

Biodiverse genome assemblies



How do we explain the sporadic presence of orthologs in a clade?



Assumption: All detected genes are encoded in the genome of the respective species

Analysis

In this module, we will analyse the orthologs of the GH28 glycosyl hydrolase in the two invertebrates *Bradysia coprophila* and *Spodoptera litura* in more detail.

Task 1: *Spodoptera litura*

- Find the NCBI accession ID of the GH28_QRW23661.1 in *Spodoptera litura* using the [interactive webviewer](#)

XP_022836218.1

- Perform a [BLASTp search](#) against the “Non-redundant protein sequences (nr)” database
- Take a look at the list of best hits. Which taxonomic clade do they represent?

Task 2: *Bradysia coprophila*

- Repeat the analysis with the GH28_QRW23661.1 ortholog in *Bradysia coprophila*

https://www.ncbi.nlm.nih.gov/protein/XP_037031340.1

Summary and Discussion

- Note down your observation and discuss with the group

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Last update: **2025/05/16 13:55**

