

## Detections of pathogens in stomach

**Table S1.** Gastric juice culturing positive individuals' number

| Bacteria from gastric juice                | Aerobic | Microaerobic | Antibiotic | Anaerobic | Total Individuals (n) |
|--|---------|--------------|------------|-----------|-----------------------|
| <i>Streptococcus salivarius</i>            | 1       | 2            | 1          | 4         | 5                     |
| <i>Streptococcus mitis</i>                 | 1       | 2            | 1          | 6         | 6                     |
| <i>Streptococcus pneumoniae</i>            | 0       | 2            | 0          | 3         | 4                     |
| <i>Streptococcus parasanguis</i>           | 0       | 1            | 0          | 1         | 2                     |
| <i>Streptococcus sanguis</i>               | 1       | 0            | 0          | 0         | 1                     |
| <i>Streptococcus oralis</i>                | 8       | 4            | 0          | 4         | 10                    |
| <i>Neisseria flavescens</i>                | 4       | 5            | 5          | 1         | 7                     |
| <i>Neisseria perflava</i>                  | 6       | 3            | 3          | 0         | 6                     |
| <i>Neisseria mucosa</i>                    | 1       | 1            | 1          | 0         | 2                     |
| <i>Rothia mucilaginosa</i>                 | 5       | 6            | 0          | 1         | 9                     |
| <i>Rothia dentocariosa</i>                 | 1       | 2            | 1          | 0         | 2                     |
| <i>Actinomyces odontolyticus</i>           | 0       | 0            | 0          | 1         | 1                     |
| <i>Candida albicans</i>                    | 9       | 11           | 12         | 9         | 15                    |
| <i>Corynebacterium argenteratense</i>      | 1       | 0            | 0          | 1         | 1                     |
| <i>Staphylococcus aureus</i>               | 5       | 4            | 0          | 3         | 6                     |
| <i>Klebsiella pneumoniae</i>               | 1       | 1            | 0          | 0         | 1                     |
| <i>Paenibacillus huicus</i>                | 1       | 1            | 0          | 0         | 2                     |
| <i>Streptococcus australis</i>             | 1       | 0            | 0          | 0         | 1                     |
| <i>Rotia aerea</i>                         | 1       | 2            | 0          | 0         | 2                     |
| <i>Ralstonia pickettii</i>                 | 1       | 3            | 0          | 1         | 5                     |
| <i>Haemophilus parainfluenzae</i>          | 1       | 0            | 1          | 0         | 2                     |
| <i>Mycobacterium abscessus</i>             | 0       | 2            | 0          | 0         | 2                     |
| <i>Bacillus cereus</i>                     | 1       | 0            | 0          | 0         | 1                     |
| <i>Veillonella atypica</i>                 | 0       | 0            | 0          | 1         | 1                     |
| <i>Veillonella dispar</i>                  | 0       | 0            | 0          | 1         | 1                     |
| <i>Propionibacterium acnes</i>             | 0       | 0            | 0          | 2         | 2                     |
| <i>Fusobacterium periodonticum</i>         | 0       | 0            | 0          | 1         | 1                     |
| <i>Lactobacillus crispatus</i>             | 0       | 0            | 0          | 1         | 1                     |
| <i>Spingomonas melonis</i>                 | 1       | 1            | 1          | 0         | 2                     |
| <i>Brevibacillus parabrevis</i>            | 1       | 0            | 0          | 0         | 1                     |
| <i>Arthrobacter psychrolactophilus</i>     | 1       | 0            | 0          | 0         | 1                     |
| <i>Bacillus subtilis</i>                   | 4       | 4            | 2          | 0         | 7                     |
| <i>Bacillus atropheus</i>                  | 1       | 0            | 0          | 0         | 1                     |
| <i>Bacillus thuringiensis</i>              | 1       | 0            | 0          | 0         | 1                     |
| <i>Paenibacillus pasadenensis</i>          | 0       | 1            | 0          | 0         | 1                     |
| <i>Serratia marcescens</i>                 | 1       | 1            | 1          | 0         | 1                     |
| <i>Candida glabrata</i>                    | 1       | 1            | 1          | 0         | 1                     |
| <i>Aspergillus niger</i>                   | 3       | 0            | 1          | 0         | 3                     |
| <i>Micrococcus flavus</i>                  | 1       | 0            | 0          | 0         | 1                     |
| <i>Burkholderia seminalis</i>              | 1       | 0            | 0          | 0         | 1                     |
| <i>Lactobacillus gasseri</i>               | 1       | 6            | 1          | 3         | 6                     |
| <i>Ralstonia insidiosa</i>                 | 1       | 1            | 2          | 1         | 2                     |
| <i>Klebsiella oxytoca</i>                  | 0       | 1            | 0          | 0         | 1                     |
| <i>Microbacterium trichothecenolyticum</i> | 1       | 0            | 0          | 0         | 1                     |
| <i>Meyerozyma guilliermondii</i>           | 0       | 0            | 1          | 0         | 1                     |
| <i>Lactobacillus oris</i>                  | 0       | 0            | 0          | 1         | 1                     |
| <i>Lactobacillus mucosae</i>               | 0       | 0            | 0          | 1         | 1                     |
| <i>Lactobacillus amylovorus</i>            | 0       | 0            | 0          | 1         | 1                     |
| <i>Veillonella parvula</i>                 | 0       | 0            | 0          | 2         | 2                     |
| <i>Corynebacterium macginleyi</i>          | 0       | 0            | 0          | 1         | 1                     |
| <i>Fusobacterium nucleatum</i>             | 0       | 0            | 0          | 1         | 1                     |
| <i>Fusobacterium canifelinum</i>           | 0       | 0            | 0          | 1         | 1                     |
| <i>Staphylococcus epidermidis</i>          | 0       | 0            | 0          | 1         | 1                     |

## Detections of pathogens in stomach

**Table S2.** Mucosa culturing positive individuals' number

| Bacteria from mucosa                  | Aerobic | Microaerobic | Antibiotic | Anaerobic | Total Individuals (n) |
|---------------------------------------|---------|--------------|------------|-----------|-----------------------|
| <i>Rothia mucilaginosa</i>            | 22      | 11           | 1          | 3         | 24                    |
| <i>Helicobacter pylori</i>            | 0       | 10           | 24         | 0         | 24                    |
| <i>Neisseria flavescens</i>           | 16      | 15           | 15         | 0         | 23                    |
| <i>Streptococcus mitis</i>            | 13      | 8            | 0          | 10        | 18                    |
| <i>Streptococcus salivarius</i>       | 9       | 5            | 2          | 9         | 16                    |
| <i>Streptococcus oralis</i>           | 9       | 5            | 0          | 11        | 16                    |
| <i>Neisseria perflava</i>             | 6       | 3            | 5          | 0         | 11                    |
| <i>Streptococcus parasanguis</i>      | 5       | 1            | 1          | 2         | 8                     |
| <i>Actinomyces odontolyticus</i>      | 1       | 6            | 0          | 5         | 8                     |
| <i>Staphylococcus aureus</i>          | 3       | 6            | 0          | 0         | 7                     |
| <i>Neisseria mucosa</i>               | 1       | 2            | 4          | 2         | 5                     |
| <i>Veillonella atypica</i>            | 0       | 0            | 0          | 5         | 5                     |
| <i>Propionibacterium acnes</i>        | 0       | 0            | 0          | 5         | 5                     |
| <i>Actinomyces graevenitzii</i>       | 3       | 3            | 0          | 4         | 4                     |
| <i>Actinomyces oris</i>               | 3       | 1            | 2          | 4         | 4                     |
| <i>Streptococcus pneumoniae</i>       | 0       | 0            | 3          | 3         | 3                     |
| <i>Streptococcus sanguis</i>          | 0       | 1            | 2          | 3         | 3                     |
| <i>Candida albicans</i>               | 1       | 0            | 0          | 3         | 3                     |
| <i>Corynebacterium argentoratense</i> | 1       | 0            | 1          | 3         | 3                     |
| <i>Haemophilus parainfluenzae</i>     | 1       | 3            | 0          | 3         | 3                     |
| <i>Veillonella dispar</i>             | 0       | 0            | 3          | 3         | 3                     |
| <i>Streptococcus infantarius</i>      | 0       | 0            | 1          | 2         | 2                     |
| <i>Rothia dentocariosa</i>            | 1       | 0            | 0          | 2         | 2                     |
| <i>Gemella sanguinis</i>              | 1       | 0            | 0          | 2         | 2                     |
| <i>Ralstonia pickettii</i>            | 1       | 1            | 0          | 2         | 2                     |
| <i>Prevotella salivae</i>             | 1       | 0            | 2          | 2         | 2                     |
| <i>Bacillus cereus</i>                | 0       | 0            | 2          | 2         | 2                     |
| <i>Neisseria subflava</i>             | 0       | 0            | 0          | 1         | 1                     |
| <i>Staphylococcus capitis</i>         | 1       | 0            | 0          | 1         | 1                     |
| <i>Staphylococcus warneri</i>         | 0       | 1            | 0          | 1         | 1                     |
| <i>Microbacterium esteraromaticum</i> | 0       | 0            | 0          | 1         | 1                     |
| <i>Bacillus infantis</i>              | 0       | 0            | 0          | 1         | 1                     |
| <i>Bacillus flexus</i>                | 0       | 0            | 0          | 1         | 1                     |
| <i>Klebsiella pneumoniae</i>          | 0       | 0            | 0          | 1         | 1                     |
| <i>Paenibacillus huicus</i>           | 1       | 0            | 0          | 1         | 1                     |
| <i>Streptococcus anginosus</i>        | 1       | 0            | 0          | 1         | 1                     |
| <i>Streptococcus australis</i>        | 1       | 0            | 0          | 1         | 1                     |
| <i>Rotia aeria</i>                    | 1       | 0            | 0          | 1         | 1                     |
| <i>Corynebacterium propinquum</i>     | 1       | 0            | 0          | 1         | 1                     |
| <i>Arthrobacter globiformis</i>       | 0       | 1            | 0          | 1         | 1                     |
| <i>Cryptococcus neoformans</i>        | 0       | 1            | 0          | 1         | 1                     |
| <i>Corynebacterium felinum</i>        | 0       | 1            | 0          | 1         | 1                     |
| <i>Mycobacterium abscessus</i>        | 0       | 1            | 0          | 1         | 1                     |
| <i>Lactobacillus sakei</i>            | 0       | 0            | 1          | 1         | 1                     |
| <i>Lactobacillus sp.</i>              | 0       | 0            | 1          | 1         | 1                     |
| <i>Staphylococcus haemolyticus</i>    | 0       | 0            | 1          | 1         | 1                     |
| <i>Veillonella denticariosi</i>       | 0       | 0            | 1          | 1         | 1                     |
| <i>Bacillus mycetoides</i>            | 0       | 0            | 1          | 1         | 1                     |
| <i>Streptococcus constellatus</i>     | 0       | 0            | 1          | 1         | 1                     |
| <i>Atopobium parvulum</i>             | 0       | 0            | 1          | 1         | 1                     |
| <i>Arthrobacter parietis</i>          | 0       | 0            | 1          | 1         | 1                     |
| <i>Arthrobacter ramosus</i>           | 0       | 0            | 1          | 1         | 1                     |
| <i>Fusobacterium periodonticum</i>    | 0       | 0            | 1          | 1         | 1                     |
| <i>Listeria ivanovii</i>              | 0       | 0            | 1          | 1         | 1                     |
| <i>Lactobacillus crispatus</i>        | 0       | 0            | 1          | 1         | 1                     |
| <i>Capnocytophaga gingivalis</i>      | 0       | 0            | 1          | 1         | 1                     |