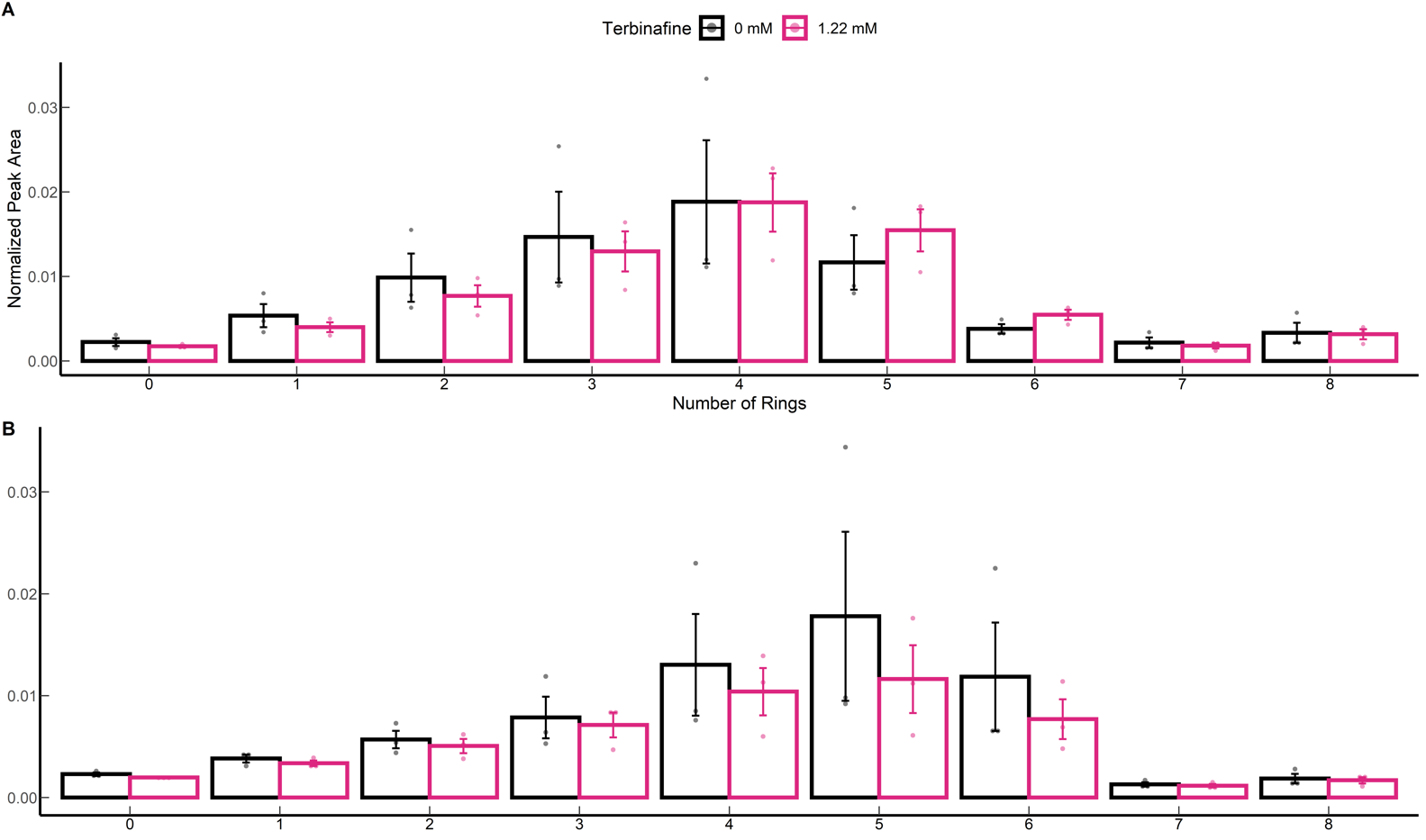
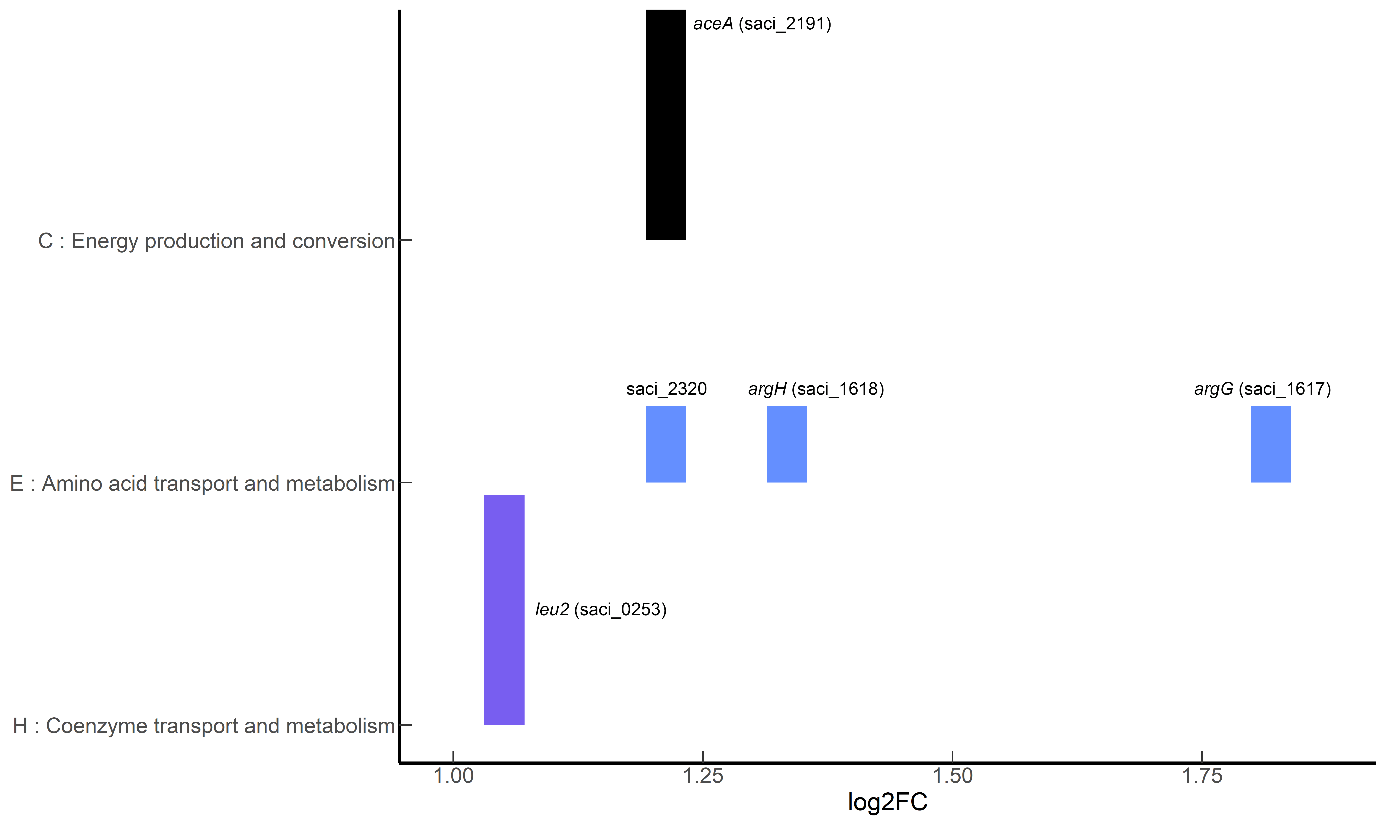
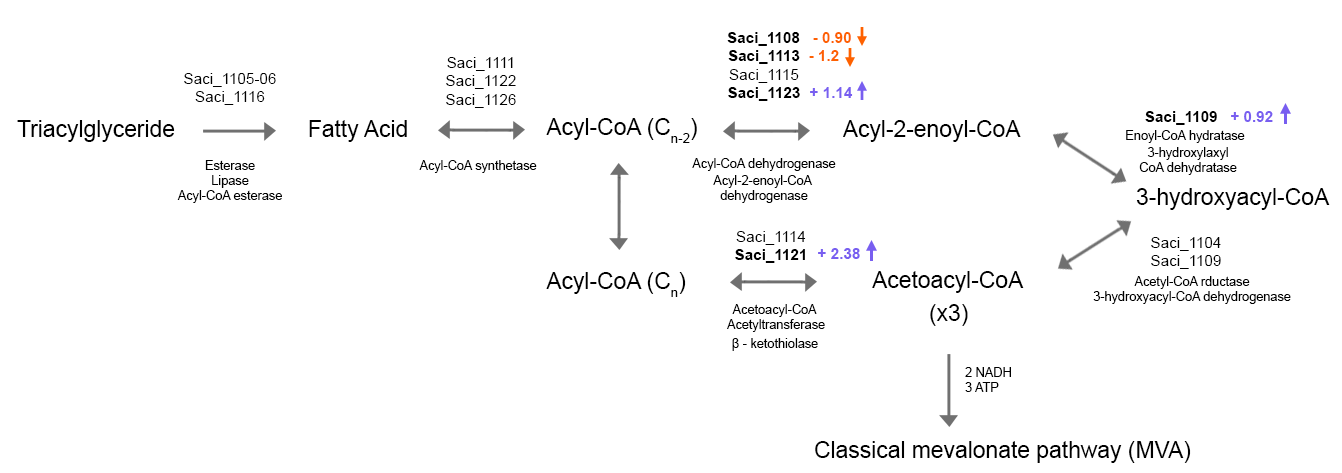
**Supplementary Materials**



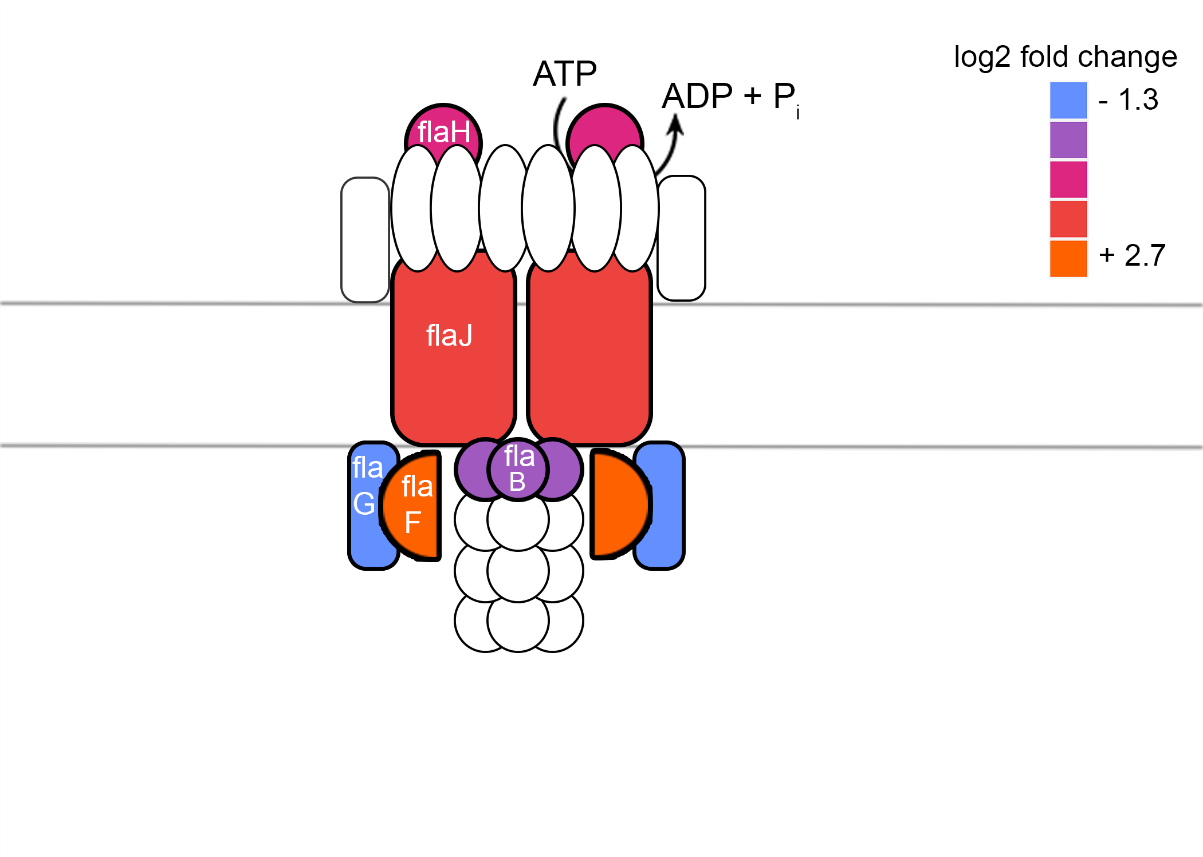
**S1**. **Effect of terbinafine on GDGT cyclization in *S. acidocaldarius* :** Normalized peak areas for GDGT 0-8 rings in (A) Exponential phase and (B) stationary phases of growth. Error bars represent standard error of the mean. Dots represent biological replicates.



**S2**. **arCOG mapping of significantly affected genes after growth with 0.31 mM terbinafine (p < 0.05):** Density plot illustrates the distribution of log2 fold changes for the five genes affected by terbinafine after three hours of growth



**S3**. **Effect of terbinafine on the proposed fatty acid metabolism cluster in *S.acidocaldarius* (p <0.05) :** The proposed catabolic fatty acid metabolism/lipase gene cluster in *S.acidocaldarius* is based on genomic annotations and predictions. Violet/orange arrows indicate upregulated and downregulated genes respectively, numbers correspond to log2 fold change values. Unaffected genes are colored grey. This scheme has been adapted from (Wang et al., 2019).



**S4 . Effect of terbinafine on the archaellum (p < 0.05)**: Colors represent log2fold change values in the diagram. No color signifies unaltered transcript levels.