

Bioinformatics Internship

Organization: The Ohio State University

Name of the laboratory/unit/group within the organization:

Molecular and Cellular Imaging Center (MCIC)
1680 Madison Avenue, Wooster, Ohio

Point of Contact:

Tea Meulia (meulia.1@osu.edu)

Description of the position:

The MCIC is a core laboratory at The Ohio State University OARDC (Ohio Agricultural Research and Development Center) located in Wooster. We are seeking to employ an intern for two quarters to set up Illumina GAI data analysis pipelines. The Illumina GAI is an ultra-high sequencer that can produce up to 100 million short (~ 50 – 75 bases-letters) reads (words) in a single run. While this new technology enables scientists to collect data relating to whole genomes, the bioinformatics tools for fast and timely processing and extraction of meaningful biological information from these data, still need to be developed and optimized. The project will center around two GAI applications: (1) de novo assembly of small bacterial genomes or transcripts with the goal of discovering new genes, and (2) SNP (single nucleotide polymorphisms) identification in various crop genomes for genetic marker breeding projects. These projects will require integration of third party software, which is mainly Linux based, newly developed algorithms and scripts, and graphic visualization systems, such as for example the Genome Browser, into a seamless, user friendly pipeline.

Familiar with C++, C# or Java, and Perl, Python languages, and with MySQL databases and web based graphic interfaces is required.

No knowledge of biology is required, but is a plus.

Period of internship:

One or two quarters.

Salary:

\$4,000 to \$7,000 per quarter.