

## Harvard Researchers Provide Resources in Kenya

As researchers in the developed world, we know that we are extraordinarily fortunate to be in an environment supportive of a wide variety of scientific pursuits. The richness of resources gives us the freedom to pursue more abstract and basic sciences that appeal to the tinkerer or the “butterfly collector” in all of us. But for anyone who has traveled in, or originates from, a developing country, it is obvious that we are not unique in that desire to explore the unknown. We know, along with ASCB members and Seeding Labs, that “talent is everywhere.”

Seeding Labs is a Boston-based nonprofit helping talented scientists in developing countries conduct great research. It is led by Nina Dudnik, who is an Associate member of the ASCB International Affairs Committee. Seeding Labs’ primary strategy is to focus on providing resources that developing country researchers need but lack. Such resources include lab equipment. Universities and companies donate surplus equipment to Seeding Labs, and Seeding Labs identifies recipient universities and facilitates the transfer of equipment.

But it doesn’t stop at equipment. Equally important resources for global scientists are professional training and connections to colleagues and opinion leaders in their fields. Seeding Labs helps talented scientists in developing countries conduct life-changing research. In this spirit, Seeding Labs and the Genetics Department of Harvard Medical School joined forces to create a new program in science diplomacy. We three Harvard

scientists—Kimberly Cooper, Amanda Nottke, and Mridula (Millie) Ray—were selected to pilot this program. Recently we visited a Seeding Labs partner university—Kenyatta University (KU) in Nairobi, Kenya.

### Gathering Information, Building Relationships

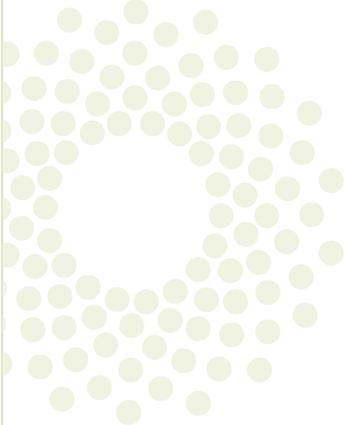
Our mission on this trip was to run workshops for graduate students and faculty on such topics as grant writing and research presentation. We also wanted to better understand the broader needs of KU and to follow up on the status of equipment previously provided by Seeding Labs. The best way to do this was to discuss academic life at KU with everyone from undergraduates to deans. We toured labs and took pictures of Seeding Labs’ equipment in use. We also held office hours every morning for students to discuss thesis proposal ideas or for faculty to get advice on grants. Along the way we acquired a close-knit core group of students who attended *every* workshop and we established relationships with many progressive and motivated faculty members and administrators. At the same time, this gave us a peek into the inner workings of the university at all levels.

We found that our outside perspective and our dialogues with a wide spectrum of people provided us a unique ability to identify some of the challenges that apply to research at KU. These were largely centered around effective communication and collaboration between scientists. Social norms often

limited interactions across hierarchical levels, and peer networks were sometimes physically restricted since most research is done off-campus in government agricultural and pathology centers. To address this communication gap, we prodded the social boundaries by encouraging both vertical and horizontal communication within KU. This culminated in a community-wide forum—something which had *never* happened before at KU. In



The authors with students at Kenyatta University, a Seeding Labs partner university



this way students, faculty, and deans could engage together in candid conversation about the challenges and future of research at their university. We discussed approaches that might promote further development of a collaborative research environment and discussed the pros and cons of implementing these policies.

One concern that students and teachers alike agreed upon was adequate attention to teaching. KU has a rapidly expanding student body (23,000 students and growing), and faculty are shouldering three classes each semester. The latter includes responsibility for grading all exams. This directly cuts into faculty time for research and mentoring, the two things that KU graduate students expressed they desired most. As a group we discussed recruiting graduate students to serve as teaching assistants and to grade undergraduate exams. This would relieve lecturers' burdens and give the graduate students valuable teaching experience. This policy was successfully implemented in the KU Department of Zoology during the fall and spring semesters.

At the same meeting, we also highlighted underutilized resources (such as open-access literature and university journal subscriptions, the potential for interdepartmental collaborations, and the grant writing office) and identified the best avenues of advertising those resources. Together with faculty and administrators, we designed a system to centralize information so that people of all departments could know which Seeding

Labs equipment was set up and running and where it was located. The meeting ended with enthusiastic speeches from deans, the director of research, and faculty members; and invigorated students thanked their professors one-on-one over tea and biscuits.

### Gaining a New Perspective

Through this unique experience, we have acquired a new perspective on our own science as well. In particular, we were exceptionally impressed and inspired by some students who took out personal loans to fund their research. We appreciate what a luxury it is to pursue basic as well as applied science. Both the students and ambassadors were encouraged rather than overwhelmed by the realization that "science is hard everywhere." We are heartened and impressed by a group of KU students who have taken the initiative to form a Biosciences Society that will invite faculty speakers, hold journal clubs, and promote social interaction. Motivated by their initiative, the Seeding Labs Harvard Medical School student chapter is expanding its vision for future international outreach activities, including pursuing formal and informal connections between Harvard scientists and the students at KU. Although we don't yet know when our next meeting will be, we look forward to lasting personal and professional relationships with the scientists at KU. ■

—Amanda Nottke, Kim Cooper, Mridula Ray,  
Harvard Medical School Department of Genetics  
and Massachusetts General Hospital

## More about Seeding Labs and the IAC in Africa

Seeding Labs and the ASCB International Affairs Committee (IAC) have partnered on providing equipment to African institutions where ASCB workshops have been held. The ASCB IAC has planned and implemented educational workshops in Africa, with support from the Carnegie Foundation of New York. Much needed equipment has also been donated by Olympus and Zeiss to host institutions. And ASCB member professors have provided grant-writing assistance and other follow-up.

Seeding Labs welcomes new institutional partnerships to expand programs in scientific training and equipment transfer; details can be found at [www.seedingslabs.org](http://www.seedingslabs.org) and at [info@seedingslabs.org](mailto:info@seedingslabs.org). ■