COVER SHEET FOR EDVENTURE PROPOSALS

CLOSING DATE: 4/29/2011
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TITLE OF EDVENTURE PROPOSAL:
Science communication workshop for C-MORE students at MIT and WHOI

REQUESTED AMOUNT: $11,662
PROPOSED START DATE: 11/11/2011

GOALS ADDRESS:
A. Increasing scientific literacy in microbial oceanography.
B. Produce leaders in the next generation of microbial oceanographers.

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PROJECT SUMMARY (250 WORDS OR LESS):
This proposal requests funding for the third in a series of workshops aimed at training C-MORE graduate students and postdocs in science communication. The proposed workshop is tailored after the initial successful workshop that took place at the University of Hawai‘i in September 2010. Organized by two graduate students from MIT and WHOI, the workshop will be led by a professional facilitator from the Communication Partnership for Science and the Sea and will be open to a total of 20 participants. Special attention will be paid to partner workshop participants with local professional media communicators that will act as post-workshop mentors as the participants put their newly learned skills into practice. This workshop will be a unique opportunity for MA-based C-MORE students and post-docs to be trained in science communication, one of the key modules of C-MORE’s newly established Professional Development Training Program.
SCIENCE COMMUNICATION WORKSHOP FOR C-MORE STUDENTS AT MIT AND WHOI

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I. BACKGROUND

As scientific disciplines have become increasingly specific they have adapted equally specific language for the communication of their findings. As a result, there is a great need for scientists to be trained to effectively communicate to a broad variety of audiences. Although graduate students are generally trained to communicate quite well with other scientists within their field, they often lack guidance on how to explain their research to the general public (Kennedy, Science, Vol 318, p715). Because a large proportion of research is publicly funded, scientists have a responsibility to clearly transmit scientific findings to the general public (Lubchenco, Science, Vol 279, p491). However, recent studies suggest that despite more than a decade of greater attention in the scientific community being paid to communicating with the general public, less than a third of American adults are scientifically literate (Miller, Michigan State University, 2007).

This proposal requests funding for the third in a series of workshops aimed at training Center for Microbial Oceanography: Research and Education (C-MORE) graduate students and postdocs in science communication. The proposed workshop will take place at MIT in November 2011 and will be targeted toward C-MORE students and postdocs at MIT and WHOI. Two graduate students, one from MIT and one from WHOI, will plan the one-day workshop facilitated by a workshop leader from the Communication Partnership for Science and the Sea (COMPASS). A pilot COMPASS science communication workshop was held at the University of Hawaii-Manoa (UH) in September 2010, with such success that a second workshop was funded and will take place at the Monterey Bay Aquarium Research Institute (MBARI) in May 2011 with C-MORE graduate students and postdocs from the University of California-Santa Cruz and Oregon State University.

II. WORKSHOP FORMAT

The workshop will be held on the MIT campus in November 2011. Similar to the UH and MBARI workshops, the MIT workshop will accommodate up to 20 C-MORE students, postdocs, and faculty.

1. Workshop Specifics:

Although the format of the MIT workshop will be similar to the COMPASS workshops at C-MORE partner institutions, the graduate student organizers, together with the COMPASS facilitator, will tailor the MIT workshop to the interests of the participants identified through surveys prior to the workshop.

Under the guidance of the COMPASS facilitator, participants will be introduced to a variety of media (radio, TV, writing). Three to four representatives from different media outlets in Boston and Cape Cod will be invited to guide participants through the particulars of successful communication within their fields.
All participants will be guided through the development of a tool the COMPASS facilitators call the “message box” to identify the key ideas and concepts related to their scientific research. By analyzing these components, participants will be able to adapt the message of their research to their target audience. Participants will be required to put their newly developed skills into practice through a series of individualized scenarios in as part of the workshop and will receive feedback from the group.

Potential journalist invitees include Lonny Lippsett, editor of WHOI’s Oceanus magazine; Ari Daniel Shapiro, an independent radio- and multimedia-based journalist; and Deborah Cramer, visiting scholar at MIT’s Earth System Initiative, and author of “Smithsonian Ocean: Our Water, Our World.”

2. Workshop Follow-up:

The proposed science communication workshop will enable students and postdocs at MIT and WHOI to complete the first of the two requirements of the Science Communication module of C-MORE’s Professional Development Program. The second part of the module requires students and postdocs trained in science communication to apply their skills (e.g. by a newspaper article, or by participating in a radio interview). The workshop will therefore aim to provide students with guidance on how to achieve the second requirement of the Science Communication module of C-MORE’s Professional Development Program.

In the selection of participating journalists, focus will be put on recruiting people who are willing to provide follow-up mentoring to students. In addition to the journalists, the organizers plan to invite potential long-term partners that may be interested in developing a project together with the workshop participants after the workshop. These partners will be invited to attend the last part of the workshop, where they would be able to learn about the participants’ research. Potential follow-up partners may include: representatives of the MIT Museum and the Woods Hole Aquarium, who can guide students on how to create exhibits related to their microbial oceanography research.

III. ALIGNMENT WITH C-MORE GOALS

The proposed science communication workshop will address the three education goals for C-MORE:

1. Train the leaders of the next generation of microbial oceanographers: The COMPASS workshop will train MIT and WHOI graduate students and postdocs to effectively communicate their scientific work with the general public. Such a skill will provide students with a competitive advantage when entering the job market, but also enable them to better serve their society by taking an active role in dissemination of science.

2. Increase scientific literacy: In alignment with the Scientific Communication module of the Professional Development Training Program, students attending the workshop will be well equipped to produce pieces that increase the microbial oceanography literacy of different target audiences.
3. Broaden participation: Improving communication of science will also allow students to address wider audiences and forge stronger connections during outreach opportunities, allowing for increased interest in microbial oceanography across a range of audiences.

The workshop will provide most MIT and WHOI C-MORE students with their first opportunity to satisfy the requirements of the Science Communication module of the Professional Development Training Program by hosting the workshop within an accessible distance of their home institution. Of the ~40 Massachusetts-based C-MORE students and postdocs, only 1 has been able to attend either of the first two C-MORE sponsored Science Communication workshops.

IV. ALIGNMENT WITH C-MORE EDVENTURES PROPOSAL PREFERENCE CRITERIA

The proposed science communication workshop will address all five preference criteria for EDventures funding of proposals:

1. Bridging research and education: The proposed workshop will teach students and postdocs valuable communication skills outside of those typically addressed in oceanography curriculum and specifically address the gap between research and educating the general public on scientific topics.

2. Involving multiple C-MORE partner institutions: The proposed workshop addresses the need to extend opportunities for student and postdoc involvement in C-MORE activities beyond the UH campus while drawing on the support of the C-MORE education office at UH.

3. Written by graduate students: This proposal was written by two C-MORE graduate students from MIT and WHOI who will be the primary organizers of the workshop at MIT, with input from students who have organized the workshop at other C-MORE partner institutions.

4. Fostering partnerships between C-MORE and other scientific and education communities: In addition to learning a skill set that will promote communication between scientific and journalist communities, the proposed workshop will allow students and postdocs to forge relationships with individual journalists and long-term partners described above (e.g. MIT Museum and Woods Hole Aquarium) who can provide long-term mentoring of students as they put their skills into practice.

5. Is Innovative, leading to potential other sources of funding: The proposed workshop will conclude a series of three scientific communication workshops funded by EDventures. After the workshop and follow-up projects have been completed and the evaluation report has been completed, the Professional Development Organizing Committee will review these materials with an eye toward seeking external funding. Although we do not expect to be able to raise funds to offer additional workshops in partnership with COMPASS, successful evaluations from these three workshops could provide proof of concept needed for funding other portions of the PDTP.
V. BUDGET

The total cost for the MIT workshop that we are requesting from C-MORE EDventures is **$11,662**, with the following breakdown:

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPASS workshop fee <em>Note: this fee reflects a COMPASS-mandated increase from the discounted fee of $6000 offered for earlier workshops</em></td>
<td>$8,000</td>
</tr>
<tr>
<td>COMPASS workshop facilitator fees</td>
<td></td>
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<tr>
<td>- airfare ($600) + rental car ($200)</td>
<td>$800</td>
</tr>
<tr>
<td>- accommodations (2 nights at NSF rate of $154/night)</td>
<td>$308</td>
</tr>
<tr>
<td>- meals/per diem</td>
<td>$71</td>
</tr>
<tr>
<td>Journalist honoraria (4 x $300)</td>
<td>$1,200</td>
</tr>
<tr>
<td>Lunch and coffee break</td>
<td>$633</td>
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<tr>
<td>Pre-workshop dinner for organizers and journalists</td>
<td>$250</td>
</tr>
<tr>
<td>MIT room rental fee</td>
<td>$250</td>
</tr>
<tr>
<td>Gift certificate for invited follow-up mentors</td>
<td>$150</td>
</tr>
<tr>
<td>TOTAL</td>
<td><strong>$11,662</strong></td>
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1. COMPASS workshop fee: The majority of the budget covers the $8,000 fee for COMPASS to hold the workshop. The fee covers the development of an agenda based on the needs addressed by the C-MORE organizers, pre-workshop materials, the collection of surveys and biographies from participants, and coordination of journalist participation.

2. Workshop facilitator-related fees: Funding is also requested to cover travel and accommodations for the COMPASS workshop facilitator, traveling from Seattle to Boston.

3. Journalist honoraria: Funding is also requested to provide 4 journalists with $200 honoraria for their participation in the workshop.

4. Lunch and snacks: Lunch for 25 people is estimated at $450 ($18/person) and $125 for mid-afternoon break. A 10% gratuity is added for a total of $633.

5. Pre-workshop dinner: The $250 requested for the organizational dinner will allow the C-MORE organizers, journalists, and COMPASS workshop facilitator to best personalize the workshop to the needs of those attending and to best plan the workshop.

6. Conference room fee: A conference room reservation fee is requested to cover the costs of reserving an adequate room for the workshop on the MIT campus via the Campus Activities Complex.

7. Gift certificate: We expect that 3 follow-up partners will be able to attend the workshop. We would like to thank each of them for their time and presence with a $50 gift certificate to the MIT Press Bookstore.