

# **Role of the mitochondrial pyruvate carrier in the occurrence of metabolic inflexibility in *Drosophila melanogaster* exposed to dietary sucrose.**

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## **Supplementary material**

**Table S1. Analyses of variances showing F values for mitochondrial respiration rates and mitochondrial ratios measured in *Drosophila melanogaster* WT and MPC1<sup>def</sup> exposed to the experimental diets (SD, MSD or HSD).**

| <b>Mitochondrial respiration rates</b> | <b>DF</b> | <b>Genotype<br/>(df=1)</b> | <b>Diet<br/>(df=2)</b> | <b>Genotype*Diet<br/>(df=2)</b> |
|----------------------------------------|-----------|----------------------------|------------------------|---------------------------------|
| CI <sub>pyr</sub> -LEAK                | 29        | 2.22                       | 1.13                   | 10.46***                        |
| CI <sub>pyr</sub> -OXPHOS              | 29        | 5.22*                      | 11.93***               | 15.69***                        |
| CI <sub>pyr+mal</sub> -OXPHOS          | 30        | 5.34*                      | 9.83***                | 16.19***                        |
| CI+proDH-OXPHOS                        | 30        | 0.53                       | 7.88**                 | 13.74***                        |
| CI+proDH+CII-OXPHOS                    | 30        | 0.74                       | 8.18**                 | 12.82***                        |
| CI+ProDH+CII+mG3P-OXPHOS               | 30        | 1.49                       | 5.51**                 | 16.52***                        |
| CI+ProDH+CII+mG3P-ETS                  | 30        | 4.82*                      | 2.87                   | 15.74***                        |
| <b>Mitochondrial ratios</b>            |           |                            |                        |                                 |
| P <sub>pyr</sub> /L <sub>pyr</sub>     | 29        | 10.52**                    | 8.06**                 | 8.44**                          |
| E <sub>max</sub> /P <sub>max</sub>     | 30        | 3.94                       | 1.65                   | 0.24                            |
| Malate contribution                    | 29        | 13.29*                     | 8.29**                 | 10.68***                        |
| Proline contribution                   | 30        | 18.93***                   | 4.83*                  | 3.54*                           |
| Succinate contribution                 | 30        | 1.98                       | 0.25                   | 2.66                            |
| G3P contribution                       | 30        | 0.97                       | 2.64                   | 0.35                            |

\*P<0.05, \*\*P<0.01, \*\*\*P<0.001; DF : denominator degree of freedom; df : numerator degree of freedom.