

Cluster Specific Annotation Tips (CSAT)

Purpose for all: To provide updated CSATs for reviewed clusters. These sessions will contain both process and product. “Process” to show how to approach a genome at both a ‘big picture’ and ‘detail’ level. “Product” is the actual tips entered into seaphages.org. This is more about process than product, though products will undoubtedly be of value.

Background & Rationale: CSATs are to inform annotators about features that they will not want to miss.

Everyone can contribute to CSATs: Because everyone can contribute, and your contribution will support the community and you!

- Cluster comparisons will facilitate your genome annotations process
- Cluster comparisons will help you identify note-worthy features when you write up a genome announcement (which we will do later)
- Cluster comparisons is an important step of writing up a comparative genomics paper, which we encourage any of you who have become good at writing genome announcements to consider working towards.

What is a Cluster Specific Annotation Tip? CSATs are provided for features that:

- Consistently present problems for annotators. Example: 2 capsid genes are present: one that codes for the hexamer subunit, another that codes for the pentamer subunit
- Are not typically found elsewhere. Example: PreQ0 pathway.
- Are not what you expected. Example: no tail assembly chaperones found or the slippage cannot be detected
- List appropriate papers that help to describe this cluster or specific genes in the cluster.
*Do not clutter these CSATs with canonically expected findings.

Instructions for Participants:

Listen carefully to the general overview and investigative “process” provided by a SMART member. Once in small groups, participants will investigate a particular cluster and identify the above-mentioned features as best that they can. Place special emphasis on papers that would be useful when annotating a phage in this cluster. Reflect and takes notes on how the facilitators approaches this work.

Instructions for Facilitators:

There are 4 CSAT groups at this meeting, for Mycobacterium phages, Microbacterium phages, Gordonia phages, and Arthrobacter phages. Each CSAT group has 1 – 2 SMART and Expedited Submitter (YOU), who will serve as facilitators.

Please provide an overview of the strategies for performing CSAT, then divide the group according to cluster preference. When complete, enter any cluster specific tips that you deem appropriate into the Cluster Specific Annotation Tips forums. Please make this a SMART member task.