



PATRIC Workshop

New Pipelines and Tools for Analyzing Private Data in PATRIC

December 12-14, 2016

Argonne National Laboratory
Building 240, Room 1406/1407
Argonne, Illinois 60439

Monday, December 12, 2016

- 9:00am** **Register for a PATRIC Account**
Rebecca Wattam
- Overview (www.beta.patricbrc.org)
- 10:00am** **Break**
- 10:15am** **Comparative Genomics: Protein Families and Pathways**
Rebecca Wattam
- Selecting sets of genomes for a study
 - Comparing by region, genes, proteins
 - Comparing pathways
 - Visualizing with heatmap viewer and downloads
- 12:00pm** **Lunch**
- 1:00pm** **Assemble a Genome in PATRIC and Upload Data**
Jim Davis
- Uploading reads and read libraries
 - Selecting assembly methods for comparison
 - Queuing jobs and retrieving results
 - Analyzing assembly output and comparisons
- 2:00pm** **Break**



PATHOSYSTEMS RESOURCE INTEGRATION CENTER

2:15pm

Annotate a Genome in PATRIC Using RASTtk

Jim Davis

- Uploading or selecting contigs in workspace
- Selecting genome metadata and annotation options
- Queuing jobs and retrieving results
- Previewing an annotated genome

3:15pm

Comparative Genomics-revisited

Rebecca Wattam

- Creating a genome group with a private genome
- Examining private genomes along with public genomes
- Finding specific differences, downloading and saving results into private workspace

4:15pm

Question and Answer Session and Hands on Work

5:00pm

Adjourn

Tuesday, December 13, 2016

9:00am

Proteomic Comparison

Jim Davis

- Selecting genomes for a study
- Visualizing compared genomes
- Downloading and analyzing the results

9:45am

RNA-Seq Pipeline, Downloading Data into PATRIC and Differential Expression

Fangfang Xia

- Uploading RNA-seq data
- Selecting genomes and mapping
- Downloading and using data in PATRIC

10:45am

Break



- 11:00am** **SNP and MNP Variation service**
Fangfang Xia
- Uploading reads data
 - Selecting genomes and mapping
 - Downloading and using data in PATRIC
- 12:00pm** **Lunch**
- 1:00pm** **Comparative Transcriptomics: Exploring public expression data and private data in PATRIC**
Rebecca Wattam
- Exploring differential expression
 - Exploring gene expression in datasets available in PATRIC
 - Studying downstream analysis of RNA-Seq genes
 - Looking for data on antibiotic resistance genes
- 4:00pm** **Practice Question and Answer Session**
- 5:00pm** **Adjourn**

Wednesday, December 14, 2016

- 9:00am** **Analyze Your Private Data in PATRIC with the Help of PATRIC Team**
- Instruction one-on-one
- 12:00pm** **Workshop Concludes**