Burger Annotation Cover Sheet

Programmed translational frameshift

Burger has a programmed translational frameshift involving features 22 and 23. We identified the frameshift at bp15442.

Notable features

Feature 33 in the final annotation (forward, start bp26710) is a forward gene surrounded by reverse genes. We are relatively confident of this annotation because a similar gene arrangement is found in other A4 genomes.

Deleted Features

We chose to delete the following (features numbers aa# indicate that feature was marked in the auto annotation but was not kept in the final annotation).

* Feature aa33 (reverse, start bp27008), because of overlap with feature 34 (forward, start bp26710). Feature 34 (feature 33 in final version) was better supported by annotation data and Phamerator maps of related phages.
* Features aa36 (start bp27376) and aa37 (start bp27725), because of overlaps with nearby features with better support.
* Feature aa89 (start bp 51038), because it was not well supported by annotation data or phamerator maps of related phages.

Functional Assignments

Functional assignments were largely made from local BLAST matches.

Gaps

We left gaps between features based on an absence of coding potential in those areas (referencing a GeneMark coding potential map generated against a *Mycobacterium smegmatis* model). These gaps are our best estimates of real gaps, but the Burger genome was not available in Phamerator while we were annotating, so our estimates are based solely on the coding potential map and not on Phamerator maps or other resources.