Akkermansia
$W_{\text {Mann-Whitney }}=34114.00, p=0.50, \hat{r}_{\text {biserial }}^{\text {rank }}=-0.03, \mathrm{Cl}_{95 \%}[-0.14,0.07], n_{\text {obs }}=650$


## Eubacterium

$W_{\text {Mann-Whitrey }}=36241.50, p=0.64, \hat{r}_{\text {biserealia }}^{\text {rank }}=0.03, C_{l_{95 \%}}[-0.08,0.13], n_{\text {obs }}=650$


## Roseburia

$W_{\text {Mann-Whitney }}=30572.00, p=0.01, \hat{r}_{\text {biserial }}^{\text {rank }}=-0.13, \mathrm{Cl}_{95 \%}[-0.24,-0.03], n_{\text {obs }}=650$


Alistipes


## Faecalibacterium

$W_{\text {Mann-Whitney }}=42985.50, p=9.12 \mathrm{e}-05, \hat{r}_{\text {biserial }}^{\text {rank }}=0.22, \mathrm{Cl}_{95 \%}[0.11,0.32], n_{\text {obs }}=650$


## Ruminococcus

$W_{\text {Mann-Whitney }}=44453.00, p=3.01 \mathrm{e}-06, \hat{r}_{\text {biserial }}^{\text {rank }}=0.26, \mathrm{Cl}_{95 \%}[0.15,0.36], n_{\text {obs }}=650$


Collinsella


Population group

## Prevotella

$W_{\text {Mann-Whitney }}=36556.00, p=0.48, \hat{r}_{\text {biserial }}^{\text {rank }}=0.03, \mathrm{Cl}_{95 \%}[-0.07,0.14], n_{\text {obs }}=650$


Population group

Supplementary Figure 1. Relative abundance of genera detections often associated with the athlete population at the genus levels across "Athletes" (Green) and "Controls" populations (Orange). The bounds, whiskers, and percentile of each box plot represented maximum, 75th percentile, median, 25th percentile, and minimum from the top to the bottom, respectively.

