

**Supplementary Data 1. Summary of the prophages found among 70 different streptococcal species.**

| Host species               |             |                 | Full-length prophages |                |                 |                   | Satellite prophages |                |                 |                   |
|----------------------------|-------------|-----------------|-----------------------|----------------|-----------------|-------------------|---------------------|----------------|-----------------|-------------------|
| Name                       | Genomes (n) | Avg. GC content | Unique phages (n)     | Avg. size (bp) | Avg. GC content | Avg. no. of genes | Unique phages (n)   | Avg. size (bp) | Avg. GC content | Avg. no. of genes |
| <i>S. pneumoniae</i>       | 482         | 39.6%           | 66                    | 37,346         | 39.6%           | 56                | 44                  | 12,936         | 37.2%           | 21                |
| <i>S. pyogenes</i>         | 50          | 38.4%           | 67                    | 39,113         | 38.5%           | 56                | 21                  | 12,825         | 36.3%           | 23                |
| <i>S. agalactiae</i>       | 50          | 35.3%           | 37                    | 37,393         | 39.4%           | 51                | 19                  | 14,096         | 35.7%           | 23                |
| <i>S. dysgalactiae</i>     | 50          | 39.3%           | 34                    | 39,344         | 38.6%           | 57                | 22                  | 13,455         | 35.5%           | 24                |
| <i>S. suis</i>             | 50          | 41.2%           | 28                    | 35,696         | 41.1%           | 52                | 24                  | 10,216         | 38.1%           | 17                |
| <i>S. equi</i>             | 50          | 41.6%           | 18                    | 38,096         | 39.0%           | 51                | 4                   | 12,813         | 36.3%           | 20                |
| <i>S. parauberis</i>       | 16          | 35.5%           | 14                    | 38,455         | 35.8%           | 55                | 17                  | 13,564         | 32.7%           | 20                |
| <i>S. mitis</i>            | 49          | 40.1%           | 12                    | 37,559         | 40.0%           | 55                | 35                  | 12,074         | 36.2%           | 18                |
| <i>S. oralis</i>           | 49          | 41.0%           | 12                    | 35,654         | 39.7%           | 50                | 14                  | 11,649         | 36.0%           | 17                |
| <i>S. anginosus</i>        | 24          | 38.6%           | 9                     | 37,077         | 39.6%           | 51                | 16                  | 10,921         | 36.8%           | 17                |
| <i>S. equinus</i>          | 27          | 37.3%           | 10                    | 40,614         | 39.1%           | 56                | 13                  | 10,075         | 34.2%           | 15                |
| <i>S. constellatus</i>     | 10          | 38.0%           | 10                    | 43,497         | 39.9%           | 51                | 4                   | 10,347         | 35.3%           | 21                |
| <i>S. uberis</i>           | 13          | 36.5%           | 9                     | 39,936         | 37.7%           | 54                | 11                  | 11,652         | 33.2%           | 18                |
| <i>S. gallolyticus</i>     | 17          | 37.5%           | 8                     | 37,207         | 38.1%           | 52                | 9                   | 9,759          | 35.1%           | 14                |
| <i>S. canis</i>            | 11          | 39.5%           | 8                     | 37,776         | 40.4%           | 51                | 3                   | 13,895         | 36.3%           | 25                |
| <i>S. urinalis</i>         | 4           | 34.1%           | 7                     | 38,072         | 37.2%           | 53                | 7                   | 9,251          | 34.1%           | 14                |
| <i>S. parasanguinis</i>    | 31          | 41.8%           | 7                     | 38,470         | 41.4%           | 54                | 6                   | 9,435          | 34.4%           | 11                |
| <i>S. gordonii</i>         | 22          | 40.4%           | 7                     | 35,522         | 40.1%           | 47                | 3                   | 10,069         | 35.4%           | 15                |
| <i>S. pseudopneumoniae</i> | 16          | 39.8%           | 5                     | 36,007         | 39.7%           | 62                | 9                   | 11,870         | 38.2%           | 19                |
| <i>S. iniae</i>            | 8           | 36.6%           | 5                     | 35,285         | 36.8%           | 52                | 1                   | 12,203         | 30.0%           | 18                |
| <i>S. salivarius</i>       | 32          | 39.7%           | 4                     | 40,116         | 42.2%           | 42                | 4                   | 9,577          | 37.7%           | 15                |
| <i>S. infantis</i>         | 4           | 39.4%           | 4                     | 35,734         | 39.3%           | 49                | 1                   | 11,158         | 38.0%           | 14                |
| <i>S. porcinus</i>         | 2           | 36.7%           | 4                     | 37,741         | 39.6%           | 51                | 0                   | -              | -               | -                 |
| <i>S. pseudoporcinus</i>   | 5           | 37.2%           | 3                     | 38,992         | 38.3%           | 62                | 2                   | 8,343          | 33.8%           | 19                |
| <i>S. entericus</i>        | 1           | 44.6%           | 2                     | 41,400         | 43.0%           | 59                | 2                   | 10,349         | 42.4%           | 18                |
| <i>S. himalayensis</i>     | 1           | 41.3%           | 2                     | 39,219         | 40.8%           | 49                | 2                   | 11,811         | 38.8%           | 16                |
| <i>S. marmotae</i>         | 1           | 40.9%           | 2                     | 37,995         | 43.0%           | 66                | 2                   | 14,088         | 40.6%           | 21                |
| <i>S. infantarius</i>      | 2           | 37.6%           | 2                     | 33,058         | 38.4%           | 48                | 1                   | 9,627          | 35.7%           | 14                |
| <i>S. azizii</i>           | 3           | 42.7%           | 2                     | 43,572         | 41.2%           | 58                | 0                   | -              | -               | -                 |
| <i>S. henryi</i>           | 2           | 38.6%           | 2                     | 40,013         | 39.8%           | 58                | 0                   | -              | -               | -                 |
| <i>S. ictaluri</i>         | 2           | 38.1%           | 2                     | 24,012         | 38.4%           | 32                | 0                   | -              | -               | -                 |
| <i>S. intermedius</i>      | 9           | 37.6%           | 1                     | 33,366         | 38.0%           | 49                | 6                   | 13,935         | 36.4%           | 23                |
| <i>S. pasteurianus</i>     | 5           | 37.3%           | 1                     | 35,546         | 38.0%           | 45                | 4                   | 10,524         | 35.0%           | 15                |
| <i>S. lutetiensis</i>      | 2           | 37.6%           | 1                     | 37,997         | 39.0%           | 51                | 3                   | 10,881         | 35.1%           | 15                |
| <i>S. halotolerans</i>     | 1           | 39.2%           | 1                     | 41,477         | 38.1%           | 52                | 2                   | 13,216         | 36.9%           | 20                |
| <i>S. hyovaginalis</i>     | 1           | 39.9%           | 1                     | 39,028         | 37.6%           | 60                | 2                   | 12,180         | 37.0%           | 22                |
| <i>S. acidominimus</i>     | 1           | 42.6%           | 1                     | 38,191         | 40.1%           | 52                | 1                   | 9,826          | 39.5%           | 15                |
| <i>S. cristatus</i>        | 4           | 42.6%           | 1                     | 38,959         | 39.8%           | 52                | 1                   | 13,630         | 40.4%           | 17                |
| <i>S. macedonicus</i>      | 2           | 37.5%           | 1                     | 38,767         | 38.5%           | 52                | 1                   | 10,632         | 33.8%           | 14                |
| <i>S. phocae</i>           | 2           | 39.5%           | 1                     | 46,987         | 37.4%           | 76                | 1                   | 12,626         | 36.2%           | 20                |
| <i>S. cuniculi</i>         | 1           | 43.4%           | 1                     | 28,958         | 40.4%           | 44                | 0                   | -              | -               | -                 |
| <i>S. orisratti</i>        | 1           | 38.5%           | 1                     | 37,447         | 41.2%           | 42                | 0                   | -              | -               | -                 |
| <i>S. porci</i>            | 1           | 40.8%           | 1                     | 40,394         | 35.3%           | 45                | 0                   | -              | -               | -                 |
| <i>S. thoralensis</i>      | 1           | 38.4%           | 1                     | 40,339         | 37.5%           | 57                | 0                   | -              | -               | -                 |
| <i>S. thermophilus</i>     | 32          | 39.0%           | 0                     | -              | -               | -                 | 16                  | 8,429          | 37.3%           | 14                |
| <i>S. sanguinis</i>        | 37          | 43.0%           | 0                     | -              | -               | -                 | 6                   | 11,336         | 38.5%           | 18                |
| <i>S. vestibularis</i>     | 6           | 39.5%           | 0                     | -              | -               | -                 | 3                   | 10,768         | 36.5%           | 14                |
| <i>S. castoreus</i>        | 1           | 37.8%           | 0                     | -              | -               | -                 | 2                   | 10,268         | 36.1%           | 18                |
| <i>S. merionis</i>         | 1           | 41.7%           | 0                     | -              | -               | -                 | 1                   | 10,429         | 39.5%           | 17                |
| <i>S. oligofermentans</i>  | 1           | 42.1%           | 0                     | -              | -               | -                 | 1                   | 10,319         | 36.2%           | 16                |
| <i>S. caballi</i>          | 1           | 40.4%           | 0                     | -              | -               | -                 | 1                   | 9,970          | 38.7%           | 17                |
| <i>S. plurextorum</i>      | 1           | 41.1%           | 0                     | -              | -               | -                 | 1                   | 13,633         | 35.0%           | 27                |
| Other strep. species       | 111         | -               | 0                     | -              | -               | -                 | 0                   | -              | -               | -                 |
| <b>Sum</b>                 | <b>1306</b> | <b>-</b>        | <b>415</b>            | <b>-</b>       | <b>-</b>        | <b>-</b>          | <b>348</b>          | <b>-</b>       | <b>-</b>        | <b>-</b>          |
| <b>Average</b>             | <b>-</b>    | <b>39.4%</b>    | <b>-</b>              | <b>38,003</b>  | <b>39.2%</b>    | <b>54</b>         | <b>-</b>            | <b>11,767</b>  | <b>36.2%</b>    | <b>19</b>         |