

## Supplementary Information

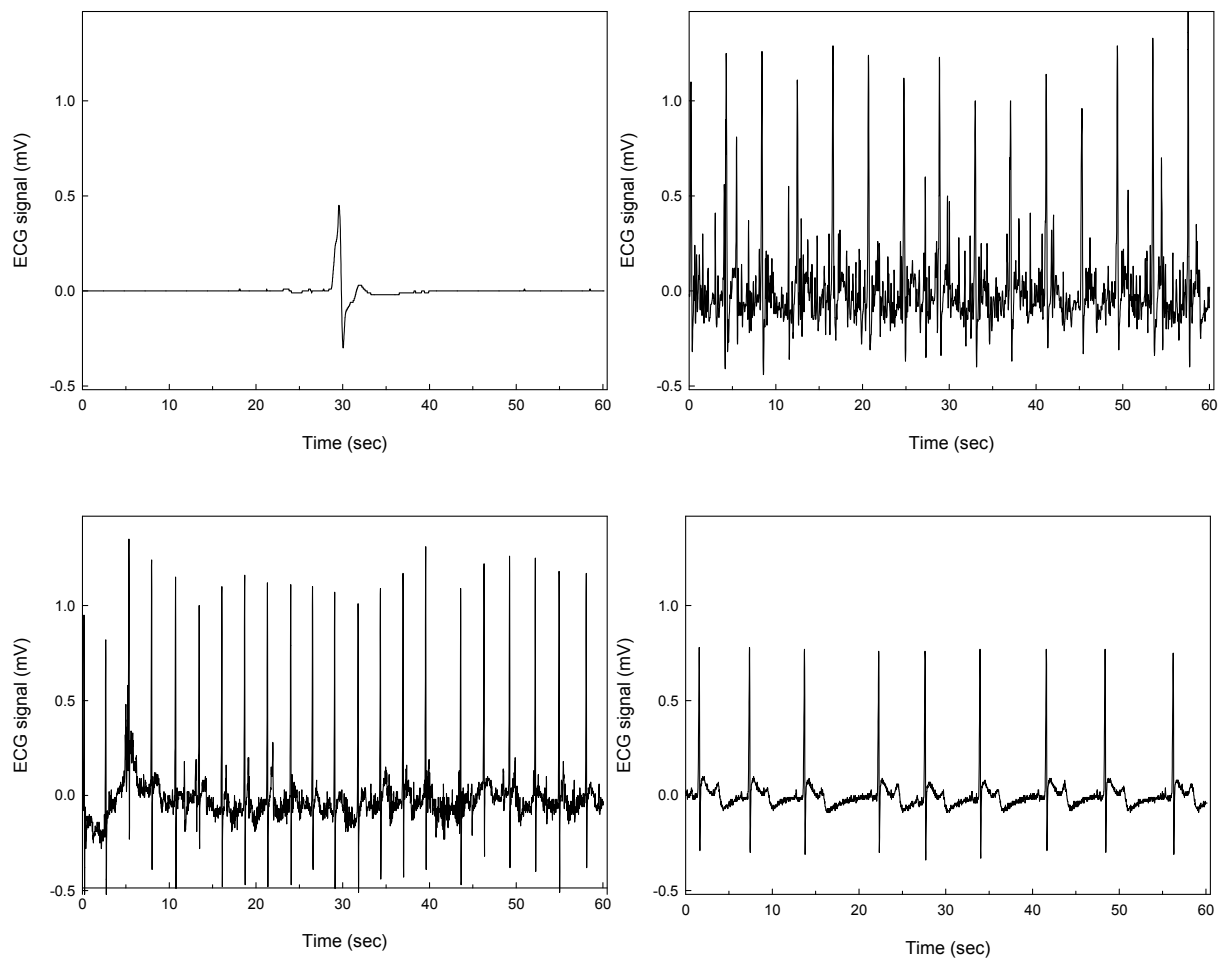


Fig. S1. Examples of ECG traces sampled from the same animal within a single torpor cycle. Signals were taken at the mid-point of the torpor phase (A,  $T_b = 5^\circ\text{C}$ ), early during arousal (B,  $T_b = 7^\circ\text{C}$ ), at the mid-point of IBE (C,  $T_b = 36.5^\circ\text{C}$ ) and during entrance ( $T_b = 30^\circ\text{C}$ ).

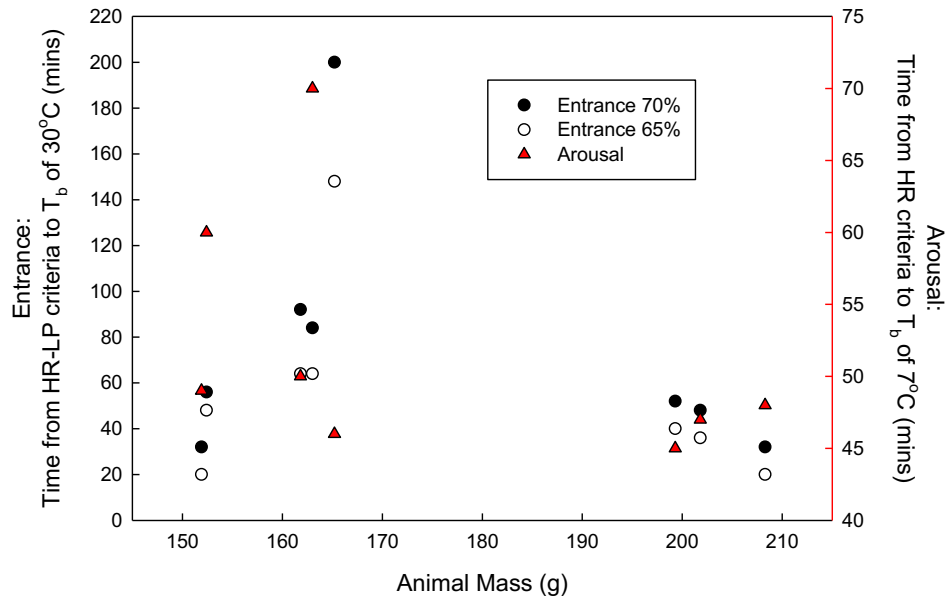


Fig. S2. No relationship between animal mass and the time between heart rate (HR) and body temperature ( $T_b$ ) criteria identifying entrance into, or arousal from a torpor. For entrance (left axis) we calculated the time between low-pass filtered HR (HR-LP) meeting the 70% (filled circles) and 65% (open circles) and  $T_b$  falling to 30°C. For arousal (red triangles, right axis) we calculated the time between raw HR meeting our criteria and  $T_b$  rising to 7°C. There was no significant correlation with body mass ( $P > 0.05$ ).

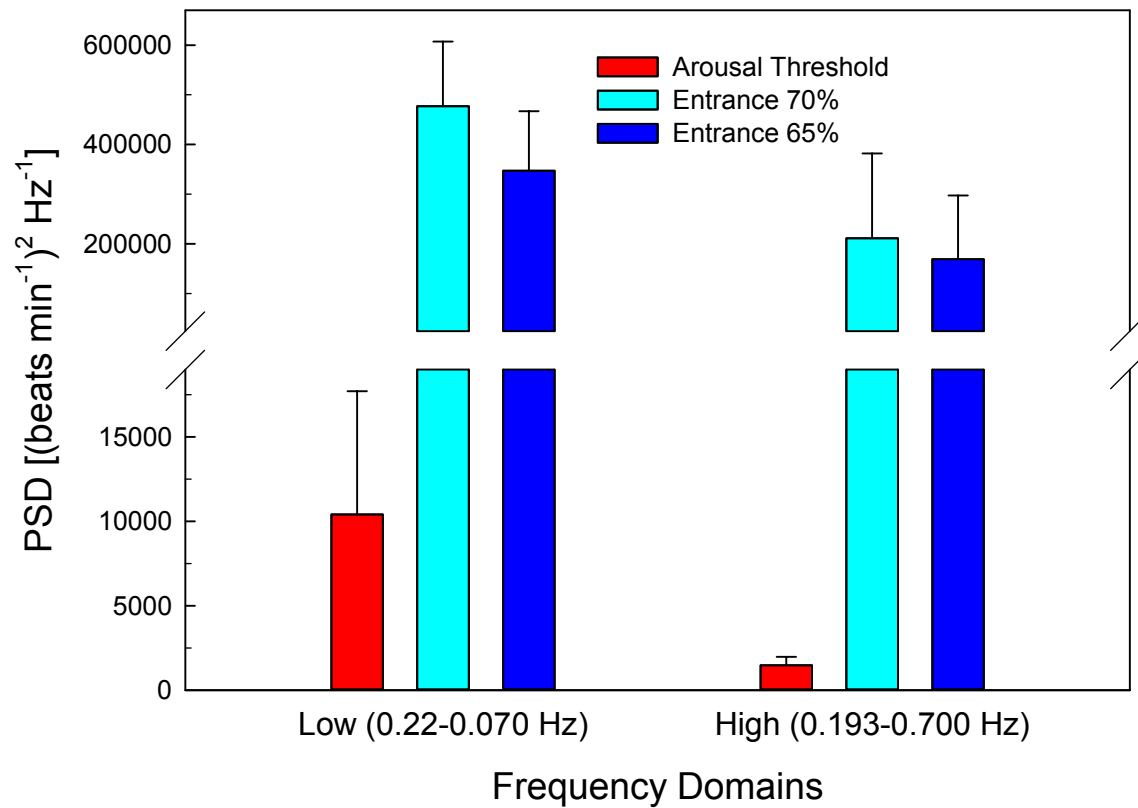


Fig. S3. Spectral analysis of heart rate variability during different stages of torpor bouts. Power spectral density (PSD) for frequency ranges representing sympathetic (0.22-0.070 Hz) and parasympathetic (0.193-0.700 Hz) regulation. Significant differences ( $P \leq 0.05$ , two-way ANOVA) between torpor bout stages within frequency domains are indicated by asterisk.