HOWARD HUGHES MEDICAL INSTITUTE

**SEA-PHAGES In Silico Workshop**

December 8-12, 2014 | HHMI Headquarters

|  |  |
| --- | --- |
| **Learning Objectives** | Participants will be able to:* Characterize and investigate mycobacteriophage genomes. This includes the details of gene calling evaluation, functional assignments, and preparing a final product of a submission file that meets QC requirements. This year, we plan to focus on further analyses and experimentation.
* Install and use the software for annotation/analyses of mycobacteriophages. The software includes DNA Master, Phamerator, and other web-based tools.
* Identify the basic concepts that underpin the bioinformatics of phage biology that is relevant to their students.
 |

|  |  |
| --- | --- |
| **Pre-****req** | Participants will bring a computer with all software installed and tested. See computer requirements and software installation information at [http://www.hhmi.org/seawiki/display/WIKINAV/Consed+and+Phamerator+Virtual+Machine+Installation](http://www.hhmi.org/seawiki/display/WIKINAV/Consed%2Band%2BPhamerator%2BVirtual%2BMachine%2BInstallation)  |

| **Monday | December 8** | ***Time*** | ***Location*** | ***Topic*** |
| --- | --- | --- | --- |
| 2:00-4:00p | *Conference Center* | **Registration** *(Guests may get lunch in the Dining Room between 11:30a-1:30p by showing their registration badge to the cashier)* |
| 4:00 | *Small Auditorium* | **Welcome: Via video from Graham Hatfull** |
| 4:30 | *Small Auditorium* | **Workshop Overview** |
| 5:30 | *Dining Room* | *Dinner* |
| 6:45 | *Small Auditorium* | **Genome Overview and Loading a Genome\*** |
| 7:30 | *Small Auditorium* | **BLASTing the Genome\*** |
|  | *Pilot* | **Social** |

| **Tuesday | December 9** | ***Time*** | ***Location*** | ***Topic*** |
| --- | --- | --- | --- |
| 7:15a | *Dining Room* | *Breakfast* |
| 8:00 | *Small Auditorium* | **Auto-Annotation & Gene Calling Guidelines\*** |
| 9:00 | *Small Auditorium* | **Add, Delete, and Modify a Gene\*** |
| 10:00 | *Outside Sm. Aud.* | *Break* |
| 10:15 | *Small Auditorium* | **Calling the Genes\*** |
| 11:00 | *Small Auditorium* | **Choose Start Tools and Considerations\*** |
| 12:30p | *Dining Room* | *Lunch* |
| 1:15 | *Small Auditorium* | **Informal Recap\*** |
| 2:00 | *D124&D125* | **Group Exercise: Annotation and Analysis of Genome** |
| 3:00 | *Great Hall* | *Break* |
| 3:15 | *D124&125* | **Group Exercise: Annotation and Analysis of Genome (continued)** |
| 5:30 | *Dining Room* | *Dinner* |
| 6:45 | *Main Auditorium* | **A Global Look at Genomes\*** |
| 7:00 | *D124&125* | **Group Exercise: Annotation and Analysis of Genome (continued)** |
|  | *Pilot* | **Social** |

| **Wednesday | December 10** | ***Time*** | ***Location*** | ***Topic*** |
| --- | --- | --- | --- |
| 7:15a | *Dining Room* | *Breakfast* |
| 8:00 | *Small Auditorium* | **Assigning Functions\*** |
| 9:00 | *D124&125* | **Group Exercise: Assigning Functions** |
| 10:15 | *Outside Sm. Aud.* | *Break* |
| 10:30 | *Small Auditorium**D124&125* | **Merge I\*****Group Exercise: Finding consensus in the merged data** |
| 12:30p | *Dining Room* | *Lunch* |
| 1:15 | *Small Auditorium**D124&125* | **Merge II\*****Group Exercise: Finding consensus in the merged data** |
| 3:00 | *Outside Sm. Aud.* | **File posted***| Break* |
| 3:15 | *Small Auditorium* | **Examining Merged Data\*** **Assignment: Construct a List of Discrepancies** |
| 5:30 | *Dining Room* | *Dinner*  |
| 6:45 | *Small Auditorium* | **Phamerator and Exercise\*** |
|  | *Pilot* | **Social** |

| **Thursday | December 11** | ***Time*** | ***Location*** | ***Topic*** |
| --- | --- | --- | --- |
| 7:15a | *Dining Room* | *Breakfast* |
| 8:00 | *Small Auditorium* | **Inside the Black Box: Assembling and Finishing\*** |
| 9:00 | *Small Auditorium* | **Resolving Discrepancies in the Merged Data: Several case studies\*** |
| 10:15 | *Great Hall* | *Break* |
| 10:30 | *D124&125* | **Group Exercise: Resolving Discrepancies** |
| 12:30p | *Dining Room* | *Lunch* |
| 1:15 | *Large Auditorium* | **Final Overview of the Genome using Comparative Genomics\*** |
| 2:00 | *D124&125* | **Group Exercise: Comparative Genomics** |
| 3:00 | *Outside Sm. Aud.* | *Break* |
| 3:15 | *Small Auditorium* | **Post Annotation Analyses & Experiments*\**** |
| 5:30 | *Dining Room* | *Dinner* |
| 6:45 | *Small Auditorium* | **Graham Hatfull – TBA** |
| 8:00 | *The Pilot* | **Informal discussions at the Pilot** |

| **Friday | December 12** | ***Time*** | ***Location*** | ***Topic*** |
| --- | --- | --- | --- |
| 7-8:00a | *Conference Center* | **Room Checkout** *(Participants may store their luggage in the Conference Center)* |
| 7:15 | *Dining Room* | *Breakfast* |
| 8:00 | *Small Auditorium* | **Ask Graham!\*** |
| 9:00 | *Small Auditorium* | **Panel: Examples of Successful In Silico Implementation\*** |
| 10:30 | *Outside Sm. Aud.* | *Break* |
| 10:45 | *Small Auditorium* | **Final file formatting requirements and submission for QC****Submit to GenBank** |
| 11:45 | *Small Auditorium* | **Closing Remarks and Announcements** |
| 12:00p | *Small Auditorium* | **Adjournment |** *Bagged Lunch (Pick up at Conference Center)* |

 \*Session will be streamed Eastern Standard Time