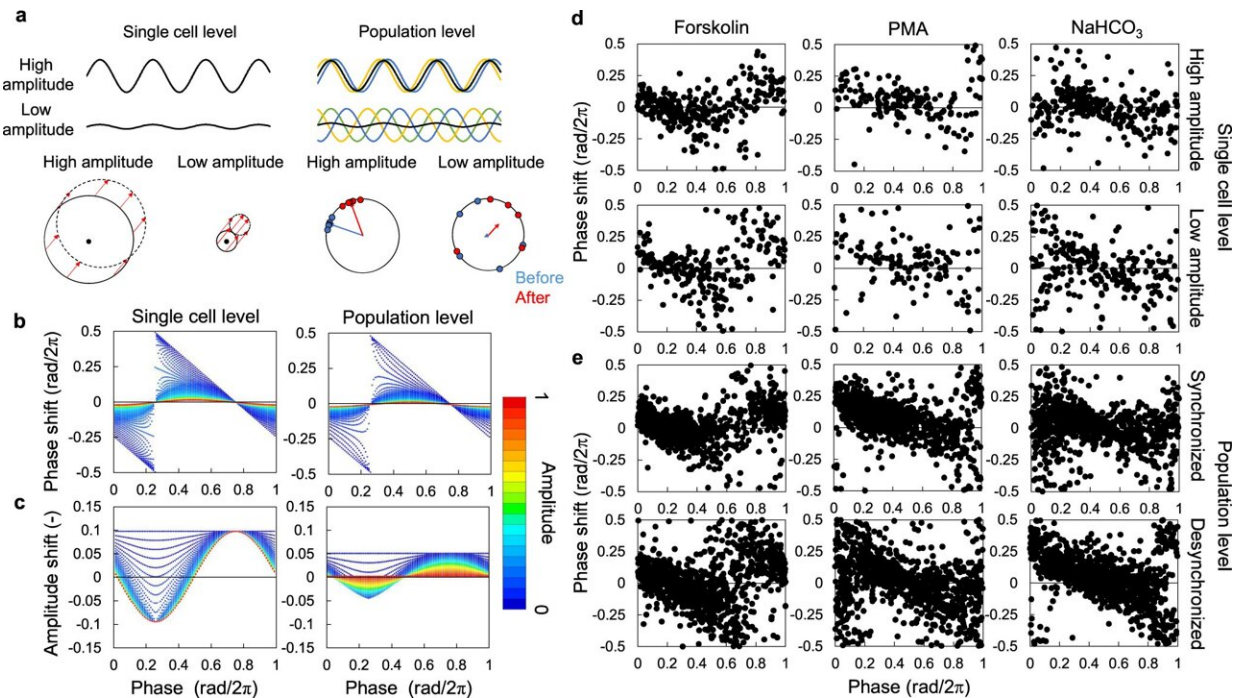


A simplified method to assess the synchronization properties of the body clock

June 5 2023



Amplitude dependency of PRCs at the cellular and population levels. **a** Models of circadian rhythm and phase response at the cellular and population levels. **b** Mathematical models for PRC at the single cell and population levels. **c** Mathematical models for amplitude response curve at the single cell and population levels. PRCs for forskolin, PMA, and NaHCO_3 at the single cell (**d**) and population levels (**e**). At the population level, one sample contains five cells, which are randomly selected. Concentrations of forskolin, PMA, and NaHCO_3 were $0.75 \mu\text{M}$, $2 \mu\text{M}$, and 77.75 mM for single-cell PRCs and $0.5 \mu\text{M}$, $1 \mu\text{M}$ and 66.5 mM for population PRCs, respectively. In single-cellular PRCs, an amplitude of $A > 0.6$ was defined as high amplitude, while $A < 0.8$ was defined as synchronized, while R

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