



HCGS

Hubbard Center for Genome Studies

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Issue 3



NEWSLETTER

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Happenings at HCGS

Keene State College Workshop:

The HCGS will offer a Bioinformatics workshop, April 17th, at Keene State College, sponsored by, NH-INBRE. The title of the workshop is:

Basic Bioinformatics for Genomics and Beyond

The workshop begins with a brief overview of genomics including an explanation of fundamental techniques such as genome sequencing, variant detection and gene expression that are broadly applicable to many disciplines in biology from clinical genomics to biodiversity and ecosystem function.

This overview will be followed by a hands-on introduction to the practice of bioinformatics. Bioinformatic tools have advanced rapidly and the vast majority of tools are almost always implemented as open source software executed via the command line. This terse and unfamiliar method of using software is the single most important hurdle to developing skills in bioinformatics. However, overcoming this hurdle is empowering and a core skill for all biologists. This workshop will introduce participants to the necessary skills for implementing virtually any open source software including managing, viewing files and editing files.

"Your genome sequence will become a vital part of your medical record, thereby providing critical information about how to optimize your wellness" Leroy Hood

Staff Profiles:

Stephen Simpson graduated from the University of Southern Maine with a B.S. in Biology. He continued his studies at Plymouth State University in a Master's program in Biology under Professor Christopher Chabot. He is currently completing his thesis while working at HCGS, creating sequencing libraries and running the HiSeq2500.



Upcoming Events:

MCBS Graduate Student Seminars:

Tuesdays - 12:40 to 1:30 - Rudman G89

Thursdays - 12:40 to 1:30 - Rudman G89

Fridays - 1:10 to 2:00 - Rudman G89

April 2, 2015 (Thursday)

Matt Coyle- Convergent mutations in *Vibrio fischeri* strain H905 improve squid symbiosis

April 10, 2015 (Friday)

Behailu Aklilu -Genetic and evolutionary characterization of plant RPA1 gene family

April 21, 2015 (Tuesday)

Caren Ghedini - Effects of supplementing different levels of liquid molasses on animal production, milk fatty acids composition, milk enterolactone concentration and nutrient utilization in organic Jersey cows fed flaxseed meal.

April 23, 2015 (Thursday)

Lauren Kordonowy - Comparative Transcriptomics of *Peromyscus eremicus* (Cactus mouse)

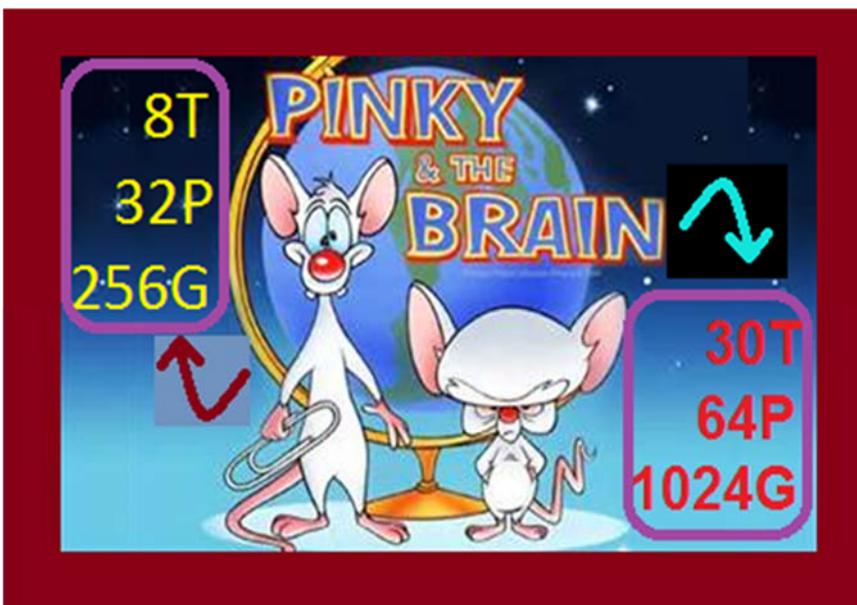
Pinky and the Brain

We have leveraged funds from COLSA, the Agricultural Experiment Station (USDA), NH-INBRE (NIH) and the HCGS to acquire a high-end computing machine to complement and bolster the genome-enabled biology research that has been the sole burden of Pinky (faculty4-641.unh.edu) at UNH.

The new machine, which has been dubbed The Brain, will be physically located in Morse Hall at the Research Computing Center (RCC) and will be administered jointly: with Patrick Messer's group at the RCC responsible for physical maintenance and Feseha from the HCGS han-

dling user account and software related administrative tasks.

The Brain will have 30Terabytes of storage, 256 processors and a whopping 1 Terabyte (1024 Gigabyte) of RAM! The Brain will run Ubuntu 14.04 as does Pinky for seamless communication and ease of data handling. The Brain will also be used to dock data from the HiSeq 2500 sequencing facility so, in spite of the huge 30TB space, users are encouraged to use it as a data cruncher not as a permanent data warehouse.



Publications

Please acknowledge our NSF MRI Grant in your publications: NSF grant DEB-1058458 . 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.

Gaspar J.M. and Thomas W.K. (2013). Assessing the consequences of denoising marker-based metagenomic data. PLoS One. 2013; 8(3): e60458. Published online 2013 March 25. doi:10.1371/journal.pone.0060458 .

