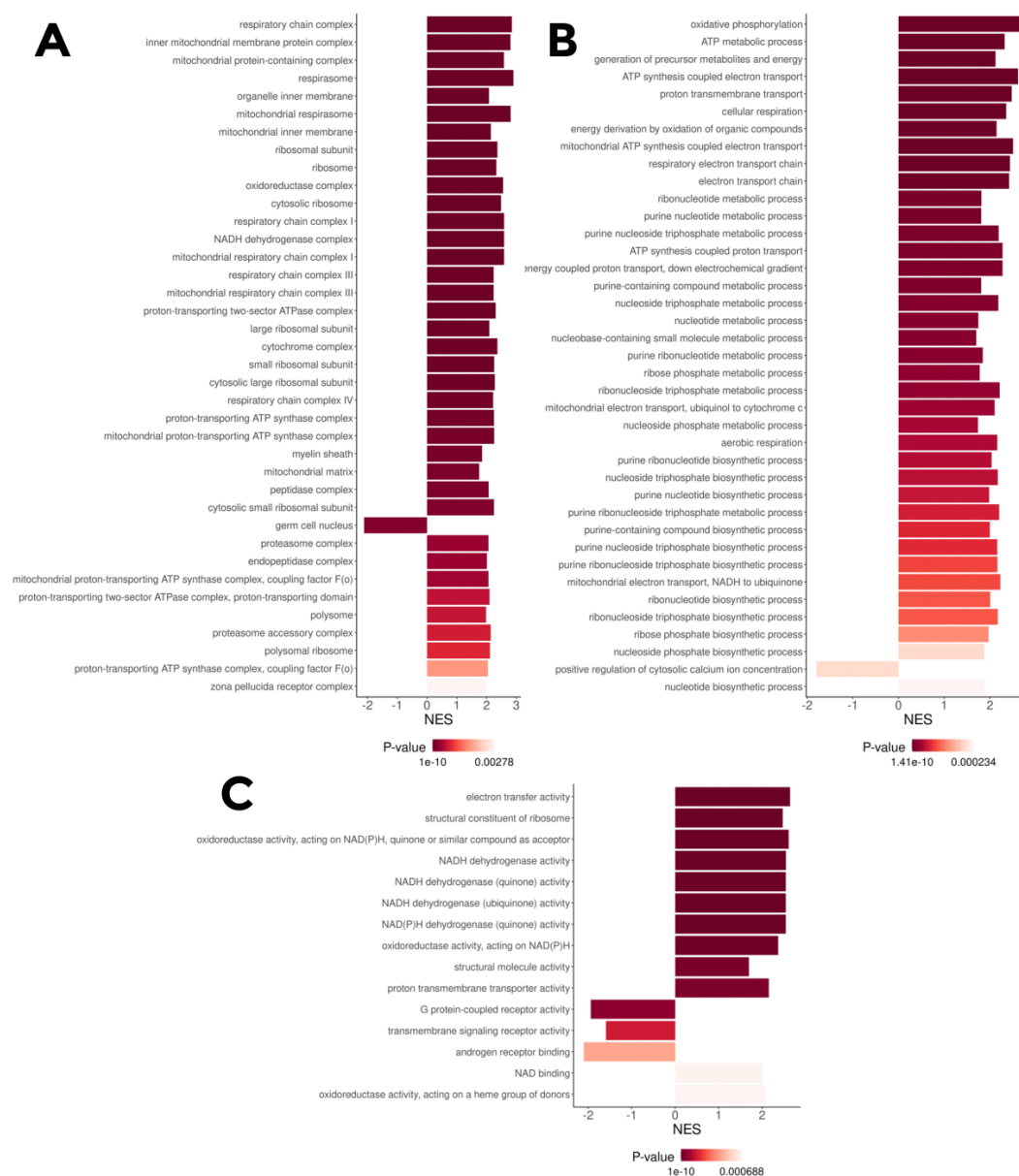
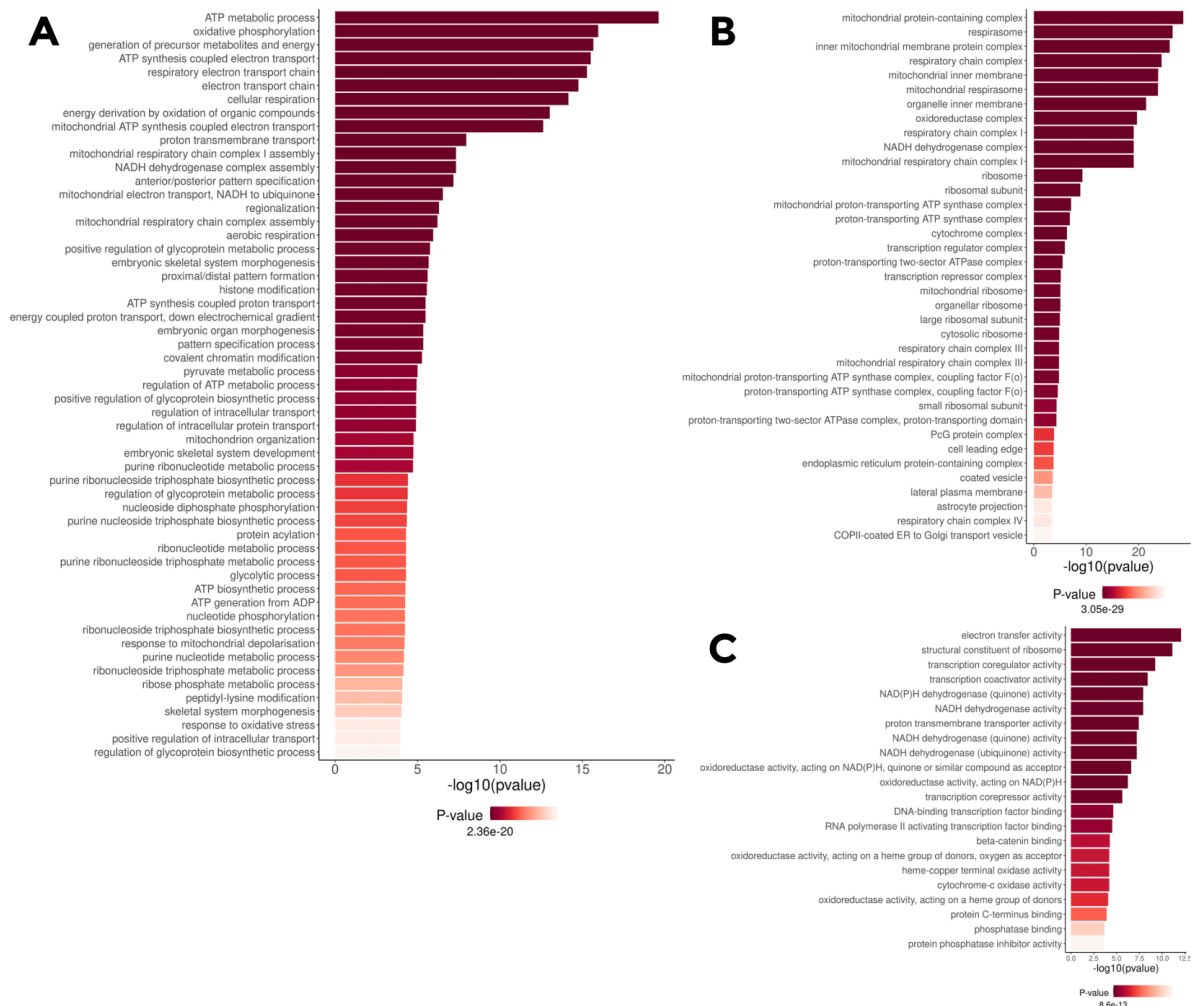




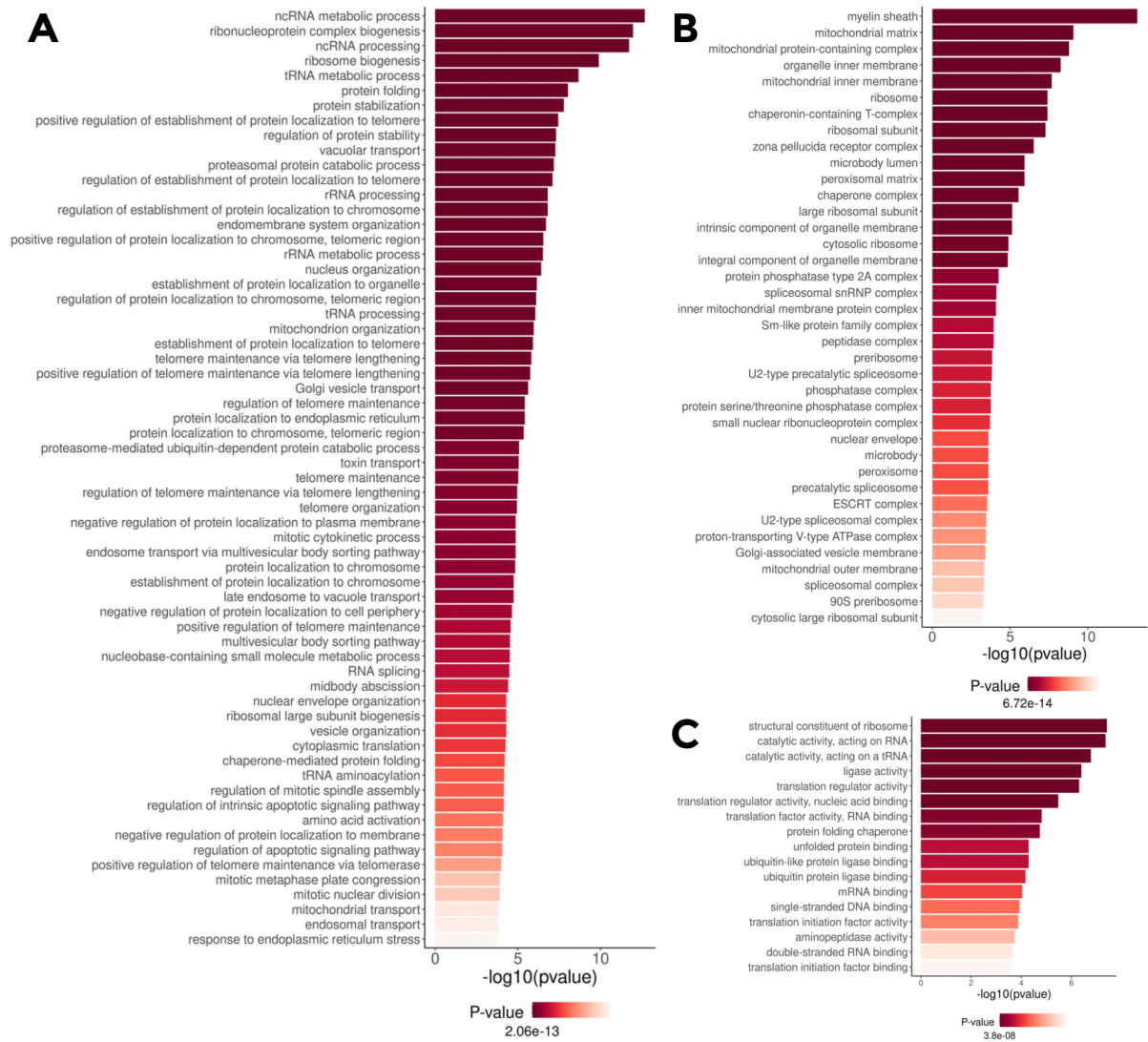
## Supplementary Material



**Figure S1.** GO terms for which the IRR knockout differential genes under bicarbonate treatment are enriched (fgsea on logFC divided by standard deviation, adjusted  $p < 0.05$ ), NES - normalized enrichment scores (positive - upregulated in knockout, negative - downregulated). A - GO cellular components; B - GO biological process; C - GO molecular function.



**Figure S2.** GO terms for which the DE genes from the turquoise WGCNA module which are highly correlated with the module eigengene are enriched (over-representation test, adjusted  $p < 0.01$ ).



**Figure S3.** GO terms for which the DE genes from the blue WGCNA module which are highly correlated with the module eigengene are enriched (over-representation test, adjusted  $p < 0.01$ ).