
Principal Investigator: Sakai, Ann K.
Organization: Botanical Soc of America

Submitted By:
Sakai, Ann - Principal Investigator

Title:
PLANTS (Preparing Leaders and Nurturing Tomorrow's Scientists): Increasing the diversity of plant scientists

Project Participants

Senior Personnel
Name: Sakai, Ann
Worked for more than 160 Hours: Yes

Contribution to Project:
PI for this grant. Ann Sakai works with Heather Cacanindin (BSA) and Ann Hirsch (co-PI) to implement the activities needed for this grant before, during, and after the annual Botany meetings. Financial support is from other unrestricted funds, and by coverage of registration fees by BSA.

Name: Hirsch, Ann
Worked for more than 160 Hours: Yes

Contribution to Project:
co-PI for this grant. Ann Hirsch works with Heather Cacanindin (BSA) and Ann Sakai (PI) to implement the activities needed for this grant before, during, and after the annual Botany meetings. Financial support is from other unrestricted funds, and by coverage of registration fees by BSA.

Post-doc

Graduate Student

Undergraduate Student

Technician, Programmer

Other Participant
Name: Cacanindin, Heather
Worked for more than 160 Hours: Yes

Contribution to Project:
Heather Cacanindin is the staff member at the Botanical Society of America responsible for coordination of all logistics and data management associated with the advertising, application collection and evaluation, meeting arrangements, document preparation and coordination of travel and payments for the students.

Research Experience for Undergraduates

Organizational Partners

University of California-Irvine
UC-Irvine has covered the expenses of PI Sakai to attend the annual SACNAS meetings, where the PI can make valuable contacts with URM undergraduates as well as faculty from minority-serving institutions who may have undergraduates interested in the PLANTS program.

SACNAS
SACNAS has advertised the PLANTS program and has allowed BSA along with ASPB (American Society of Plant Biologists) to arrange the judging of SACNAS plant posters to better coordinate the SACNAS awards given by BSA and ASPB.

American Society of Plant Biologists
The ASPB (American Society of Plant Biologists) has worked with BSA to arrange the judging of SACNAS plant posters to better coordinate the SACNAS awards given by BSA and ASPB. The ASPB has also advertised the PLANTS program to undergraduate during some of ASPB’s outreach programs around the country.

Other Collaborators or Contacts

Activities and Findings

Research and Education Activities: (See PDF version submitted by PI at the end of the report)
The goal of this program is to increase the number of undergraduates from underrepresented groups who attend the Botanical Society of America annual meetings, and to increase their level of academic excellence and motivation to pursue advanced degrees in the plant sciences. The 2011 BSA meeting was held in St. Louis, MO in July 2011. Nine students were selected from an open competition that required an application, one or more letters of recommendation, and an unofficial transcript. The students were required to sign an official contract (attached), and to attend the functions listed upon it. Each student was paired with a faculty and a postdoc/advanced graduate student mentor to interact with the student at the activities, to take them various talks and poster sessions and to discuss the content of these presentations with the student.

Findings:
Please see section on Contributions to Human Resources.

Training and Development:
The mentors, especially the graduate student and postdoctoral mentors, were provided the opportunity to interact one to one with their student and to make certain that the students attended oral presentations and posters within each other's scientific interests. The younger mentors also had the opportunity to interact with the faculty mentors who were able to provide guidance about teaching skills and experience.

Outreach Activities:
The PLANTS grant (PLANTS [Preparing Leaders and Nurturing Tomorrow's Scientists]: Increasing the diversity of plant scientists) funds up to 12 undergraduates a year from a diversity of backgrounds to attend the annual joint meetings of the Botanical Society of America (BSA) and other participating organizations. The goal of this program is to increase the number of undergraduates from underrepresented groups who attend these meetings, and to increase their level of academic excellence and motivation to pursue advanced degrees in the plant sciences.

Journal Publications

Books or Other One-time Publications

Web/Internet Site

URL(s):
http://www.botany.org/awards_grants/detail/PLANTS.php

Description:
This web page is used as a landing site for dissemination and advertising the PLANTS program. It is also the page from which applicants may begin their application.
Other Specific Products

**Product Type:**

Presentations

**Product Description:**

PLANTS undergraduates presenting posters or talks at the 2011 Botanical Society of America meetings:

CASTRO (poster):

Castro Escobar, Betsabe D; Melendez Ackerman, Elvia J.; Crain, Benjamin. Variation in Native and Cactaceae Seeds in the Soil as a Function of an Invasive Exotic Grass in Mona Island Reserve

ORTIZ (poster; talk; publication in preparation)

Ortiz, Irma; Schwartz, Allison; Sanders, Erin R.; Diener, Andrew C.; Hirsch, Ann M.. A Bacillus strain isolated by undergraduate students at UCLA promotes plant growth by procuring soil nutrients and may also serve as a biological control agent. Schwartz, Allison; Ortiz, Irma; Sanders, Erin R.; Demason, Darleen; Hirsch, Ann M.. A newly isolated Bacillus strain affects legume plant architecture and pea nodule morphology by secreting auxin.

PAASCH (poster)

Paasch, Amber Elizabeth; Fisher, Kirsten. Development of microsatellite markers to enable population assessment of skewed sex ratios and genetic diversity in Mojave Desert Syntrichia caninervis.

RICHEY (talk)

Richey, Jon; Upchurch, Garland. Inference of pCO2 Levels and Climate in the Late Cretaceous from Fossil Lauraceae.

TOLL (poster)

Toll, Katherine; Whitlock, Barbara A.. A molecular phylogeny of Micromelum (Rutaceae: Aurantioideae) and observations on floral morphology using a historical plant anatomy resource

**Sharing Information:**

Presentations were given at the 2011 Botanical Society of America meetings

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**Product Type:**

Online submission form for applicants & evaluation tool for selection process

**Product Description:**

This online tool was developed as a simple format for application submission and allows the applications to easily be captured and placed in a secure portal online for consideration by the review committee.

**Sharing Information:**

This is an internal tool used by the Botanical Society of America for evaluation of many different award types, including the PLANTS applications. We are often in communication with other scientific/botanical societies with whom we share our best processes and procedures such as this online system for award submission and evaluation.

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**Contributions**

**Contributions within Discipline:**

This grant funds the PLANTS program to bring undergraduates interested in any aspect of the plant sciences to the annual national meetings of the joint meetings of several botanical societies, including the Botanical Society of America, American Society of Plant Taxonomists, American Fern Society, and American Bryological and Lichenological Society. The goal of the PLANTS program is to help to increase the diversity of plant biologists and people interested in botanical research and teaching. The PLANTS program involves current members of these organizations as mentors and raises the general awareness of the membership to the importance of participation of diverse groups in the sciences. Even after only one year, we see the lasting impact that the program has had on several of the PLANTS undergraduate participants.

**Contributions to Other Disciplines:**

The PLANTS program impacts the membership of the several societies interested in botanical research and teaching.

**Contributions to Human Resource Development:**
The PLANTS grant (PLANTS [Preparing Leaders and Nurturing Tomorrow’s Scientists]: Increasing the diversity of plant scientists) funds up to 12 undergraduates a year from a diversity of backgrounds to attend the annual joint meetings of the Botanical Society of America (BSA) and other participating organizations. The goal of this program is to increase the number of undergraduates from underrepresented groups who attend these meetings, and to increase their level of academic excellence and motivation to pursue advanced degrees in the plant sciences. At the core of this program is a mentoring program that assigns two mentors to each student, one peer mentor (advanced undergraduate or graduate student) and one senior mentor (postdoc, faculty or equivalent). Mentors contact students before the meeting, attend social activities and scientific talks with the students, help the students network with other students and faculty at the meeting, and in general, point out the broader relevance and application of the discipline to the students, passing on to the students the genuine intellectual excitement and involvement of the conference participants.

In 2011, nine undergraduates and 19 mentors participated in the PLANTS program, attending the BOTANY 2011 meetings in St. Louis, MO. We limited the number of students in the first year because of uncertainties related to the award at the time we were recruiting students. A total of 58 eligible students applied for these travel awards (see Table 1 for statistics on gender and ethnicity of awardees, applicants, and mentors). Mentors were matched as much as possible to the interests of the students.

Students were required to participate in several scientific and networking events, and other events were optional but encouraged. All students were required to attend a PLANTS orientation meeting and mixer and a PLANTS debriefing meeting at the end of the conference. They also were required to attend a professional development workshop on how to apply to graduate school, the Student involvement in botany luncheon, the Enhancing Scientist Diversity in Plant Biology talk and luncheon (with mentors), the Plenary lecture (with mentors), the All Society mixer (with mentors), and the All Society banquet (with mentors). Optional events included the student/new member mixer, individual society dinners, and a field trip. About half the students attended a field trip; some students were unable to attend because of constraints associated with previous arrangements made for transportation. In addition to these events, each student was required to attend at least three talks a day with a mentor and discuss the content of each of those talks with the mentor. Students were expected to attend additional talks, and often did so with other students and mentors.

Student feedback was very positive. When asked about the most important thing learned from attending the meetings, several students said they gained a new appreciation for the value of networking (‘I learned the importance of networking with other students’, ‘networking is very important when it comes to graduate school and getting in on research’, and to ‘network with scientists and other students that could become your future colleagues or mentors’).

When asked about the most useful part of the PLANTS program (not including finances), most students were especially pleased with the mentoring they received. Answers included ‘mentor/mentee program’, ‘the encouragement of intellectual discussion about talks’, ‘the mentors are great and they are a lot of help. They also know many people that they can introduce us to’, ‘the peer mentor was very helpful in giving honest feedback relating to graduate admissions’, and ‘having mentors to guide me through the various talks and sessions’.

For some students, the conference opened their eyes to new opportunities—‘I learned to be more flexible and keep my options open for graduate school’; ‘I feel that the most valuable thing I learned was about myself and my goals. Prior to the BSA I did not know if academia was something I would truly enjoy, but after the meetings I know without a doubt that I want to be a part of this community for the rest of my life’; ‘I learned that science can be the most gratifying career there is’.

Other students were quite directed in their goals for the meeting—‘I was able to refine and develop questions I might seek to answer in graduate school’; ‘it was useful to meet professors I would potentially like to work with in a smaller setting than I would if I were a normal conference attendee’; ‘At the BSA, I was able to narrow down my specific research interests by attending a wide variety of presentations. I was also able to meet with potential graduate school advisers, which made a big difference in my admittance to the programs for which I applied’.

Mentors and PLANTS students were encouraged to keep in contact after the meetings. Although we have no quantitative data on this aspect of the program, students have not been shy about contacting PLANTS mentors for help (e.g., Sakai has helped four different students with their CVs, a letter of reference, and/or an NSF GRFP application).

Perhaps the most gratifying aspect of the program has been the continued interest in botany and science and success of these students. James McDaniel (African American from Lynchburg College, VA), originally an education major, will be entering a doctoral program at U. Wisconsin in ecology/botany in Fall 2012, in part because of his exposure to the area at the BSA meetings (information from his advisor). Clayton Visger (native American/Lebanese) will be entering the doctoral program at U. Florida (Solits lab); his choice of labs was greatly influenced by the chance to meet with different potential advisors (self-reported). Of the nine PLANTS students, one is still an undergraduate (Castro), one is working at USDA/ARS (Putnam), two are entering or are in Master's degree programs (Paasch-Cal State-LA; Richey-TSU-San Marcos) and five are entering or entered a doctoral program (Atkinson-Oregon State, Fall 2012; McDaniel-U. Wisconsin-Madison, Fall 2012; Ortiz-UC-Riverside, Winter 2012; Toll-Duke, Fall 2011; Visger-U. Florida, Fall 2012). We are very gratified that three of the 2011 PLANTS students have volunteered to serve as mentors for the 2012 meetings (Visger, Paasch, and Atkinson).

Based on student feedback, improvements for next year will include earlier notification of students so that they can plan to attend the
pre-meeting field trips, a 'home base' room where PLANTS students and mentors can more easily stay in contact with each other throughout the meetings, and a compiled list (title, time, and location) of the presentations by the mentors and PLANTS students so that interested PLANTS participants can attend each other's presentations.

Table 1. Gender and ethnicity of PLANTS awardees, non-awardees, and PLANT mentors in 2011. The 9 undergraduate PLANT awardees included five who self-identified as low income, five first generation to attend college in their family, one military veteran, one single mother, and one with dyslexia.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Ethnicity</th>
<th>Count</th>
<th>Awardees</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>African Am</td>
<td>2</td>
<td>(Atkinson, McDaniel)</td>
</tr>
<tr>
<td>F</td>
<td>Latina</td>
<td>4</td>
<td>(Ortiz, Paasch, Toll, Castro)</td>
</tr>
<tr>
<td>M</td>
<td>Latino</td>
<td>1</td>
<td>(Richey)</td>
</tr>
<tr>
<td>F</td>
<td>Native American</td>
<td>1</td>
<td>(Putnam)</td>
</tr>
<tr>
<td>M</td>
<td>Native American</td>
<td>1</td>
<td>(Visger)</td>
</tr>
</tbody>
</table>

Applicants not granted PLANTS awards:
- F white 22
- M white 11
- M African Am 1
- F Latina 4
- M Latino 4
- F Native American 1
- F Asian American 2
- M Asian American 1
- F disability (learning/physical) 3

Mentors:
- F white faculty 8
- M white faculty 1
- M Latino postdoc 2 (Mexican citizenship)
- F white postdoc 1 (with disability)
- F Latina grad student 1 (Brazilian citizenship)
- F African Am grad student 2
- M Asian Am grad student 1
- F white grad student 1
- M white grad student 1
- F Native Am grad student 1

Table 2. PLANTS awardess, undergraduate institution, graduation date, current status, gender, and diversity. (see pdf)

Contributions to Resources for Research and Education:
Please see section on Human Resources.

Contributions Beyond Science and Engineering:
Science will not thrive unless it is equally accessible to students from all backgrounds, including those from groups that are currently under-represented. Access involves knowledge about the discipline, understanding the culture of science, feeling welcome as a participant in scientific endeavors and as a member of the scientific community, and understanding job opportunities in the area. The PLANTS program encourages URM students to become part of the scientific community.

Conference Proceedings

Special Requirements
Special reporting requirements: None
Change in Objectives or Scope: None
Animal, Human Subjects, Biohazards: None

Categories for which nothing is reported:

Any Journal
Any Book
Any Conference
Table 2. PLANTS awardees, undergraduate institution, graduation date, current status, gender, and diversity.

<table>
<thead>
<tr>
<th>Name</th>
<th>Undergrad Institution</th>
<th>Graduation Date</th>
<th>Current/Future Plans</th>
<th>Gender</th>
<th>Diversity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atkinson</td>
<td>Ohio U</td>
<td>June yr 2012</td>
<td>Fall 2012-PhD program Oregon State in paleobotany;</td>
<td>M</td>
<td>African-American</td>
</tr>
<tr>
<td>Castro</td>
<td>U Puerto Rico Rio Piedras</td>
<td>Dec yr 2012</td>
<td>Grad Dec 2012-wants to apply to grad school in ethnobotany</td>
<td>F</td>
<td>Black Hispanic Puerto Rican 'mulato'</td>
</tr>
<tr>
<td>McDaniel</td>
<td>Lynchburg College (VA)</td>
<td>May yr 2012</td>
<td>Fall 2012-PhD program in ecology/botany-U. Wisconsin-Madison</td>
<td>M</td>
<td>African-American</td>
</tr>
<tr>
<td>Ortiz</td>
<td>UCLA</td>
<td>Dec yr 2011</td>
<td>Jan 2012-PhD program UC-Riverside in plant biology</td>
<td>F</td>
<td>Hispanic</td>
</tr>
<tr>
<td>Paasch</td>
<td>Cal State-LA; grad spr11</td>
<td>Spring 2011</td>
<td>Fall 2011-Cal State LA-MS program in plant bio; plans to apply to PhD program for 2013</td>
<td>F</td>
<td>Hispanic</td>
</tr>
<tr>
<td>Putnam</td>
<td>Delta State U (MS)</td>
<td>May yr 2012</td>
<td>Spring 2012-working at USDA/ARS to pay student debt; interested in MS in medical botany</td>
<td>F</td>
<td>Am Indian (affiliation unspecified)</td>
</tr>
<tr>
<td>Richey</td>
<td>Texas State University-San Marcos</td>
<td>Aug yr 2011</td>
<td>Fall 2011-MS program at TSU-San Marcos</td>
<td>M</td>
<td>Hispanic</td>
</tr>
<tr>
<td>Toll</td>
<td>U Miami</td>
<td>Spring 2011</td>
<td>Fall 2011-PhD program-Duke</td>
<td>F</td>
<td>Hispanic/Cuban</td>
</tr>
<tr>
<td>Visger</td>
<td>CSU-Sacramento</td>
<td>May yr 2012</td>
<td>Fall 2012-PhD program U. Florida in plant systematics</td>
<td>M</td>
<td>Caucasian/Lebanese/Native American (affiliation unspecified); veteran</td>
</tr>
</tbody>
</table>
BOTANICAL SOCIETY OF AMERICA
PLANTS (Preparing Leaders and Nurturing Tomorrow’s Scientists):
Increasing the diversity of plant scientists

Student Contract

The PLANTS program brings undergraduates from a diversity of backgrounds to the annual joint meetings of the Botanical Society of America (BSA) and other participating organizations. The goal of this program is to increase number of undergraduates from underrepresented groups who attend these meetings, and to increase their level of academic excellence and motivation to pursue advanced degrees in the plant sciences. The PLANTS program is expected to increase the awareness of students of current research in the plant sciences, illustrate the range of career opportunities in this area and application of the plant sciences to societal needs, and in general, provide a venue for students to explore their academic and research interests in the plant sciences and provide students with skills needed for their professional development (workshops, networking, etc.). At the core of this program is the interaction between students and the supporting mentoring network of graduate students, post-docs, and faculty who will assist the students before, during and after the meetings. Each student will be assigned mentors for the meeting. Students and their mentors will be expected to coordinate with each other before the meeting to determine which scientific talks are of greatest interest and relevance to the students. Mentors and students will also attend and discuss the content of those talks with each other, attend other required activities together, interact together during networking events, and mentors will introduce the students to other faculty, postdocs, and students in their academic field. The mentors will work not only to interpret the content of scientific talks to the students, but also to point out the broader relevance and application of the discipline to the students, and pass on to the students the genuine intellectual excitement and involvement of the conference participants. These activities are central to the mission of the PLANTS program, and it is the student’s responsibility to facilitate these interactions with their mentors to the greatest extent possible.

The activities in Table 1 will be the Student’s top priorities at the Botany 2011 Conference. The PLANTS Student agrees to participate and be on time to all proposed conference activities. The undersigned student agrees to participate in the BOTANY 2011 conference from July 10 through July 13, 2011, according to the calendar of activities listed in Table 1. The Student agrees to abide by the rules and regulations outlined herein and explained at the orientation meeting on July 10, 2011.

The top priority for the Student is the outlined activities; therefore, the participant agrees to limit activities outside this training so that other activities do not interfere with any PLANTS activity.

The Student will at all times conduct him/herself in an appropriate manner, understanding that he/she is a representative of the PLANTS program of the Botanical Society of America. He/she will abide by all rules and regulations set by state law, the conference, and the PLANTS program. As a participant in this program, the following are not allowed: 1) guests or visitors in rooms and 2) parties, loud conversations, music, television or noise that disturb the neighbors at any time of the day or night.

The Student will be responsible for any incidental costs for their hotel/dorm room stay above and beyond the cost of the nightly costs which is covered by the PLANTS grant. The Student will be responsible for any financial charges incurred because of changes in transportation due to the student (missed the plane, decided to change flights or not attend, etc.) unless pre-approved by the specified Botanical Society of America staff member.

The ability to track participants professionally following participation in the PLANTS program attendance at the BSA is critical to evaluate the PLANTS program. The PLANTS student agrees to maintain a long-term contact with the Botanical Society of America staff to provide information about the progress made during his/her career.

___________________________ ________________________________ ___________
Student Name (Print) Signature Date
Table 1. Required activities for PLANTS students. Please check the BSA website and the conference program book (received at registration) for all locations.

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturday, July 9, 2011</td>
<td>Field trips—OPTIONAL (you must be registered to attend and must check in at the registration desk at the Chase Park Plaza Hotel to obtain your ticket for your field trip)</td>
<td></td>
</tr>
<tr>
<td>Sunday, July 10, 2011</td>
<td>REQUIRED—make sure to check in and pick up registration materials at the Registration Desk (Chase Park Plaza Hotel) first thing after checking into your lodging</td>
<td></td>
</tr>
<tr>
<td>3-4:30p</td>
<td>Professional development workshop: Applying to graduate school (WS11)-REQUIRED for students</td>
<td>This workshop is for undergraduates interested in applying to graduate programs, and master's degree students applying to doctoral programs. Brief talk, followed by Q &amp; A session.</td>
</tr>
<tr>
<td>4:30-6p</td>
<td>PLANTS Orientation meeting/mixer --REQUIRED for students; mentors strongly urged to attend; includes food</td>
<td>First chance for students and mentors to meet face-to-face before most conference activities begin. An overview of PLANTS program goals, events and orientation to the site and to the structure of a scientific conference will be presented. This is the best time to figure out which events and talks students and mentors will attend together.</td>
</tr>
<tr>
<td>7:30 on</td>
<td>Plenary lecture &amp; All-Society Mixer—REQUIRED for students; students and mentors should try to attend together (food at mixer)</td>
<td>First opportunity for students to observe and participate with their mentors in the informal interactions that lead to networks and professional relationships</td>
</tr>
<tr>
<td>Monday, July 11, 2011</td>
<td>REQUIRED—students should take notes on all talks they attend; student and mentors should agree on at least three talks each day that the student + at least one mentor will attend together and discuss the content with each other; students will be required to fill out a brief form for each of those three talks; talks should be from contributed paper sessions, poster sessions, or symposia, not the lunch or banquet talks</td>
<td></td>
</tr>
<tr>
<td>Morning</td>
<td>scientific sessions-REQUIRED-students should attend talks of their choice</td>
<td></td>
</tr>
<tr>
<td>12-1:30p</td>
<td>Student involvement in botany lunch (TE-05; ticket must be part of registration)--REQUIRED for students</td>
<td>Highlighting jobs in botany, talk from Donn Cummings (Monsanto Corp.), grad school programs, etc.</td>
</tr>
<tr>
<td>afternoon</td>
<td>scientific sessions-REQUIRED-students should attend talks of their choice</td>
<td></td>
</tr>
<tr>
<td>3:15p</td>
<td>Student involvement across the BSA (M18)—OPTIONAL for students</td>
<td>This student-led session is a discussion of how BSA could better facilitate the needs of students</td>
</tr>
<tr>
<td>dinner</td>
<td>small group dinners or societal/sectional banquets—Plants students are encouraged to get together with mentors or other PLANTS participants</td>
<td></td>
</tr>
<tr>
<td>Tuesday, July 12, 2011</td>
<td>REQUIRED—students should take notes on all talks they attend; student and mentors should agree on at least three talks each day that the student + at least one mentor will attend together and discuss the content with each other; students will be required to fill out a brief form for each of those three talks; talks should be from contributed paper sessions, poster sessions, or symposia, not the lunch or banquet talks</td>
<td></td>
</tr>
<tr>
<td>Morning</td>
<td>scientific sessions-REQUIRED-students should attend talks of their choice</td>
<td></td>
</tr>
<tr>
<td>12-1:30p</td>
<td>Enhancing Scientist Diversity in Plant Biology Lunch (TE-10)—REQUIRED for students; students and mentors are encouraged to sit together</td>
<td></td>
</tr>
<tr>
<td>afternoon</td>
<td>scientific sessions-REQUIRED-students should attend talks of their choice (papers, posters)</td>
<td></td>
</tr>
<tr>
<td>6-8p</td>
<td>Student and new member social (R3)—OPTIONAL for students</td>
<td>This is a chance to meet other students in the BSA</td>
</tr>
<tr>
<td>6-7p</td>
<td>PlantingScience mixer (MX4)—OPTIONAL for students</td>
<td>PlantingScience is an outreach program to junior high and high school students (see BSA website); students interested in teaching should attend</td>
</tr>
<tr>
<td>Dinner</td>
<td>Small group dinners or societal/sectional banquets—PLANTS students are</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Event Description</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Wednesday, July 13, 2011</td>
<td>REQUIRED—students should take notes on all talks they attend; student and mentors should agree on at least three talks each day that the student + at least one mentor will attend together and discuss the content with each other; students will be required to fill out a brief form for each of those three talks; talks should be from contributed paper sessions, poster sessions, or symposia, not the lunch or banquet talks</td>
<td></td>
</tr>
<tr>
<td>Morning</td>
<td><strong>scientific sessions</strong>—REQUIRED—students should attend talks of their choice</td>
<td></td>
</tr>
<tr>
<td>12-1:30p</td>
<td><strong>Debriefing session/lunch</strong>—REQUIRED for students; mentors are strongly encouraged to attend; This is the time to discuss highlights of the meeting, ways to improve the PLANTS program, turn in talk forms, turn in financial forms and receipts, etc.</td>
<td></td>
</tr>
<tr>
<td>afternoon</td>
<td>at <strong>scientific sessions</strong>—REQUIRED—students should attend talks of their choice</td>
<td></td>
</tr>
<tr>
<td>6-7p</td>
<td><strong>All society mixer</strong> (food)—Students are strongly encouraged to attend with mentors</td>
<td></td>
</tr>
<tr>
<td>7-10p</td>
<td><strong>All Society Banquet</strong> (TE15).REQUIRED for students; students are strongly encouraged to sit with mentors and other PLANTS participants</td>
<td></td>
</tr>
<tr>
<td>Thursday, July 14, 2011</td>
<td>Check out of hotel and departure— if you are flying, make sure to be at the airport at least 1.5 hr in advance</td>
<td></td>
</tr>
</tbody>
</table>