

Small Group Exercise #4:

MITOS – Animal mitochondrial gene annotation and annotation file formats

For this exercise, we will use the web based software package MITOS ([Bernt et al. 2013](#)).

Go to `/home/shared/biobootcamp/data/Lamellibrachia_luymesi_remapping_data/` and copy `Lamellibrachia_luymesi_potential_complete_mito_genome.fasta` to your `/home` directory on the ASC.

Transfer these files to the Desktop of your personal laptop using `scp` or an SCP transfer agent like Cyberduck.

Visit the MITOS webpage at <http://mitos.bioinf.uni-leipzig.de/>. This server is designed to aid the annotation of animal mitochondrial genomes. Consult the tutorial and then submit the potential *Lamellibrachia luymesi* mtDNA genome that you just transferred to your computer. This job will take a couple of hours and you will receive an email confirmation when it is completed (so be sure to supply a valid email address and check that account starting at the appropriate time).

When MITOS sends the email that the results are ready, open the supplied link and scan over the resultant files. How is the information conveyed? There is both graphical and tabular output. Please save all of the supplied files to an appropriately named directory on the Desktop of your personal laptop. Of the files, please be sure to download the `*.bed` file which you will need in Exercise #6.

In the case that you don't receive any results, a copy of the MITOS output has been placed in the folder: `/home/shared/biobootcamp/data/Lamellibrachia_luymesi_MITOS_data`. You will need a copy of `Lamellibrachia_luymesi_MITOS_features.bed` for a later exercise.