UNIVERSITY of ROCHESTER
HSCCI
HEALTH SCIENCES CENTER for COMPUTATIONAL INNOVATION
http://www.rochester.edu/provost/hscci/

REQUEST FOR APPLICATIONS TO SUPPORT HEALTH SCIENCES RESEARCH USING HIGH PERFORMANCE COMPUTATIONAL RESOURCES

Applications are requested to support laboratory staff that will accelerate the research in computational biology and health, and to take advantage of the high-performance computational resources of the University.

Funds are available to support laboratory staff for short-term, early-phase work necessary to allow investigators to translate their ideas into computer code or models, and to get new biocomputational/health-related scientific projects up-and-running in the following four areas:

- Modeling Complex Biological Systems and Integration of Big Data: Vertical integration of multiple high-dimensional data sets from different levels of a complex biological system-incorporates genomics, microbiomics, proteomics, and organ-level data.
- Biomedical Imaging: Improved computational methods for analyzing images collected by a variety of technologies including MRI, ultrasound, and multiphoton microscopy. Includes development of analytical tools and computational methods for four-dimensional (3D over time) data.
- Molecular and Fluid Dynamics: Structural simulation and prediction of RNA, protein, and intermolecular interactions; and fluid dynamics related to medical diagnostics and biological processes (eg. microfluidic devices and blood or air flow).
- Biomedical Applications of Integrated Photonics: Integrated photonic structures for chem/bio sensing and diagnostics
- Biomedical Informatics: Personalized (-omic) medicine, research using Electronic Medical Records, improving health outcomes using data
- Data analysis and visualization: New tools and methods for visualizing and extracting meaning from complex data sets

Initial salary support will be permitted for periods up to 12 months, including academic semesters and summer terms, and all laboratory research staff including students, technicians, and fellows are eligible. Funds are limited and the size of the budget request will be considered as a review criterion. Offers of matching support will be viewed favorably, but are not required. Priority will be placed on those projects anticipating rapid funding and publications. It is anticipated that 1 or 2 awards will be made, with a start date of January 1, 2020.

Please send a **two-page** description of the project, including Specific Aims and how the support will accelerate your research. Please include, on a separate page, the proposed timeline detailing expected or actual milestones (in months) for the project and a budget. The intent is to support development of future NIH (or equivalent) grant applications or enhanced competitiveness of grant resubmissions. Hence, on a 4th page, please provide an explicit plan for submitting a future NIH (or equivalent) grant submission or resubmission.

Please include a brief biosketch or CV of the PI and the individual to be supported. The UR maintains connections with local area colleges that have strong programs in bioinformatics and relevant

expertise in computation and biology. If needed, we can assist in linking faculty who need computational support with research staff, and this should be indicated in the application.

Applications are due Friday, November 29, 2019

Send application material to:

Ben Miller

Benjamin_miller@urmc.rochester.edu