

## Supplemental data

**Supplemental Table 5: The 317 genus-level OTUs and their percentage prevalence in 186 older**

### German adults

| S.No | Genus-level OTUs                                          | Prevalence* | S. No. | Genus-level OTUs                                                                 | Prevalence* |
|------|-----------------------------------------------------------|-------------|--------|----------------------------------------------------------------------------------|-------------|
| 1.   | <i>Bacteroides</i>                                        | 100         | 43.    | <i>Peptoclostridium</i>                                                          | 97.4        |
| 2.   | <i>Parabacteroides</i>                                    | 100         | 44.    | <i>[Eubacterium]</i><br><i>ventriosum</i> group                                  | 96.9        |
| 3.   | <i>Alistipes</i>                                          | 100         | 45.    | Family XIII AD3011<br>group                                                      | 96.4        |
| 4.   | <i>Streptococcus</i>                                      | 100         | 46.    | <i>Dorea</i>                                                                     | 96.4        |
| 5.   | <i>Blautia</i>                                            | 100         | 47.    | <i>Eisenbergiella</i>                                                            | 96.4        |
| 6.   | <i>Incertae Sedis</i> in family<br><i>Lachnospiraceae</i> | 100         | 48.    | <i>Lachnospiraceae</i><br><i>FCS020</i> group                                    | 96.4        |
| 7.   | <i>Lachnoclostridium</i>                                  | 100         | 49.    | <i>Collinsella</i>                                                               | 95.9        |
| 8.   | <i>Lachnospiraceae</i><br><i>NK4A136</i> group            | 100         | 50.    | <i>Barnesiella</i>                                                               | 95.9        |
| 9.   | <i>Lachnospiraceae</i> UCG-<br>008                        | 100         | 51.    | <i>Lachnospiraceae</i> UCG-<br>010                                               | 95.9        |
| 10   | <i>Pseudobutyrvibrio</i>                                  | 100         | 52.    | Uncultured genus in<br>family <i>Bacteroidales</i><br><i>S24-7</i> group         | 95.3        |
| 11   | <i>Roseburia</i>                                          | 100         | 53.    | <i>Fusicatenibacter</i>                                                          | 95.3        |
| 12   | Uncultured genus in<br>family <i>Lachnospiraceae</i>      | 100         | 54.    | <i>Shuttleworthia</i>                                                            | 94.8        |
| 13   | <i>Anaerotruncus</i>                                      | 100         | 55.    | <i>Ruminiclostridium</i> 6                                                       | 94.8        |
| 14   | <i>Faecalibacterium</i>                                   | 100         | 56.    | <i>Ruminococcaceae</i><br><i>NK4A214</i> group                                   | 93.8        |
| 15   | <i>Ruminiclostridium</i>                                  | 100         | 57.    | <i>Ruminococcaceae</i><br><i>UCG-003</i>                                         | 93.8        |
| 16   | <i>Ruminiclostridium</i> 5                                | 100         | 58.    | <i>Oscillospira</i>                                                              | 93.3        |
| 17   | <i>Ruminiclostridium</i> 9                                | 100         | 59.    | <i>Ruminococcaceae</i><br><i>UCG-010</i>                                         | 93.3        |
| 18   | <i>Ruminococcaceae</i> UCG-<br>002                        | 100         | 60.    | <i>Clostridium sensu</i><br><i>stricto</i> 1                                     | 92.7        |
| 19   | <i>Ruminococcus</i> 1                                     | 100         | 61.    | <i>Lachnospiraceae</i> UCG-<br>005                                               | 92.7        |
| 20   | <i>Ruminococcus</i> 2                                     | 100         | 62.    | <i>Intestinimonas</i>                                                            | 92.7        |
| 21   | <i>Subdoligranulum</i>                                    | 100         | 63.    | <i>Sutterella</i>                                                                | 92.7        |
| 22   | <i>[Eubacterium]</i><br><i>coprostanoligenes</i> group    | 100         | 64.    | Uncultured genus in the<br>family<br><i>Coriobacteriaceae</i>                    | 92.2        |
| 23   | Uncultured genus in<br>family <i>Ruminococcaceae</i>      | 100         | 65.    | Uncultured genus in the<br>family<br><i>Christensenellaceae</i>                  | 91.7        |
| 24   | <i>Veillonella</i>                                        | 100         | 66.    | Uncultured genus in the<br>family <i>Clostridiales</i><br><i>vadinBB60</i> group | 91.7        |
| 25   | <i>Prevotella</i> 9                                       | 99.5        | 67.    | Family XIII UCG-001                                                              | 91.7        |
| 26   | <i>Coprococcus</i> 1                                      | 99.5        | 68.    | <i>Ruminococcaceae</i><br><i>UCG-004</i>                                         | 90.7        |
| 27   | <i>Lachnospira</i>                                        | 99.5        | 69.    | <i>Parasutterella</i>                                                            | 90.7        |
| 28   | <i>Lachnospiraceae</i> UCG-<br>004                        | 99.5        | 70.    | <i>Dialister</i>                                                                 | 90.2        |

## Supplemental data

|    |                                                      |      |     |                                                                                                                    |      |
|----|------------------------------------------------------|------|-----|--------------------------------------------------------------------------------------------------------------------|------|
| 29 | <i>Ruminococcaceae</i> UCG-005                       | 99.5 | 71. | <i>Escherichia-Shigella</i>                                                                                        | 90.2 |
| 30 | <i>Ruminococcaceae</i> UCG-013                       | 99.5 | 72. | [ <i>Ruminococcus</i> ] <i>gauvreauii</i> group                                                                    | 88.6 |
| 31 | <i>Akkermansia</i>                                   | 99.5 | 73. | <i>Erysipelotrichaceae</i> UCG-003                                                                                 | 88.1 |
| 32 | <i>Christensenellaceae</i> R-7 group                 | 99   | 74. | <i>Bilophila</i>                                                                                                   | 88.1 |
| 33 | <i>Anaerostipes</i>                                  | 99   | 75. | <i>Haemophilus</i>                                                                                                 | 88.1 |
| 34 | <i>Lachnospiraceae</i> NC2004 group                  | 99   | 76. | <i>Marvinbryantia</i>                                                                                              | 87.6 |
| 35 | <i>Flavonifractor</i>                                | 99   | 77. | <i>Candidatus Soleaferrea</i>                                                                                      | 87.6 |
| 36 | <i>Odoribacter</i>                                   | 98.4 | 78. | <i>Phascolarctobacterium</i>                                                                                       | 87.6 |
| 37 | [ <i>Eubacterium</i> ] <i>hallii</i> group           | 98.4 | 79. | Uncultured genus in family <i>Peptococcaceae</i>                                                                   | 85.5 |
| 38 | <i>Rhodococcus</i>                                   | 97.9 | 80. | <i>Thalassospira</i>                                                                                               | 85.5 |
| 39 | <i>Lachnospiraceae</i> UCG-001                       | 97.9 | 81. | <i>Holdemania</i>                                                                                                  | 84.5 |
| 40 | <i>Ruminococcaceae</i> UCG-014                       | 97.9 | 82. | <i>Defluviitaleaceae</i> UCG-011                                                                                   | 83.4 |
| 41 | <i>Bifidobacterium</i>                               | 97.4 | 83. | Unidentified genus in unidentified family, order unidentified, class uncultured bacterium, phylum Saccharibacteria | 83.4 |
| 42 | Uncultured genus in family <i>Porphyromonadaceae</i> | 97.4 | 84. | <i>Butyricimonas</i>                                                                                               | 82.9 |

# Supplemental data

Supplemental Table 5 continued

| S.No | Genus-level OTUs                                                             | Prevalence* | S. No. | Genus-level OTUs                                              | Prevalence* |
|------|------------------------------------------------------------------------------|-------------|--------|---------------------------------------------------------------|-------------|
| 85.  | <i>Lactobacillus</i>                                                         | 82.4        | 125    | <i>Prevotella</i> 7                                           | 55.4        |
| 86.  | <i>Coprococcus</i> 2                                                         | 82.4        | 126    | <i>Tyzzerella</i> 3                                           | 52.8        |
| 87.  | <i>Desulfovibrio</i>                                                         | 81.9        | 127    | <i>Gelria</i>                                                 | 51.3        |
| 88.  |                                                                              | 81.3        | 128    | <i>Incertae Sedis in family Erysipelotrichaceae</i>           | 49.7        |
| 89.  | <i>Erysipelatoclostridium</i>                                                | 80.8        | 129    | <i>Campylobacter</i>                                          | 49.7        |
| 90.  | Unidentified genus in family uncultured bacterium, order Gastranaerophilales | 79.8        | 130    | <i>Klebsiella</i>                                             | 49.7        |
| 91.  | [ <i>Eubacterium</i> ] <i>nodatum</i> group                                  | 79.3        | 131    | <i>Ruminococcaceae</i> UCG-011                                | 47.7        |
| 92.  | <i>Rikenellaceae</i> RC9 gut group                                           | 78.8        | 132    | <i>Rothia</i>                                                 | 46.1        |
| 93.  | Unidentified genus in Unidentified family, order Rubus hybrid cultivar       | 78.2        | 133    | <i>Prevotella</i>                                             | 46.1        |
| 94.  | Uncultured organism in family Clostridiales vadinBB60 group                  | 74.6        | 134    | <i>Christensenella</i>                                        | 45.1        |
| 95.  | <i>Turicibacter</i>                                                          | 74.1        | 135    | <i>Dielma</i>                                                 | 43.5        |
| 96.  | [ <i>Eubacterium</i> ] <i>oxidoreducens</i> group                            | 73.6        | 136    | <i>Enterobacter</i>                                           | 43.5        |
| 97.  | <i>Pseudoflavonifractor</i>                                                  | 73.6        | 137    | <i>Howardella</i>                                             | 43.0        |
| 98.  | Uncultured genus in family Prevotellaceae                                    | 73.1        | 138    | <i>Eggerthella</i>                                            | 42.5        |
| 99.  | <i>Coprobacter</i>                                                           | 72.5        | 139    | <i>Acetanaerobacterium</i>                                    | 42.5        |
| 100  | <i>Anaerofilum</i>                                                           | 72.5        | 140    | <i>Catenibacterium</i>                                        | 42.5        |
| 101  |                                                                              |             | 141    | Uncultured bacterium genus in family Lachnospiraceae          | 40.9        |
|      | <i>Butyrivibrio</i>                                                          | 72          | 142    | <i>Lachnospiraceae</i> UCG-007                                | 40.4        |
| 102  | <i>Oscillibacter</i>                                                         | 71          | 143    | <i>Papillibacter</i>                                          | 40.4        |
| 103  | <i>Alloprevotella</i>                                                        | 69.9        | 144    | Uncultured genus in family boneC3G7                           | 39.4        |
| 104  | <i>Lactococcus</i>                                                           | 69.9        | 145    | <i>Oxalobacter</i>                                            | 39.4        |
| 105  | <i>Ruminococcaceae</i> UCG-009                                               | 69.9        | 146    | Uncultured genus in family uncultured, order Bacteroidales    | 38.9        |
| 106  | [ <i>Eubacterium</i> ] <i>ruminantium</i> group                              | 69.4        | 147    | <i>Enterococcus</i>                                           | 38.9        |
| 107  | <i>Enterorhabdus</i>                                                         | 68.9        | 148    | <i>Lactonifactor</i>                                          | 38.9        |
| 108  | <i>Holdemanella</i>                                                          | 67.9        | 149    | <i>Atopobium</i>                                              | 36.8        |
| 109  | Uncultured genus in family Erysipelotrichaceae                               | 67.9        | 150    | <i>Ruminococcaceae</i> UCG-007                                | 36.8        |
| 110  | <i>Slackia</i>                                                               | 67.4        | 151    | Unidentified genus in family uncultured organism, order NB1-n | 34.2        |
| 111  |                                                                              |             | 152    | <i>Prevotellaceae</i> UCG-001                                 | 33.7        |
|      | <i>Actinomyces</i>                                                           | 66.3        | 153    | <i>Allisonella</i>                                            | 33.7        |
| 112  | Unidentified genus in family uncultured bacterium, order Mollicutes RF9      | 65.3        |        |                                                               |             |
| 113  | <i>Granulicatella</i>                                                        | 63.7        |        |                                                               |             |

### Supplemental data

|     |                                      |      |     |                                                                                             |      |
|-----|--------------------------------------|------|-----|---------------------------------------------------------------------------------------------|------|
| 114 | <i>Peptococcus</i>                   | 62.7 | 154 | <i>Prevotella</i> 6                                                                         | 32.1 |
| 115 | <i>Hydrogenoanaerobacterium</i>      | 60.6 | 155 | <i>Acetitomaculum</i>                                                                       | 32.1 |
| 116 | <i>Tyzzerella</i>                    | 59.6 | 156 | <i>Arachis hypogaea</i> var.<br><i>vulgaris</i>                                             | 32.1 |
| 117 | <i>Oribacterium</i>                  | 59.1 | 157 | <i>Mogibacterium</i>                                                                        | 31.6 |
| 118 | <i>Senegalimassilia</i>              | 57.5 | 158 | <i>Lachnospiraceae</i> UCG-<br>003                                                          | 31.1 |
| 119 |                                      |      | 159 | Unidentified genus in<br>family uncultured<br>bacterium, order<br><i>Opitutae</i> vadinHA64 | 31.1 |
|     | <i>Paraprevotella</i>                | 57.5 | 160 | <i>Gordonibacter</i>                                                                        | 30.6 |
| 120 | <i>Gemella</i>                       | 57.5 | 161 | <i>Prevotellaceae</i> NK3B31<br>group                                                       | 30.6 |
| 121 | <i>Megasphaera</i>                   | 57.0 | 162 | <i>Erysipelotrichaceae</i><br>UCG-004                                                       | 30.6 |
| 122 | <i>Prevotella</i> 2                  | 56.5 | 163 | <i>Asteroleplasma</i>                                                                       | 30.1 |
| 123 | <i>Coriobacteriaceae</i> UCG-<br>002 | 56   | 164 | <i>Coprobacillus</i>                                                                        | 30.1 |
| 124 | <i>Victivallis</i>                   | 56   |     |                                                                                             |      |

# Supplemental data

Supplemental Table 5 continued

| S. No | Genus-level OTUs                                                                | Prevalence* | S. No. | Genus-level OTUs                                                                                                       | Prevalence* |
|-------|---------------------------------------------------------------------------------|-------------|--------|------------------------------------------------------------------------------------------------------------------------|-------------|
| 165   |                                                                                 | 29.5        | 203.   | <i>Unidentified genus, unidentified family, unidentified order, class Candidatus Saccharibacteria bacterium UB2523</i> | 11.9        |
|       | <i>Uncultured Thermoanaerobacterales bacterium</i>                              |             | 204.   | <i>Peptostreptococcus</i>                                                                                              | 11.4        |
| 166   | <i>Acidaminococcus</i>                                                          | 29.5        | 205.   | <i>Uncultured genus in family Rhodospirillaceae</i>                                                                    | 10.4        |
| 167   | <i>[Eubacterium] brachy group</i>                                               | 29.0        | 206.   | <i>Neisseria</i>                                                                                                       | 10.4        |
| 168   | <i>Porphyromonas</i>                                                            | 28.5        | 207.   | <i>Coriobacteriaceae UCG-003</i>                                                                                       | 9.8         |
| 169   | <i>Solobacterium</i>                                                            | 28.5        | 208.   | <i>Lysinibacillus</i>                                                                                                  | 9.8         |
| 170   | <i>Leuconostoc</i>                                                              | 28          | 209.   | <i>Pyramidobacter</i>                                                                                                  | 9.8         |
| 171   | <i>Ruminiclostridium 1</i>                                                      | 28          | 210.   |                                                                                                                        | 9.3         |
| 172   | <i>Uncultured organism in family Bacteroidales S24-7 group</i>                  | 25.9        |        | <i>Epulopiscium</i>                                                                                                    |             |
| 173   | <i>Cloacibacillus</i>                                                           | 25.9        | 211.   | <i>Selenomonas 3</i>                                                                                                   | 9.3         |
| 174   | <i>Ezakiella</i>                                                                | 25.4        | 212.   | <i>Propionibacterium</i>                                                                                               | 8.8         |
| 175   |                                                                                 | 25.4        | 213.   | <i>Prevotellaceae UCG-003</i>                                                                                          | 8.8         |
|       | <i>Anaerosporeobacter</i>                                                       |             | 214.   |                                                                                                                        | 8.8         |
| 176   | <i>Unidentified genus in family uncultured bacterium, order NB1-n</i>           | 25.4        |        | <i>Abiotrophia</i>                                                                                                     |             |
| 177   | <i>Pseudomonas</i>                                                              | 24.9        | 215.   | <i>Lachnospiraceae NK3A20 group</i>                                                                                    | 8.8         |
| 178   | <i>Ruminococcaceae V9D2013 group</i>                                            | 24.4        | 216.   | <i>Lachnospiraceae UCG-002</i>                                                                                         | 8.8         |
| 179   | <i>Erysipelotrichaceae UCG-007</i>                                              | 23.3        | 217.   |                                                                                                                        | 8.8         |
| 180   | <i>Anaerofustis</i>                                                             | 22.3        |        | <i>Aggregatibacter</i>                                                                                                 |             |
| 181   | <i>Candidatus Saccharimonas</i>                                                 | 21.2        | 218.   | <i>Megamonas</i>                                                                                                       | 8.3         |
| 182   | <i>Lachnospiraceae UCG-006</i>                                                  | 20.7        | 219.   | <i>Uncultured genus in family Veillonellaceae</i>                                                                      | 8.3         |
| 183   |                                                                                 |             | 220.   | <i>Uncultured genus in family ratAN060301C</i>                                                                         | 7.8         |
|       | <i>Fusobacterium</i>                                                            | 20.7        | 221.   | <i>Unidentified genus in family Clostridiales vadinBB60 group</i>                                                      | 7.8         |
| 184   | <i>Unidentified genus, unidentified family, order uncultured cyanobacterium</i> | 20.2        | 222.   |                                                                                                                        | 7.8         |
| 185   | <i>Uncultured Clostridiaceae bacterium in family Lachnospiraceae</i>            | 20.2        | 223.   | <i>Fusibacter</i>                                                                                                      | 7.8         |
| 186   | <i>Mitsuokella</i>                                                              | 20.2        |        | <i>Faecalicoccus</i>                                                                                                   |             |
| 187   | <i>Bacillus</i>                                                                 | 19.7        | 224.   | <i>Leptotrichia</i>                                                                                                    | 7.8         |
| 188   |                                                                                 |             | 225.   | <i>Scardovia</i>                                                                                                       | 7.3         |
|       | <i>Caldicoprobacter</i>                                                         | 19.2        | 226.   | <i>Unnamed genus in family Blattella</i>                                                                               | 7.3         |

## Supplemental data

|     |                               |      |                                        |     |
|-----|-------------------------------|------|----------------------------------------|-----|
|     |                               |      | <i>germanica</i> (German<br>cockroach) |     |
| 189 | <i>Lachnoanaerobaculum</i>    | 18.1 | 227. <i>Pediococcus</i>                | 7.3 |
| 190 | <i>Stomatobaculum</i>         | 17.6 | 228. <i>Finegoldia</i>                 | 7.3 |
| 191 | <i>Faecalitalea</i>           | 17.6 | 229. <i>Peptoniphilus</i>              | 7.3 |
| 192 | <i>Microbacter</i>            | 17.1 | 230. <i>Anaeroglobus</i>               | 7.3 |
| 193 |                               |      | 231. <i>Uncultured genus in</i>        | 6.7 |
|     | <i>Herbaspirillum</i>         | 17.1 | <i>family Actinomycetaceae</i>         |     |
| 194 | <i>Robiginitalea</i>          | 16.1 | 232. <i>Corynebacterium 1</i>          | 6.7 |
| 195 | <i>Parvimonas</i>             | 16.1 | 233. <i>Olsenella</i>                  | 6.7 |
| 196 | <i>Erysipelotrichaceae</i>    |      | 234.                                   | 6.7 |
|     | <i>UCG-001</i>                | 16.1 | <i>Syntrophomonas</i>                  |     |
| 197 | <i>Staphylococcus</i>         | 15.5 | 235. <i>Actinobacillus</i>             | 6.7 |
| 198 | <i>Lachnospiraceae ND3007</i> |      | 236.                                   | 5.7 |
|     | <i>group</i>                  | 15   | <i>Weissella</i>                       |     |
| 199 | <i>Succinivibrio</i>          | 15   | 237. <i>Selenomonas</i>                | 5.7 |
| 200 | <i>Erysipelotrichaceae</i>    |      | 238.                                   | 5.2 |
|     | <i>UCG-006</i>                | 14   | <i>Prevotella 1</i>                    |     |
| 201 | <i>Anaeroplasma</i>           | 13.5 | 239. <i>Rikenella</i>                  | 5.2 |
| 202 |                               |      | 240. <i>Uncultured genus in</i>        | 5.2 |
|     | <i>Hafnia</i>                 | 11.9 | <i>family Clostridiaceae</i>           |     |

# Supplemental data

Supplemental Table 5 continued

| S.No | Genus-level OTUs                                                                                               | Prevalence* | S. No. | Genus-level OTUs                                                                                           | Prevalence* |
|------|----------------------------------------------------------------------------------------------------------------|-------------|--------|------------------------------------------------------------------------------------------------------------|-------------|
| 241. | <i>Pelospora</i>                                                                                               | 5.2         | 277.   | <i>DgA-11 gut group</i>                                                                                    | 1.6         |
| 242. | <i>Cardiobacterium</i>                                                                                         | 5.2         | 278.   | <i>Chryseobacterium</i>                                                                                    | 1.6         |
| 243. | <i>Alloscardovia</i>                                                                                           | 4.7         | 279.   | <i>Carnobacterium</i>                                                                                      | 1.6         |
| 244. | Uncultured genus in family <i>Corynebacteriaceae</i>                                                           | 4.7         | 280.   |                                                                                                            | 1.6         |
| 245. | <i>Succiniclasticum</i>                                                                                        | 4.7         | 281.   | <i>Natranaerovirga</i>                                                                                     | 1.6         |
| 246. |                                                                                                                | 4.7         | 282.   | Unidentified genus in family unidentified, order uncultured bacterium, class lentisphaerae RFP12 gut group | 1.6         |
|      | <i>Serratia</i>                                                                                                |             | 283.   | <i>Variovorax</i>                                                                                          | 1.6         |
| 247. | <i>Acinetobacter</i>                                                                                           | 4.7         | 284.   |                                                                                                            | 1.6         |
| 248. | Unidentified genus, in family unidentified, order unidentified, class uncultured bacterium, and phylum SHA-109 | 4.7         |        |                                                                                                            |             |
| 249. | <i>Cryptobacterium</i>                                                                                         | 4.1         | 285.   | <i>Morganella</i>                                                                                          | 1.6         |
| 250. | <i>Alkaliflexus</i>                                                                                            | 4.1         | 286.   | <i>Cobetia</i>                                                                                             | 1           |
| 251. |                                                                                                                | 4.1         | 287.   | <i>Brumimicrobium</i>                                                                                      | 1           |
|      |                                                                                                                |             | 287.   | Unidentified genus in family uncultured organism, order Gastranaerophilales                                | 1           |
|      | <i>Prevotellaceae UCG-004</i>                                                                                  |             | 288.   | <i>Geobacillus</i>                                                                                         | 1           |
| 252. | <i>Eubacterium</i>                                                                                             | 4.1         | 289.   | <i>Candidatus Arthromitus</i>                                                                              | 1           |
| 253. | <i>Anaerococcus</i>                                                                                            | 4.1         | 290.   |                                                                                                            | 1           |
| 254. | Unidentified genus in family uncultured rumen bacterium                                                        | 4.1         |        |                                                                                                            |             |
| 255. | Uncultured genus in family <i>Flavobacteriaceae</i>                                                            | 3.6         | 291.   | <i>Cellulosilyticum</i>                                                                                    | 1           |
| 256. | <i>Butyricicoccus</i>                                                                                          | 3.6         |        |                                                                                                            |             |
| 257. | <i>Selenomonas 4</i>                                                                                           | 3.6         |        | <i>Negativicoccus</i>                                                                                      |             |
| 258. | <i>Sphingomonas</i>                                                                                            | 3.6         | 292.   | <i>Acidovorax</i>                                                                                          | 1           |
| 259. | <i>Burkholderia</i>                                                                                            | 3.6         | 293.   | <i>Eikenella</i>                                                                                           | 1           |
| 260. |                                                                                                                |             | 294.   | <i>Succinatimonas</i>                                                                                      | 1           |
|      | <i>Mobiluncus</i>                                                                                              | 3.1         | 295.   | <i>Vibrio</i>                                                                                              | 1           |
| 261. | Uncultured bacterium in family Bacteroidales RF16 group                                                        | 3.1         | 296.   |                                                                                                            | 1           |
| 262. |                                                                                                                |             | 297.   | <i>Brachyspira</i>                                                                                         | 1           |
|      | Uncultured organism in family Lachnospiraceae                                                                  | 3.1         |        |                                                                                                            |             |
| 263. | Uncultured bacterium in family <i>Erysipelotrichaceae</i>                                                      | 3.1         |        | <i>Synergistes</i>                                                                                         |             |
| 264. |                                                                                                                |             | 298.   | Unidentified genus in family uncultured bacterium adhufec202                                               | 1           |
|      | <i>Anaerovibrio</i>                                                                                            | 3.1         | 299.   |                                                                                                            | 0.5         |
| 265. | <i>Comamonas</i>                                                                                               | 3.1         |        |                                                                                                            |             |
|      |                                                                                                                |             | 300.   | <i>Asaccharobacter</i>                                                                                     | 0.5         |
|      |                                                                                                                |             | 301.   | Uncultured bacterium genus in family gir-aah93h0                                                           | 0.5         |
|      |                                                                                                                |             |        | <i>Cellulophaga</i>                                                                                        | 0.5         |

### Supplemental data

|      |                             |     |      |                                 |     |
|------|-----------------------------|-----|------|---------------------------------|-----|
| 266. | <i>Prevotellaceae Ga6A1</i> |     | 302. |                                 | 0.5 |
|      | <i>group</i>                | 2.6 |      | <i>Atopostipes</i>              |     |
| 267. | <i>Elusimicrobium</i>       | 2.6 | 303. | <i>Sarcina</i>                  | 0.5 |
| 268. | <i>Bulleidia</i>            | 2.6 | 304. | <i>Sedimentibacter</i>          | 0.5 |
| 269. | <i>Arcobacter</i>           | 2.6 | 305. | <i>Coprococcus 3</i>            | 0.5 |
| 270. | <i>Uncultured Aeromonas</i> |     | 306. |                                 | 0.5 |
|      | <i>sp.</i>                  | 2.6 |      | <i>Anaerosinus</i>              |     |
| 271. |                             |     | 307. | <i>Unidentified genus in</i>    | 0.5 |
|      |                             |     |      | <i>family unidentified</i>      |     |
|      |                             |     |      | <i>family, order uncultured</i> |     |
|      |                             |     |      | <i>bacterium, class</i>         |     |
|      | <i>Pseudoalteromonas</i>    | 2.6 |      | <i>ARKICE-90</i>                |     |
| 272. | <i>Gardnerella</i>          | 2.1 | 308. | <i>Achromobacter</i>            | 0.5 |
| 273. |                             |     | 309. | <i>Uncultured genus in</i>      | 0.5 |
|      | <i>Fastidiosipila</i>       | 2.1 |      | <i>family Alcaligenaceae</i>    |     |
| 274. |                             |     | 310. | <i>Uncultured genus in</i>      | 0.5 |
|      | <i>[Anaerorhabdus]</i>      |     |      | <i>family</i>                   |     |
|      | <i>furcosa group</i>        | 2.1 |      | <i>Comamonadaceae</i>           |     |
| 275. | <i>Aeromonas</i>            | 2.1 | 311. | <i>Snodgrassella</i>            | 0.5 |
| 276. | <i>Treponema 2</i>          | 2.1 | 312. | <i>Thauera</i>                  | 0.5 |



## Supplemental data

**Supplemental Table 5 continued**

| S.No | Genus-level OTUs                                                    | Prevalence* | S. No. | Genus-level OTUs       | Prevalence* |
|------|---------------------------------------------------------------------|-------------|--------|------------------------|-------------|
| 313. | <i>Uncultured bacterium in family GR-WP33-58</i>                    | 0.5         | 316.   | <i>Marinomonas</i>     | 0.5         |
| 314. | <i>Unidentified genus in family uncultured bacterium, order B38</i> | 0.5         | 317.   | <i>Prosthecobacter</i> | 0.5         |
| 315. | <i>Rickettsiella</i>                                                | 0.5         |        |                        |             |

S.No.=Serial number; OTU=Operational taxonomic units; \*Prevalence in percentage