

**Figure S3. Steady-state flux through the FA  $\beta$ -oxidation (A and C), CoASH concentration (B and D) and concentrations of the CoA esters (E-J) from the various model calculations.**

**Panel A-D:** Steady-state flux through the FA  $\beta$ -oxidation (A and C) and CoASH concentration (B and D) at various concentrations of the substrate palmitoyl CoA. In the standard model the malonyl CoA concentration was 0  $\mu\text{M}$  and the mitochondrial NAD/NADH ratio was 15.

**Panel E-J:** For each CoA ester the concentrations of the specific CoA esters with different chain length were summed up. Panel E corresponds to Figure 3A and B (blue lines) in the main text; Panel F corresponds to Figure 3A and B (red lines) in the main text; Panel G corresponds to Figure 3A and B (green lines) in the main text; Panel H corresponds to Figure 3C (short-dashed lines) in the main text and Figure S3A and B (long-dashed lines); Panel I corresponds to Figure S3A and B (short-dashed lines); Panel J corresponds to Figure 3C (long-dashed lines) in the main text and Figure S3C and D (short-dashed lines).

