

First New York City Regional Association of Biology Laboratory Education (RABLE) Workshop

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Abstract

Over fifty undergraduates and professors attended the first regional ABE workshop held in New York City on February 25, 2012. The idea of hosting a RABLE had been simmering in K. Nolan's mind, and burst forth when S. Lipson received a Faculty Development grant to host a cell culture/cytotoxicity workshop for faculty members from other institutions. K. Nolan decided to piggyback on top of this idea and got in touch with J. Goldstein and S. Salm to see if they might be interested in running a mini-workshop on cell diffusion on the same day as Dr. Lipson's workshop on cell culture and cytotoxicity. Thus (with ABE board approval) the first NY RABLE was born. A mix of other workshops was available throughout the day; breakfast and lunch were provided by SFC. No one received any compensation. One workshop on the use of Image J to determine leaf herbivory was a modification of a previous major workshop held at the U. of Delaware, and another was an idea for a mini-workshop using horseshoe crab larvae that will hopefully be presented at a future ABE workshop. Caveats included lack of time for extensive recruitment and overlap of interests with another local organization. The strengths were getting the undergraduates involved and the synergy of interacting with the other professors---Peter Parks from Nyack College, for example, would like to present a mini-workshop at ABE in the future. Another plus noted by S. Lipson is that a RABLE could be used to teach workshops in which it would be too difficult to set everything up at another institution, such as his cell culture experiments. Overall, the conference was fairly easy to put together which was most likely due to all the help and cooperation of the participants.

Time	Activity	Location
8:30-9 A.M.	Breakfast	Callahan Center
9 A.M. -12 noon	Cell Culture and Cytotoxicity I-Steven Lipson SPACE LIMITED TO 12 PARTICIPANTS	Rm 5210
9-10:30	Cell diffusion simulation--- Jessica Goldstein and Sarah Salm	Rm 5201
9-10:30	Fruit fly larvae food preference---Alex Braun	Rm 5213
10:30-12 noon	Using image J to Collect Herbivory Data--- Lauren Clark and Alina Zhyzotovska	Rm 5213
10:30-12 noon	What is the effect of varying salinity on horseshoe crab larvae and estuarine shrimp?--- James Foo and Mamuna Fazi	Rm 5201
12 noon-1:30 P.M.	Lunch---pizza (outside theater) Introduction to ABE--- Jessica Goldstein, Sarah Salm and Kathleen Nolan Viewing of Biol-O-Gez DVD---Janet MacDonald Experimental field education in NYC and the Caribbean--- Kathleen Nolan	7 th floor Theater
1:30-4:30 P.M.	Cell Culture and Cytotoxicity II---Steven Lipson SPACE LIMITED TO SAME 12 PARTICIPANTS AS ABOVE	Rm 5210
1:30-3 P.M.	Designing Experiments with the use of Vernier software Marlon Joseph and Michelle Batchu	Rm 5201
1:30-3 P.M.	Designing Experiments with the use of Biopac software Alex Braun and Jill Callahan	Rm 5213
3-4:30 P.M.	Designing Experiments with the use of Vernier software Marlon Joseph and Michelle Batchu	Rm 5213
3-4:30 P.M.	Utilizing a Community Tank for Cichlid Behavior Studies Francine Foo	Rm 5201



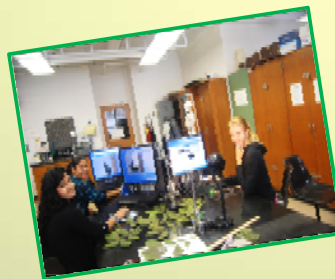
Steven Lipson feels that a RABLE would satisfy the desire to learn techniques such as cell culture, that might be too difficult to replicate elsewhere than the home institution. He supplemented the RABLE with a St. Francis College Faculty Development grant and bought all the cell culture supplies.



Long-time ABE members, Jessica Goldstein and Sarah Salm lead a Cell diffusion workshop with a kit produced by Carolina Biological Supply. We found that ready-made agar cubes sped up the time involved in conducting this laboratory. Below, students are leading a workshop in the use of Vernier equipment for water quality testing.



Biopac, similar to Vernier uses probes and an interface with the computer to teach concepts such as EKF.



Conclusions

Recruitment could be an issue in the success of your RABLE. Although we had a low number of faculty members (ten in all) from various NY and NJ institutions (St. Francis College, Barnard College, Borough of Manhattan Community College, Brooklyn College, Tuoro College, St. Peter's College and Nyack College, we feel that was a good pilot project for gaining insight on running future RABLE projects. We did involve students heavily, which was a welcome addition in that our ultimate goal is to reach students. The students lead some of the workshops which were held simultaneously in three labs. At our noon-time break we showed some teaching rap videos that were developed by Janet MacDonald. Expenses for the program were approximately \$1000, which covered break and lunch for 50 participants (bagels and pizza). A large local organization, the Metropolitan Association of College and University Biologists currently hosts a one-day conference that sometimes contains hands-on mini-workshop type activities in the afternoon. We would like to collaborate more with the organization in the hopes of continuing to build publicity for ABE and fulfilling our mission. We think that synergy was recreated among the participants; notably, Peter Park will be presenting at ABE and will be collaborating with Kathy Nolan on projects with students this summer.



The Herbivory Project is an adaptation of a previous ABE exercise. Students take pictures of leaves, and with the help of Image J calculate the area of herbivory in a leaf. They have used this technique to do comparative studies between Riverdale Park in the Bronx and the new Brooklyn Bridge Park. The percentage of herbivory is usually low---less than 4% of any given leaf.

