

to conduct literature surveys, engage in critical peer discussions, prepare written reports of their findings and be involved in oral presentations. One goal (of seven) for this course was "To identify major issues identified through class discussions and presentations and to present them to a public audience". A group of students developed a presentation on recent advances in Stem Cell Research for a First Year Seminar Class, "Science in the Media". The first year class was a mixed group of science majors and non-majors from disciplines such as journalism, business and political science. Written feedback showed a clear distinction between perceptions and needs of science majors and the non-majors. An analysis of the feedback prompted the development of an "extended" service project over the summer. Presentations were created for majors as well as non-majors, and implemented during the Fall 2009 semester. Audiences included high school students, second year majors and a residential dormitory. To evaluate learning outcomes of the modified presentations, pre- and post-assessments were conducted. A benefit for students taking this course is that they have become more aware of sharing their knowledge and to engage in communicating science to a public audience.

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Program/Abstract # 73

Elegant science in the high school classroom

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The Socrates Fellows, funded by an NSF GK-12 grant to UC San Diego, are part of a unique partnership with local area high school science teachers. The relationship provides an opportunity for Fellows to create an inquiry-based curriculum piece based on their own research, while simultaneously practicing science communication skills. The introduction of *Caenorhabditis elegans* into biology classrooms was enthusiastically received; students were engaged in their learning experiences and performed well on tests that covered related concepts. Over the course of the 2009–2010 academic year, I implemented the following student-centered learning lessons: 1) *C. elegans* was first introduced to students in an activity to stimulate discussion about the soil ecosystem. Students brought their own soil samples into the classroom to isolate *C. elegans* and other "life forms" from the soil. 2) We used *C. elegans* to demonstrate Mendelian ratios in live organisms, since much of my dissertation research is based on genetic analysis. Students receive progeny from genetic crosses between wild type and a visually appealing mutant. They then distinguish the phenotypes and calculate ratios to determine whether

a mutant allele is dominant or recessive to wild type. 3) *C. elegans* chemotaxis investigates the function of the nervous system by examining a simple circuit important in olfaction. Students carried out a chemotaxis assay using animals with wild type and mutant responses to odorant attractants almond extract and buttered popcorn. Overall, the partnership and experiments highlight student-driven inquiry and the scientific process as practiced by laboratory scientists.

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Program/Abstract # 74

Bringing the understanding of evolution to Turkish public: A volunteer organization model for developing countries

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Turkey has a low acceptance of evolution among European countries. This reflects intense creationist effort and a relative lack of outreach by the science community in Turkey. Importantly, teacher education programs at universities, as well as school textbooks, do not include appropriate coverage of biological evolution. The Internet is a powerful tool to reverse this trend, yet until recently there was no accessible presentation of evolution in Turkish on the Internet. *Hard-workers for Evolution* is a volunteer group for promoting an understanding of evolution in Turkey, with over 140 members, including graduate and post-graduate researchers. The group has so far translated 70% of the UC Berkeley's Understanding Evolution website (<http://evolution.berkeley.edu/>), which presents evolution at a level accessible to the general public. The Turkish website started publishing in 2007 at <http://www.evrinianlamak.org>. *Hard-workers for Evolution* established a science education community that eventually began involving in translations of other media such as documentaries and books, as well as organizing seminars and symposia. *Hard-workers for Evolution* can be used as a volunteer organization model to be applied especially in developing countries where there is a lack of funding and resources for public outreach.

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