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.paticbrc.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
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*

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**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*