



Supplementary Figure 5. Effects of IL-1 β and multiple low dose streptozotocin (MLD-STZ) treatment on circadian regulation of glucose-stimulated insulin secretion (GSIS) in isolated mouse islets. (A) Diagrammatic representation of the study design indicating that isolated islets from control, IL-1 β (24 hr treatment in vitro at 2 ng/ml) and MLD-STZ (i.p. STZ; 40 mg/kg/day for 5 consecutive days) treated mice were synchronized with forskolin (10 μ M) and glucose-stimulated insulin secretion (GSIS) assessed at 12 and 24 hours post synchronization representative of the peak and trough of islet GSIS in vitro post forskolin synchronization (Perelis et al, 2015). (B) GSIS index expressed as insulin release (as % insulin content) during 30 min incubations at hyperglycemic 16 mM glucose over basal 4 mM glucose concentrations assessed at 12 and 24 hours post forskolin synchronization in Control (gray), IL-1 β (brown) and MLD-STZ (red) mouse islets. Data are expressed as mean \pm SEM and an average of 3 independent experiments (from 3-4 mice per group). * P < .05 vs. 24 h post synchronization.

