

Description of Additional Supplementary Files

File name: **Supplementary Data 1**

Description: Rhythmicity and amplitude analysis of zOTUs using JTK_cycle, as well as the average abundance and phase of each zOTU.

File name: **Supplementary Data 2**

Description: Percentage of rhythmic/arrhythmic zOTUs that belongs to Firmicutes, Bacteroidetes or other phyla.

File name: **Supplementary Data 3**

Description: Compare rhythm analysis of absolute abundance of zOTUs.

File name: **Supplementary Data 4**

Description: comparison of rhythmic/ arrhythmic zOTUs from Heddes et al. LD cohort in comparison to Thaiss et al. 2014 data.

File name: **Supplementary Data 5**

Description: p-value of amplitude, baseline and phase shift comparisons of all 24-hour circadian profiles provided in the figures.