MENTORING PHILOSOPHY

My overarching mentoring philosophy is focused on establishing and fostering a **"growth mindset"** for all of my scientific trainees, including postdoctoral researchers. A "growth mindset" describes a person's behavior and response to challenging circumstances, most notably how they respond to failure and setbacks. This concept was pioneered by American psychological researcher Carol Dweck, whose work revealed that individuals can be placed on a continuum according to their implicit views of where their ability comes from. According to Dweck, individuals with a "growth mindset" are more likely to continue working hard despite setbacks, and they believe that their skills and abilities can be developed through sustained effort, study, and persistence. Having a growth mindset does not mean that a person thinks they can become the next Albert Einstein. Rather, it means that individuals believe that anyone can get smarter and gain important skills if they put in time and work hard towards their goal. My role as a mentor is to remind my trainees that every project (however big or small) should be viewed as an opportunity for growth and learning, rather than an insurmountable task that will immediately defeat them. Even if success remains elusive (e.g. a protocol fails, or you didn't get the job you really wanted), a person with a growth mindset will appreciate the learning opportunities that accompany the work involved in a challenging task. They dust themselves off after failure, reflect on what they have learned, and re-strategize as they work towards the next logical goal.

Inclusive Mentoring: In science, I firmly believe that grit and resilience are the key to success. This is especially true for trainees who do not come from privileged racial or socioeconomic backgrounds, and who must overcome additional barriers and systemic inequalities that hamper their career progression in academia. My focus on a "growth mindset" is a result of my formal pedagogy training with The Carpentries organization, a global non-profit that teaches practical scientific programming skills to diverse learners using open-source online curricula. My mentoring also includes a strong focus on structural frameworks that are tailored to each individual, according to their specific needs and personal/professional background. An example of a structural framework would be a reliable and useful schedule of one-on-one meetings (e.g. a standing meeting at 10:30am every Wednesday with a postdoctoral trainee); this establishes a formal schedule for face-to-face communication and discussion, and sets up known expectations for deliverables and project results each week. Inclusive mentoring also acknowledges that every trainee deserves some level of customized mentoring, that may be more hands-on (or hands-off) as discussed and agreed upon by the mentor/mentee pair.

Description of current research group: Research in the Bik Lab is intensely interdisciplinary, using high-throughput sequencing and diverse –Omics approaches to explore broad patterns in marine microbial eukaryotes (biodiversity and phylogeography, host-associated microbiomes, and the relationship between species and environmental parameters), with an emphasis on free-living nematodes in deep-sea and Antarctic habitats. My lab works on questions at the interface between biology and computer science, using biological questions and evolutionary hypotheses to drive the development and refinement of –Omic approaches.

How FFIRE candidate will be incorporated: The FFIRE candidate will be holistically integrated into all aspects of the Bik Lab, including weekly one-on-one meetings with PI Bik, biweekly group lab meetings, and monthly lab social events (lunch/dinner off campus). Specific research projects will be chosen via discussion with PI Bik and lab members (and will be heavily influenced by the postdoc's specific skills and research interests). The postdoc will work closely with all lab members to coordinate sample processing and research activities, including nematode taxonomy, molecular wet lab work, bioinformatics data analysis, and manuscript preparation. Further details on professional development and mentoring frameworks are included in the mentoring plan below.

POSTDOCTORAL RESEARCHER MENTORING PLAN

During the course of the project, PI Bik will undertake both formal and informal mentoring of the postdoctoral researcher. The goal is to ***facilitate the postdoc in achieving the skills, knowledge, and experience needed to succeed in their chosen career trajectory.*** PI Bik will provide a structured mentoring plan, career planning assistance, and opportunities to develop a number of distinct skill sets, including project management, technical writing (scientific grants and manuscripts), student/trainee supervision and mentoring, as well as public outreach and scientific communication skills (e.g. writing and speaking for a lay audience). Specific elements of the postdoctoral mentoring plan will include:

- Working with the postdoctoral researcher to complete and review their **Individual Development Plan (IDP)**, following the action points recommended by the Federation of American Societies for Experimental Biology (FASEB) for trainees and their mentors. We will use existing IDP template documents that are freely available online.

- Working to identify and attend relevant seminars, workshops, and conference opportunities that will enrich the postdoctoral scientist's research and career goals.

- During the time period immediately following the start of the project, meeting with the postdoc to clearly define lab expectations and the postdoc's responsibilities at UGA, including clear discussion of timeline, project activities, and expected products.

- Identifying and promoting participation in relevant activities and leadership opportunities on campus, such as journal clubs, career seminars, skills training workshops (e.g. programming skills, science communication, professional development), and membership in the UGA Postdoctoral Association. These opportunities will be customized and tailored towards the postdoctoral researcher's target career trajectory, in order to build up their CV appropriately and complement the formal research activities.

- Participation in weekly lab meetings, where postdoctoral scientists are expected to present their research on a regular basis, and give feedback to other presenters so that they can refine their scientific ideas and communication/presentation skills.

- Provide training and feedback in regard to the postdoc's project management and leadership skills, to encourage independence in the postdoctoral researcher's day-to-day tasks and responsibilities and troubleshoot any problem areas.

- Towards the end of the project period, provide career guidance and assistance for the postdoctoral scientist's subsequent job applications (academic, industry, or government agency positions or other non-research career tracks), including review of application materials and facilitation of networking opportunities.

Success of this mentoring plan will be assessed via <u>quarterly reviews</u> of the postdoc's **Individual Development Plan (IDP)**; this quarterly review will occur as an in-person meeting between PI Bik and the postdoctoral researcher, in order to assess progress towards defined goals (research, career, and professional development). During the quarterly review, PI Bik will also discuss the postdoctoral researcher's satisfaction with mentoring and research activities, and help to identify any roadblocks or areas for improvement. At the end of each quarter (every three months), the postdoctoral researcher will reassess and adjust their IDP Plan to re-define priorities and establish goals and milestones for the upcoming quarter. Finally, the postdoctoral scientist will receive ethics training, including online and UGA-specific courses so that postdocs are made aware of university and funding agency policies for responsible conduct of research.