POST-DOCTORAL MENTORING PLAN (1 PG)

Postdocs tasked to perform the networks work for this proposal will be mentored primarily by Dr Mark Gerstein, Albert L. Williams professor at Yale University with joint appointments in Biomedical Informatics, Molecular Biophysics and Biochemistry, and Computer Science. Yale University provides an excellent environment for the maturation of postdoctoral scientists into independent researchers.

The program in Computational Biology and Bioinformatics hosts an annual symposium and the departments of Molecular, Cellular, and Developmental Biology (MCDB) and Molecular Biophysics and Biochemistry (MBB) sponsor annual departmental retreats. Frequent seminars at the Yale Medical School and in the MCDB, MBB, Genetics, Biostatistics, and Computer Science departments all provide opportunities for interaction with a diverse group of scientists. The Gerstein lab has formal collaborations with many other labs in US and also abroad. The lab is a participant in several important community efforts in bioinformatics. The Gerstein lab itself is a diverse group of people, with members from the U.S., Europe, China, India, Africa, and South America.

Dr Gerstein meets at least twice a week with each member of his lab. The entire lab gathers once a week for lab meeting, during which one lab member presents a conference-style summary of their current research. The size and diversity of the lab make presentations at the weekly lab meeting a useful arena for honing presentation skills. Dr Gerstein closely supervises the research progress of all postdocs with weekly subgroup meetings, during which small groups of lab members with shared interest come together to discuss and troubleshoot their current research. These meetings are also the forum where research that has reached a mature stage is prepared for publication. The Gerstein lab generated over 300 publications in the last decade.

Postdocs in the Gerstein lab have ample opportunity to mentor and direct the research of undergraduate and graduate students. Many undergrads seek out the lab for summer research internships, and graduate students in the Computational Biology and Bioinformatics (CBB) program often choose the lab for one of their three lab rotations at the beginning of their graduate program. Bioinformatics students can take Dr Gerstein's gateway class in bioinformatics (MBB752, http://info.gersteinlab.org/Cbb752b11). In that class, postdocs have the opportunity to give guest lectures about their areas of expertise.

The Gerstein lab has significant computational resources to support bioinformatics research, including appropriate software and priority access to one of the Yale supercomputers, namely Louise & BulldogN, and regular access to six other Yale supercomputers. There are two full-time administrators maintaining these high-performance computing resources.

The broader Yale community provides some key mentoring services for postdocs. The postdoc office, headed by Dr John Alvaro provides career counseling. Programs for teacher training tailored for the busy schedules of postdocs are organized by the Graduate Teaching Center.

In summary, Dr Gerstein has a strong track record of mentoring postdocs. He has supervised more than 30 postdocs during his tenure at Yale. Most of them have transitioned into leadership positions in academia and industry. It is remarkable to note that numerous former postdocs of Dr Gerstein (e.g. Dr Nick Luscombe, Dr Paul Harrison, Dr Jiang Qian and Dr Zhaolei Zhang) have already achieved tenure at prominent research universities.