Enhancing Diversity in Biomedical Data Science (R25 & BD2K Centers)

Moderators: Bettie Graham (lead) and David Banks

Agenda

- Introductions
- Project Overviews: PIs are invited to give a short introduction about their program to the group and discuss how they are interacting with the BD2K Centers
- Discussion
- What is working well in your program? What parts of your program would you like help with?
- How do we understand the current workforce, and the potential for its development, with respect to diversity issues?
- Are there particular underrepresented minorities/groups that we can directly engage with to facilitate their involvement in data sciences?
- How do we look at the users of data science technologies and approaches? Can we broaden the pool of users so that it is more diverse?
- How do we improve inclusion at the trainee level, and help to ensure a steady pipeline of individuals as the undergraduate, graduate, and postdoctoral levels?

Summary of Meeting:

Each of the PIs provided an overview of key aspects of their programs. All of the PIs noted that the faculty development components of their programs are underway.

- U Puerto Rico (Partnering with U. Pittsburgh and University of California, Santa Cruz): Jose highlighted that their program has three partners, seeks to take students from 3 distinct scientific backgrounds and expose them to online classes in big data during their sophomore year and pursue a summer experience at their partners' BD2K centers at the end of their junior year so they are prepared to conduct a capstone BD2K project at their home institution in their senior year. He noted that this prepares them for their applications to the master and PhD programs. He stated that they anticipate having approximately 6 candidates per year; moreover, that their faculty development component is under development.
- California State University, Fullerton (Partnering with USC): Archana began by stating that their program is a student led faculty mentor experience where they begin recruitment of 6 students from a pool of 300 students. Components include

courses such as nutrigenetics, nueroimaging, and proteomics as well as lab experiences and computational machine learning. This provides the students with an in depth understanding of big data. She noted that USC will coordinate the loading of software and aid in data analysis. She discussed how students must meet with advisors to demonstrate satisfactory progress towards degree and advisors are responsible for making linkages and advising students on programs. She stated that they have an outside evaluator and are coordinating internal and external media about the program.

- Fisk University (Partnering with University of Chicago/Mayo Clinic): Lei discussed their program by stating that they are developing new courses including more advanced bioinformatics and biostatistics. They plan to train between 2-4 students each year with students having 2-3 years in the program. They will initiate a journal club via electronic media with undergraduates and graduate students from both institutions. There will also be laboratory experiences for the students at the partner BD2K Centers.
- California State University, Monterey Bay (Partnering with UC Santa Cruz): Judith noted how they were able to develop their summer undergraduate research program. She noted that the students in the program were encouraged to complete their masters then to matriculate into PhD programs. She stated that the master's degree helps to prepare them also for industry positions.