Advancing in situ biogeochemical research in Monterey Bay in collaboration with an MBARI summer intern

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Once EdVentures funded this award, I arranged with MBARI Education Specialist George Matsumoto to begin the process of recruiting a summer intern for our lab. George posted a description of the project to the MBARI website, and I received several applicants. The best of the applicants happened to be C-MORE Scholar Sara Thomas. Since MBARI only accepts interns through their summer internship program, Sara was paid as an intern and made arrangements for accommodations and transportation with the other interns.

Though Sara didn't have the molecular skills required for the project, she picked up techniques easily. I acquired mentoring skills while teaching her PCR, qPCR, cloning, clone library preparation, DNA extractions and analyzing sequence information. We also worked on optimizing some qPCR assays on the Environmental Sample Processor's (ESP's) Microfluidic Block (MFB). Sara optimized a variety of assays on the MFB that will be deployed during Fall 2011 at Station ALOHA. As part of the internship program, Sara presented her work to MBARI and wrote a report. Sara also applied for an NSF Graduate Research Fellowship award. I advised her through these tasks. Sara acquired an internship and then a technician position in Dr. Matt Church's lab at UH, and has applied for graduate school to continue studying marine microbiology.

Sara's work has laid the essential groundwork for the coming ESP deployment, as the molecular assays that were previously optimized for the instrument are coastal assays. She came out to the MEGAMER facility this winter to qualify several more assays, and as a result we are almost prepared for the deployment. I would be way behind on this if it weren't for Sara. We have tentative plans to continue to work together with the coming deployment, and we have built a strong working relationship that I plan to continue to build on.