

## ASHG's GENA Project Overview

The American Society of Human Genetics (ASHG) and the National Science Resources Center (NSRC) are using the broad theme of genetics to build a framework of long-term collaborations between educators and scientists. With funding from the Math Science Partnership program at the National Science Foundation, the Geneticist-Educator Network of Alliances (GENA) project (grant #0634296) is establishing a sustainable infrastructure to support meaningful outreach by scientists in the high school science classroom and thereby help to improve STEM education. The project is also exploring how ASHG, as a professional society, can promote the value of outreach to higher education institutions, for example by playing a positive role in the career development of both junior (pre-tenure) and senior (post-tenure) genetics faculty.

The project is developing a national network of 70 alliances between university researchers and high school biology teachers that is designing and implementing teaching plans related to state standards and misconceptions in genetics. After implementation and testing in the classroom, these teaching plans are being made available for use by other geneticists and teachers, which should help decrease the time required for scientists to prepare for outreach and maximize meaningful interaction between the geneticists and students.

The geneticists and high school teachers begin their year-long partnerships by attending workshops to examine genetics content inherent in state science education standards, identify misconceptions in genetics education, evaluate a range of educational resources, develop a plan for assessment, and receive guidance on implementing inquiry-based lessons. Detailed teaching strategies and case studies are being disseminated nationally through current Math and Science Partnerships (via MSPnet) and a publicly accessible website sponsored by ASHG. Many partnerships are now in their second and third year.

The project is also providing support for the professional advancement of participants by sending certifications to participants and letters of recognition from ASHG to key administrators, such as department chairs, principals, and deans. Changes being made within ASHG as a result of the GENA project are deepening the Society's commitment to K-16 genetics education and are beginning to serve as a model for other disciplinary scientific societies. For example, at ASHG, a Board-approved Statement on the Importance of Participation of Scientists in K-12 Education serves as a concrete indicator of the Society's commitment to K-12 STEM outreach. This was followed by Board approval of an Undergraduate Summer Internship Program and money allocated for an ASHG Genetics Education Research Award program.