Sharing Strategies in K-12 Science Education: Outreach Events for Local Teachers/Students at Scientific Meetings
June 2010

Bethesda, MD - The American Physiological Society (APS) hosted a fourth seminar in its series on Sharing Strategies in K-12 Science Education on the campus of the Federation of American Societies for Experimental Biology (FASEB) on June 8, 2010. The roundtable discussions were among eight national scientific organizations. Each presented their outreach events for precollege teachers and/or students at scientific meetings sponsored by their respective organizations, including:

- FASEB's Experimental Biology, which is the annual conference for the APS, the American Society for Biochemistry and Molecular Biology (ASBMB), and the FASEB Minority Access to Research Careers (MARC) Program;
- American Society for Cell Biology's Cell Biology;
- American Society of Plant Biologists' Plant Biology;
- Society for Developmental Biology Regional Meetings;
- Howard Hughes Medical Institute's (HHMI) Holiday Lecture Series; and the
- National Center for Research Resources (NCRR) at the National Institutes of Health (NIH) Science Education Partnership Award (SEPA) Project Director's Annual Meeting.

Common Objectives: The presentations revealed that the goals and objectives for these outreach programs are similar. The following is a summary of the major threads of discussion:

- The outreach event or program's objective is to provide a pivotal experience for getting students excited and engaged in science by exposure to scientists. The most common strategy for this experience is through interactive hands-on participation in workshops and discussions with career panelists.
- The event establishes connections between the organization’s member scientists and teachers in the local area of the convention city area.
- The workshops provide an awareness of information and instructional resources for teachers.
- The event also provides a learning experience for scientists themselves in communicating with precollege students and teachers either as speakers, volunteers, or as mentors for the participants.

Challenges and strategies in developing these outreach programs were also discussed, including preparing for the workshop events, identifying resources, and evaluating the programs. For instance, logistics in scheduling the workshops must be taken into consideration. State testing, spring breaks, limited school field trip days, and/or transportation are common challenges. Scheduling within the conference program also needs to coincide with the availability of scientists to interact with students and teachers.

Promoting the workshop and recruiting participants in the local area before the conference are other challenges. Approaches to casting wide publicity include mass postal media campaigns in the vicinity of the conference venue by address/mailing...
services, and email announcements to state, local, and district science administrators and science teacher organizations. Additionally, direct announcements to past teacher participants and scientist members of the sponsoring organizations are effective in publicizing the program. Society newsletters, direct invitations, past experience, and word of mouth are common methods in recruiting scientist volunteers.

Though the outreach programs are primarily funded and sponsored by their respective organizations, identifying additional resources and donations to support the workshop event was another aspect discussed. Material resources from local member scientists are one avenue for hands-on experiments with participants. Solicited donations of supplies, equipment demonstrations, and door prizes from vendors are other mechanisms of enhancing support for the outreach programs. A Program Officer from HHMI attended the brown bag lunch seminar and offered DVD copies of their Holiday Lecture Series to the outreach events presented in support of precollege science education.

Finally, program evaluation was discussed and varied with different measurable objectives. The number of participants is one measure, but more importantly, participant feedback evaluations help further refine the annual workshop programs. Some organizations implement a mentoring model and peer network, thus providing the potential for more qualitative feedback on the outreach program experience.

In summary, the brown bag lunch roundtable seminar fostered a network of expertise and experience in producing effective outreach events for teachers and students at scientific meetings. The collaborative sharing identified common themes, challenges, and strategies for this model of supporting science education in communities across the nation.

The seminar series is supported by an NIH NCRR SEPA grant (www.ncrsepa.org) as part of the APS’ Six Star Science Frontiers in Physiology program (www.frontiersinphys.org). Programmatic information for the seminar series and presentations are available at: www.frontiersinphys.org/pages/page04g.shtml.

The next brown bag lunch seminar is scheduled for November, 2010 on the topic of “Developing and Providing Resources for Teachers.” For further inquiries, email Mel Limson, APS K-12 Education Programs Coordinator: mlimson@the-aps.org.
Seminar Series: Sharing Strategies in K-12 Science Education

Title: Outreach Events for Local Teachers/Students at Scientific Meetings
Format: Roundtable discussion for sharing unique outreach events to teachers and/or students at scientific annual or regional meetings

Date: Tuesday, June 8, 2010 (re-scheduled from February 11)
Time: 12:00 noon - 1:00 pm
Cookies and coffee will be provided; bring your lunch.

Location: Federation of American Societies for Experimental Biology (FASEB)
9650 Rockville Pike, Bethesda, MD 20814
http://www.faseb.org/Who-We-Are/Directions-to-FASEB.aspx
East Wing, Third Floor, APS Conference Room

Host: American Physiological Society
Contacts: Mel Limson, Ph.D., APS K-12 Education Programs Coordinator mlimson@the-aps.org, 301.634.7132
Marsha Lakes Matyas, Ph.D., APS Director of Education Programs

Do you invite local K-12 teachers and students to your annual meeting or conferences? Come and share your ideas and learning about program models. This roundtable discussion will focus on sharing our programs and events for teachers and students in the local communities of the conference host city.

Learn from other societies and bring your own experience to share answers to these types of questions:
- What are the program’s goals and objectives?
- What types of events are offered?
- What content is delivered?
- How do member scientists engage and interact with students and/or teachers?
- How are these events planned, promoted, evaluated, and funded?
- What resources are available?

Please RSVP no later than Thursday, June 3rd, by our Evite system (preferred) by clicking: http://www.evite.com/app/publicUrl/MUER1NSFUGTNWSJRPDR/100608Seminar or by directly emailing Mel Limson in the APS Education Office at mlimson@the-aps.org.

Feel free to share this invitation with appropriate colleagues in the K-12 science education community within the metropolitan DC region. Programmatic information and presentations are posted at: http://www.frontiersinphys.org/pages/page04q.shtml.

The seminar series is part of the APS’ Six Star Science Frontiers in Physiology program (www.frontiersinphys.org) sponsored by the APS and by an NIH NCRR Science Education Partnership Award (www.ncrrsepa.org).

Other questions? Email Mel: mlimson@the-aps.org.