Happenings at HCGS: Summer 2015

The HCGS faculty and staff are winding down from a summer full of workshops and conferences. As we welcome everyone back for a new semester, we hope the summer break has given everyone an opportunity to relax and recharge for the challenges of a new year. The HCGS welcomes new and returning students, and we wish you every success in the new academic year.

The Illumina sequencing submissions and tracking project

Over the past month the HCGS lab has made great strides toward having its services and Illumina-based DNA sequencing tracked by a Laboratory Information Management System (LIMS). This will be aided by a web-based service provided by IdeaElan. When fully functional, it will allow users to view and select HCGS Illumina sequencing services as well as submit and track their samples and data. Much of the past month was dedicated to developing and testing modules, and finally putting these modules together in service options, products, and pricing. Currently, we are identifying test sites for initial trials of the LIMS. Once in place the LIMS will not only help internal workflow and efficiencies, it will improve communications with users and also allow users to track the progress of their individual projects. This LIMS is also being implemented in the University Instrumentation Center.

Seacoast School of Technology Interns:

What has it meant to be an intern here at the Hubbard Center for Genome Studies?

Sarah McCallister (on the left)
Being an intern at UNH has given me a great opportunity to experience new techniques in the lab and learn so much more! Being an intern also has given me an idea of what I want to do when I grow up!

Courtney Fowler (on the right)
"Being an intern at the Hubbard Center for Genome Studies has helped me see the different parts of the scientific world, especially that of a research lab. Since I have been here I have learned how to set up an experiment that will provide the best results, and how to conduct the experiment in the right way. I’ve also learned how to document the progression of the experiment better so that it can be replicated with little to no confusion. For the project that we are running we learned the basics of bioinformatics and how to use a linux system to assemble all of the data that we have found. Everything I have learned here will help me in the future whether it be in school or out in the real world."
This year's NH-INBRE Annual Meeting was held at The Wentworth by The Sea. The HCGS is both the Genomics Core and the Bioinformatics Core for the state of New Hampshire INBRE grant. The iSURF program administered by NH_INBRE provides stipends for students to perform summer research, and these projects are carried out in the Chemistry, Biology, Psychology and Nursing Departments. Students who perform summer research projects present their work at the NH-INBRE Annual Meeting held every August.

These are the topics that our group presented

**HCGS/INBRE-iSURF-Students**
Louisa Normington, et al.: Protein Alignment for Functional Profiling Whole Metagenome Shotgun Data
Shane Kochvi et al.: Determining the reliability of the 16s ribosomal RNA sequences as a proxy for whole genome taxonomic characterization.

**HCGS Staff**
Jordan Ramsdell; W. Kelley Thomas, Feseha Abebe-Akele: Bioinformatics Core Facility at UNH: From Experimental Design to Analysis
Stephen Simpson, W. Kelley Thomas, Krystalynne Morris: Genomics Core Facility at UNH: High-Throughput Sequencing on the Illumina HiSeq 2500 Platform

If you would like to check them out, visit our website at: [http://hcgs.unh.edu/Bioinformatics/Bioinfo_posters.html](http://hcgs.unh.edu/Bioinformatics/Bioinfo_posters.html)

"You're going to see a proliferation of discoveries about the genetic contributions to diabetes and heart disease and high blood pressure and schizophrenia and multiple sclerosis and on down the list." - Francis Collins

**Publications**
If you have any publications resulting from data generated by the HCGS that you would like to have listed here, please send the citation to Cynthia.Wiggin@unh.edu.