

Computational Biology

Biology, a complex branch of science, ranges from molecules within cells to ecosystems and includes enormous datasets, common place in post-genomic biology. The challenge of understanding these complex biological systems and their interrelationships requires computing power for data accumulation, manipulation and modeling. To reach national prominence in this area, biological science programs must integrate computational sciences and biology. The computational biology area builds on existing strengths in: supercomputing; graduate programs, especially the Ph.D. and M.S. degrees in computational science with emphases in biology, computer science, physics, or mathematics and in engineering; and existing research in computational biology.

The Mississippi Computational Biology Consortium (MCBC) is being established within the MCSN. The MCBC is an interdependent network that integrates High Performance Computing into biology.

Mississippi Computational Biology Consortium: The Mississippi Computational Biology Consortium Seed Research Grants program has been initiated to foster collaborative/interdisciplinary research initiatives in computational biology among universities in Mississippi. The grants are designed for faculty to develop projects and gather preliminary data to support applications in computational biology for private and public extramural funding and demonstrate that the principal investigator can accomplish the stated goals of the project. The selection of proposals by the Steering Committee is based on external peer review of proposals.

The Computational Biology website has been developed to facilitate communication among participants in the Mississippi Computational Biology Consortium and to promote research collaborations in the area of computational biology. A working draft can be found at <http://131.95.113.156/mcbc/>.