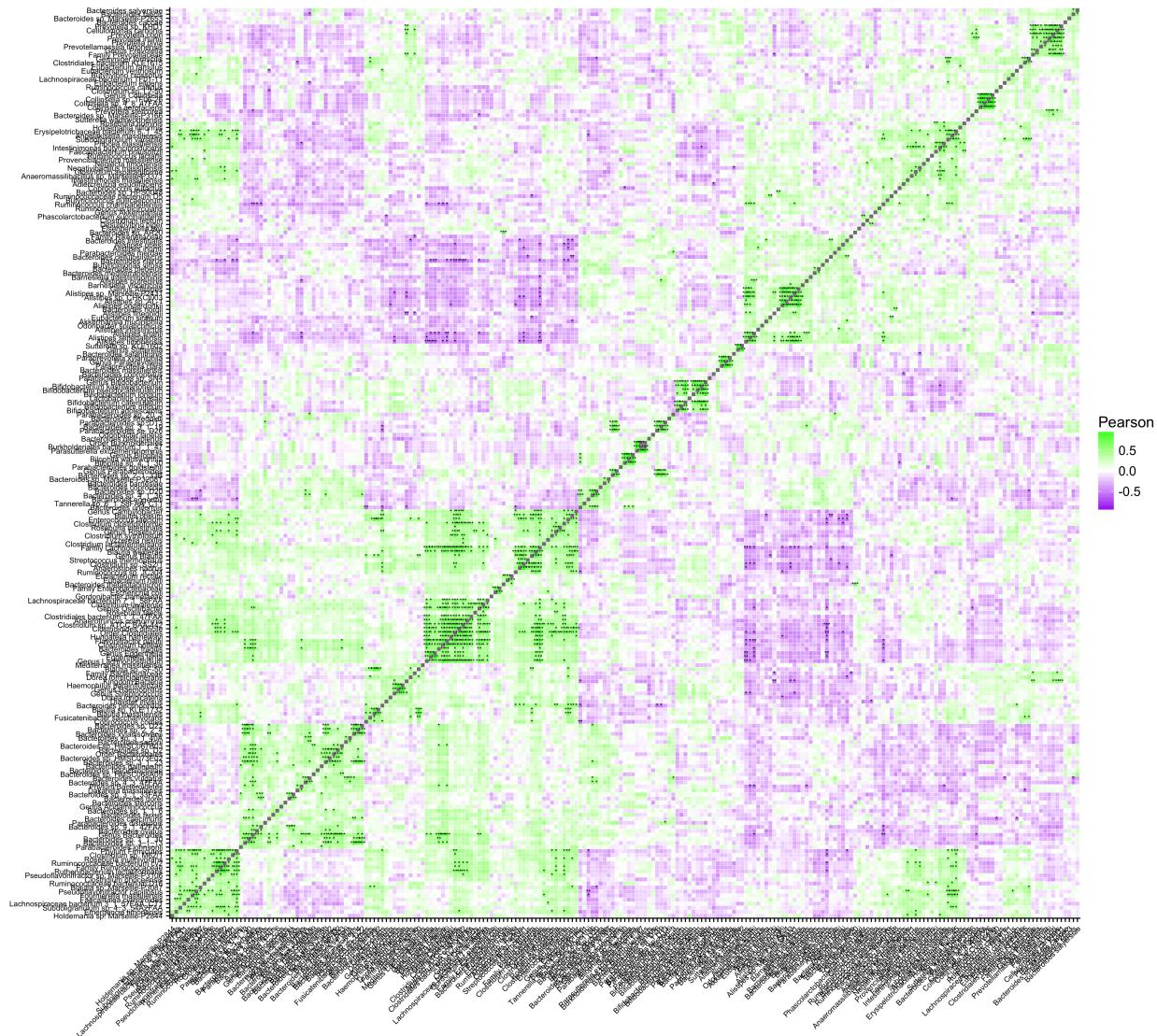


# Microbes v. microbes

Abby

16 January, 2018



```
##                                     Taxa1
## 1 Burkholderiales bacterium 1_1_47
## 2          Order Burkholderiales
## 3 Burkholderiales bacterium 1_1_47
## 4             Genus Haemophilus
## 5            Eggerthella lenta
## 6      Bilophila wadsworthia
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## 7          Collinsella aerofaciens
## 8          Genus Sutterella
## 9          Collinsella sp. 4_8_47FAA
## 10         Anaerostipes hadrus
## 11         Alistipes onderdonkii
## 12         Collinsella sp. TF06-26
## 13         Collinsella sp. 4_8_47FAA
## 14         Collinsella aerofaciens
## 15         Genus Paraprevotella
## 16         Alistipes onderdonkii
## 17         Collinsella aerofaciens
## 18         Bifidobacterium catenulatum
## 19         Bifidobacterium kashiwanoense
## 20         Bilophila sp. 4_1_30
## 21         Alistipes sp. AL-1
## 22         Bacteroides sp. 4_1_36
## 23         Ruminococcaceae bacterium cv2
## 24         Clostridium bolteae
## 25         Family Ruminococcaceae
## 26         Blautia massiliensis
## 27         Family Ruminococcaceae
## 28         Blautia massiliensis
## 29         Bifidobacterium longum
## 30         Clostridium sp. ATCC BAA-442
## 31         Family Lachnospiraceae
## 32         Blautia sp. KLE 1732
## 33         Bifidobacterium catenulatum
## 34         Bifidobacterium kashiwanoense
## 35         Flavonifractor plautii
## 36         Bacteroides sp. 3_1_13
## 37         Escherichia coli
## 38         Bifidobacterium catenulatum
## 39         Bacteroides sp. 2_1_33B
## 40         Clostridium bolteae
## 41         Prevotella copri
## 42         Prevotella copri
## 43         Bacteroides sp. 2_1_33B
## 44         Family Lachnospiraceae
## 45         Family Prevotellaceae
## 46         Blautia wexlerae
## 47         Bilophila sp. 4_1_30
## 48         Flavonifractor plautii
## 49         Bacteroides sp. D22
## 50         Alistipes sp. Marseille-P2431
## 51         Genus Paraprevotella
## 52         Bacteroides sp. 2_1_33B
## 53         Alistipes senegalensis
## 54         Family Lachnospiraceae
## 55         Alistipes sp. Marseille-P2431
## 56         Family Ruminococcaceae
## 57         Genus Lachnoclostridium
## 58         Bacteroides dorei
## 59         Family Lachnospiraceae
## 60         Paraprevotella clara

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## 61          Flavonifractor plautii
## 62          Angelakisella massiliensis
## 63          Clostridium bolteae
## 64          Cellulomonas carbonis
## 65          Bacteroides sp. 2_2_4
## 66          Family Ruminococcaceae
## 67          Fournierella massiliensis
## 68          Bifidobacterium pseudocatenulatum
## 69          Bacteroides sp. 2_2_4
## 70          Clostridium sp. ATCC BAA-442
## 71          Alistipes senegalensis
## 72          Anaerotruncus colihominis
## 73          Alistipes senegalensis
## 74          Intestinimonas butyriciproducens
## 75          Bacteroides sp. 3_1_19
## 76          Blautia wexlerae
## 77          Bacteroides fragilis
## 78          Hungatella hathewayi
## 79          Clostridium sp. SS2/1
## 80          Clostridium sp. ATCC BAA-442
## 81          Clostridiooides difficile
## 82          Bacteroides sp. 2_2_4
## 83          Alistipes sp. CHKCI003
## 84          Bacteroides sp. 3_1_13
## 85          Gemmiger formicilis
## 86          Bacteroides sp. 2_2_4
## 87          Blautia wexlerae
## 88          Clostridiooides difficile
## 89          Anaerotruncus colihominis
## 90          Blautia obeum
## 91          Clostridiooides difficile
## 92          Phylum Firmicutes
## 93          Bacteroides sp. 3_1_23
## 94          Bacteroides sp. 3_1_13
## 95          Clostridium sp. ATCC BAA-442
## 96          Clostridium sp. ATCC BAA-442
## 97          Bacteroides sp. D2
## 98          Bacteroides sp. HMSC067B03
## 99          Genus Bacteroides
## 100         Genus Roseburia
## 101         Phylum Firmicutes
## 102         Blautia wexlerae
## 103         Cellulomonas carbonis
## 104         Clostridium clostridioforme
## 105         Flavonifractor plautii
## 106         Alistipes sp. CHKCI003
## 107         Bacteroides sp. AR20
## 108         Phylum Firmicutes
## 109         Cellulomonas carbonis
## 110         Bacteroides sp. 1_1_30
## 111         Cellulomonas carbonis
## 112         Clostridium symbiosum
## 113         Anaerotruncus colihominis
## 114         Genus Oscillibacter

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## 115           Family Prevotellaceae
## 116           Bacteroides sp. 4_3_47FAA
## 117           Alistipes sp. CHKCI003
## 118           Alistipes onderdonkii
## 119           Bacteroides sp. 3_1_19
## 120           Anaerotruncus colihominis
## 121           Bacteroides sp. 1_1_30
## 122           Alistipes timonensis
## 123           Clostridium bolteae
## 124           Anaerotruncus colihominis
## 125           Genus Lachnoclostridium
## 126           Prevotella ihumii
## 127           Clostridium bolteae
## 128           Erysipelotrichaceae bacterium 6_1_45
## 129           Flavonifractor plautii
## 130           Clostridium lavalense
## 131           Bacteroides sp. 3_1_19
## 132           Genus Lachnoclostridium
## 133           Bifidobacterium adolescentis
## 134           Blautia wexlerae
## 135           Bifidobacterium adolescentis
## 136           Bacteroides sp. 3_1_23
## 137           Bacteroides sp. 3_1_23
## 138           Clostridium lavalense
## 139           Blautia massiliensis
## 140           Genus Parabacteroides
## 141           Clostridium bolteae
## 142           Eubacterium hallii
## 143           Erysipelotrichaceae bacterium 6_1_45
## 144           Anaerostipes hadrus
## 145           Eggerthella lenta
## 146           Alistipes onderdonkii
## 147           Bacteroides sp. D2
## 148           Alistipes senegalensis
## 149           Genus Roseburia
## 150           Clostridioides difficile
## 151           Bacteroides dorei
## 152           Fournierella massiliensis
## 153           Parabacteroides sp. D13
## 154           Lachnospiraceae bacterium 7_1_58FAA
## 155           Blautia sp. KLE 1732
## 156           Angelakisella massiliensis
## 157           Prevotella ihumii
## 158           Angelakisella massiliensis
## 159           Anaerotruncus colihominis
## 160           Blautia wexlerae
## 161           Bacteroides sp. 4_1_36
## 162           Clostridiales bacterium 1_7_47FAA
## 163           Family Lachnospiraceae
## 164           Clostridium sp. M62/1
## 165           Genus Prevotella
## 166           Bacteroides sp. 3_1_23
## 167           Clostridioides difficile
## 168           Alistipes sp. AL-1

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## 169          Bacteroides sp. 4_3_47FAA
## 170          Clostridiales bacterium 1_7_47FAA
## 171          Clostridioides difficile
## 172          Bacteroides sp. 2_1_33B
## 173          Clostridiales bacterium KLE1615
## 174          Clostridium sp. ATCC BAA-442
## 175          Clostridioides difficile
## 176          Clostridium bolteae
## 177          Clostridium asparagiforme
## 178          Cellulomonas carbonis
## 179          Bacteroides sp. 1_1_30
## 180          Bifidobacterium adolescentis
## 181          Clostridium sp. SS2/1
## 182          Alistipes putredinis
## 183          Alistipes shahii
## 184          Anaerotruncus colihominis
## 185          Clostridium bolteae
## 186          Clostridium lavalense
## 187          Family Lachnospiraceae
## 188          Eubacterium siraeum
## 189          Bacteroides sp. 3_1_13
## 190          Clostridium sp. ATCC BAA-442
## 191          Genus Haemophilus
## 192          Eggerthella lenta
## 193          Genus Streptococcus
## 194          Anaerotruncus colihominis
## 195          Bacteroides sp. 3_1_23
## 196          Clostridium clostridiiforme
## 197          Bacteroides fragilis
## 198          Erysipelotrichaceae bacterium 6_1_45
## 199          Family Prevotellaceae
## 200          Clostridiales bacterium 1_7_47FAA
## 201          Clostridioides difficile
## 202          Enterococcus faecium
## 203          Clostridiales bacterium KLE1615
## 204          Bacteroides sp. D2
## 205          Bifidobacterium catenulatum
## 206          Clostridioides difficile
## 207          Clostridium sp. SS2/1
## 208          Alistipes senegalensis
## 209          Erysipelotrichaceae bacterium 6_1_45
## 210          Clostridiales bacterium 1_7_47FAA
## 211          Prevotella bivia
## 212          Bacteroides fragilis
## 213          Alistipes finegoldii
## 214          Phylum Firmicutes
## 215          Angelakisella massiliensis
## 216          Emergencia timonensis
## 217          Alistipes sp. AL-1
## 218          Clostridiales bacterium 1_7_47FAA
## 219          Bacteroides nordii
## 220          Anaerotruncus colihominis
## 221          Anerostipes hadrus
## 222          Clostridioides difficile

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## 223           Genus Bacteroides
## 224           Genus Roseburia
## 225           Angelakisella massiliensis
## 226           Flavonifractor plautii
## 227           Bacteroides sartorii
## 228           Anaerostipes hadrus
## 229           Bacteroides fragilis
## 230           Genus Oscillibacter
## 231           Blautia wexlerae
## 232 Anaeromassilibacillus sp. Marseille-P3371
## 233           Family Ruminococcaceae
## 234           Enterococcus faecium
## 235           Clostridiales bacterium 1_7_47FAA
## 236           Bacteroides sp. 1_1_30
## 237           Alistipes onderdonkii
## 238           Cellulomonas carbonis
## 239           Enterococcus faecium
## 240           Bacteroides sp. D20
## 241           Enterococcus faecium
## 242           Anaerotruncus colihominis
## 243           Blautia wexlerae
## 244           Alistipes senegalensis
## 245           Bacteroides caecimuris
## 246           Faecalibacterium prausnitzii
## 247           Blautia wexlerae
## 248           Blautia obeum
## 249           Bacteroides sp. 3_1_23
## 250           Bacteroides pectinophilus
## 251           Order Clostridiales
## 252           Bifidobacterium adolescentis
## 253           Bifidobacterium bifidum
## 254           Bacteroides cellulosilyticus
## 255           Bacteroides ovatus
## 256           Clostridium sp. SS2/1
## 257           Bacteroides sp. 1_1_30
## 258           Blautia sp. SF-50
## 259           Order Clostridiales
## 260           Pseudoflavonifractor capillosus
## 261           Flavonifractor plautii
## 262           Bifidobacterium kashiwanoense
## 263           Blautia obeum
## 264           Cellulomonas carbonis
## 265           Desulfovibrio piger
## 266           Clostridioides difficile
## 267           Family Prevotellaceae
## 268           Blautia obeum
## 269           Bacteroides caecimuris
## 270           Anaerostipes hadrus
## 271           Clostridium sp. ATCC BAA-442
## 272           Clostridioides difficile
## 273           Faecalitalea cylindroides
## 274           Anaerotruncus colihominis
## 275           Prevotella bivia
## 276           Clostridium sp. ATCC BAA-442

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## 277 Clostridium sp. M62/1
## 278 Anaerostipes hadrus
## 279 Ruminococcus champanellensis
## 280 Blautia wexlerae
## 281 Blautia sp. SF-50
## 282 Fournierella massiliensis
## 283 Bacteroides sp. 3_1_40A
## 284 Blautia obeum
## 285 Eggerthella lenta
## 286 Bacteroides sp. HMSC067B03
## 287 Bacteroides sp. 3_1_33FAA
## 288 Family Lachnospiraceae
## 289 Bacteroides sp. HMSC073E02
## 290 Blautia wexlerae
## 291 Clostridium sp. SS2/1
## 292 Bacteroides fragilis
## 293 Genus Eggerthella
## 294 Clostridium sp. M62/1
## 295 Angelakisella massiliensis
## 296 Bacteroides pectinophilus
## 297 Bacteroides sp. 3_1_13
## 298 Blautia obeum
## 299 Clostridium bolteae
## 300 Genus Prevotella
## 301 Blautia obeum
## 302 Clostridiales bacterium 1_7_47FAA
## 303 Kingdom Bacteria
## 304 Intestinimonas massiliensis
## 305 Bacteroides pectinophilus
## 306 Anaerotruncus colihominis
## 307 Emergencia timonensis
## 308 Clostridium sp. M62/1
## 309 Faecalibacterium prausnitzii
## 310 Blautia obeum
## 311 Bacteroides sp. D2
## 312 Bacteroides sp. 9_1_42FAA
## 313 Roseburia inulinivorans
## 314 Alistipes finegoldii
## 315 Clostridium clostridioforme
## 316 Dorea formicigenerans
## 317 Blautia sp. KLE 1732
## 318 Prevotella bivia
## 319 Bacteroides fragilis
## 320 Clostridium lavalense
## 321 Alistipes shahii
## 322 Clostridioides difficile
## 323 Clostridium clostridioforme
## 324 Angelakisella massiliensis
## 325 Bacteroides sp. HMSC067B03
## 326 Lachnospiraceae bacterium 3_1_57FAA_CT1
## 327 Blautia obeum
## 328 Family Lachnospiraceae
## 329 Bacteroides sp. 3_1_13
## 330 Genus Eggerthella

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## 331           Eubacterium eligens
## 332           Bacteroides sp. 2_2_4
## 333           Bacteroides pectinophilus
## 334 Lachnospiraceae bacterium 3_1_57FAA_CT1
## 335           Genus Blautia
## 336           Blautia obeum
## 337 Clostridiales bacterium KLE1615
## 338           Clostridium lavalense
## 339           Emergencia timonensis
## 340           Clostridium bolteae
## 341           Bacteroides sp. 1_1_30
## 342           Holdemania filiformis
## 343           Blautia wexlerae
## 344           Prevotella copri
## 345           Bacteroides pectinophilus
## 346           Bacteroides uniformis
## 347           Alistipes sp. AL-1
## 348 Family Ruminococcaceae
## 349           Clostridium leptum
## 350 Clostridium lactatifermentans
## 351           Bacteroides faecis
## 352           Clostridioides difficile
## 353           Bifidobacterium bifidum
## 354           Eggerthella lenta
## 355           Bacteroides sp. D22
## 356           Phylum Firmicutes
## 357           Bacteroides gallinarum
## 358 Clostridium sp. ATCC BAA-442
## 359           Clostridium symbiosum
## 360 Ruthenibacterium lactatiformans
## 361           Anaerostipes hadrus
## 362           Clostridium clostridioforme
## 363           Clostridium clostridioforme
## 364           Family Ruminococcaceae
## 365           Dorea formicigenerans
## 366 Clostridium clostridioforme
## 367           Akkermansia muciniphila
## 368           Alistipes timonensis
## 369           Bacteroides pectinophilus
## 370           Order Clostridiales
## 371           Bifidobacterium bifidum
## 372 Erysipelotrichaceae bacterium 6_1_45
## 373           Bacteroides fragilis
## 374           Clostridium lavalense
## 375           Clostridium asparagiforme
## 376           Bacteroides sp. 3_1_40A
## 377           Genus Campylobacter
## 378           Faecalitalea cylindroides
## 379           Order Clostridiales
## 380           Eggerthella lenta
## 381           Bacteroides pectinophilus
## 382           Genus Roseburia
## 383 Clostridium lactatifermentans
## 384           Clostridium asparagiforme

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## 385           Genus Bacteroides
## 386           Clostridium symbiosum
## 387           Clostridiales bacterium 1_7_47FAA
## 388           Kingdom Bacteria
## 389           Bacteroides vulgatus
## 390           Clostridium clostridioforme
## 391           Bacteroides vulgatus
## 392           Family Prevotellaceae
## 393           Family Lachnospiraceae
## 394           Bacteroides vulgatus
## 395           Clostridium phoceensis
## 396           Genus Streptococcus
## 397           Phocea massiliensis
## 398           Blautia sp. Marseille-P3087
## 399           Bacteroides uniformis
## 400           Clostridium asparagiforme
## 401           Dakarella massiliensis
## 402           Genus Lachnoclostridium
## 403           Provencibacterium massiliense
## 404           Angelakisella massiliensis
## 405           Bacteroides sp. 1_1_30
## 406           Bacteroides gallinarum
## 407           Clostridium clostridioforme
## 408           Bacteroides sp. 3_1_13
## 409           Family Ruminococcaceae
## 410           Clostridium lactatifermentans
## 411           Clostridium lavalense
## 412           Faecalibacterium prausnitzii
## 413           Bacteroides sp. 3_1_23
## 414           Ruminococcaceae bacterium cv2
## 415           Alistipes putredinis
## 416           Clostridium clostridioforme
## 417           Bifidobacterium longum
## 418           Blautia sp. Marseille-P3087
## 419           Clostridium symbiosum
## 420           Bacteroides caecimuris
## 421           Anaerostipes hadrus
## 422           Bacteroides sp. 3_1_13
## 423           Blautia sp. SF-50
## 424           Anaerotruncus colihominis
## 425           Blautia wexlerae
## 426           Genus Roseburia
## 427           Alistipes sp. CHKCI003
## 428           Clostridium clostridioforme
## 429           Genus Bacteroides
## 430           Blautia wexlerae
## 431           Genus Roseburia
## 432           Blautia wexlerae
## 433           Clostridium sp. ATCC BAA-442
## 434           Erysipelotrichaceae bacterium 6_1_45
## 435           Bacteroides sp. HMSC073E02
## 436           Clostridium sp. M62/1
## 437           Clostridium lavalense
## 438           Clostridioides difficile

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## 439      Faecalitalea cylindroides
## 440          Emergencia timonensis
## 441          Angelakisella massiliensis
## 442          Blautia sp. Marseille-P3087
## 443          Clostridium sp. ATCC BAA-442
## 444          Bacteroides pectinophilus
## 445          Bacteroides fragilis
## 446          Bacteroides sp. 4_3_47FAA
## 447          Clostridium symbiosum
## 448          Phylum Firmicutes
## 449          Negativibacillus massiliensis
## 450          Clostridium asparagiforme
## 451          Genus Prevotella
## 452          Bacteroides sp. 3_1_13
## 453          Bacteroides caecimuris
## 454          Bacteroides sp. 4_1_36
## 455          Blautia obeum
## 456          Prevotella copri
## 457          Bacteroides sp. 3_1_33FAA
## 458          Bacteroides uniformis
## 459          Clostridiooides difficile
## 460          Family Lachnospiraceae
## 461          Prevotella sp. KHD1
## 462          Angelakisella massiliensis
## 463          Coprococcus comes
## 464          Roseburia inulinivorans
## 465          Bacteroides ovatus
## 466          Family Ruminococcaceae
## 467          Blautia sp. Marseille-P3087
## 468          Genus Parabacteroides
## 469 Anaeromassilibacillus sp. Marseille-P3371
## 470          Clostridiales bacterium 1_7_47FAA
## 471          Fournierella massiliensis
## 472          Clostridium lavalense
## 473          Flavonifractor plautii
## 474          Bacteroides ovatus
## 475          Intestinimonas butyriciproducens
## 476          Bifidobacterium adolescentis
## 477          Clostridium sp. M62/1
## 478          Butyrivibrio crossotus
## 479          Coprococcus eutactus
## 480          Blautia massiliensis
## 481          Bacteroides sp. 2_2_4
## 482          Family Bacteroidaceae
## 483          Anaerostipes hadrus
## 484          Alistipes shahii
## 485          Blautia sp. SF-50
## 486          Family Lachnospiraceae
## 487          Clostridiales bacterium 1_7_47FAA
## 488          Fournierella massiliensis
## 489          Pseudoflavonifractor capillosus
## 490          Blautia sp. Marseille-P3087
## 491 Lachnospiraceae bacterium 3_1_57FAA_CT1
## 492          Genus Blautia

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## 493           Escherichia coli
## 494           Blautia massiliensis
## 495           Bacteroides sp. 1_1_30
## 496           Pseudoflavonifractor capillosus
## 497           Faecalibacterium prausnitzii
## 498           Bacteroides fragilis
## 499           Bacteroides fragilis
## 500           Roseburia inulinivorans
## 501           Parabacteroides merdae
## 502           Clostridium symbiosum
## 503           Intestinimonas butyriciproducens
## 504           Blautia sp. Marseille-P3087
## 505           Clostridium lavalense
## 506           Bacteroides ovatus
## 507           Bacteroides fragilis
## 508           Clostridium sp. ATCC BAA-442
## 509           Genus Roseburia
## 510           Clostridium bolteae
## 511           Bacteroides sp. 1_1_6
## 512           Clostridium phoceensis
## 513           Clostridium clostridioforme
## 514           Bacteroides mediterraneensis
## 515           Clostridioides difficile
## 516           Bacteroides sartorii
## 517           Bacteroides pectinophilus
## 518           Eggerthella lenta
## 519           Clostridium clostridioforme
## 520           Cellulomonas carbonis
## 521           Clostridium sp. SS2/1
## 522           Clostridium asparagiforme
## 523           Bacteroides sp. 1_1_6
## 524           Clostridium sp. ATCC BAA-442
## 525           Bacteroides thetaiotaomicron
## 526           Bacteroides sp. HMSC067B03
## 527           Bacteroides sp. Marseille-P3166
## 528           Holdemania sp. Marseille-P2844
## 529           Bacteroides sp. 3_1_23
## 530           Provencibacterium massiliense
## 531           Family Ruminococcaceae
## 532           Fournierella massiliensis
## 533           Bacteroides sp. 1_1_6
## 534           Bacteroides fragilis
## 535           Parabacteroides distasonis
## 536           Clostridium clostridioforme
## 537           Clostridioides difficile
## 538           Erysipelotrichaceae bacterium 6_1_45
## 539           Fournierella massiliensis
## 540           Alistipes onderdonkii
## 541           Clostridiales bacterium 1_7_47FAA
## 542           Eggerthella lenta
## 543           Phylum Firmicutes
## 544           Prevotella bivia
## 545           Bacteroides barnesiae
## 546           Blautia massiliensis

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## 547           Clostridiooides difficile
## 548 Lachnospiraceae bacterium 3_1_57FAA_CT1
## 549           Clostridium asparagiforme
## 550           Bacteroides fragilis
## 551 Erysipelotrichaceae bacterium 6_1_45
## 552           Alistipes finegoldii
## 553           Blautia wexlerae
## 554 Holdemania sp. Marseille-P2844
## 555           Alistipes shahii
## 556           Bacteroides sp. 2_2_4
## 557 Intestinimonas massiliensis
## 558           Clostridium bolteae
## 559           Bacteroides pectinophilus
## 560 Intestinimonas butyriciproducens
## 561 Holdemania sp. Marseille-P2844
## 562           Eubacterium ramulus
## 563           Genus Campylobacter
## 564           Clostridium symbiosum
## 565           Clostridium symbiosum
## 566           Enterococcus faecium
## 567           Cellulomonas carbonis
## 568           Clostridium sp. M62/1
## 569           Bacteroides ovatus
## 570 Anaeromassilibacillus sp. Marseille-P3371
## 571           Genus Campylobacter
## 572           Clostridium clostridioforme
## 573 Alistipes sp. Marseille-P2431
## 574           Bacteroides gallinarum
## 575           Bacteroides sp. 1_1_30
## 576           Bacteroides gallinarum
## 577 Erysipelotrichaceae bacterium 6_1_45
## 578           Bacteroides sp. 4_1_36
## 579           Butyrivibacter pullicaecorum
## 580           Bacteroides caecimuris
## 581           Clostridium sp. ATCC BAA-442
## 582           Roseburia inulinivorans
## 583           Clostridium symbiosum
## 584           Clostridium clostridioforme
## 585           Bacteroides sp. 9_1_42FAA
## 586           Roseburia inulinivorans
## 587           Bacteroides sp. 4_1_36
## 588 Fusicatenibacter saccharivorans
## 589           Alistipes ihumii
## 590           Family Ruminococcaceae
## 591           Blautia massiliensis
## 592           Alistipes obesi
## 593           Alistipes timonensis
## 594           Bacteroides clarus
## 595           Bacteroides caecimuris
## 596           Bacteroides fragilis
## 597 Bacteroides intestinalis
## 598           Alistipes onderdonkii
## 599           Anaerostipes hadrus
## 600           Alistipes senegalensis

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## 601          Alistipes onderdonkii
## 602          Akkermansia muciniphila
## 603          Bacteroides vulgatus
## 604          Bifidobacterium kashiwanohense
## 605          Alistipes shahii
## 606          Alistipes senegalensis
## 607          Bacteroides clarus
## 608          Bacteroides sp. Marseille-P3166
## 609          Bacteroides clarus
## 610          Bilophila sp. 4_1_30
## 611          Bacteroides sp. D20
## 612          Dialister invisus
## 613          Alistipes onderdonkii
## 614          Alistipes putredinis
## 615          Bacteroides pectinophilus
## 616          Alistipes timonensis
## 617          Alistipes finegoldii
## 618          Bacteroides uniformis
## 619          Bacteroides clarus
## 620          Family Lachnospiraceae
## 621          Genus Bacteroides
## 622          Bacteroides sp. D20
## 623          Bacteroides clarus
## 624          Alistipes timonensis
## 625          Alistipes ihumii
## 626          Phocea massiliensis
## 627          Alistipes shahii
## 628          Alistipes ihumii
## 629          Genus Lachnoclostridium
## 630          Bacteroides clarus
## 631          Alistipes finegoldii
## 632          Bacteroides intestinalis
## 633          Bacteroides ovatus
## 634          Clostridiales bacterium KLE1615
## 635          Bacteroides salanitronis
## 636          Alistipes senegalensis
## 637          Alistipes obesi
## 638          Alistipes sp. Marseille-P2431
## 639          Genus Blautia
## 640          Bacteroides clarus
## 641          Bacteroides eggerthii
## 642          Bacteroides uniformis
## 643          Alistipes sp. Marseille-P2431
## 644          Alistipes onderdonkii
## 645          Alistipes timonensis
## 646          Alistipes timonensis
## 647          Angelakisella massiliensis
## 648          Alistipes sp. Marseille-P2431
## 649          Eubacterium siraeum
## 650          Alistipes shahii
## 651          Alistipes shahii
## 652          Flavonifractor plautii
## 653          Bacteroides intestinalis
## 654          Alistipes shahii

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## 655           Bacteroides clarus
## 656           Alistipes senegalensis
## 657           Adlercreutzia equolifaciens
## 658           Bacteroides faecis
## 659           Alistipes sp. CHKCI003
## 660           Alistipes sp. CHKCI003
## 661           Alistipes timonensis
## 662           Alistipes shahii
## 663           Bacteroides pectinophilus
## 664           Alistipes sp. CHKCI003
## 665           Bacteroides clarus
## 666           Alistipes obesi
## 667           Alistipes sp. CHKCI003
## 668           Barnesiella intestinihominis
## 669           Bacteroides cellulosilyticus
## 670           Bacteroides caecimuris
## 671           Alistipes obesi
## 672           Family Bacteroidaceae
## 673           Alistipes shahii
## 674           Bacteroides clarus
## 675           Bacteroides intestinalis
## 676           Alistipes senegalensis
## 677           Alistipes shahii
## 678           Bacteroides sp. 9_1_42FAA
## 679           Alistipes shahii
## 680           Bacteroides eggerthii
## 681           Clostridium bolteae
## 682           Bacteroides clarus
## 683           Bacteroides pectinophilus
## 684           Bacteroides clarus
## 685           Alistipes senegalensis
## 686           Alistipes timonensis
## 687           Genus Bacteroides
## 688           Alistipes shahii
## 689           Bacteroides uniformis
## 690           Bacteroides cellulosilyticus
## 691           Bacteroides clarus
## 692           Bacteroides eggerthii
## 693           Alistipes timonensis
## 694           Alistipes finegoldii
## 695           Alistipes timonensis
## 696           Alistipes timonensis
## 697           Bacteroides clarus
## 698           Bacteroides clarus
##
##                                     Taxa2 Correlation      fdr_pval
## 1           Order Burkholderiales  0.9904372 9.390866e-27
## 2           Parasutterella exrementihominis 0.9889931 8.744378e-26
## 3           Parasutterella exrementihominis 0.9873285 8.156430e-25
## 4           Haemophilus parainfluenzae 0.9871424 1.019689e-24
## 5           Genus Eggerthella 0.9788126 2.816585e-21
## 6           Genus Bilophila 0.9757145 2.425405e-20
## 7           Collinsella sp. 4_8_47FAA 0.9752405 3.265978e-20
## 8           Sutterella sp. KLE1602 0.9662243 4.367043e-18
## 9           Genus Collinsella 0.9571630 1.818847e-16

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## 10	Clostridium sp. SS2/1	0.9569771	1.930861e-16
## 11	Genus Alistipes	0.9565574	2.230365e-16
## 12	Genus Collinsella	0.9524333	9.166179e-16
## 13	Collinsella sp. TF06-26	0.9497119	2.171617e-15
## 14	Collinsella sp. TF06-26	0.9495582	2.259855e-15
## 15	Paraprevotella clara	0.9461703	6.190793e-15
## 16	Alistipes sp. AL-1	0.9459775	6.495324e-15
## 17	Genus Collinsella	0.9434039	1.332123e-14
## 18	Bifidobacterium kashiwanohense	0.9417011	2.098177e-14
## 19	Bifidobacterium pseudocatenulatum	0.9297211	3.796276e-13
## 20	Genus Bilophila	0.9272858	6.383885e-13
## 21	Genus Alistipes	0.9271422	6.532510e-13
## 22	Bacteroides sp. D20	0.9214622	2.067653e-12
## 23	Ruthenibacterium lactatiformans	0.9157558	6.046435e-12
## 24	Genus Lachnoclostridium	0.9152088	6.630425e-12
## 25	Ruthenibacterium lactatiformans	0.9146511	7.280510e-12
## 26	Blautia sp. KLE 1732	0.8979920	1.108443e-10
## 27	Ruminococcaceae bacterium cv2	0.8905660	3.206247e-10
## 28	Blautia sp. SF-50	0.8896915	3.592470e-10
## 29	Genus Bifidobacterium	0.8851136	6.608481e-10
## 30	Order Clostridiales	0.8776670	1.695721e-09
## 31	Order Clostridiales	0.8766616	1.905206e-09
## 32	Blautia sp. SF-50	0.8701661	4.097078e-09
## 33	Genus Bifidobacterium	0.8645758	7.659563e-09
## 34	Genus Bifidobacterium	0.8609007	1.135795e-08
## 35	Genus Lachnoclostridium	0.8568074	1.739800e-08
## 36	Bacteroides xylinisolvans	0.8566566	1.755469e-08
## 37	Family Enterobacteriaceae	0.8501742	3.362318e-08
## 38	Bifidobacterium pseudocatenulatum	0.8501289	3.362318e-08
## 39	Bacteroides sp. 3_1_19	0.8427859	6.791871e-08
## 40	Flavonifractor plautii	0.8391510	9.461931e-08
## 41	Prevotella ihumii	0.8387870	9.719791e-08
## 42	Prevotella sp. KHD1	0.8379881	1.038858e-07
## 43	Genus Parabacteroides	0.8348608	1.368599e-07
## 44	Genus Lachnoclostridium	0.8284764	2.376441e-07
## 45	Prevotella sp. KHD1	0.8259495	2.926864e-07
## 46	Genus Blautia	0.8257691	2.949811e-07
## 47	Bilophila wadsworthia	0.8257074	2.949811e-07
## 48	Order Clostridiales	0.8217632	4.068776e-07
## 49	Bacteroides xylinisolvans	0.8212538	4.216097e-07
## 50	Alistipes timonensis	0.8148624	6.999205e-07
## 51	Paraprevotella xyliniphila	0.8114157	9.100076e-07
## 52	Parabacteroides sp. D26	0.8104392	9.750454e-07
## 53	Alistipes shahii	0.8102840	9.807765e-07
## 54	Flavonifractor plautii	0.8074027	1.213520e-06
## 55	Genus Alistipes	0.7994882	2.161280e-06
## 56	Subdoligranulum sp. 4_3_54A2FAA	0.7985912	2.291557e-06
## 57	Order Clostridiales	0.7979999	2.376560e-06
## 58	Bacteroides sp. 9_1_42FAA	0.7970532	2.527569e-06
## 59	Hungatella hathewayi	0.7958008	2.745987e-06
## 60	Paraprevotella xyliniphila	0.7935121	3.205629e-06
## 61	Genus Oscillibacter	0.7928210	3.344229e-06
## 62	Fournierella massiliensis	0.7914212	3.663270e-06
## 63	Family Lachnospiraceae	0.7905782	3.859893e-06

## 64	Prevotella sp. KHD1	0.7901878	3.942173e-06
## 65	Bacteroides sp. 3_1_23	0.7883121	4.454425e-06
## 66	Phylum Firmicutes	0.7854013	5.387690e-06
## 67	Pseudoflavonifractor capillosus	0.7844488	5.708597e-06
## 68	Genus Bifidobacterium	0.7788433	8.193936e-06
## 69	Bacteroides sp. 3_1_13	0.7775638	8.847836e-06
## 70	Family Lachnospiraceae	0.7765688	9.368141e-06
## 71	Alistipes sp. Marseille-P2431	0.7764989	9.368141e-06
## 72	Hungatella hathewayi	0.7695956	1.435991e-05
## 73	Alistipes timonensis	0.7683072	1.545822e-05
## 74	Phocea massiliensis	0.7677766	1.588231e-05
## 75	Parabacteroides sp. D26	0.7657745	1.784030e-05
## 76	Family Lachnospiraceae	0.7635220	2.031875e-05
## 77	Genus Bacteroides	0.7607556	2.382001e-05
## 78	Order Clostridiales	0.7603769	2.423004e-05
## 79	Genus Blautia	0.7595917	2.524223e-05
## 80	Genus Lachnoclostridium	0.7576561	2.811577e-05
## 81	Order Clostridiales	0.7565804	2.977053e-05
## 82	Bacteroides xylanisolvans	0.7543285	3.371314e-05
## 83	Alistipes timonensis	0.7537735	3.462180e-05
## 84	Bacteroides sp. 3_1_23	0.7536006	3.478754e-05
## 85	Subdoligranulum variabile	0.7523353	3.719296e-05
## 86	Bacteroides sp. D22	0.7511381	3.949820e-05
## 87	Ruminococcus sp. JC304	0.7510933	3.949820e-05
## 88	Clostridium sp. ATCC BAA-442	0.7471592	4.895717e-05
## 89	Order Clostridiales	0.7468971	4.942615e-05
## 90	Blautia wexlerae	0.7465267	5.019881e-05
## 91	Family Lachnospiraceae	0.7447186	5.517040e-05
## 92	Ruthenibacterium lactatiformans	0.7428543	6.077131e-05
## 93	Bacteroides xylanisolvans	0.7426367	6.091208e-05
## 94	Bacteroides sp. D22	0.7426326	6.091208e-05
## 95	Flavonifractor plautii	0.7417058	6.373583e-05
## 96	Hungatella hathewayi	0.7396500	7.083828e-05
## 97	Order Bacteroidales	0.7393663	7.157808e-05
## 98	Genus Bacteroides	0.7371709	8.005605e-05
## 99	Order Bacteroidales	0.7366080	8.208307e-05
## 100	Roseburia intestinalis	0.7346738	9.004359e-05
## 101	Ruminococcaceae bacterium cv2	0.7346672	9.004359e-05
## 102	Clostridioides difficile	0.7333326	9.608522e-05
## 103	Family Prevotellaceae	0.7330982	9.681271e-05
## 104	Order Clostridiales	0.7328380	9.767704e-05
## 105	Genus Bacteroides	0.7322512	9.999000e-05
## 106	Genus Alistipes	0.7322092	9.999000e-05
## 107	Bacteroides thetaiotaomicron	0.7298013	1.126689e-04
## 108	Pseudoflavonifractor capillosus	0.7288409	1.178002e-04
## 109	Prevotella copri	0.7284961	1.187987e-04
## 110	Bacteroides sp. D22	0.7284295	1.187987e-04
## 111	Prevotella ihumii	0.7284105	1.187987e-04
## 112	Order Clostridiales	0.7275792	1.233722e-04
## 113	Clostridium bolteae	0.7273835	1.240504e-04
## 114	Order Clostridiales	0.7271401	1.250356e-04
## 115	Prevotella copri	0.7266266	1.277614e-04
## 116	Bacteroides vulgatus	0.7259808	1.314148e-04
## 117	Alistipes sp. Marseille-P2431	0.7248500	1.384913e-04

## 118	Alistipes sp. Marseille-P2431	0.7231502	1.501063e-04
## 119	Parabacteroides sp. D13	0.7229127	1.512351e-04
## 120	Genus Lachnoclostridium	0.7225928	1.529977e-04
## 121	Genus Bacteroides	0.7221080	1.560507e-04
## 122	Genus Alistipes	0.7209034	1.649141e-04
## 123	Order Clostridiales	0.7182556	1.869662e-04
## 124	Clostridium sp. ATCC BAA-442	0.7155607	2.121460e-04
## 125	Genus Oscillibacter	0.7152884	2.140434e-04
## 126	Prevotella sp. KHD1	0.7145614	2.207244e-04
## 127	Genus Oscillibacter	0.7129472	2.374428e-04
## 128	Subdoligranulum variabile	0.7112699	2.560643e-04
## 129	Lachnospiraceae bacterium 7_1_58FAA	0.7097020	2.745820e-04
## 130	Order Clostridiales	0.7091596	2.805073e-04
## 131	Genus Parabacteroides	0.7059563	3.243409e-04
## 132	Hungatella hathewayi	0.7048610	3.397838e-04
## 133	Bifidobacterium catenulatum	0.7046552	3.416267e-04
## 134	Order Clostridiales	0.7045393	3.420646e-04
## 135	Bifidobacterium bifidum	0.7041560	3.467459e-04
## 136	Bacteroides sp. D22	0.7038063	3.509448e-04
## 137	Bacteroides sp. HMSC073E02	0.7021124	3.777018e-04
## 138	Genus Oscillibacter	0.6986204	4.406197e-04
## 139	Enterococcus faecium	0.6976895	4.575893e-04
## 140	Parabacteroides sp. D26	0.6974360	4.596934e-04
## 141	Genus Bacteroides	0.6974104	4.596934e-04
## 142	Eubacterium rectale	0.6969460	4.674930e-04
## 143	Pseudoflavonifractor capillosus	0.6964099	4.769362e-04
## 144	Genus Blautia	0.6955693	4.931795e-04
## 145	Flavonifractor plautii	0.6949214	5.055868e-04
## 146	Alistipes sp. CHKCI003	0.6943894	5.156294e-04
## 147	Genus Bacteroides	0.6927752	5.510785e-04
## 148	Alistipes sp. CHKCI003	0.6914439	5.801575e-04
## 149	Order Clostridiales	0.6913057	5.814505e-04
## 150	Genus Campylobacter	0.6911142	5.836566e-04
## 151	Bacteroides sp. 3_1_33FAA	0.6910454	5.836566e-04
## 152	Phylum Firmicutes	0.6904044	5.979271e-04
## 153	Parabacteroides sp. D26	0.6897798	6.120757e-04
## 154	Order Clostridiales	0.6891337	6.271118e-04
## 155	Enterococcus faecium	0.6884730	6.428841e-04
## 156	Erysipelotrichaceae bacterium 6_1_45	0.6879431	6.535168e-04
## 157	Prevotella stercorea	0.6879210	6.535168e-04
## 158	Pseudoflavonifractor capillosus	0.6877724	6.552926e-04
## 159	Clostridioides difficile	0.6862267	6.976890e-04
## 160	Clostridium sp. SS2/1	0.6858564	7.062398e-04
## 161	Bacteroides uniformis	0.6855017	7.144142e-04
## 162	Genus Lachnoclostridium	0.6844010	7.425335e-04
## 163	Genus Eggerthella	0.6843437	7.425335e-04
## 164	Phylum Firmicutes	0.6843403	7.425335e-04
## 165	Prevotella copri	0.6834592	7.680493e-04
## 166	Bacteroides sp. D2	0.6817730	8.217583e-04
## 167	Clostridium clostridioforme	0.6808705	8.504650e-04
## 168	Alistipes sp. Marseille-P2431	0.6804985	8.607588e-04
## 169	Genus Bacteroides	0.6800791	8.728980e-04
## 170	Clostridium lavalense	0.6797866	8.789751e-04
## 171	Flavonifractor plautii	0.6797444	8.789751e-04

## 172	Parabacteroides sp. D13	0.6792439	8.943773e-04
## 173	Gemmiger formicilis	0.6791087	8.962939e-04
## 174	Lachnospiraceae bacterium 7_1_58FAA	0.6788429	9.031185e-04
## 175	Genus Lachnoclostridium	0.6782798	9.212989e-04
## 176	Hungatella hathewayi	0.6781223	9.241441e-04
## 177	Intestinimonas butyriciproducens	0.6773263	9.518379e-04
## 178	Prevotella bivia	0.6771670	9.524415e-04
## 179	Bacteroides sp. 3_1_13	0.6771350	9.524415e-04
## 180	Genus Bifidobacterium	0.6770260	9.524415e-04
## 181	Enterococcus faecium	0.6769807	9.524415e-04
## 182	Alistipes shahii	0.6761112	9.838743e-04
## 183	Alistipes timonensis	0.6744068	1.051599e-03
## 184	Clostridiales bacterium 1_7_47FAA	0.6734720	1.088846e-03
## 185	Clostridium sp. ATCC BAA-442	0.6733420	1.090968e-03
## 186	Flavonifractor plautii	0.6732158	1.092936e-03
## 187	Genus Blautia	0.6725715	1.118221e-03
## 188	Ruminococcaceae bacterium D5	0.6723896	1.122783e-03
## 189	Genus Bacteroides	0.6718040	1.145965e-03
## 190	Clostridium symbiosum	0.6689792	1.278117e-03
## 191	Genus Streptococcus	0.6675798	1.344647e-03
## 192	Family Lachnospiraceae	0.6671113	1.365514e-03
## 193	Haemophilus parainfluenzae	0.6665923	1.385913e-03
## 194	Genus Oscillibacter	0.6665750	1.385913e-03
## 195	Genus Bacteroides	0.6663054	1.396305e-03
## 196	Clostridium sp. ATCC BAA-442	0.6657179	1.424602e-03
## 197	Flavonifractor plautii	0.6653873	1.438732e-03
## 198	Phylum Firmicutes	0.6647463	1.470906e-03
## 199	Kingdom Bacteria	0.6641471	1.501246e-03
## 200	Flavonifractor plautii	0.6615742	1.655170e-03
## 201	Genus Eggerthella	0.6607397	1.695058e-03
## 202	Genus Blautia	0.6607222	1.695058e-03
## 203	Subdoligranulum variabile	0.6607189	1.695058e-03
## 204	Bacteroides sp. HMSC073E02	0.6605847	1.698576e-03
## 205	Bifidobacterium longum	0.6604961	1.699103e-03
## 206	Eggerthella lenta	0.6598412	1.737383e-03
## 207	Family Lachnospiraceae	0.6597571	1.737637e-03
## 208	Ruminococcus champanellensis	0.6587233	1.802884e-03
## 209	Fournierella massiliensis	0.6573794	1.892713e-03
## 210	Genus Oscillibacter	0.6571132	1.906266e-03
## 211	Prevotella ihumii	0.6569888	1.909503e-03
## 212	Clostridium bolteae	0.6568350	1.914921e-03
## 213	Alistipes sp. Marseille-P2431	0.6551325	2.037345e-03
## 214	Subdoligranulum sp. 4_3_54A2FAA	0.6528494	2.214826e-03
## 215	Subdoligranulum sp. 4_3_54A2FAA	0.6520966	2.266252e-03
## 216	Faecalitalea cylindroides	0.6520799	2.266252e-03
## 217	Alistipes sp. CHKCI003	0.6519732	2.268527e-03
## 218	Order Clostridiales	0.6509215	2.352861e-03
## 219	Bacteroides sp. HPS0048	0.6493548	2.487349e-03
## 220	Flavonifractor plautii	0.6485469	2.555659e-03
## 221	Enterococcus faecium	0.6477776	2.621879e-03
## 222	Ruthenibacterium lactatiformans	0.6475963	2.631717e-03
## 223	Genus Oscillibacter	0.6464024	2.742349e-03
## 224	Roseburia faecis	0.6461695	2.757850e-03
## 225	Subdoligranulum variabile	0.6457354	2.794056e-03

## 226	Genus Eggerthella	0.6456397	2.795693e-03
## 227	Bacteroides vulgatus	0.6455032	2.801554e-03
## 228	Blautia wexlerae	0.6449504	2.850697e-03
## 229	Bacteroides sp. 1_1_30	0.6443407	2.906660e-03
## 230	Lachnospiraceae bacterium 7_1_58FAA	0.6439541	2.939532e-03
## 231	Clostridium bolteae	0.6429079	3.045132e-03
## 232	Intestinimonas butyriciproducens	0.6425328	3.078113e-03
## 233	Fournierella massiliensis	0.6414222	3.195588e-03
## 234	Family Lachnospiraceae	0.6400549	3.347775e-03
## 235	Clostridium bolteae	0.6399767	3.347775e-03
## 236	Bacteroides sp. 3_1_23	0.6391989	3.433064e-03
## 237	Alistipes timonensis	0.6390353	3.434657e-03
## 238	Kingdom Bacteria	0.6390279	3.434657e-03
## 239	Phylum Firmicutes	0.6383423	3.510292e-03
## 240	Bacteroides uniformis	0.6376183	3.586494e-03
## 241	Order Clostridiales	0.6375851	3.586494e-03
## 242	Family Lachnospiraceae	0.6369757	3.655139e-03
## 243	Genus Campylobacter	0.6356199	3.825140e-03
## 244	Genus Alistipes	0.6349087	3.911917e-03
## 245	Bacteroides xylinisolvans	0.6339213	4.039656e-03
## 246	Roseburia hominis	0.6331334	4.130469e-03
## 247	Flavonifractor plautii	0.6317989	4.316742e-03
## 248	Family Lachnospiraceae	0.6315682	4.327905e-03
## 249	Order Bacteroidales	0.6308139	4.431418e-03
## 250	Blautia obeum	0.6300008	4.534079e-03
## 251	Ruthenibacterium lactatiformans	0.6297367	4.562856e-03
## 252	Bifidobacterium kashiwanohense	0.6296632	4.562856e-03
## 253	Bifidobacterium catenulatum	0.6295262	4.572281e-03
## 254	Bacteroides intestinalis	0.6292098	4.610394e-03
## 255	Genus Bacteroides	0.6280027	4.794427e-03
## 256	Order Clostridiales	0.6278921	4.799929e-03
## 257	Bacteroides sp. 2_2_4	0.6266574	4.995381e-03
## 258	Genus Blautia	0.6263531	5.034521e-03
## 259	Phylum Firmicutes	0.6259353	5.093764e-03
## 260	Subdoligranulum variabile	0.6253088	5.190616e-03
## 261	Hungatella hathewayi	0.6245121	5.319954e-03
## 262	Bifidobacterium longum	0.6242895	5.346440e-03
## 263	Clostridioides difficile	0.6241211	5.363150e-03
## 264	Prevotellamassilia timonensis	0.6225817	5.636762e-03
## 265	Phascolarctobacterium succinutens	0.6222601	5.683695e-03
## 266	Hungatella hathewayi	0.6198721	6.144850e-03
## 267	Genus Prevotella	0.6194626	6.213784e-03
## 268	Genus Blautia	0.6192035	6.251825e-03
## 269	Bacteroides sp. 3_1_13	0.6184059	6.372506e-03
## 270	Family Lachnospiraceae	0.6184016	6.372506e-03
## 271	Ruthenibacterium lactatiformans	0.6180712	6.426781e-03
## 272	Clostridium bolteae	0.6179245	6.441844e-03
## 273	Pseudoflavonifractor capillosus	0.6175373	6.508987e-03
## 274	Clostridium clostridioforme	0.6170196	6.605400e-03
## 275	Prevotella copri	0.6167784	6.641738e-03
## 276	Genus Oscillibacter	0.6166052	6.663191e-03
## 277	Pseudoflavonifractor sp. Marseille-P3106	0.6161390	6.739624e-03
## 278	Streptococcus thermophilus	0.6161099	6.739624e-03
## 279	Subdoligranulum variabile	0.6159369	6.761397e-03

## 280	Clostridium sp. ATCC BAA-442	0.6149046	6.978990e-03
## 281	Fusicatenibacter saccharivorans	0.6146645	7.005124e-03
## 282	Subdoligranulum sp. 4_3_54A2FAA	0.6146402	7.005124e-03
## 283	Bacteroides vulgatus	0.6143818	7.047565e-03
## 284	Ruminococcus sp. JC304	0.6140672	7.103405e-03
## 285	Genus Lachnoclostridium	0.6137834	7.152380e-03
## 286	Bacteroides sp. HMSC068A09	0.6135142	7.198222e-03
## 287	Bacteroides sp. 9_1_42FAA	0.6132427	7.244904e-03
## 288	Genus Campylobacter	0.6128730	7.315398e-03
## 289	Genus Bacteroides	0.6127537	7.326093e-03
## 290	Genus Lachnoclostridium	0.6120120	7.488040e-03
## 291	Streptococcus thermophilus	0.6114826	7.600231e-03
## 292	Genus Oscillibacter	0.6093993	8.074607e-03
## 293	Genus Lachnoclostridium	0.6089425	8.175293e-03
## 294	Pseudoflavonifractor capillosus	0.6062320	8.857941e-03
## 295	Family Ruminococcaceae	0.6058886	8.934655e-03
## 296	Genus Roseburia	0.6054458	9.020202e-03
## 297	Bacteroides sp. HMSC073E02	0.6054423	9.020202e-03
## 298	Enterococcus faecium	0.6047906	9.166539e-03
## 299	Eggerthella lenta	0.6043549	9.248923e-03
## 300	Prevotella sp. KHD1	0.6042933	9.248923e-03
## 301	Order Clostridiales	0.6036783	9.408355e-03
## 302	Clostridium clostridioforme	0.6029304	9.612198e-03
## 303	Prevotella sp. KHD1	0.6025373	9.710097e-03
## 304	Pseudoflavonifractor capillosus	0.6021708	9.800650e-03
## 305	Genus Campylobacter	0.6013805	1.000209e-02
## 306	Ruthenibacterium lactatiformans	0.6010295	1.009012e-02
## 307	Phylum Firmicutes	0.6006395	1.019139e-02
## 308	Family Ruminococcaceae	0.5997489	1.045686e-02
## 309	Phocea massiliensis	0.5993692	1.053915e-02
## 310	Roseburia inulinivorans	0.5993528	1.053915e-02
## 311	Bacteroides sp. HMSC067B03	0.5990454	1.061689e-02
## 312	Genus Bacteroides	0.5982017	1.083072e-02
## 313	Ruminococcaceae bacterium D16	0.5971608	1.115875e-02
## 314	Alistipes senegalensis	0.5970502	1.117191e-02
## 315	Genus Roseburia	0.5965548	1.131986e-02
## 316	Fusicatenibacter saccharivorans	0.5964654	1.132579e-02
## 317	Genus Blautia	0.5952270	1.174280e-02
## 318	Prevotellamassilia timonensis	0.5949537	1.181598e-02
## 319	Genus Lachnoclostridium	0.5947161	1.187646e-02
## 320	Clostridium sp. ATCC BAA-442	0.5946371	1.187889e-02
## 321	Alistipes sp. CHKCI003	0.5942180	1.200678e-02
## 322	Enterococcus faecium	0.5937452	1.215597e-02
## 323	Genus Lachnoclostridium	0.5924708	1.258566e-02
## 324	Ruminococcus champanellensis	0.5921401	1.268583e-02
## 325	Order Bacteroidales	0.5916031	1.283940e-02
## 326	Pseudoflavonifractor capillosus	0.5912373	1.295529e-02
## 327	Clostridium sp. SS2/1	0.5911063	1.297877e-02
## 328	Genus Oscillibacter	0.5906264	1.314146e-02
## 329	Bacteroides sp. D2	0.5903153	1.323773e-02
## 330	Order Clostridiales	0.5896161	1.348823e-02
## 331	Subdoligranulum variabile	0.5895561	1.348823e-02
## 332	Genus Bacteroides	0.5883735	1.389939e-02
## 333	Ruminococcus sp. JC304	0.5883518	1.389939e-02

## 334	Phylum Firmicutes	0.5878618	1.407653e-02
## 335	Ruminococcus sp. JC304	0.5876116	1.415285e-02
## 336	Genus Campylobacter	0.5873152	1.424944e-02
## 337	Fusicatenibacter saccharivorans	0.5870260	1.434346e-02
## 338	Clostridium sp. SS2/1	0.5869418	1.434926e-02
## 339	Pseudoflavonifractor sp. Marseille-P3106	0.5860458	1.467863e-02
## 340	Genus Eggerthella	0.5856656	1.481566e-02
## 341	Order Bacteroidales	0.5849608	1.509988e-02
## 342	Phocea massiliensis	0.5836740	1.565838e-02
## 343	Clostridiales bacterium 1_7_47FAA	0.5835620	1.567765e-02
## 344	Prevotella stercorea	0.5834464	1.569868e-02
## 345	Enterococcus faecium	0.5833164	1.572654e-02
## 346	Genus Bilophila	0.5831575	1.576800e-02
## 347	Alistipes timonensis	0.5829309	1.584150e-02
## 348	Pseudoflavonifractor capillosus	0.5822837	1.606632e-02
## 349	Neglecta timonensis	0.5822462	1.606632e-02
## 350	Ruthenibacterium lactatiformans	0.5814891	1.639681e-02
## 351	Bacteroides salyersiae	0.5811413	1.653211e-02
## 352	Ruminococcaceae bacterium cv2	0.5801942	1.696568e-02
## 353	Genus Bifidobacterium	0.5798439	1.710636e-02
## 354	Order Clostridiales	0.5795498	1.720069e-02
## 355	Genus Bacteroides	0.5790079	1.740958e-02
## 356	Roseburia inulinivorans	0.5789674	1.740958e-02
## 357	Parabacteroides johnsonii	0.5779685	1.782769e-02
## 358	Genus Eggerthella	0.5779492	1.782769e-02
## 359	Phylum Firmicutes	0.5774063	1.807620e-02
## 360	Subdoligranulum sp. 4_3_54A2FAA	0.5767637	1.834695e-02
## 361	Bacteroides pectinophilus	0.5767275	1.834695e-02
## 362	Phylum Firmicutes	0.5766892	1.834695e-02
## 363	Genus Campylobacter	0.5758328	1.877212e-02
## 364	Roseburia inulinivorans	0.5755093	1.891136e-02
## 365	Enterococcus faecium	0.5752006	1.904333e-02
## 366	Enterococcus faecium	0.5748807	1.914415e-02
## 367	Bacteroides intestinalis	0.5747397	1.918426e-02
## 368	Ruminococcus champanellensis	0.5744643	1.929946e-02
## 369	Phylum Firmicutes	0.5743727	1.931231e-02
## 370	Ruminococcaceae bacterium cv2	0.5738394	1.949763e-02
## 371	Bifidobacterium kashiwanohense	0.5737419	1.951295e-02
## 372	Family Ruminococcaceae	0.5733259	1.960639e-02
## 373	Bacteroides sp. D22	0.5733050	1.960639e-02
## 374	Genus Lachnoclostridium	0.5729899	1.974666e-02
## 375	Negativibacillus massiliensis	0.5724709	1.988894e-02
## 376	Bacteroides sp. 4_3_47FAA	0.5721045	2.006072e-02
## 377	Order Clostridiales	0.5718926	2.014425e-02
## 378	Phylum Firmicutes	0.5715984	2.025699e-02
## 379	Roseburia intestinalis	0.5715642	2.025699e-02
## 380	Genus Oscillibacter	0.5711258	2.043469e-02
## 381	Blautia wexlerae	0.5708234	2.053384e-02
## 382	Ruthenibacterium lactatiformans	0.5700826	2.082594e-02
## 383	Clostridium sp. ATCC BAA-442	0.5700636	2.082594e-02
## 384	Ruminococcaceae bacterium cv2	0.5697716	2.096053e-02
## 385	Genus Lachnoclostridium	0.5696677	2.098316e-02
## 386	Hungatella hathewayi	0.5695872	2.099184e-02
## 387	Clostridium sp. ATCC BAA-442	0.5689878	2.131098e-02

## 388	Prevotella copri	0.5689253	2.131098e-02
## 389	Parabacteroides sp. 20_3	0.5680378	2.180246e-02
## 390	Clostridium lavalense	0.5679905	2.180246e-02
## 391	Genus Bacteroides	0.5677774	2.185714e-02
## 392	Prevotella ihumii	0.5677708	2.185714e-02
## 393	Ruminococcus sp. JC304	0.5675835	2.185889e-02
## 394	Bacteroides xylinisolvans	0.5673377	2.196370e-02
## 395	Pseudoflavonifractor capillosus	0.5668815	2.220778e-02
## 396	Kingdom Bacteria	0.5667105	2.227431e-02
## 397	Roseburia hominis	0.5665017	2.236490e-02
## 398	Fusicatenibacter saccharivorans	0.5663964	2.238976e-02
## 399	Bilophila sp. 4_1_30	0.5663326	2.238976e-02
## 400	Phocea massiliensis	0.5659770	2.251101e-02
## 401	Phylum Bacteroidetes	0.5659754	2.251101e-02
## 402	Lachnospiraceae bacterium 7_1_58FAA	0.5659471	2.251101e-02
## 403	Ruminococcaceae bacterium D5	0.5658690	2.251972e-02
## 404	Ruminococcaceae bacterium D16	0.5655973	2.261061e-02
## 405	Bacteroides sp. HMSC073E02	0.5652239	2.280798e-02
## 406	Genus Bacteroides	0.5650749	2.286245e-02
## 407	Pseudoflavonifractor sp. Marseille-P3106	0.5644133	2.319715e-02
## 408	Phylum Bacteroidetes	0.5643685	2.319715e-02
## 409	Pseudoflavonifractor sp. Marseille-P3106	0.5643648	2.319715e-02
## 410	Fournierella massiliensis	0.5640786	2.330911e-02
## 411	Family Lachnospiraceae	0.5633058	2.368263e-02
## 412	Intestinimonas butyriciproducens	0.5621228	2.436278e-02
## 413	Bacteroides vulgatus	0.5620993	2.436278e-02
## 414	Subdoligranulum sp. 4_3_54A2FAA	0.5616815	2.460398e-02
## 415	Bacteroides sp. 3_1_19	0.5614345	2.468638e-02
## 416	Ruthenibacterium lactatiformans	0.5612950	2.473874e-02
## 417	Bifidobacterium pseudocatenulatum	0.5611914	2.476654e-02
## 418	Subdoligranulum variabile	0.5607404	2.493289e-02
## 419	Genus Roseburia	0.5606984	2.493289e-02
## 420	Genus Bacteroides	0.5606340	2.493411e-02
## 421	Blautia obeum	0.5605175	2.497135e-02
## 422	Clostridium bolteae	0.5602968	2.508089e-02
## 423	Enterococcus faecium	0.5601273	2.515525e-02
## 424	Ruminococcaceae bacterium cv2	0.5599604	2.519037e-02
## 425	Hungatella hathewayi	0.5599523	2.519037e-02
## 426	Phylum Firmicutes	0.5598306	2.523180e-02
## 427	Barnesiella viscericola	0.5596269	2.533069e-02
## 428	Family Ruminococcaceae	0.5593441	2.548541e-02
## 429	Phylum Bacteroidetes	0.5592207	2.550029e-02
## 430	Genus Eggerthella	0.5591991	2.550029e-02
## 431	Streptococcus thermophilus	0.5591274	2.550725e-02
## 432	Eggerthella lenta	0.5590390	2.552605e-02
## 433	Eggerthella lenta	0.5589058	2.553969e-02
## 434	Negativibacillus massiliensis	0.5588965	2.553969e-02
## 435	Order Bacteroidales	0.5585548	2.571529e-02
## 436	Fournierella massiliensis	0.5585248	2.571529e-02
## 437	Genus Roseburia	0.5578713	2.609313e-02
## 438	Family Ruminococcaceae	0.5577807	2.611418e-02
## 439	Subdoligranulum sp. 4_3_54A2FAA	0.5573423	2.638575e-02
## 440	Ruminococcaceae bacterium cv2	0.5569440	2.663045e-02
## 441	Phylum Firmicutes	0.5567369	2.669779e-02

## 442	Phylum Firmicutes	0.5567297	2.669779e-02
## 443	Ruminococcaceae bacterium cv2	0.5564261	2.687543e-02
## 444	Eubacterium ventriosum	0.5555051	2.751349e-02
## 445	Bacteroides sp. HMSC067B03	0.5552260	2.765996e-02
## 446	Bacteroides sp. D20	0.5550602	2.771067e-02
## 447	Family Lachnospiraceae	0.5549621	2.773888e-02
## 448	Subdoligranulum variabile	0.5547939	2.782008e-02
## 449	Ruminococcaceae bacterium cv2	0.5544399	2.797858e-02
## 450	Emergencia timonensis	0.5544033	2.797858e-02
## 451	Prevotella ihumii	0.5536558	2.843992e-02
## 452	Flavonifractor plautii	0.5536552	2.843992e-02
## 453	Bacteroides sp. 1_1_30	0.5536192	2.843992e-02
## 454	Bacteroides sp. 4_3_47FAA	0.5533011	2.859252e-02
## 455	Blautia sp. Marseille-P3087	0.5527060	2.897498e-02
## 456	Prevotellamassilia timonensis	0.5526890	2.897498e-02
## 457	Parabacteroides johnsonii	0.5525908	2.897498e-02
## 458	Bilophila wadsworthia	0.5525695	2.897498e-02
## 459	Genus Blautia	0.5523569	2.904784e-02
## 460	Genus Roseburia	0.5520996	2.909430e-02
## 461	Prevotellamassilia timonensis	0.5520972	2.909430e-02
## 462	Provencibacterium massiliense	0.5520595	2.909430e-02
## 463	Genus Blautia	0.5517428	2.927182e-02
## 464	Subdoligranulum variabile	0.5517151	2.927182e-02
## 465	Bacteroides sp. HMSC073E02	0.5513143	2.954200e-02
## 466	Negativibacillus massiliensis	0.5498148	3.055983e-02
## 467	Pseudoflavonifractor capillosus	0.5497006	3.060494e-02
## 468	Parabacteroides sp. D13	0.5496410	3.060543e-02
## 469	Erysipelotrichaceae bacterium 6_1_45	0.5494752	3.069302e-02
## 470	Clostridioides difficile	0.5493497	3.074768e-02
## 471	Subdoligranulum variabile	0.5492093	3.078526e-02
## 472	Lachnospiraceae bacterium 7_1_58FAA	0.5491865	3.078526e-02
## 473	Phylum Bacteroidetes	0.5488048	3.105183e-02
## 474	Bacteroides sp. 3_1_33FAA	0.5487048	3.108613e-02
## 475	Neglecta timonensis	0.5484907	3.121532e-02
## 476	Bifidobacterium longum	0.5479716	3.160051e-02
## 477	Order Clostridiales	0.5477145	3.176787e-02
## 478	Pseudoflavonifractor capillosus	0.5472965	3.194409e-02
## 479	Ruminococcus champanellensis	0.5472728	3.194409e-02
## 480	Coprococcus comes	0.5469743	3.201506e-02
## 481	Bacteroides sp. HMSC073E02	0.5469421	3.201506e-02
## 482	Family Prevotellaceae	0.5468729	3.201506e-02
## 483	Order Clostridiales	0.5468413	3.201506e-02
## 484	Alistipes sp. Marseille-P2431	0.5467137	3.203528e-02
## 485	Dorea formicigenerans	0.5467021	3.203528e-02
## 486	Lachnospiraceae bacterium 7_1_58FAA	0.5463796	3.221173e-02
## 487	Hungatella hathewayi	0.5462717	3.221607e-02
## 488	Provencibacterium massiliense	0.5462597	3.221607e-02
## 489	Subdoligranulum sp. 4_3_54A2FAA	0.5456989	3.263662e-02
## 490	Gemmiger formicilis	0.5450311	3.302820e-02
## 491	Subdoligranulum variabile	0.5448366	3.310236e-02
## 492	Order Clostridiales	0.5447827	3.310236e-02
## 493	Tyzzerella nexilis	0.5447750	3.310236e-02
## 494	Genus Blautia	0.5447053	3.311355e-02
## 495	Bacteroides xylosoxylansolvans	0.5443595	3.336641e-02

## 496	Pseudoflavonifractor sp.	Marseille-P3106	0.5440176	3.361750e-02
## 497	Ruminococcaceae	bacterium D16	0.5435364	3.395766e-02
## 498	Family Lachnospiraceae		0.5432097	3.418502e-02
## 499	Bacteroides sp.	3_1_13	0.5429279	3.438727e-02
## 500	Ruthenibacterium	lactatiformans	0.5427607	3.441058e-02
## 501	Parabacteroides sp.	20_3	0.5427324	3.441058e-02
## 502	Lachnospiraceae	bacterium 7_1_58FAA	0.5426187	3.446227e-02
## 503	Intestinimonas	massiliensis	0.5421804	3.480819e-02
## 504	Subdoligranulum sp.	4_3_54A2FAA	0.5419943	3.492638e-02
## 505	Roseburia faecis		0.5416382	3.514918e-02
## 506	Bacteroides sp.	3_1_23	0.5409600	3.561936e-02
## 507	Phylum Bacteroidetes		0.5405742	3.587344e-02
## 508	Genus Campylobacter		0.5405188	3.587344e-02
## 509	Roseburia inulinivorans		0.5402403	3.608157e-02
## 510	Clostridium	lavalense	0.5401596	3.610496e-02
## 511	Bacteroides sp.	3_1_23	0.5399365	3.626211e-02
## 512	Erysipelotrichaceae	bacterium 6_1_45	0.5397706	3.636593e-02
## 513	Roseburia inulinivorans		0.5392803	3.669909e-02
## 514	Bacteroides plebeius		0.5391885	3.669909e-02
## 515	Emergencia timonensis		0.5391872	3.669909e-02
## 516	Bacteroides sp.	3_1_40A	0.5386996	3.701423e-02
## 517	Clostridium sp.	SS2/1	0.5383004	3.734456e-02
## 518	Genus Bacteroides		0.5378852	3.763934e-02
## 519	Family Lachnospiraceae		0.5376904	3.777500e-02
## 520	Family Bacteroidaceae		0.5373687	3.798133e-02
## 521	Genus Roseburia		0.5369013	3.838640e-02
## 522	Phylum Firmicutes		0.5367256	3.850555e-02
## 523	Order Bacteroidales		0.5366132	3.856234e-02
## 524	Pseudoflavonifractor sp.	Marseille-P3106	0.5364690	3.865083e-02
## 525	Eubacterium	rectale	0.5362063	3.880293e-02
## 526	Flavonifractor	plautii	0.5360350	3.891908e-02
## 527	Prevotella copri		0.5358986	3.900057e-02
## 528	Intestinimonas	massiliensis	0.5357032	3.914151e-02
## 529	Bacteroides sp.	4_1_36	0.5354369	3.929920e-02
## 530	Ruminococcaceae	bacterium D16	0.5351072	3.952164e-02
## 531	Order Clostridiales		0.5347972	3.972537e-02
## 532	Ruminococcaceae	bacterium D16	0.5344475	3.996026e-02
## 533	Genus Bacteroides		0.5343130	3.996026e-02
## 534	Order Clostridiales		0.5342253	3.996026e-02
## 535	Parabacteroides sp.	D13	0.5341871	3.996026e-02
## 536	Flavonifractor	plautii	0.5335704	4.033170e-02
## 537	Genus Roseburia		0.5326906	4.105898e-02
## 538	Ruminococcaceae	bacterium cv2	0.5322550	4.139519e-02
## 539	Ruthenibacterium	lactatiformans	0.5321636	4.139519e-02
## 540	Alistipes	senegalensis	0.5321035	4.139519e-02
## 541	Family Lachnospiraceae		0.5320495	4.139519e-02
## 542	Lachnospiraceae	bacterium 7_1_58FAA	0.5315406	4.182010e-02
## 543	Pseudoflavonifractor sp.	Marseille-P3106	0.5315384	4.182010e-02
## 544	Prevotella sp.	KHD1	0.5314095	4.189186e-02
## 545	Bacteroides sp.	Marseille-P3208T	0.5313643	4.189186e-02
## 546	Blautia sp.	Marseille-P3087	0.5312839	4.192081e-02
## 547	Genus Oscillibacter		0.5311393	4.195112e-02
## 548	Tyzzerella	nexilis	0.5310863	4.195112e-02
## 549	Holdemania sp.	Marseille-P2844	0.5308230	4.204632e-02

## 550	Clostridium sp. ATCC BAA-442	0.5307570	4.204632e-02
## 551	Intestinimonas butyriciproducens	0.5307475	4.204632e-02
## 552	Alistipes timonensis	0.5306905	4.204632e-02
## 553	Clostridium lavalense	0.5302464	4.246342e-02
## 554	Roseburia inulinivorans	0.5297640	4.282439e-02
## 555	Ruminococcus champanellensis	0.5297116	4.282439e-02
## 556	Bacteroides sp. D2	0.5292930	4.309509e-02
## 557	Ruminococcaceae bacterium cv2	0.5287222	4.365961e-02
## 558	Lachnospiraceae bacterium 7_1_58FAA	0.5285722	4.376675e-02
## 559	Coprococcus comes	0.5284893	4.380059e-02
## 560	Negativibacillus massiliensis	0.5284204	4.381906e-02
## 561	Intestinimonas butyriciproducens	0.5280349	4.412889e-02
## 562	Holdemania filiformis	0.5275411	4.439038e-02
## 563	Hungatella hathewayi	0.5275361	4.439038e-02
## 564	Emergencia timonensis	0.5274950	4.439038e-02
## 565	Enterococcus faecium	0.5274361	4.439038e-02
## 566	Genus Campylobacter	0.5270944	4.471298e-02
## 567	Prevotella stercorea	0.5269925	4.476923e-02
## 568	Erysipelotrichaceae bacterium 6_1_45	0.5268725	4.484573e-02
## 569	Bacteroides sp. 9_1_42FAA	0.5267392	4.487973e-02
## 570	Clostridium asparagiforme	0.5264445	4.515265e-02
## 571	Ruminococcus sp. JC304	0.5263062	4.525052e-02
## 572	Emergencia timonensis	0.5259968	4.546495e-02
## 573	Ruminococcus champanellensis	0.5259604	4.546495e-02
## 574	Bacteroides sp. 3_1_33FAA	0.5259113	4.546495e-02
## 575	Bacteroides sp. 1_1_6	0.5253008	4.604253e-02
## 576	Order Bacteroidales	0.5247506	4.661576e-02
## 577	Subdoligranulum sp. 4_3_54A2FAA	0.5246515	4.665482e-02
## 578	Bacteroides vulgatus	0.5246147	4.665482e-02
## 579	Fournierella massiliensis	0.5245365	4.668627e-02
## 580	Bacteroides sp. D22	0.5243659	4.676593e-02
## 581	Tyzzerella nexilis	0.5238037	4.730136e-02
## 582	Subdoligranulum sp. 4_3_54A2FAA	0.5236803	4.738315e-02
## 583	Pseudoflavonifractor sp. Marseille-P3106	0.5236323	4.738315e-02
## 584	Genus Oscillibacter	0.5234401	4.754896e-02
## 585	Bacteroides sp. D2	0.5231745	4.780169e-02
## 586	Ruminococcaceae bacterium cv2	0.5227992	4.812560e-02
## 587	Bacteroides sp. D22	0.5218170	4.919549e-02
## 588	Gemmiger formicilis	0.5218038	4.919549e-02
## 589	Alistipes indistinctus	0.5210666	4.990214e-02
## 590	Genus Roseburia	0.5209201	4.990214e-02
## 591	Fusicatenibacter saccharivorans	0.5209192	4.990214e-02
## 592	Enterococcus faecium	-0.5209622	4.990214e-02
## 593	Clostridium bolteae	-0.5210029	4.990214e-02
## 594	Ruthenibacterium lactatiformans	-0.5215182	4.947991e-02
## 595	Eubacterium ventriosum	-0.5228650	4.810753e-02
## 596	Ruminococcus champanellensis	-0.5240263	4.710106e-02
## 597	Phylum Firmicutes	-0.5244421	4.673663e-02
## 598	Hungatella hathewayi	-0.5255287	4.584094e-02
## 599	Bacteroides intestinalis	-0.5262180	4.529209e-02
## 600	Flavonifractor plautii	-0.5268175	4.484970e-02
## 601	Ruminococcus sp. JC304	-0.5274636	4.439038e-02
## 602	Blautia obeum	-0.5276145	4.439038e-02
## 603	Eubacterium eligens	-0.5278526	4.427299e-02

## 604	Intestinimonas butyriciproducens	-0.5283364	4.385415e-02
## 605	Genus Oscillibacter	-0.5294456	4.298647e-02
## 606	Clostridium sp. SS2/1	-0.5294901	4.298647e-02
## 607	Flavonifractor plautii	-0.5297004	4.282439e-02
## 608	Genus Oscillibacter	-0.5299312	4.274522e-02
## 609	Hungatella hathewayi	-0.5307281	4.204632e-02
## 610	Coprococcus eutactus	-0.5310436	4.195112e-02
## 611	Gemmiger formicilis	-0.5310823	4.195112e-02
## 612	Phascolarctobacterium succinatutens	-0.5320484	4.139519e-02
## 613	Dorea longicatena	-0.5321624	4.139519e-02
## 614	Phylum Bacteroidetes	-0.5330106	4.078220e-02
## 615	Bacteroides sp. 3_1_19	-0.5331506	4.069287e-02
## 616	Anaerostipes hadrus	-0.5335548	4.033170e-02
## 617	Family Bacteroidaceae	-0.5338766	4.011225e-02
## 618	Kingdom Bacteria	-0.5338858	4.011225e-02
## 619	Ruminococcaceae bacterium cv2	-0.5340370	4.005836e-02
## 620	Genus Alistipes	-0.5341973	3.996026e-02
## 621	Prevotella stercorea	-0.5342319	3.996026e-02
## 622	Blautia sp. Marseille-P3087	-0.5343065	3.996026e-02
## 623	Family Lachnospiraceae	-0.5348701	3.970662e-02
## 624	Genus Streptococcus	-0.5353038	3.937827e-02
## 625	Clostridium sp. SS2/1	-0.5356017	3.918846e-02
## 626	Phylum Bacteroidetes	-0.5363651	3.869957e-02
## 627	Clostridium sp. SS2/1	-0.5374534	3.795238e-02
## 628	Enterococcus faecium	-0.5382054	3.738282e-02
## 629	Ruminococcus champanellensis	-0.5389924	3.678759e-02
## 630	Genus Oscillibacter	-0.5391408	3.669909e-02
## 631	Family Prevotellaceae	-0.5393982	3.666571e-02
## 632	Enterococcus faecium	-0.5406392	3.586559e-02
## 633	Ruminococcus champanellensis	-0.5409679	3.561936e-02
## 634	Dakarella massiliensis	-0.5414240	3.529441e-02
## 635	Negativibacillus massiliensis	-0.5416486	3.514918e-02
## 636	Genus Streptococcus	-0.5427491	3.441058e-02
## 637	Order Clostridiales	-0.5435208	3.395766e-02
## 638	Family Lachnospiraceae	-0.5453382	3.281114e-02
## 639	Ruminococcaceae bacterium D5	-0.5455974	3.263662e-02
## 640	Clostridium clostridioforme	-0.5456413	3.263662e-02
## 641	Phylum Firmicutes	-0.5465916	3.208025e-02
## 642	Ruminococcus sp. JC304	-0.5470804	3.200872e-02
## 643	Genus Streptococcus	-0.5471268	3.200872e-02
## 644	Family Lachnospiraceae	-0.5475630	3.179710e-02
## 645	Flavonifractor plautii	-0.5476341	3.178642e-02
## 646	Clostridium sp. SS2/1	-0.5502547	3.024978e-02
## 647	Bacteroides eggerthii	-0.5502954	3.024978e-02
## 648	Kingdom Bacteria	-0.5504587	3.018048e-02
## 649	Genus Blautia	-0.5521937	2.909430e-02
## 650	Genus Bacteroides	-0.5524418	2.902817e-02
## 651	Bacteroides fragilis	-0.5535360	2.845763e-02
## 652	Ruminococcus champanellensis	-0.5547315	2.782148e-02
## 653	Dorea formicigenerans	-0.5551883	2.765996e-02
## 654	Order Clostridiales	-0.5579547	2.607732e-02
## 655	Phylum Firmicutes	-0.5607236	2.493289e-02
## 656	Genus Lachnoclostridium	-0.5609359	2.489909e-02
## 657	Bacteroides coprophilus	-0.5615353	2.466065e-02

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## 658      Bacteroides vulgatus -0.5626826 2.405524e-02
## 659      Family Lachnospiraceae -0.5637503 2.343187e-02
## 660      Clostridium sp. SS2/1 -0.5639652 2.333292e-02
## 661      Order Clostridiales -0.5640653 2.330911e-02
## 662      Phylum Bacteroidetes -0.5657514 2.255349e-02
## 663      Parabacteroides sp. D26 -0.5675720 2.185889e-02
## 664      Kingdom Bacteria -0.5676930 2.185889e-02
## 665      Clostridium sp. M62/1 -0.5703726 2.072131e-02
## 666      Family Lachnospiraceae -0.5705666 2.064590e-02
## 667      Anaerostipes hadrus -0.5710241 2.045518e-02
## 668      Family Lachnospiraceae -0.5714446 2.028766e-02
## 669      Streptococcus thermophilus -0.5726850 1.980511e-02
## 670      Clostridium sp. L2-50 -0.5727967 1.977981e-02
## 671      Clostridium clostridioforme -0.5729123 1.975239e-02
## 672      Family Rikenellaceae -0.5733140 1.960639e-02
## 673      Eggerthella lenta -0.5735289 1.959478e-02
## 674      Eggerthella lenta -0.5738373 1.949763e-02
## 675      Blautia obeum -0.5739583 1.949763e-02
## 676      Phylum Bacteroidetes -0.5749512 1.914323e-02
## 677      Genus Eggerthella -0.5783688 1.768177e-02
## 678      Ruminococcus champanellensis -0.5795174 1.720069e-02
## 679      Family Lachnospiraceae -0.5826736 1.592983e-02
## 680      Fournierella massiliensis -0.5860998 1.467863e-02
## 681      Ruminococcus champanellensis -0.5890067 1.368535e-02
## 682      Enterococcus faecium -0.5916586 1.283940e-02
## 683      Bacteroides uniformis -0.5924923 1.258566e-02
## 684      Clostridioides difficile -0.5981898 1.083072e-02
## 685      Family Lachnospiraceae -0.5983799 1.081571e-02
## 686      Genus Lachnoclostridium -0.6018269 9.884850e-03
## 687      Ruminococcus champanellensis -0.6042884 9.248923e-03
## 688      Flavonifractor plautii -0.6052147 9.064567e-03
## 689      Coprococcus comes -0.6079262 8.407871e-03
## 690      Blautia obeum -0.6085840 8.250826e-03
## 691      Genus Eggerthella -0.6098545 7.975453e-03
## 692      Pseudoflavonifractor capillosus -0.6101427 7.920279e-03
## 693      Eggerthella lenta -0.6186506 6.352282e-03
## 694      Kingdom Bacteria -0.6303161 4.496762e-03
## 695      Family Lachnospiraceae -0.6317162 4.317365e-03
## 696      Genus Eggerthella -0.6337879 4.047481e-03
## 697      Order Clostridiales -0.6689314 1.278117e-03
## 698      Clostridium sp. ATCC BAA-442 -0.6927054 5.510785e-04

## Significance
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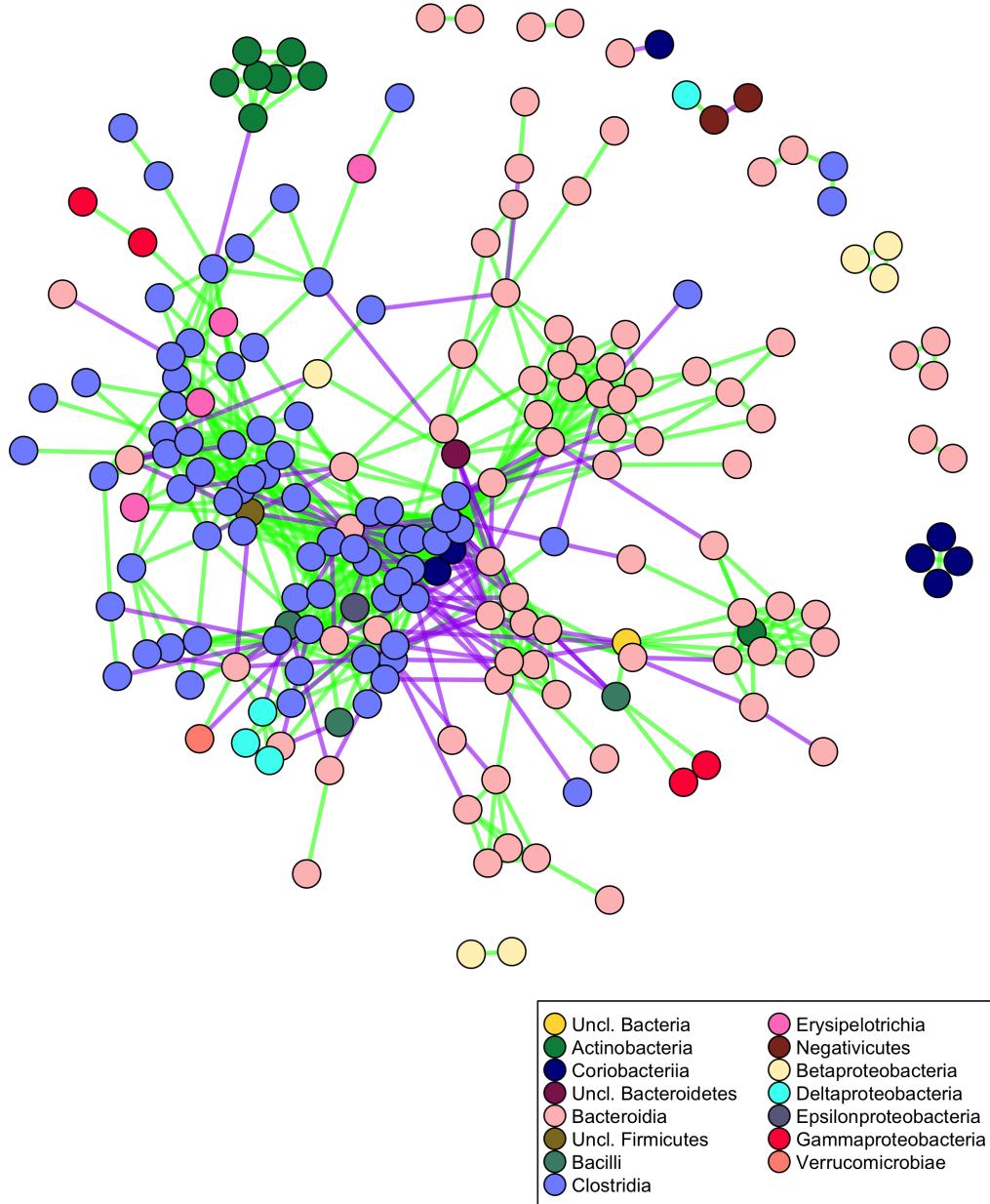
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## 685      *
## 686      **
## 687      **
## 688      **
## 689      **
## 690      **
## 691      **
## 692      **
## 693      **
## 694      **
## 695      **
## 696      **
## 697      **
## 698      ***
```

## View as a network

```
##
## Attaching package: 'igraph'
## The following object is masked from 'package:vegan':
##
##     diversity
## The following object is masked from 'package:permute':
##
##     permute
## The following object is masked from 'package:tibble':
##
```

```
##      as_data_frame
## The following objects are masked from 'package:dplyr':
##
##      as_data_frame, groups, union
## The following object is masked from 'package:tidyr':
##
##      crossing
## The following objects are masked from 'package:stats':
##
##      decompose, spectrum
## The following object is masked from 'package:base':
##
##      union
```

## Overall study average significant correlations



Repeat this but with the averages from the individual people comparisons

```
## Loading required package: abind
```

## Repeat previous steps

```
##      Count_sig_fdr          Taxa1
## 1            30    Alistipes onderdonkii
## 2            32    Alistipes onderdonkii
## 3            32 Burkholderiales bacterium 1_1_47
## 4            34    Bilophila wadsworthia
## 5            30    Alistipes sp. AL-1
## 6            28    Bacteroides sp. D20
## 7            28    Bacteroides sp. 4_1_36
## 8            30 Burkholderiales bacterium 1_1_47
## 9            31    Bacteroides sp. 4_1_36
## 10           33    Bilophila sp. 4_1_30
## 11           29    Order Burkholderiales
## 12           30 Collinsella aerofaciens
## 13           33 Collinsella sp. TF06-26
## 14           30 Collinsella aerofaciens
## 15           21    Genus Paraprevotella
## 16           33 Bifidobacterium catenulatum
## 17           34    Bilophila sp. 4_1_30
## 18           27 Bifidobacterium catenulatum
## 19           33 Collinsella aerofaciens
## 20           21    Bacteroides sp. 3_1_19
## 21           21 Bacteroides cellulosilyticus
## 22           32 Collinsella sp. 4_8_47FAA
## 23           31    Genus Sutterella
## 24           31 Collinsella sp. 4_8_47FAA
## 25           30 Escherichia coli
## 26           31 Bifidobacterium kashiwanohense
## 27           32    Blautia obeum
## 28           19 Bacteroides sp. 2_1_33B
## 29           33    Blautia wexlerae
## 30           18 Alistipes indistinctus
## 31           31    Order Clostridiales
## 32           22 Bifidobacterium bifidum
## 33           24 Bifidobacterium kashiwanohense
## 34           32 Alistipes senegalensis
## 35           26 Alistipes onderdonkii
## 36           25 Bifidobacterium pseudocatenulatum
## 37           25    Alistipes shahii
## 38           25 Bacteroides dorei
## 39           33    Blautia obeum
## 40           27 Alistipes shahii
## 41           21 Desulfovibrio piger
## 42           19 Cellulomonas carbonis
## 43           28 Bacteroides sp. 3_1_13
## 44           23 Bifidobacterium catenulatum
## 45           18 Bacteroides sp. 2_1_33B
## 46           25 Alistipes onderdonkii
## 47           26 Bacteroides sp. 3_1_13
## 48           30 Alistipes senegalensis
## 49           22 Blautia massiliensis
## 50           28 Alistipes senegalensis
## 51           30    Blautia wexlerae
```

## 52	23	Bifidobacterium adolescentis
## 53	20	Family Comamonadaceae
## 54	28	Bacteroides sp. 4_3_47FAA
## 55	28	Blautia sp. KLE 1732
## 56	30	Alistipes finegoldii
## 57	27	Genus Parabacteroides
## 58	27	Alistipes finegoldii
## 59	30	Eggerthella lenta
## 60	28	Alistipes finegoldii
## 61	29	Bacteroides dorei
## 62	25	Alistipes timonensis
## 63	21	Sutterella sp. KLE1602
## 64	18	Bacteroides sp. 3_1_19
## 65	19	Desulfovibrio piger
## 66	28	Bacteroides sp. D22
## 67	24	Bacteroides sp. 3_1_33FAA
## 68	25	Bifidobacterium bifidum
## 69	24	Bacteroides sp. 2_1_33B
## 70	20	Bifidobacterium adolescentis
## 71	22	Desulfovibrio piger
## 72	24	Bacteroides sp. 1_1_30
## 73	22	Bacteroides fragilis
## 74	28	Genus Blautia
## 75	26	Bacteroides dorei
## 76	20	Alistipes putredinis
## 77	26	Genus Parabacteroides
## 78	28	Genus Bacteroides
## 79	18	Genus Sutterella
## 80	25	Bacteroides sp. 2_2_4
## 81	26	Bacteroides sp. 1_1_6
## 82	28	Blautia obeum
## 83	26	Blautia massiliensis
## 84	24	Alistipes shahii
## 85	28	Alistipes finegoldii
## 86	27	Family Ruminococcaceae
## 87	21	Bifidobacterium bifidum
## 88	25	Bacteroides sp. 3_1_40A
## 89	22	Bacteroides sp. 9_1_42FAA
## 90	29	Family Ruminococcaceae
## 91	28	Blautia sp. SF-50
## 92	26	Bifidobacterium adolescentis
## 93	21	Desulfovibrio piger
## 94	20	Bacteroides sp. 2_2_4
## 95	28	Bifidobacterium longum
## 96	26	Alistipes senegalensis
## 97	21	Alistipes putredinis
## 98	21	Parabacteroides distasonis
## 99	19	Prevotella bivia
## 100	26	Bacteroides ovatus
## 101	21	Bifidobacterium adolescentis
## 102	26	Bacteroides ovatus
## 103	30	Blautia sp. KLE 1732
## 104	19	Genus Parabacteroides
## 105	19	Prevotella ihumii

## 106	29	Bacteroides vulgatus
## 107	22	Bacteroides sp. 2_2_4
## 108	25	Bacteroides sp. 1_1_30
## 109	24	Bacteroides sp. 3_1_33FAA
## 110	25	Bacteroides sartorii
## 111	25	Blautia massiliensis
## 112	22	Bacteroides sp. 3_1_40A
## 113	18	Bacteroides sp. 3_1_19
## 114	25	Alistipes onderdonkii
## 115	24	Alistipes finegoldii
## 116	20	Genus Paraprevotella
## 117	27	Bacteroides sartorii
## 118	18	Alistipes indistinctus
## 119	22	Bacteroides sp. 3_1_23
## 120	21	Bacteroides sp. 3_1_23
## 121	26	Bacteroides sp. 1_1_30
## 122	22	Bacteroides sp. 2_2_4
## 123	20	Bacteroides sp. 3_1_23
## 124	25	Bacteroides ovatus
## 125	22	Flavonifractor plautii
## 126	19	Order Bacteroidales
## 127	19	Alistipes obesi
## 128	28	Bacteroides uniformis
## 129	24	Bacteroides pectinophilus
## 130	19	Dakarella massiliensis
## 131	21	Cellulomonas carbonis
## 132	28	Bacteroides dorei
## 133	19	Bacteroides fragilis
## 134	22	Bacteroides sp. D2
## 135	23	Blautia obeum
## 136	28	Bacteroides ovatus
## 137	19	Family Comamonadaceae
## 138	30	Alistipes sp. Marseille-P2431
## 139	21	Dakarella massiliensis
## 140	21	Dorea longicatena
## 141	26	Bacteroides ovatus
## 142	27	Ruminococcaceae bacterium cv2
## 143	23	Alistipes onderdonkii
## 144	23	Alistipes sp. AL-1
## 145	26	Bacteroides fragilis
## 146	19	Blautia obeum
## 147	21	Ruminococcaceae bacterium cv2
## 148	19	Bifidobacterium longum
## 149	24	Bacteroides sp. 3_1_23
## 150	29	Bacteroides ovatus
## 151	20	Alistipes sp. AL-1
## 152	18	Alistipes senegalensis
## 153	27	Bacteroides ovatus
## 154	18	Bifidobacterium adolescentis
## 155	21	Bacteroides caecimuris
## 156	25	Bacteroides sp. AR20
## 157	18	Alistipes sp. CHKCI003
## 158	26	Bacteroides sp. D20
## 159	23	Dorea formicigenerans

## 160	25	Alistipes senegalensis
## 161	24	Blautia obeum
## 162	18	Prevotella ihumii
## 163	23	Bacteroides xylosois
## 164	27	Alistipes putredinis
## 165	28	Bacteroides caecimuris
## 166	20	Family Bacteroidaceae
## 167	25	Family Ruminococcaceae
## 168	19	Bacteroides ovatus
## 169	22	Order Bacteroidales
## 170	25	Bacteroides thetaiotaomicron
## 171	22	Bacteroides sp. HMSC067B03
## 172	20	Bacteroides sp. 1_1_30
## 173	24	Alistipes finegoldii
## 174	24	Blautia obeum
## 175	24	Bacteroides sp. 1_1_30
## 176	26	Bacteroides ovatus
## 177	23	Alistipes onderdonkii
## 178	19	Bacteroides finegoldii
## 179	28	Bacteroides sp. 2_2_4
## 180	28	Family Lachnospiraceae
## 181	25	Enterococcus faecium
## 182	24	Bacteroides ovatus
## 183	20	Bacteroides sp. 3_1_13
## 184	24	Alistipes sp. Marseille-P2431
## 185	18	Bifidobacterium bifidum
## 186	23	Clostridium sp. ATCC BAA-442
## 187	19	Dakarella massiliensis
## 188	24	Blautia sp. KLE 1732
## 189	24	Genus Parabacteroides
## 190	18	Bacteroides dorei
## 191	23	Bacteroides eggerthii
## 192	24	Bacteroides dorei
## 193	18	Blautia wexlerae
## 194	23	Bacteroides massiliensis
## 195	24	Bacteroides sp. 2_2_4
## 196	24	Bacteroides finegoldii
## 197	22	Desulfovibrio piger
## 198	22	Bacteroides dorei
## 199	20	Genus Bacteroides
## 200	22	Bacteroides sp. 1_1_30
## 201	20	Bifidobacterium adolescentis
## 202	22	Alistipes sp. AL-1
## 203	20	Alistipes putredinis
## 204	20	Alistipes onderdonkii
## 205	19	Bacteroides sp. 1_1_30
## 206	24	Order Bacteroidales
## 207	18	Bacteroides fragilis
## 208	20	Bacteroides sp. 1_1_6
## 209	20	Cellulomonas carbonis
## 210	18	Flavonifractor plautii
## 211	21	Family Ruminococcaceae
## 212	19	Blautia sp. KLE 1732
## 213	19	Phascolarctobacterium succinatutens

## 214	19	Bacteroides vulgatus
## 215	18	Genus Eggerthella
## 216	19	Alistipes shahii
## 217	24	Bacteroides sp. HMSC073E02
## 218	18	Roseburia faecis
## 219	19	Alistipes putredinis
## 220	18	Bacteroides sp. 1_1_30
## 221	22	Parabacteroides distasonis
## 222	23	Bacteroides sp. 1_1_6
## 223	19	Bacteroides sp. 1_1_6
## 224	19	Bacteroides sp. 3_1_13
## 225	28	Clostridium sp. ATCC BAA-442
## 226	28	Ruthenibacterium lactatiformans
## 227	25	Bacteroides sp. 4_1_36
## 228	29	Family Lachnospiraceae
## 229	23	Desulfovibrio piger
## 230	24	Blautia massiliensis
## 231	23	Blautia sp. SF-50
## 232	21	Intestinimonas butyriciproducens
## 233	25	Akkermansia muciniphila
## 234	18	Family Bacteroidaceae
## 235	28	Coprococcus comes
## 236	18	Bacteroides caecimuris
## 237	21	Bacteroides sp. D22
## 238	20	Bacteroides sp. 3_1_13
## 239	19	Bacteroides finegoldii
## 240	18	Bacteroides sp. 1_1_6
## 241	24	Genus Roseburia
## 242	24	Clostridioides difficile
## 243	19	Alistipes obesi
## 244	21	Blautia obeum
## 245	23	Bacteroides sp. D2
## 246	21	Clostridium sp. ATCC BAA-442
## 247	26	Bacteroides sp. 3_1_33FAA
## 248	22	Clostridioides difficile
## 249	22	Dorea longicatena
## 250	25	Clostridium sp. ATCC BAA-442
## 251	23	Clostridium sp. ATCC BAA-442
## 252	21	Bacteroides massiliensis
## 253	21	Blautia sp. SF-50
## 254	22	Bacteroides caecimuris
## 255	26	Bacteroides sp. 3_1_40A
## 256	21	Clostridium clostridiiforme
## 257	19	Enterococcus faecium
## 258	21	Bacteroides sp. 1_1_6
## 259	24	Clostridium bolteae
## 260	20	Bacteroides massiliensis
## 261	24	Coprococcus comes
## 262	18	Bacteroides ovatus
## 263	19	Alistipes ihumii
## 264	18	Genus Bacteroides
## 265	24	Alistipes sp. CHKCI003
## 266	21	Dorea formicigenerans
## 267	22	Bacteroides sp. 3_1_33FAA

## 268	18	Bacteroides sp. 3_1_40A
## 269	21	Bacteroides sp. 3_1_13
## 270	21	Angelakisella massiliensis
## 271	18	Bacteroides fragilis
## 272	21	Bacteroides sp. 9_1_42FAA
## 273	19	Alistipes finegoldii
## 274	20	Bacteroides thetaiotaomicron
## 275	23	Clostridium sp. M62/1
## 276	26	Alistipes finegoldii
## 277	26	Genus Lachnoclostridium
## 278	22	Bacteroides caecimuris
## 279	23	Genus Lachnoclostridium
## 280	20	Bacteroides uniformis
## 281	19	Bacteroides finegoldii
## 282	18	Bacteroides sp. HMSC073E02
## 283	20	Bacteroides sp. 3_1_33FAA
## 284	19	Clostridium sp. ATCC BAA-442
## 285	20	Anaerostipes hadrus
## 286	22	Bacteroides eggerthii
## 287	20	Flavonifractor plautii
## 288	18	Bacteroides sp. 3_1_19
## 289	20	Bacteroides dorei
## 290	23	Clostridium clostridioforme
## 291	23	Alistipes shahii
## 292	20	Bacteroides caecimuris
## 293	20	Bacteroides salyersiae
## 294	18	Bacteroides sp. 4_3_47FAA
## 295	23	Family Ruminococcaceae
## 296	18	Order Bacteroidales
## 297	21	Clostridium clostridioforme
## 298	18	Genus Parabacteroides
## 299	22	Bacteroides vulgatus
## 300	18	Bacteroides caecimuris
## 301	18	Bacteroides sp. 4_3_47FAA
## 302	22	Bacteroides sp. HMSC073E02
## 303	20	Dorea longicatena
## 304	18	Bacteroides fragilis
## 305	21	Bacteroides sp. 1_1_30
## 306	22	Bacteroides finegoldii
## 307	21	Bacteroides fragilis
## 308	23	Genus Roseburia
## 309	20	Bacteroides eggerthii
## 310	24	Clostridium sp. M62/1
## 311	21	Bacteroides sp. D2
## 312	22	Bacteroides caecimuris
## 313	21	Bacteroides fragilis
## 314	22	Blautia massiliensis
## 315	19	Genus Roseburia
## 316	23	Coprococcus comes
## 317	21	Bacteroides finegoldii
## 318	21	Bacteroides sartorii
## 319	25	Bacteroides sp. 4_3_47FAA
## 320	18	Order Bacteroidales
## 321	22	Bacteroides sp. 1_1_30

## 322	20	Bacteroides sp. D20
## 323	20	Blautia sp. KLE 1732
## 324	21	Genus Oscillibacter
## 325	19	Anaerotruncus colihominis
## 326	21	Genus Bacteroides
## 327	22	Blautia sp. Marseille-P3087
## 328	21	Bacteroides sartorii
## 329	18	Clostridium sp. ATCC BAA-442
## 330	19	Bacteroides finegoldii
## 331	21	Bacteroides massiliensis
## 332	19	Faecalibacterium prausnitzii
## 333	20	Bacteroides sp. 1_1_6
## 334	25	Genus Bacteroides
## 335	21	Bacteroides dorei
## 336	18	Bacteroides sp. 9_1_42FAA
## 337	23	Bacteroides stercoris
## 338	19	Bacteroides caecimuris
## 339	28	Blautia obeum
## 340	19	Blautia massiliensis
## 341	18	Faecalibacterium prausnitzii
## 342	18	Bacteroides sp. HMSC067B03
## 343	23	Bacteroides pectinophilus
## 344	20	Blautia sp. Marseille-P3087
## 345	21	Bacteroides ovatus
## 346	18	Bacteroides sp. D2
## 347	19	Clostridium sp. ATCC BAA-442
## 348	19	Family Ruminococcaceae
## 349	18	Bacteroides sartorii
## 350	24	Bacteroides sartorii
## 351	20	Blautia sp. Marseille-P3087
## 352	21	Blautia wexlerae
## 353	24	Blautia massiliensis
## 354	25	Order Bacteroidales
## 355	22	Bacteroides sp. D22
## 356	20	Bacteroides sp. 4_1_36
## 357	18	Blautia sp. KLE 1732
## 358	18	Bacteroides sp. 1_1_6
## 359	19	Genus Bacteroides
## 360	18	Bacteroides sp. D20
## 361	18	Family Lachnospiraceae
## 362	18	Bacteroides eggerthii
## 363	18	Bacteroides sp. 3_1_40A
## 364	23	Parabacteroides distasonis
## 365	18	Bacteroides dorei
## 366	21	Bacteroides sp. 1_1_30
## 367	18	Bacteroides finegoldii
## 368	22	Bacteroides sp. 2_2_4
## 369	19	Bacteroides sp. 3_1_40A
## 370	18	Bacteroides finegoldii
## 371	18	Genus Parabacteroides
## 372	18	Bacteroides thetaiotaomicron
## 373	21	Clostridioides difficile
## 374	20	Coprococcus comes
## 375	18	Bacteroides dorei

## 376	18	Alistipes onderdonkii
## 377	22	Family Bacteroidaceae
## 378	23	Enterococcus faecium
## 379	28	Angelakisella massiliensis
## 380	23	Blautia wexlerae
## 381	20	Angelakisella massiliensis
## 382	23	Genus Bacteroides
## 383	18	Blautia wexlerae
## 384	19	Bacteroides dorei
## 385	23	Genus Acidaminococcus
## 386	19	Bacteroides fragilis
## 387	18	Clostridium clostridioforme
## 388	20	Bacteroides vulgatus
## 389	18	Clostridium bolteae
## 390	18	Bacteroides ovatus
## 391	18	Bacteroides dorei
## 392	22	Flavonifractor plautii
## 393	19	Bacteroides sp. 3_1_40A
## 394	23	Dorea longicatena
## 395	18	Bacteroides caecimuris
## 396	18	Genus Parabacteroides
## 397	22	Alistipes finegoldii
## 398	18	Bacteroides ovatus
## 399	19	Parabacteroides johnsonii
## 400	19	Order Clostridiales
## 401	18	Bacteroides sp. 3_1_33FAA
## 402	21	Anaerotruncus colihominis
## 403	23	Blautia wexlerae
## 404	18	Alistipes putredinis
## 405	21	Genus Roseburia
## 406	18	Bacteroides finegoldii
## 407	20	Anaerotruncus colihominis
## 408	21	Genus Bacteroides
## 409	20	Anaerostipes hadrus
## 410	22	Bacteroides fragilis
## 411	18	Blautia massiliensis
## 412	24	Blautia obeum
## 413	21	Intestinimonas butyriciproducens
## 414	19	Bacteroides ovatus
## 415	19	Bacteroides sartorii
## 416	18	Bacteroides caecimuris
## 417	27	Eubacterium hallii
## 418	21	Bacteroides ovatus
## 419	18	Bacteroides caecimuris
## 420	22	Phylum Firmicutes
## 421	19	Bacteroides vulgatus
## 422	23	Blautia sp. Marseille-P3087
## 423	21	Eubacterium ramulus
## 424	25	Angelakisella massiliensis
## 425	19	Dorea longicatena
## 426	21	Genus Paraprevotella
## 427	18	Bacteroides dorei
## 428	19	Bacteroides sartorii
## 429	18	Bacteroides vulgatus

```

## 430      21      Bacteroides sp. 1_1_6
## 431      19      Dakarella massiliensis
## 432      20      Clostridium symbiosum
## 433      22      Bacteroides sartorii
## 434      19      Bacteroides fragilis
## 435      18      Order Bacteroidales
## 436      21      Clostridioides difficile
## 437      18      Eubacterium rectale
## 438      18      Bacteroides salyersiae
## 439      19      Angelakisella massiliensis
## 440      20      Bacteroides xylosovens
## 441      20      Bacteroides sp. 1_1_6
## 442      18      Bacteroides sp. 1_1_30
## 443      19      Genus Oscillibacter
## 444      18      Bacteroides sartorii
## 445      19      Genus Acidaminococcus
## 446      18      Anaerostipes hadrus
## 447      18      Eubacterium ventriosum
##                               Taxa2 ave_corr
## 1                  Alistipes sp. AL-1 0.9689977
## 2                  Genus Alistipes 0.9499881
## 3      Parasutterella exrementihominis 0.9419705
## 4                  Genus Bilophila 0.9403749
## 5                  Genus Alistipes 0.9352635
## 6                  Bacteroides uniformis 0.9350306
## 7                  Bacteroides uniformis 0.9284490
## 8                  Order Burkholderiales 0.9237601
## 9                  Bacteroides sp. D20 0.9236605
## 10                 Genus Bilophila 0.9191304
## 11                 Parasutterella exrementihominis 0.9175107
## 12                 Collinsella sp. 4_8_47FAA 0.9124923
## 13                 Genus Collinsella 0.9094142
## 14                 Genus Collinsella 0.9079683
## 15                 Sutterella sp. KLE1602 0.8998760
## 16                 Bifidobacterium kashiwanohense 0.8989643
## 17                 Bilophila wadsworthia 0.8977936
## 18                 Bifidobacterium pseudocatenulatum 0.8973830
## 19                 Collinsella sp. TF06-26 0.8959867
## 20                 Genus Parabacteroides 0.8927067
## 21                 Bacteroides intestinalis 0.8903074
## 22                 Collinsella sp. TF06-26 0.8898370
## 23                 Sutterella sp. KLE1602 0.8887541
## 24                 Genus Collinsella 0.8866451
## 25                 Family Enterobacteriaceae 0.8864179
## 26                 Bifidobacterium pseudocatenulatum 0.8844549
## 27                 Blautia wexlerae 0.8813808
## 28                 Bacteroides sp. 3_1_19 0.8799356
## 29                 Genus Blautia 0.8794944
## 30                 Sutterella sp. KLE1602 0.8737459
## 31                 Phylum Firmicutes 0.8737103
## 32                 Bifidobacterium catenulatum 0.8718216
## 33                 Genus Bifidobacterium 0.8706531
## 34                 Alistipes shahii 0.8706116
## 35                 Alistipes senegalensis 0.8705742

```

```

## 36           Genus Bifidobacterium 0.8695269
## 37           Alistipes timonensis 0.8680289
## 38           Bacteroides sp. 9_1_42FAA 0.8665513
## 39           Genus Blautia 0.8662385
## 40           Genus Alistipes 0.8653193
## 41           Sutterella sp. KLE1602 0.8645509
## 42           Prevotella ihumii 0.8631973
## 43           Bacteroides xyloisolvans 0.8621811
## 44           Genus Bifidobacterium 0.8612708
## 45           Parabacteroides sp. D26 0.8591714
## 46           Alistipes shahii 0.8578553
## 47           Bacteroides sp. D22 0.8554659
## 48           Genus Alistipes 0.8539973
## 49           Blautia sp. KLE 1732 0.8539228
## 50           Alistipes timonensis 0.8488529
## 51           Ruminococcus sp. JC304 0.8486579
## 52           Genus Bifidobacterium 0.8468694
## 53           Genus Acidaminococcus 0.8467431
## 54           Bacteroides vulgatus 0.8461529
## 55           Genus Blautia 0.8448821
## 56           Genus Alistipes 0.8448458
## 57           Parabacteroides distasonis 0.8419764
## 58           Alistipes shahii 0.8413358
## 59           Genus Eggerthella 0.8411621
## 60           Alistipes senegalensis 0.8410505
## 61           Bacteroides vulgatus 0.8408786
## 62           Genus Alistipes 0.8405154
## 63           Sutterella wadsworthensis 0.8394960
## 64           Parabacteroides distasonis 0.8394856
## 65           Genus Sutterella 0.8383598
## 66           Bacteroides xyloisolvans 0.8381923
## 67           Bacteroides sp. 9_1_42FAA 0.8375085
## 68           Bifidobacterium kashiwanohense 0.8372324
## 69           Genus Parabacteroides 0.8362057
## 70           Bifidobacterium pseudocatenulatum 0.8361149
## 71           Genus Paraprevotella 0.8356817
## 72           Bacteroides xyloisolvans 0.8350562
## 73           Genus Bacteroides 0.8350076
## 74           Ruminococcus sp. JC304 0.8348245
## 75           Bacteroides sp. 3_1_33FAA 0.8347851
## 76           Alistipes senegalensis 0.8329560
## 77           Parabacteroides sp. D26 0.8322269
## 78           Order Bacteroidales 0.8320713
## 79           Sutterella wadsworthensis 0.8312006
## 80           Bacteroides xyloisolvans 0.8308935
## 81           Bacteroides thetaiotaomicron 0.8308404
## 82           Ruminococcus sp. JC304 0.8298416
## 83           Genus Blautia 0.8292969
## 84           Alistipes sp. AL-1 0.8292934
## 85           Alistipes onderdonkii 0.8277579
## 86           Subdoligranulum sp. 4_3_54A2FAA 0.8272210
## 87           Bifidobacterium pseudocatenulatum 0.8270667
## 88           Bacteroides vulgatus 0.8261331
## 89           Bacteroides vulgatus 0.8255684

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## 90 Ruthenibacterium lactatiformans 0.8255441
## 91 Genus Blautia 0.8254445
## 92 Bifidobacterium kashiwanoense 0.8250631
## 93 Family Comamonadaceae 0.8237173
## 94 Bacteroides sp. D2 0.8233133
## 95 Genus Bifidobacterium 0.8231297
## 96 Alistipes sp. AL-1 0.8225334
## 97 Alistipes shahii 0.8223583
## 98 Parabacteroides sp. D26 0.8222611
## 99 Prevotella ihumii 0.8220301
## 100 Bacteroides sp. 3_1_23 0.8220007
## 101 Bifidobacterium catenulatum 0.8209092
## 102 Bacteroides sp. D2 0.8206522
## 103 Blautia sp. SF-50 0.8194758
## 104 Parabacteroides sp. D13 0.8191289
## 105 Sutterella sp. KLE1602 0.8190411
## 106 Genus Bacteroides 0.8190160
## 107 Bacteroides sp. 3_1_23 0.8180641
## 108 Bacteroides sp. D22 0.8170197
## 109 Bacteroides vulgatus 0.8158715
## 110 Genus Bacteroides 0.8157966
## 111 Blautia sp. SF-50 0.8149350
## 112 Bacteroides sp. 4_3_47FAA 0.8148086
## 113 Parabacteroides sp. D13 0.8145902
## 114 Alistipes timonensis 0.8140594
## 115 Alistipes putredinis 0.8138399
## 116 Genus Sutterella 0.8128670
## 117 Bacteroides vulgatus 0.8123472
## 118 Genus Paraprevotella 0.8119862
## 119 Bacteroides xylosoxylolyticus 0.8119022
## 120 Bacteroides sp. D2 0.8117910
## 121 Bacteroides sp. 3_1_13 0.8117668
## 122 Bacteroides sp. 3_1_13 0.8114732
## 123 Bacteroides sp. HMSC073E02 0.8106244
## 124 Bacteroides sp. 1_1_30 0.8097938
## 125 Lachnospiraceae bacterium 7_1_58FAA 0.8085091
## 126 Parabacteroides sp. SN4 0.8078239
## 127 Alistipes shahii 0.8078199
## 128 Genus Bacteroides 0.8075577
## 129 Genus Roseburia 0.8072887
## 130 Desulfovibrio piger 0.8070655
## 131 Family Prevotellaceae 0.8065369
## 132 Genus Bacteroides 0.8062237
## 133 Bacteroides vulgatus 0.8051382
## 134 Bacteroides sp. HMSC073E02 0.8050138
## 135 Blautia sp. KLE 1732 0.8037100
## 136 Bacteroides sp. 2_2_4 0.8024381
## 137 Sutterella sp. KLE1602 0.8016598
## 138 Alistipes timonensis 0.8015896
## 139 Sutterella sp. KLE1602 0.8012197
## 140 Genus Blautia 0.8006742
## 141 Genus Bacteroides 0.8005684
## 142 Ruthenibacterium lactatiformans 0.8003268
## 143 Alistipes sp. Marseille-P2431 0.8002666

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## 144          Alistipes timonensis 0.7999007
## 145          Order Bacteroidales 0.7997382
## 146          Dorea longicatena 0.7983182
## 147          Subdoligranulum sp. 4_3_54A2FAA 0.7982220
## 148          Bifidobacterium pseudocatenulatum 0.7981700
## 149          Bacteroides sp. D22 0.7981252
## 150          Bacteroides xylinisolvans 0.7979245
## 151          Alistipes sp. Marseille-P2431 0.7974204
## 152          Alistipes sp. CHKCI003 0.7973476
## 153          Bacteroides sp. HMSC073E02 0.7971888
## 154          Bifidobacterium longum 0.7969272
## 155          Bacteroides sp. 1_1_30 0.7967038
## 156          Bacteroides thetaiotaomicron 0.7962465
## 157          Alistipes sp. Marseille-P2431 0.7961219
## 158          Genus Bacteroides 0.7957526
## 159          Dorea longicatena 0.7955320
## 160          Alistipes sp. Marseille-P2431 0.7942754
## 161          Blautia sp. SF-50 0.7938191
## 162          Prevotella stercorea 0.7935023
## 163          Genus Bacteroides 0.7933486
## 164          Genus Alistipes 0.7930999
## 165          Genus Bacteroides 0.7929860
## 166          Order Bacteroidales 0.7916683
## 167          Order Clostridiales 0.7916574
## 168          Bacteroides thetaiotaomicron 0.7914128
## 169          Parabacteroides sp. 20_3 0.7911253
## 170          Genus Bacteroides 0.7907610
## 171          Genus Bacteroides 0.7904258
## 172          Bacteroides sp. 2_2_4 0.7899428
## 173          Alistipes timonensis 0.7891313
## 174          Blautia sp. Marseille-P3087 0.7889185
## 175          Genus Bacteroides 0.7887577
## 176          Bacteroides sp. D22 0.7886605
## 177          Alistipes putredinis 0.7881631
## 178          Bacteroides ovatus 0.7874684
## 179          Bacteroides sp. D22 0.7870309
## 180          Phylum Firmicutes 0.7867792
## 181          Phylum Firmicutes 0.7862991
## 182          Bacteroides sp. 3_1_13 0.7849873
## 183          Bacteroides sp. 3_1_23 0.7842552
## 184          Genus Alistipes 0.7825983
## 185          Sutterella sp. KLE1602 0.7820379
## 186          Intestinimonas butyriciproducens 0.7809277
## 187          Family Comamonadaceae 0.7804085
## 188          Blautia wexlerae 0.7803732
## 189          Order Bacteroidales 0.7801899
## 190          Parabacteroides johnsonii 0.7801457
## 191          Genus Bacteroides 0.7798706
## 192          Bacteroides sartorii 0.7796454
## 193          Dorea longicatena 0.7783603
## 194          Genus Bacteroides 0.7774391
## 195          Bacteroides sp. HMSC073E02 0.7772160
## 196          Genus Bacteroides 0.7771018
## 197          Phascolarctobacterium succinatutens 0.7765207

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## 198 Bacteroides sp. 4_3_47FAA 0.7764498
## 199 Parabacteroides johnsonii 0.7757213
## 200 Bacteroides sp. 3_1_23 0.7756658
## 201 Bifidobacterium bifidum 0.7750369
## 202 Alistipes sp. CHKCI003 0.7748439
## 203 Alistipes sp. AL-1 0.7747891
## 204 Alistipes sp. CHKCI003 0.7745168
## 205 Bacteroides sp. HMSC067B03 0.7736334
## 206 Parabacteroides distasonis 0.7733277
## 207 Bacteroides massiliensis 0.7731701
## 208 Bacteroides xylanisolvans 0.7728717
## 209 Genus Paraprevotella 0.7725397
## 210 Order Clostridiales 0.7723861
## 211 Ruminococcaceae bacterium cv2 0.7721969
## 212 Ruminococcus sp. JC304 0.7720416
## 213 Sutterella sp. KLE1602 0.7716187
## 214 Parabacteroides sp. 20_3 0.7714272
## 215 Gordonibacter pamelaeae 0.7714194
## 216 Alistipes sp. CHKCI003 0.7713863
## 217 Bacteroides xylanisolvans 0.7711160
## 218 Roseburia intestinalis 0.7709341
## 219 Alistipes timonensis 0.7707726
## 220 Bacteroides thetaiotaomicron 0.7705800
## 221 Parabacteroides sp. 20_3 0.7701669
## 222 Genus Bacteroides 0.7696157
## 223 Bacteroides sp. D22 0.7694541
## 224 Genus Bacteroides 0.7689807
## 225 Order Clostridiales 0.7689030
## 226 Subdoligranulum sp. 4_3_54A2FAA 0.7683133
## 227 Genus Bacteroides 0.7677350
## 228 Order Clostridiales 0.7675073
## 229 Genus Acidaminococcus 0.7664621
## 230 Blautia obeum 0.7658551
## 231 Blautia wexlerae 0.7656934
## 232 Intestinimonas massiliensis 0.7656526
## 233 Genus Akkermansia 0.7654811
## 234 Prevotella sp. KHD1 0.7654138
## 235 Dorea longicatena 0.7649891
## 236 Bacteroides sp. HMSC067B03 0.7643300
## 237 Bacteroides sp. HMSC073E02 0.7641744
## 238 Bacteroides sp. D2 0.7640643
## 239 Order Bacteroidales 0.7640609
## 240 Bacteroides sp. 2_2_4 0.7638448
## 241 Roseburia intestinalis 0.7637496
## 242 Family Lachnospiraceae 0.7633526
## 243 Alistipes timonensis 0.7631718
## 244 Coprococcus comes 0.7628862
## 245 Bacteroides xylanisolvans 0.7626132
## 246 Pseudoflavonifractor capillosus 0.7624246
## 247 Genus Bacteroides 0.7621256
## 248 Dorea formicigenerans 0.7614570
## 249 Ruminococcus faecis 0.7613428
## 250 Flavonifractor plautii 0.7612966
## 251 Lachnospiraceae bacterium 7_1_58FAA 0.7607069

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## 252           Bacteroides vulgatus 0.7606276
## 253           Ruminococcus sp. JC304 0.7604851
## 254           Bacteroides xylanisolvans 0.7602601
## 255           Genus Bacteroides 0.7596655
## 256           Family Lachnospiraceae 0.7594619
## 257           Family Lachnospiraceae 0.7589320
## 258           Bacteroides sp. AR20 0.7580564
## 259           Genus Lachnoclostridium 0.7579962
## 260           Bacteroides sartorii 0.7574744
## 261           Dorea formicigenerans 0.7574408
## 262           Bacteroides sp. 1_1_6 0.7569469
## 263           Alistipes indistinctus 0.7561704
## 264           Parabacteroides sp. 20_3 0.7556690
## 265           Alistipes timonensis 0.7554876
## 266           Family Lachnospiraceae 0.7551834
## 267           Bacteroides sp. 3_1_40A 0.7550071
## 268           Bacteroides sp. 9_1_42FAA 0.7545043
## 269           Bacteroides sp. HMSC073E02 0.7542257
## 270           Pseudoflavonifractor capillosus 0.7540005
## 271           Parabacteroides sp. SN4 0.7537721
## 272           Genus Bacteroides 0.7535697
## 273           Alistipes sp. CHKCI003 0.7533632
## 274           Order Bacteroidales 0.7533519
## 275           Phylum Firmicutes 0.7533113
## 276           Alistipes sp. AL-1 0.7532060
## 277           Order Clostridiales 0.7530527
## 278           Order Bacteroidales 0.7530231
## 279           Phylum Firmicutes 0.7530150
## 280           Order Bacteroidales 0.7529602
## 281           Bacteroides thetaiotaomicron 0.7526437
## 282           Bacteroides vulgatus 0.7524894
## 283           Order Bacteroidales 0.7519748
## 284           Genus Oscillibacter 0.7518876
## 285           Eubacterium hallii 0.7514086
## 286           Bacteroides vulgatus 0.7511570
## 287           Intestinimonas butyriciproducens 0.7511260
## 288           Order Bacteroidales 0.7511199
## 289           Bacteroides sp. 3_1_40A 0.7506026
## 290           Phylum Firmicutes 0.7503197
## 291           Alistipes sp. Marseille-P2431 0.7503034
## 292           Bacteroides ovatus 0.7499156
## 293           Genus Bacteroides 0.7498774
## 294           Bacteroides sp. 9_1_42FAA 0.7494458
## 295           Phylum Firmicutes 0.7492265
## 296           Parabacteroides sp. D26 0.7491216
## 297           Order Clostridiales 0.7483532
## 298           Parabacteroides sp. 20_3 0.7482755
## 299           Parabacteroides distasonis 0.7479009
## 300           Bacteroides sp. 1_1_6 0.7478226
## 301           Parabacteroides sp. 20_3 0.7477634
## 302           Genus Bacteroides 0.7470625
## 303           Ruminococcus sp. JC304 0.7461599
## 304           Bacteroides xylanisolvans 0.7460298
## 305           Bacteroides sp. 1_1_6 0.7459850

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## 306 Bacteroides xyloisolvans 0.7458949
## 307 Parabacteroides distasonis 0.7455592
## 308 Roseburia faecis 0.7455111
## 309 Bacteroides sp. 4_3_47FAA 0.7453736
## 310 Order Clostridiales 0.7449619
## 311 Bacteroides sp. D22 0.7444816
## 312 Bacteroides finegoldii 0.7444523
## 313 Genus Parabacteroides 0.7443394
## 314 Ruminococcus sp. JC304 0.7440521
## 315 Roseburia inulinivorans 0.7434915
## 316 Genus Blautia 0.7433161
## 317 Bacteroides sp. 1_1_30 0.7430848
## 318 Order Bacteroidales 0.7430415
## 319 Genus Bacteroides 0.7429004
## 320 Parabacteroides johnsonii 0.7425280
## 321 Order Bacteroidales 0.7424466
## 322 Order Bacteroidales 0.7418945
## 323 Coprococcus comes 0.7417347
## 324 Intestinimonas butyriciproducens 0.7417201
## 325 Angelakisella massiliensis 0.7416518
## 326 Parabacteroides sp. SN4 0.7415553
## 327 Blautia wexlerae 0.7403537
## 328 Bacteroides sp. 3_1_33FAA 0.7403027
## 329 Ruminococcaceae bacterium D16 0.7401239
## 330 Bacteroides sp. D2 0.7399800
## 331 Order Bacteroidales 0.7399413
## 332 Ruminococcaceae bacterium D16 0.7397894
## 333 Bacteroides sp. HMSC073E02 0.7396998
## 334 Parabacteroides distasonis 0.7396303
## 335 Bacteroides eggerthii 0.7393676
## 336 Parabacteroides sp. 20_3 0.7392535
## 337 Genus Bacteroides 0.7388172
## 338 Bacteroides sartorii 0.7386298
## 339 Eubacterium hallii 0.7375399
## 340 Dorea longicatena 0.7375213
## 341 Phylum Firmicutes 0.7372533
## 342 Bacteroides vulgatus 0.7371232
## 343 Roseburia intestinalis 0.7370656
## 344 Ruminococcus sp. JC304 0.7366666
## 345 Order Bacteroidales 0.7362743
## 346 Genus Bacteroides 0.7355556
## 347 Family Ruminococcaceae 0.7354066
## 348 Genus Lachnoclostridium 0.7352049
## 349 Bacteroides sp. 9_1_42FAA 0.7340955
## 350 Bacteroides sp. 4_3_47FAA 0.7331791
## 351 Dorea formicigenerans 0.7331561
## 352 Coprococcus comes 0.7330844
## 353 Blautia wexlerae 0.7329816
## 354 Parabacteroides sp. D13 0.7323074
## 355 Genus Bacteroides 0.7318236
## 356 Order Bacteroidales 0.7318186
## 357 Dorea longicatena 0.7313968
## 358 Order Bacteroidales 0.7300516
## 359 Parabacteroides merdae 0.7300029

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## 360 Parabacteroides distasonis 0.7298248
## 361 Tyzzerella nexilis 0.7292874
## 362 Parabacteroides sp. 20_3 0.7290467
## 363 Parabacteroides distasonis 0.7289576
## 364 Parabacteroides sp. D13 0.7286371
## 365 Bacteroides sp. HMSC073E02 0.7284352
## 366 Bacteroides sp. HMSC073E02 0.7283331
## 367 Bacteroides sp. 3_1_33FAA 0.7282200
## 368 Genus Bacteroides 0.7281193
## 369 Parabacteroides sp. SN4 0.7280726
## 370 Bacteroides sp. 3_1_13 0.7271462
## 371 Parabacteroides sp. SN4 0.7268290
## 372 Bacteroides vulgatus 0.7266502
## 373 Phylum Firmicutes 0.7265104
## 374 Ruminococcus sp. JC304 0.7260274
## 375 Parabacteroides sp. 20_3 0.7259673
## 376 Family Rikenellaceae 0.7258168
## 377 Genus Bacteroides 0.7251296
## 378 Order Clostridiales 0.7249140
## 379 Clostridium sp. ATCC BAA-442 0.7248409
## 380 Dorea formicigenerans 0.7247345
## 381 Family Ruminococcaceae 0.7238661
## 382 Genus Parabacteroides 0.7235675
## 383 Ruminococcus faecis 0.7235316
## 384 Parabacteroides distasonis 0.7230755
## 385 Phascolarctobacterium succinatutens 0.7228774
## 386 Bacteroides sp. HMSC067B03 0.7223150
## 387 Clostridium sp. M62/1 0.7212190
## 388 Parabacteroides sp. SN4 0.7206371
## 389 Phylum Firmicutes 0.7206272
## 390 Bacteroides sartorii 0.7193954
## 391 Order Bacteroidales 0.7192931
## 392 Genus Oscillibacter 0.7191875
## 393 Order Bacteroidales 0.7190121
## 394 Family Lachnospiraceae 0.7186995
## 395 Bacteroides vulgatus 0.7186801
## 396 Parabacteroides merdae 0.7183836
## 397 Alistipes sp. Marseille-P2431 0.7183216
## 398 Odoribacter splanchnicus 0.7174376
## 399 Parabacteroides merdae 0.7169234
## 400 Ruminococcaceae bacterium D16 0.7161705
## 401 Bacteroides thetaiotaomicron 0.7157051
## 402 Clostridium sp. ATCC BAA-442 0.7156303
## 403 Eubacterium hallii 0.7155269
## 404 Family Rikenellaceae 0.7154437
## 405 Lachnospiraceae bacterium TFC01-11 0.7151676
## 406 Bacteroides uniformis 0.7150900
## 407 Pseudoflavonifractor sp. Marseille-P3106 0.7147983
## 408 Odoribacter splanchnicus 0.7143959
## 409 Blautia sp. SF-50 0.7138709
## 410 Bacteroides sp. 1_1_6 0.7130004
## 411 Family Lachnospiraceae 0.7129369
## 412 Dorea formicigenerans 0.7126067
## 413 Pseudoflavonifractor capillosus 0.7124056

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## 414           Bacteroides sp. D20 0.7123807
## 415           Genus Parabacteroides 0.7122082
## 416           Parabacteroides distasonis 0.7117337
## 417           Genus Blautia 0.7111179
## 418           Bacteroides vulgatus 0.7109180
## 419           Odoribacter splanchnicus 0.7102470
## 420           Subdoligranulum variabile 0.7101192
## 421           Genus Parabacteroides 0.7094502
## 422           Genus Blautia 0.7093790
## 423           Family Lachnospiraceae 0.7093651
## 424           Intestinimonas butyriciproducens 0.7092370
## 425           Eubacterium ramulus 0.7087471
## 426           Prevotella ihumii 0.7087074
## 427           Bacteroides finegoldii 0.7081380
## 428           Bacteroides sp. HMSC067B03 0.7076684
## 429           Bacteroides xylosoxylansolvans 0.7076527
## 430           Bacteroides vulgatus 0.7075302
## 431           Genus Paraprevotella 0.7062553
## 432           Order Clostridiales 0.7059289
## 433           Bacteroides sp. 3_1_40A 0.7058710
## 434           Bacteroides sartorii 0.7058336
## 435           Phylum Bacteroidetes 0.7055719
## 436           Order Clostridiales 0.7054890
## 437           Genus Roseburia 0.7052654
## 438           Order Bacteroidales 0.7049011
## 439           Erysipelotrichaceae bacterium 6_1_45 0.7048408
## 440           Order Bacteroidales 0.7039768
## 441           Bacteroides sp. 3_1_33FAA 0.7035771
## 442           Bacteroides sp. 3_1_40A 0.7030156
## 443           Pseudoflavonifractor capillosus 0.7029630
## 444           Parabacteroides johnsonii 0.7028470
## 445           Sutterella sp. KLE1602 0.7025512
## 446           Blautia sp. KLE 1732 0.7023853
## 447           Family Lachnospiraceae 0.7000835

```

# Average Network

