategies relating to standards and misconceptions in genetics that can decrease the time required for scientists to engage in these activities, thus maximizing the effective and meaningful interaction between the geneticists and the students.

#### Broader Impact of the GENA Project

A network of 92 master Geneticist-Educator alliances, each made up of a geneticist and a local high school teacher (for 184 total participants), will be developed during the 3 years of the GENA Project. These alliances will serve to train leaders in their own school districts in subsequent years. Detailed teaching strategies will be disseminated nationally through current Math and Science Partnerships and a publicly accessible Web site sponsored by ASHG and GSA (<http://www.genednet.org>). Geneticists will interact with a local high school teacher for a period of 1 year. During that year, the alliances will attend a two-and-a-half-day workshop (for which they will receive a small stipend) and will develop and implement innovative teaching programs in genetics education. Along with GENA professional staff, STEM faculty mentors will develop and coauthor publications and presentations at national meetings of all the societies involved. At the conclusion of this work, the data will be evaluated, and a model

program, adaptable by any disciplinary scientific society, will be presented through publications and semiannual meetings of education leaders from science and mathematics societies. The GENA Project and training will become an integral part of the strategic development plan for the educational efforts of ASHG and GSA, thus making K-12 education outreach a truly integral aspect of society activities.

The work completed during the three years of the GENA project will:

1. Create a sustainable infrastructure of pedagogical and content-specific support that scientists can use to develop meaningful scholarly interactions with local K-12 teachers and students,
2. Increase respect for the efforts of scientists to perform outreach through a series of scholarly publications, written by scientist-mentors in the GENA Project, to be submitted and published in scientific journals,
3. Develop a model of professional development for *scientists*, adaptable to other disciplines, that will be presented at the annual meetings and newsletters of all four societies involved in the GENA Project,
4. Provide and maintain a forum for geneticists and teachers to communicate throughout the lifetime of this project and beyond, through an ASHG-/GSA-supported listserv dedicated to the GENA Project,
5. Develop a set of lesson plans and case studies that will be made publicly available so that any interested teachers or scientists across the country can access the materials and implement them in the classroom, expanding exponentially the impact of the GENA Project,
6. Promote K-12 outreach by scientists through presentation of GENA Project-related monographs, editorials, and data on a dedicated page of the <http://www.genednet.org> Web site (the education Web site of both ASHG and GSA), and
7. Create a mechanism for scientists engaged in the efforts of the GENA Project to receive letters of support for their career-development portfolio from members of the Board of Directors and the Executive Vice President of ASHG.

ASHG is currently looking for members of ASHG or GSA who would be interested in being active members of the GENA Project for at least 1 year between 2007 and 2009. To gauge the impact that this program has on the institutional policies at institutes of higher education, participating geneticists must be at a tenure-granting institution and must be a faculty member in a science department. If you are interested in applying to be a part of the GENA Project or in learning more about what involvement will entail, please do not hesitate to contact the Education Office at ASHG or to go online (<http://www.surveymonkey.com/s.asp?u=332912664353>) to apply.

We look forward to working with you.

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