**Table S1.** The 85 discriminative ASVs between CON+Saline and CUMS+Saline groups identified by LEfSe.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Species name** | **Family** | **Phylum** | **LDA value** | **P value** |
| **ASV1** | Lactobacillaceae | Firmicutes | 4.832  | 0.013  |
| **ASV5** | Lactobacillaceae | Firmicutes | 4.502  | 0.009  |
| **ASV6** | Bacillaceae | Firmicutes | 4.286  | 0.013  |
| **ASV70** | Muribaculaceae | Bacteroidota | 4.093  | 0.011  |
| **ASV7** | Muribaculaceae | Bacteroidota | 3.857  | 0.010  |
| **ASV290** | Rikenellaceae | Bacteroidota | 3.854  | 0.009  |
| **ASV51** | Muribaculaceae | Bacteroidota | 3.785  | 0.039  |
| **ASV264** | Marinifilaceae | Bacteroidota | 3.779  | 0.001  |
| **ASV10** | Bacteroidaceae | Bacteroidota | 3.703  | 0.003  |
| **ASV455** | Prevotellaceae | Bacteroidota | 3.656  | 0.022  |
| **ASV55** | Unclassified\_o\_Oscillospirales | Firmicutes | 3.622  | 0.033  |
| **ASV456** | Lachnospiraceae | Firmicutes | 3.593  | 0.027  |
| **ASV19** | Muribaculaceae | Bacteroidota | 3.590  | 0.005  |
| **ASV36** | Tannerellaceae | Bacteroidota | 3.514  | 0.000  |
| **ASV12** | Muribaculaceae | Bacteroidota | 3.500  | 0.018  |
| **ASV28** | Muribaculaceae | Bacteroidota | 3.427  | 0.015  |
| **ASV277** | Rikenellaceae | Bacteroidota | 3.390  | 0.018  |
| **ASV300** | Muribaculaceae | Bacteroidota | 3.304  | 0.031  |
| **ASV60** | Saccharimonadaceae | Patescibacteria | 3.264  | 0.005  |
| **ASV63** | Bacteroidaceae | Bacteroidota | 3.227  | 0.031  |
| **ASV561** | Muribaculaceae | Bacteroidota | 3.223  | 0.017  |
| **ASV229** | Erysipelotrichaceae | Firmicutes | 3.212  | 0.041  |
| **ASV82** | Lachnospiraceae | Firmicutes | 3.201  | 0.033  |
| **ASV65** | Sutterellaceae | Proteobacteria | 3.196  | 0.002  |
| **ASV14** | Erysipelotrichaceae | Firmicutes | 3.194  | 0.015  |
| **ASV601** | Norank\_o\_Clostridia\_UCG-014 | Firmicutes | 3.184  | 0.031  |
| **ASV244** | Selenomonadaceae | Firmicutes | 3.142  | 0.002  |
| **ASV1059** | Lachnospiraceae | Firmicutes | 3.138  | 0.031  |
| **ASV564** | Muribaculaceae | Bacteroidota | 3.122  | 0.019  |
| **ASV278** | Lachnospiraceae | Firmicutes | 3.120  | 0.013  |
| **ASV274** | Marinifilaceae | Bacteroidota | 3.100  | 0.041  |
| **ASV578** | Muribaculaceae | Bacteroidota | 3.072  | 0.031  |
| **ASV41** | Muribaculaceae | Bacteroidota | 3.050  | 0.038  |
| **ASV324** | Norank\_o\_Clostridia\_vadinBB60\_group | Firmicutes | 3.049  | 0.031  |
| **ASV111** | Muribaculaceae | Bacteroidota | 3.027  | 0.022  |
| **ASV518** | Eggerthellaceae | Actinobacteriota | 3.021  | 0.021  |
| **ASV416** | Ruminococcaceae | Firmicutes | 3.021  | 0.031  |
| **ASV440** | norank\_o\_\_Clostridia\_UCG-014 | Firmicutes | 3.002  | 0.013  |
| **ASV101** | Ruminococcaceae | Firmicutes | 2.980  | 0.023  |
| **ASV87** | Muribaculaceae | Bacteroidota | 2.967  | 0.027  |
| **ASV307** | Rikenellaceae | Bacteroidota | 2.945  | 0.019  |
| **ASV407** | Monoglobaceae | Firmicutes | 2.934  | 0.002  |
| **ASV347** | Rikenellaceae | Bacteroidota | 2.909  | 0.013  |
| **ASV538** | Norank\_o\_\_Clostridia\_vadinBB60\_group | Firmicutes | 2.904  | 0.031  |
| **ASV331** | Lachnospiraceae | Firmicutes | 2.901  | 0.026  |
| **ASV172** | Rikenellaceae | Bacteroidota | 2.863  | 0.017  |
| **ASV373** | Norank\_o\_\_Clostridia\_UCG-014 | Firmicutes | 2.859  | 0.025  |
| **ASV98** | Sutterellaceae | Proteobacteria | 2.856  | 0.017  |
| **ASV343** | Lachnospiraceae | Firmicutes | 2.855  | 0.026  |
| **ASV279** | Lachnospiraceae | Firmicutes | 2.854  | 0.042  |
| **ASV97** | Rikenellaceae | Bacteroidota | 2.846  | 0.001  |
| **ASV431** | Muribaculaceae | Bacteroidota | 2.842  | 0.011  |
| **ASV585** | Muribaculaceae | Bacteroidota | 2.838  | 0.013  |
| **ASV311** | Lachnospiraceae | Firmicutes | 2.832  | 0.012  |
| **ASV370** | Ruminococcaceae | Firmicutes | 2.816  | 0.031  |
| **ASV796** | Norank\_o\_\_Clostridia\_vadinBB60\_group | Firmicutes | 2.811  | 0.013  |
| **ASV569** | Muribaculaceae | Bacteroidota | 2.808  | 0.025  |
| **ASV516** | Tannerellaceae | Bacteroidota | 2.804  | 0.050  |
| **ASV404** | Bifidobacteriaceae | Actinobacteriota | 2.802  | 0.031  |
| **ASV742** | Saccharimonadaceae | Patescibacteria | 2.792  | 0.050  |
| **ASV91** | Unclassified\_c\_\_Bacilli | Firmicutes | 2.781  | 0.036  |
| **ASV308** | Saccharimonadaceae | Patescibacteria | 2.780  | 0.036  |
| **ASV69** | Anaerovoracaceae | Firmicutes | 2.774  | 0.004  |
| **ASV128** | Rikenellaceae | Bacteroidota | 2.765  | 0.008  |
| **ASV72** | Bacteroidaceae | Bacteroidota | 2.758  | 0.028  |
| **ASV803** | Norank\_o\_\_Clostridia\_UCG-014 | Firmicutes | 2.749  | 0.031  |
| **ASV820** | Oscillospiraceae | Firmicutes | 2.748  | 0.031  |
| **ASV71** | Lachnospiraceae | Firmicutes | 2.747  | 0.027  |
| **ASV75** | Lachnospiraceae | Firmicutes | 2.728  | 0.009  |
| **ASV688** | Muribaculaceae | Bacteroidota | 2.712  | 0.031  |
| **ASV336** | Staphylococcaceae | Firmicutes | 2.707  | 0.031  |
| **ASV131** | Sutterellaceae | Proteobacteria | 2.702  | 0.031  |
| **ASV88** | Lachnospiraceae | Firmicutes | 2.697  | 0.041  |
| **ASV186** | Norank\_o\_\_Clostridia\_vadinBB60\_group | Firmicutes | 2.693  | 0.036  |
| **ASV209** | Sutterellaceae | Proteobacteria | 2.692  | 0.021  |
| **ASV232** | Oscillospiraceae | Firmicutes | 2.690  | 0.031  |
| **ASV851** | Oscillospiraceae | Firmicutes | 2.686  | 0.031  |
| **ASV510** | Rikenellaceae | Bacteroidota | 2.682  | 0.041  |
| **ASV157** | Norank\_o\_\_Clostridia\_UCG-014 | Firmicutes | 2.660  | 0.031  |
| **ASV910** | Bacteroidaceae | Bacteroidota | 2.653  | 0.031  |
| **ASV1058** | Lachnospiraceae | Firmicutes | 2.639  | 0.031  |
| **ASV458** | Ruminococcaceae | Firmicutes | 2.605  | 0.041  |
| **ASV591** | Muribaculaceae | Bacteroidota | 2.591  | 0.007  |
| **ASV766** | Bacteroidaceae | Bacteroidota | 2.563  | 0.031  |
| **ASV223** | Lachnospiraceae | Firmicutes | 2.539  | 0.039  |

Red: increased in CUMS+Saline group; Green: decreased in CUMS+Saline group;