



**Figure 3,** predictions according to the initial model (red lines; the same result as the red line in Figure 1 in the main text) and reparameterized model (blue lines) compared to experimental data (grey diamonds) sampling the  $\triangle G_p - J_p(A)$  and  $ADP - J_p$  relation (**B**). The reparameterized model was obtained by including both the  $\triangle G_p - J_p$  and  $ADP - J_p$  data in the parameter estimation procedure. The transduction function of the reparameterized model became very similar to the initial model and was rejected because it failed to describe rest and low exercise conditions.