Postdoctoral (PD) training is both an apprenticeship and a partnership. As an apprentice, the PD receives additional training in research technical skills, but is transitioning to a career as an independent practicing scientist. As a partner, the PD has a say in the direction of the project and implementing a plan to achieve the research objectives. This involves daily conversations between the PI and the PD about designing experiments and managing laboratory personnel.

An important aspect of PD training is professional development. It is the responsibility of the mentor to discuss career goals and to provide guidance to achieve those goals. The PI has mentored 7 PDs; 6 are employed in academic, research, or technical fields. Mentoring activities will be tailored according to the PD’s needs, but will consist of the following:

1. Formal teaching/instruction. The PD will be given the opportunity to organize, manage, and teach a Biology course during the 8-week summer session. This is particularly important for those individuals interested in teaching at a four-year college or university. The mentor will review course content and attend lectures to provide constructive criticism on delivery. A science education specialist, Dr. Meena Balgoal, in the School of Education, will participate.

2. Informal teaching/mentoring. The PD will mentor graduate students and undergraduate students. The PI’s lab usually has 3-4 graduate students and 5-6 undergraduate students working in the lab during the academic year. As the lab group includes women, first-generation students, and ethnic minorities, it provides an opportunity to work with individuals from diverse backgrounds. The PI and PD will meet at least once a week to discuss and resolve issues that arise.

3. Workshops. The PD will participate in campus workshops on professional development. The College of Natural Sciences holds “Best Practices” workshops 3 times a semester on such topics as teaching scientific ethics, involving undergraduates in research, incorporating “active learning” in large lecture classes, etc. These have been well attended and attract students, PDs, and faculty from across campus. The Office of Regulatory Compliance offers regular workshops on animal care and use, human subjects, and responsible conduct in research (scientific ethics).

4. Networking/service. The PD will present his/her research at annual meetings of the appropriate scientific society. The PI will work with the PD in organizing the presentation, as well as encourage the PD to participate in the society’s governance and activities, such as those involving postdoctoral/graduate student affairs. The PI will recommend the PD to editors and grant program directors as a reviewer of manuscripts and proposals, respectively.

5. Manuscript/Grant writing. The PD’s publication record must be strong to be competitive. It is the PI’s responsibility to make it possible for the PD to publish regularly in high-quality journals as first author. The PD will submit proposals for fellowships, travel awards, and/or research. The PI and other Biology faculty will critique proposals.

6. Career counseling and job interviews. The PD will meet with the College’s career counselor on a regular basis to discuss career options, as well as prepare a curriculum vitae. The PI will prepare the PD for job interviews. This involves practicing the research presentation and practicing mock interviews. If possible, the PD will present a research seminar to the Biology Department before the interviews.