

## **College of Charleston**

### **Endowed Professorship in Bioinformatics**

Applications are invited for the Endowed Professorship in Bioinformatics at the College of Charleston. This is one of two endowed appointments to be made within the Center for Economic Excellence in Marine Genomics being developed in partnership between the College of Charleston and the Medical University of South Carolina. Rank for this position is open, but it is anticipated that the appointment will be made at the level of Associate Professor or Professor in the Department of Biology at the College (see [www.cofc.edu/~biology](http://www.cofc.edu/~biology)). This position also will include a joint appointment with the Medical University of South Carolina.

The successful applicant will have a demonstrated track record as a scholar in a collaborative and collegial setting, a strong commitment to teaching at all levels and to mentoring both graduate and undergraduate students, and, ideally, will also have significant experience with the mechanisms for enhancing research value through economic development (e.g., intellectual property, interaction with relevant industries, translational research activities, etc.) Experience as a research team leader or as a research program director is highly desirable.

The individual appointed will be expected to provide academic and program leadership to the Bioinformatics Group within the Marine Genomics Program in Charleston and to interact with the newly established Discovery Informatics program at the College of Charleston. The appointee will be expected to develop or enhance a strong extramurally funded research program in bioinformatics, especially as applied to marine genomics, mentor graduate students, teach courses in their area of expertise, and promote economic initiatives related to their research that could assist relevant stakeholders.

The Marine Genomics Program is an integrated, highly collaborative effort that brings together over 40 faculty, students and staff from the College of Charleston, the Medical University of South Carolina, the SC Department of Natural Resources, and the National Oceanic and Atmospheric Administration and the National Institute of Standards and Technology (both agencies of the U.S. Department of Commerce) on the Fort Johnson Marine campus, five miles from downtown Charleston. In addition to these Charleston-based agencies, the Marine Genomics program has a strong network of contacts and collaborations regionally, nationally and internationally. The Marine Genomics program is focused on applying the power of genomic approaches to increasing understanding of the interactions of marine organisms with their environment, including infectious diseases, and the relationship between the oceans and human health. Historic Charleston SC, with its location on the biologically very diverse southeast Atlantic marsh, is a natural and beautiful surrounding for articulating a globally driven effort to monitor, understand, protect and manage the marine environment.

The current Marine Genomics Program bioinformatics infrastructure (<http://marinegenomics.org>, see also BML Genomics 2005, 6:34) includes cDNA and RNA sequence information for over 20 species, working as a clearing-house maintaining over 60,000 sequence entries, and with both databases increasingly rapidly. In the past year, the bioinformatics research and development efforts have added a strong focus on expression data to assist in the design of microarrays for the in-house production facility and the subsequent acquisition and analysis of microarray hybridization data (see publications in the Marine Genomics Program URL). This is a unique opportunity for both fundamental and applied advances as the Marine Genomics Program and its worldwide network of associates are starting to use these microarrays beyond *in vitro* experimentation, and increasingly as tools for experimental field biology. The bioinformatic component of this initiative has been described as a biosensor calibration exercise (Comparative and Functional Genomics, 6(3):132-137(6)) which creates the opportunity for fundamental advances in systems biology by correlating the transcriptomic information with metabolic, regulatory and signaling information. A marine proteomics component is emerging that will reinforce the ability to move towards systemic approaches to marine biology.

The successful candidate will coordinate an existing team of programmers and computational biologists and will drive the conceptual and theoretical interpretation of the experimental results. The Bioinformatics effort is configured as an active member of the open source community and as such is driven towards publication of results, dissemination of open source software tools and articulation of the data repositories with public resources such as those maintained by NCBI and EMBL. Accordingly, the computing infrastructure is based on Linux blade servers and the tools use open community-supported software tools, languages and libraries.

**Additional information about this position can be obtained from Dr George Pothering, Dean School of Sciences and Mathematics, at [PotheringG@cofc.edu](mailto:PotheringG@cofc.edu) or the chair of the search committee, Dr. Allan Strand, at [stranda@cofc.edu](mailto:stranda@cofc.edu).**