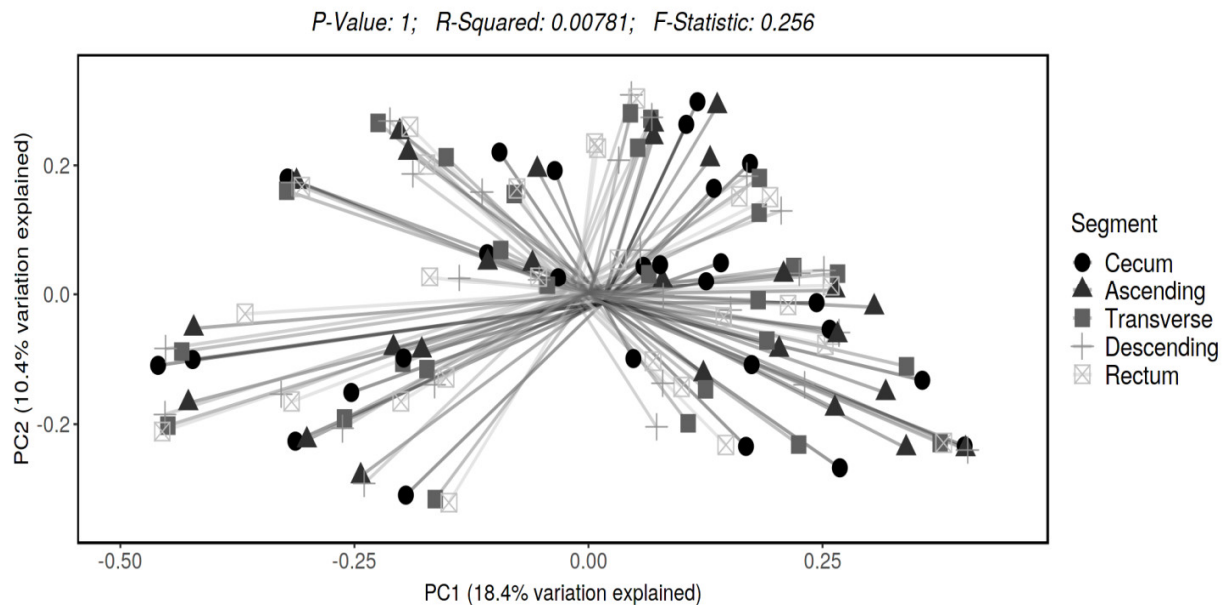


Supplementary Materials: The following are available online at www.mdpi.com/xxx/s1,



Supplemental Figure 1. The community composition of colonic mucosa-associated microbiota did not differ by colon segments.

Supplemental Table 1. Relative abundance (%) of the bacterial genera in short sleepers and normal sleepers in the OTU-based analysis

| Genus (phylum-family) | Short sleepers | Normal sleepers | <i>q</i> values |
|--|----------------|-----------------|-----------------|
| Lower in short sleepers | | | |
| Relative abundance (%) | | | |
| Alistipes(Bacteroidetes-Rikenellaceae) | 0.57 | 1.54 | 0.019 |
| Lachnoclostridium (Firmicutes-Lachnospiraceae) | 1.06 | 2.01 | 0.005 |
| Sutterella (Proteobacteria-Sutterellaceae) | 0.38 | 1.25 | 0.00056 |
| Bilophila (Proteobacteria-Desulfovibrionaceae) | 0.27 | 0.63 | 0.0026 |
| Paraprevotella (Bacteroidetes-Prevotellaceae) | 0.06 | 0.28 | 0.017 |
| Phascolarctobacterium(Firmicutes-Acidaminococcaceae) | 0.23 | 0.52 | 0.026 |
| Dorea (Firmicutes-Lachnospiraceae) | 0.02 | 0.17 | <0.0001 |
| Higher in short sleepers | | | |
| Prevotellaceae(Unc00yx7)(Bacteroidetes-Prevotellaceae) | 1.60 | 0.12 | < 0.0001 |
| Lachnospiraceae(Unc08782) (Firmicutes) | 1.18 | 0.86 | 0.017 |
| Lachnospiraceae (Unc89581) (Firmicutes) | 0.50 | 0.19 | 0.0024 |
| Lachnospiraceae (Unc01nqn) (Firmicutes) | 0.40 | 0.11 | 0.005 |
| Lachnospiraceae (Unc04i72) (Firmicutes) | 0.10 | 0.04 | 0.0053 |
| Fusicatenibacter (Firmicutes) (Firmicutes) | 0.39 | 0.26 | 0.0068 |
| Ruminococcaceae (Unc058de) (Firmicutes) | 0.19 | 0.05 | 0.0068 |
| Pseudomonas (Proteobacteria-Pseudomonadaceae) | 0.14 | 0.08 | 0.0072 |
| Lachnospiraceae (Unc02p9p) (Firmicutes) | 0.13 | 0.06 | 0.018 |