

April 13: Martin Morgan, Bioconductor for Integrative Cancer Genomic Analysis



SYNOPSIS:

Bioconductor is a widely-used collection of R packages for the statistical analysis and comprehension of high-throughput genomic data. Bioconductor has strengths in sequence (RNA-seq, ChIP-seq, called variants, ...) and microarray (expression, methylation, copy number, ...) analysis, as well as significant facilities for flow cytometry, proteomics, and many other omics domains. The breadth of available facilities, coupled with principles of interoperability and reproducibility, make Bioconductor an ideal platform for integrative approaches to cancer genomics. This presentation outlines technical aspects of recent and forthcoming facilities to enable integrative cancer genomic analysis in Bioconductor. We discuss our own work to enable routine integration of large-scale consortium (e.g., ENCODE, Ensembl), annotation into analysis work flows, development within Bioconductor of facilities to manage multiple-assay experiments, and approaches to scaling R's in-memory model to large scale data sets. The presentation concludes with a brief overview of integrative approaches contributed to Bioconductor by our international contributors.

[Session details...](#)

BIO:

Dr. Morgan earned his undergraduate and master degrees in Botany at the University of Toronto. Dr. Morgan's Ph.D., from the University of Chicago, involved the evolutionary consequences of frequency-dependent selection and of multilocus deleterious mutation.

Dr. Morgan spent 10 years as an Assistant and then Associate Professor at Washington State University, before joining the Fred Hutchinson Cancer Research Center in 2005. At the Hutch, Dr. Morgan worked on the Bioconductor project for the analysis and comprehension of high-throughput genomic data; he has led Bioconductor since 2008. Dr. Morgan recently moved to Roswell Park Cancer Institute in Buffalo, NY, where the Bioconductor project is now based.

SUMMARY:

Topic: Bioconductor for Integrative Cancer Genomic Analysis

Speaker: Martin Morgan, Ph.D.

Date: Wednesday, April 13, 2016

Time: 11 AM – 12 PM ET

You are invited to listen to Dr. Morgan's presentation in Room 2E908 in the NCI Shady Grove Building on Medical Center Drive or via WebEx.

Presentation: A screen cast of the presentation will be available for viewing after the event on the [NCI CBIIT Speaker Series YouTube Playlist](#) 

About the NCI CBIIT Speaker Series:

The National Cancer Institute (NCI) Center for Biomedical Informatics and Information Technology (CBIIT) Speaker Series is a bi-weekly knowledge-sharing forum featuring both internal and external speakers on topics of interest to the biomedical informatics and research communities. For additional information, including past speaker series presentations, visit the [CBIIT Speaker Series page](#).

Individuals with disabilities who need reasonable accommodation to participate in this program should contact the Office of Space and Facilities Management (OSFM) at 240-276-5900 or the Federal TTY Relay number 1-800-877-8339.