**Bioinformatics Scientist 9**

**Statement of work for the Information Technology/Database Expert for the Human Brain Collection Core**

* Create and maintain a relational database system for use in a human subject research setting, typically requiring .NET experience and knowledge of SQL SERVER.
* Develop interfaces enabling end-users to input, retrieve and update data, typically consisting of laboratory, clinical interview and genetic data.
* Create summary statistics based on end-user needs. Develop novel statistical approaches to the analysis of molecular and genetic data.
* Disseminate information to the wider scientific community about scientific results, typically consisting of microarray gene expression and genotyping data.
* Develop security measures to protect personal information of human subjects, including user authentication and database activity logging procedures.
* Perform server administrator jobs, setting up server roles and features, managing user accounts, including authentication, user rights, managing file sharing and user access.
* Create privileges that allow both data sharing between users and restricted access for particular subsets of the data.
* Develop programs and procedures for inserting data from legacy formats such as spreadsheets into databases and vice versa.
* Coordinate the standardization of data management procedures across various subgroups within the organization.
* Recommend appropriate data architectures and use of appropriate database software packages based on organizational need.
* Conduct analyses of molecular and genetic data.
* Develop computer programs and scripts in the service of analysis of genotyping and gene expression data.
* Develop a human subject research database for the Human Brain Collection Core.
* Interact with scientists and clinicians to facilitate database development.
* Provide documentation of developed programs and train staff to use and expand the programs
* Provide advice on statistical questions arising during the analysis of microarray and other molecular biological data.

**Requirements**

* Bachelor’s degree or Ph. D. in mathematics, statistics, neuroscience, molecular biology, genetics or a related discipline.
* Minimum of four (4) years of experience in a related field.
* Experience working in UNIX/Linux environments.
* General programming experience (C/C++, Perl, or other relevant languages).
* Experience analyzing microarray data and designing microarray experiments.
* Understanding of advanced molecular biology/genetics analysis concepts.
* Experience with relational database programming.
* Experience in database design, implementation, installation, upgrade SQL analysis and application development.
* Excellent organization and time management skills.