

Supplemental Material:

Autonomous circadian oscillators intrinsic to cell membranes

Mauro A. Forlino,^{1,*} Oreste Piro,² Monika Stengl,³ and Martin E. Garcia¹

¹*Theoretical Physics, FB10, University of Kassel, Kassel, Germany*

²*Departament de Física, Universitat de les Illes Balears, Palma de Mallorca, Spain*

³*Animal Physiology, FB10, University of Kassel, Kassel, Germany*

* mauro.forlino@uni-kassel.de

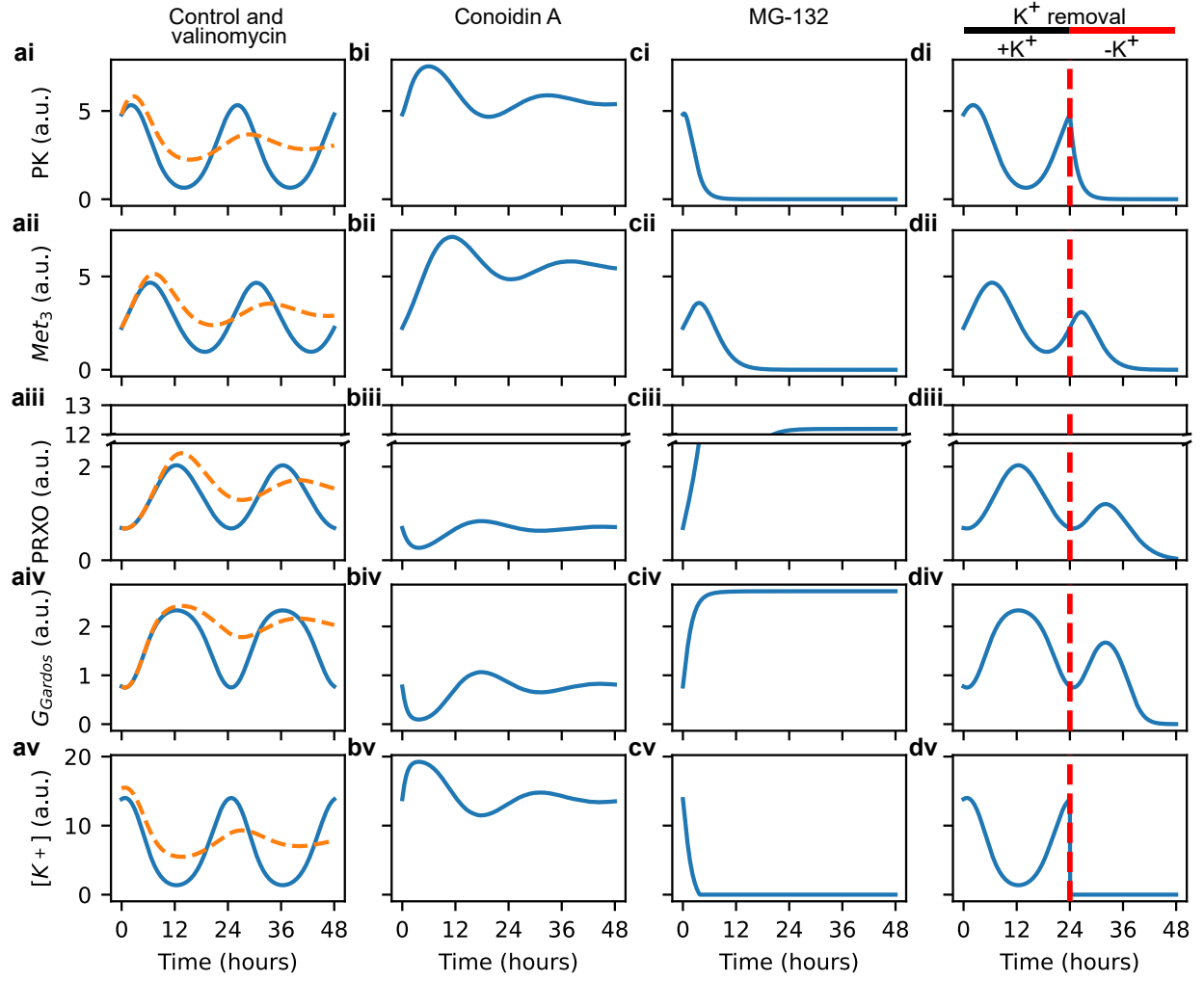


FIG. S1. **Column a.** Time series for two different membrane potentials. Solid blue and dashed orange curves correspond to -10 mV and -30 mV, respectively, showing the dependence of intrinsic oscillator period on electrochemical driving force, representing control conditions and valinomycin treatment respectively. **Column b.** Time series for PRX- $\text{SO}_{2/3}$ production rate reduced to 25% of its original value, inhibition of PRX oxidation with Conoidin A. **Column c.** Time series for PRX- $\text{SO}_{2/3}$ degradation rate $\gamma_{PRXO} = 0$, representing proteasomal inhibition after treatment with MG-132. **Column d.** Time series representing a transfer to a medium without K^+ at $t = 24$ hours. **Rows i to v.** Time series for active pyruvate kinase, the third glycolytic intermediate (Met_3), hyperoxidized peroxiredoxin, Gardos conductance and K^+ concentration respectively.