

Best Practices: Experimental Design, Sample Preparation, NGS Technologies

Monday, January 23, 2017

About BTEP

- **What is BTEP?**

- NCI → CCR → Office of Science and Technology Resources (OSTR) → Bioinformatics Training and Education Program (BTEP)

- **Mission**

- Centralized resource for education on all aspects of bioinformatics
- **B**ioinformatics **T**rained and **E**mpowered **P**rofessionals

- **How do we do achieve this?**

- Seminars
- Workshops (NGS Series from Feb-June)
- Webinars
- Collaboration with experts at other NIH ICs

- **Contact us – ncibtep@mail.nih.gov**

Agenda for Today

Bldg. 37 Room 6041

- 9:30 - 11:00 am
 - Overview of Next-Gen Sequencing Techniques (Kevin Shianna, Illumina)
- 11:00 - 11:15 am
 - Bldg 37 Sequencing Core (Core Staff)
- 11:15- 12:15 pm
 - CCR Sequencing Facility (Core Staff)
- 12:15 - 12:30 pm
 - Questions (Panel)

Bldg 10, FAES Classroom 4 (B1C205)

- 1:30 - 3:00 pm
 - Introduction to CCBR (Maggie Cam, CCR)
 - Next-Gen Data Analysis (CCBR staff)
- 3:00 - 3:45 pm
 - NCI Cloud Pilots (Sean Davis, CCR)
- 3:45 - 4:00 pm
 - CCR/OSTR Supported Software (Anand S. Merchant, CCR)

NIH NATIONAL CANCER INSTITUTE

Center for Cancer Research
BTEP
Bioinformatics Training & Education Program

NEXT-GENERATION SEQUENCING (NGS)
WORKSHOP SERIES

The Bioinformatics Training and Education Program (BTEP), Office of Science and Technology Resources (OSTR) is excited to announce a series of workshops focused on the analysis of Next-Generation Sequencing (NGS) data. The in-depth, comprehensive series includes lecture and hands-on components on the most popular and relevant topics for the CCR scientific community.

WINTER 2017 (JAN-MAR)	SPRING 2017 (APR-JUN)
January 23 Best Practices: Experimental Design, Sample Preparation, NGS Technologies	April 17-18 Stepping into the Regulome: ChIP-Seq/ENCODE Data Analysis <i>Probing DNA-Protein Interactions</i>
February 21-22 From the Beginning: Exome-Seq Data Analysis <i>Identifying Clinically Impactful Variants</i>	May 22-23 Making Sense of the Data: Visualization, Pathway and Enrichment Analysis <i>Visualizing the biology</i>
March 20-21 Comprehending the Message: RNA-Seq Data Analysis <i>Differential Expression and Beyond</i>	June 19-20 The Art and Science of Data Mining <i>Harvesting the Wealth of Public Data (TCGA, ICGC, etc.)</i>

For more information about the BTEP program in general and details of these workshops visit our website at:
<http://bioinformatics.cancer.gov/btep>

There is no charge for attending any of the workshops, but **registration is required**. Detailed agenda and registration link will be shared at least 2 weeks prior to the start of the workshop. For more information and questions, please send e-mail to **ncibtep@mail.nih.gov**.

U.S. Department of Health & Human Services | National Institutes of Health

Upcoming Events

FEBRUARY 2017

- Feb 14th (2-5 pm): Seminar on Nanostring Applications (OSTR)
- Feb 15th (12-3 pm): Workshop on Nanostring Data Analysis
- Feb 16th (1:30-2:30 pm): Webinar on CLC Biomedical Workbench
- Feb 21-22: Hands-on 2-day Workshop on Exome-Seq Data Analysis

Details will be posted on: <https://bioinformatics.cancer.gov/btep/agenda>

- **January 31st - Single Cell RNA-Seq Analysis**
 - Co-sponsored by OSTR, NIH Single Cell & Bioinformatics SIGs
 - **Speaker: Rahul Satija (New York Genome Center)**
 - **Seminar at 12 pm - Lipsett Auditorium (Bldg 10, Bethesda)**
 - Present **Seurat** - analysis package that has been used extensively for recent high-throughput single cell RNA-Seq platform datasets, such as Drop-Seq, 10X Genomics, etc., and seems to be the go-to analysis platform.
 - More at the following link: <http://satijalab.org/seurat/>

Scientific Software for CCR Researchers

<https://ostr.cancer.gov/btep/software>

List of Scientific Software

- Partek Genomics Suite
- iPathwayGuide
- Ingenuity Pathway Analysis
- GeneGo MetaCore and MetaRodent
- Genomatix Suite (Online, GGA, GeneGrid)
- Biodiscovery Nexus Software
- GeneSpring Expression
- Geneious Pro
- ChemNavigator

Accessing Scientific Software

<https://service.cancer.gov/selfservice/>

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Text

Category

- Accounts and Systems Access
- Hardware
- Network
- Non-Scientific Software
- Scientific Software
- Telecommunications

Sort by:

View as:

Agilent GeneSpring	BioDiscovery Nexus Copy Number	CLC Genomics Workbench
Elsevier Pathway Studio Enterprise	Endnote	FlowJo Cytometry
Geneious Pro	GenePix Pro 6	Genomatix Software

Important Websites to Bookmark

- <https://ostr.cancer.gov/bioinformatics> - OSTR
- <https://bioinformatics.cancer.gov/btep> - BTEP
- <https://service.cancer.gov/selfservice/> - NCI CBIIT

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The poster features the NIH logo and the text 'NATIONAL CANCER INSTITUTE' at the top. Below this is the 'Center for Cancer Research' logo and the 'BTEP Bioinformatics Training & Education Program' logo. The main title is 'NEXT-GENERATION SEQUENCING (NGS) WORKSHOP SERIES'. The text describes the program and lists workshops for Winter 2017 (Jan-Mar) and Spring 2017 (Apr-Jun). It includes dates, topics, and speakers for each workshop. At the bottom, it provides contact information and a registration link.

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