**Cellular Oscillator Frequency Spectrum**
**Eight Classes Spanning 19 Orders of Magnitude**

R (Circadian) — *Bioluminescence rhythms*

Ca (Calcium) — *Calcium imaging*

G (Genetic) — *Single-cell RNA-seq*

A (ATP) — *Metabolic flux analysis*

M (Membrane) — *Action potential recordings*

C (Channel) — *Patch clamp electrophysiology*

E (Enzyme) — *Michaelis-Menten kinetics*

P (Protein) — *H-bond vibration spectroscopy*

$\log_{10}(\omega/\text{Hz})$

24 hr — 1 Hz — 1 MHz — 1 THz