Bioinformatics Training at HBC

Next-generation sequencing (NGS) technologies have revolutionized the study of human health and disease, providing us with tools to rapidly sequence complete genomes and transcriptomes. Improvements in sequencing technologies and laboratory techniques have outpaced many labs’ abilities to analyze next-generation data, creating a need for bioinformatics services to aid in data analysis. The Harvard Chan Bioinformatics Core (HBC) provides a single point of contact for Harvard researchers in need of bioinformatics support, including the management, integration and contextual analysis of biological high-throughput data, with a focus on next-generation sequencing. Please send general enquiries about the core’s services and project requests to us via email.

A key component of the HBC’s mission is its training initiative, which aims to help researchers better understand our analytical methods and to apply these methods to their data themselves. Our hands-on NGS workshops focus on experimental design and current best practices for computational analyses. Understanding the tools available and best practices when designing your sequencing experiments is crucial to yielding meaningful results from your experimental data.

Our one-day Galaxy workshops introduce the basic concepts of NGS analysis using the easy point-and-click Galaxy interface. These include Introduction to RNA-Seq, Introduction to ChIP-Seq, and Introduction to Variant Calling with Exome-Seq courses. We also offer more in-depth courses to teach researchers to conduct a variety of sequencing analyses from the command line. The in-depth NGS Data Analysis Course covers topics including RNA-Seq, ChIP-Seq, exome-Seq, and variant calling. In addition to learning how to perform these analyses, participants will also gain hands-on experience with UNIX, R, version control, and high-performance computing environments.

The HBC training initiative is supported by the Harvard Medical School (HMS) Tools and Technology Committee, the Harvard NeuroDiscovery Center (HNDC), the Harvard Stem Cell Institute (HSCI), and Harvard Catalyst. This funding enables us to provide subsidized workshops to sponsor-affiliated researchers. Subsidized bioinformatics consulting services are open to a wider section of the Harvard community.

If you have questions about training, please contact us at: hbctraining@hsph.harvard.edu.

For our consulting services, please contact us at: bioinformatics@hsph.harvard.edu.

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Upcoming HBC Training Events

Please see updated course offerings at our core webpage: http://bioinformatics.sph.harvard.edu/training/.

*Please note that our workshops are restricted to the sponsor-affiliated researchers (TnT/HNDC, Catalyst, HSCI, etc.).