

Table S2. Relative proportions of bacterial taxa in dogs administered prednisolone

|                              | Medians % (min.–max. %) of sequences |                     |                     |                     |
|------------------------------|--------------------------------------|---------------------|---------------------|---------------------|
|                              | day 0                                | day 14              | day 28              | day 42              |
| Actinobacteria (phylum)      | 0.16 (0.00–14.18)                    | 0.02 (0.00–2.53)    | 0.24 (0.04–8.93)    | 0.23 (0.03–2.35)    |
| Actinobacteria (class)       | 0.16 (0.00–14.18)                    | 0.02 (0.00–2.53)    | 0.24 (0.04–8.93)    | 0.23 (0.03–2.35)    |
| Actinomycetales              | 0.00 (0.00–0.14)                     | 0.00 (0.00–0.01)    | 0.00 (0.00–0.29)    | 0.01 (0.00–0.30)    |
| Actinomycetaceae             | 0.00 (0.00–0.11)                     | 0.00 (0.00–0.01)    | 0.00 (0.00–0.01)    | 0.01 (0.00–0.03)    |
| Bifidobacteriales            | 0.03 (0.00–14.17)                    | 0.01 (0.00–2.53)    | 0.17 (0.04–8.93)    | 0.08 (0.00–2.35)    |
| Bifidobacteriaceae           | 0.03 (0.00–14.11)                    | 0.01 (0.00–2.50)    | 0.17 (0.04–8.90)    | 0.08 (0.00–2.35)    |
| <i>Bifidobacterium</i>       | 0.03 (0.00–14.11)                    | 0.01 (0.00–2.50)    | 0.17 (0.04–8.90)    | 0.08 (0.00–2.35)    |
| Bacteroidetes                | 1.21 (0.04–2.95)                     | 0.39 (0.01–6.69)    | 0.15 (0.05–2.51)    | 1.44 (0.39–17.22)   |
| Bacteroidia                  | 1.21 (0.04–2.95)                     | 0.39 (0.01–6.69)    | 0.15 (0.05–2.51)    | 1.44 (0.39–17.22)   |
| Bacteroidales                | 1.21 (0.04–2.95)                     | 0.39 (0.01–6.69)    | 0.15 (0.05–2.51)    | 1.44 (0.39–17.22)   |
| Bacteroidaceae               | 0.41 (0.02–2.30)                     | 0.09 (0.00–3.12)    | 0.05 (0.01–2.09)    | 0.49 (0.12–7.29)    |
| <i>Bacteroides</i>           | 0.41 (0.02–2.30)                     | 0.09 (0.00–3.12)    | 0.05 (0.01–2.09)    | 0.49 (0.12–7.29)    |
| Porphyromonadaceae           | 0.01 (0.00–0.11)                     | 0.01 (0.00–0.05)    | 0.00 (0.00–0.02)    | 0.00 (0.00–0.04)    |
| <i>Parabacteroides</i>       | 0.01 (0.00–0.09)                     | 0.01 (0.00–0.04)    | 0.00 (0.00–0.01)    | 0.00 (0.00–0.04)    |
| Prevotellaceae               | 0.26 (0.01–0.80)                     | 0.23 (0.01–3.33)    | 0.12 (0.03–0.32)    | 0.57 (0.11–2.89)    |
| <i>Prevotella</i>            | 0.26 (0.01–0.80)                     | 0.23 (0.01–3.33)    | 0.12 (0.03–0.32)    | 0.57 (0.11–2.89)    |
| Paraprevotellaceae           | 0.01 (0.00–0.09)                     | 0.01 (0.00–0.13)    | 0.01 (0.00–0.18)    | 0.02 (0.00–7.03)    |
| S24-7                        | 0.00 (0.00–0.01)                     | 0.00 (0.00–0.05)    | 0.00 (0.00–0.01)    | 0.01 (0.00–0.04)    |
| Firmicutes                   | 96.55 (85.58–99.66)                  | 97.06 (72.22–99.93) | 98.72 (90.65–99.70) | 95.35 (59.13–97.19) |
| Bacilli                      | 80.42 (17.00–91.78)                  | 83.22 (25.60–97.36) | 86.38 (56.37–92.54) | 52.32 (19.21–85.36) |
| Bacillales                   | 0.01 (0.00–0.04)                     | 0.00 (0.00–0.00)    | 0.01 (0.00–0.01)    | 0.01 (0.00–0.20)    |
| Staphylococcaceae            | 0.01 (0.00–0.04)                     | 0.00 (0.00–0.00)    | 0.01 (0.00–0.01)    | 0.01 (0.00–0.20)    |
| Gemellales                   | 0.00 (0.00–0.04)                     | 0.00 (0.00–0.00)    | 0.00 (0.00–0.06)    | 0.01 (0.00–0.01)    |
| Gemmellaceae                 | 0.00 (0.00–0.04)                     | 0.00 (0.00–0.00)    | 0.00 (0.00–0.06)    | 0.01 (0.00–0.01)    |
| <i>Gemella</i>               | 0.00 (0.00–0.04)                     | 0.00 (0.00–0.00)    | 0.00 (0.00–0.06)    | 0.01 (0.00–0.01)    |
| Lactobacillales              | 80.38 (2.97–91.71)                   | 83.07 (24.58–96.98) | 86.35 (54.93–92.52) | 48.52 (18.35–85.23) |
| Enterococcaceae              | 0.01 (0.00–0.34)                     | 0.01 (0.00–0.02)    | 0.02 (0.02–0.07)    | 0.03 (0.00–0.34)    |
| Lactobacillaceae             | 80.34 (0.87–91.61)                   | 82.94 (24.56–96.62) | 86.21 (54.08–92.31) | 39.02 (17.86–85.05) |
| <i>Lactobacillus</i>         | 31.07 (0.14–61.25)                   | 45.04 (2.69–76.63)  | 52.19 (1.84–78.67)  | 16.13 (0.69–44.68)  |
| Streptococcaceae             | 0.08 (0.01–1.75)                     | 0.06 (0.01–4.84)    | 0.17 (0.02–0.80)    | 0.11 (0.06–10.13)   |
| <i>Lactococcus</i>           | 0.01 (0.00–0.11)                     | 0.01 (0.00–0.02)    | 0.01 (0.00–0.01)    | 0.00 (0.00–0.02)    |
| <i>Streptococcus</i>         | 0.04 (0.01–1.10)                     | 0.01 (0.00–0.19)    | 0.03 (0.00–0.15)    | 0.06 (0.02–0.69)    |
| Turicibacteriales            | 0.19 (0.03–13.92)                    | 0.16 (0.01–1.00)    | 0.04 (0.01–1.37)    | 0.62 (0.08–3.76)    |
| Turicibacteraceae            | 0.19 (0.03–13.92)                    | 0.16 (0.01–1.00)    | 0.04 (0.01–1.37)    | 0.62 (0.08–3.76)    |
| <i>Turicibacter</i>          | 0.19 (0.03–13.92)                    | 0.16 (0.01–1.00)    | 0.04 (0.01–1.37)    | 0.62 (0.08–3.76)    |
| Clostridia                   | 13.16 (3.40–66.03)                   | 11.57 (1.50–43.22)  | 9.34 (5.25–30.95)   | 36.93 (10.13–48.75) |
| Clostridiales                | 12.86 (3.26–64.48)                   | 11.20 (1.44–30.65)  | 9.16 (5.05–30.31)   | 36.65 (10.03–48.10) |
| Clostridiaceae               | 6.48 (0.80–27.10)                    | 6.35 (0.66–20.61)   | 3.30 (2.90–14.02)   | 20.53 (4.88–21.49)  |
| <i>Clostridium</i>           | 6.45 (0.79–25.82)                    | 6.34 (0.65–20.47)   | 3.29 (2.86–13.78)   | 20.27 (4.88–20.97)  |
| Eubacteriaceae               | 0.24 (0.10–0.97)                     | 0.16 (0.09–0.66)    | 0.36 (0.04–0.53)    | 0.23 (0.10–0.69)    |
| <i>Eubacterium</i>           | 0.24 (0.10–0.95)                     | 0.16 (0.09–0.66)    | 0.36 (0.04–0.53)    | 0.23 (0.10–0.68)    |
| Lachnospiraceae              | 2.77 (0.82–14.75)                    | 2.23 (0.57–13.42)   | 1.83 (0.96–9.09)    | 5.38 (1.70–13.00)   |
| <i>Blautia</i>               | 1.86 (0.59–5.67)                     | 1.21 (0.49–10.42)   | 1.25 (0.61–6.13)    | 2.39 (1.06–9.39)    |
| <i>Dorea</i>                 | 0.33 (0.05–5.26)                     | 0.44 (0.04–1.01)    | 0.14 (0.07–1.25)    | 1.07 (0.21–2.19)    |
| Peptococcaceae               | 0.67 (0.00–2.95)                     | 0.45 (0.03–3.35)    | 0.25 (0.10–1.91)    | 0.47 (0.02–2.29)    |
| <i>Peptococcus</i>           | 0.67 (0.00–2.95)                     | 0.45 (0.03–3.35)    | 0.25 (0.10–1.91)    | 0.47 (0.02–2.29)    |
| Peptostreptococcaceae        | 0.08 (0.00–1.54)                     | 0.02 (0.00–2.29)    | 0.01 (0.00–0.57)    | 0.29 (0.05–7.70)    |
| Ruminococcaceae              | 1.39 (0.41–13.66)                    | 1.83 (0.13–4.59)    | 0.98 (0.49–3.26)    | 3.26 (1.30–4.34)    |
| <i>Faecalibacterium</i>      | 0.04 (0.00–0.11)                     | 0.04 (0.00–0.64)    | 0.08 (0.00–0.13)    | 0.01 (0.00–0.34)    |
| <i>Ruminococcus</i>          | 1.31 (0.41–13.26)                    | 1.71 (0.13–3.84)    | 0.91 (0.48–3.10)    | 3.23 (1.29–3.97)    |
| Veillonellaceae              | 0.74 (0.01–4.41)                     | 0.46 (0.03–1.99)    | 1.44 (0.01–4.27)    | 2.74 (0.29–6.36)    |
| <i>Megamonas</i>             | 0.49 (0.00–3.65)                     | 0.04 (0.01–1.76)    | 0.14 (0.01–1.06)    | 0.95 (0.19–5.67)    |
| <i>Megasphaera</i>           | 0.00 (0.00–0.17)                     | 0.02 (0.00–0.77)    | 0.00 (0.00–4.09)    | 0.00 (0.00–2.74)    |
| <i>Phascolarctobacterium</i> | 0.08 (0.00–0.48)                     | 0.01 (0.00–0.25)    | 0.01 (0.00–0.24)    | 0.05 (0.02–0.59)    |
| Coriobacteriales             | 0.19 (0.14–1.41)                     | 0.17 (0.03–0.29)    | 0.16 (0.12–0.58)    | 0.24 (0.06–0.95)    |
| Coriobacteriaceae            | 0.19 (0.14–1.41)                     | 0.17 (0.03–0.29)    | 0.16 (0.12–0.58)    | 0.24 (0.06–0.95)    |
| <i>Collinsella</i>           | 0.19 (0.14–1.35)                     | 0.16 (0.03–0.22)    | 0.16 (0.12–0.57)    | 0.22 (0.06–0.95)    |
| <i>Slackia</i>               | 0.00 (0.00–0.06)                     | 0.01 (0.00–0.04)    | 0.00 (0.00–0.01)    | 0.02 (0.00–0.03)    |

Table S2. Cont.

|                           | Medians % (min.–max. %) of sequences |                   |                  |                   |
|---------------------------|--------------------------------------|-------------------|------------------|-------------------|
|                           | day 0                                | day 14            | day 28           | day 42            |
| Erysipelotrichi           | 2.55 (1.77–4.90)                     | 1.48 (0.88–6.99)  | 1.57 (0.95–2.74) | 2.77 (1.33–7.54)  |
| Erysipelotrichales        | 2.55 (1.77–4.90)                     | 1.48 (0.88–6.99)  | 1.57 (0.95–2.74) | 2.77 (1.33–7.54)  |
| Erysipelotrichaceae       | 1.70 (0.38–3.54)                     | 1.37 (0.23–6.68)  | 0.79 (0.43–2.21) | 2.51 (0.98–4.00)  |
| <i>Allobaculum</i>        | 1.27 (0.37–3.37)                     | 1.33 (0.23–6.59)  | 0.76 (0.42–2.14) | 2.50 (0.95–3.83)  |
| Coprobacillaceae          | 0.94 (0.05–2.17)                     | 0.11 (0.02–0.65)  | 0.66 (0.36–1.04) | 0.46 (0.26–4.58)  |
| <i>Catenibacterium</i>    | 0.94 (0.04–2.17)                     | 0.11 (0.01–0.64)  | 0.65 (0.36–1.03) | 0.45 (0.26–4.58)  |
| Fusobacteria (phylum)     | 0.01 (0.01–7.19)                     | 0.51 (0.00–19.21) | 0.06 (0.01–5.38) | 1.53 (0.83–17.48) |
| Fusobacteria (class)      | 0.01 (0.01–7.19)                     | 0.51 (0.00–19.21) | 0.06 (0.01–5.38) | 1.53 (0.83–17.48) |
| Fusobacteriales           | 0.01 (0.01–7.19)                     | 0.51 (0.00–19.21) | 0.06 (0.01–5.38) | 1.53 (0.83–17.48) |
| Fusobacteriaceae          | 0.01 (0.01–7.19)                     | 0.51 (0.00–19.21) | 0.06 (0.01–5.38) | 1.53 (0.83–17.48) |
| <i>Fusobacterium</i>      | 0.01 (0.00–0.04)                     | 0.01 (0.00–0.02)  | 0.00 (0.00–0.04) | 0.00 (0.00–0.01)  |
| J2-29                     | 0.00 (0.00–0.77)                     | 0.03 (0.00–2.92)  | 0.01 (0.00–1.88) | 0.15 (0.07–4.02)  |
| Proteobacteria            | 0.08 (0.04–1.18)                     | 0.29 (0.03–1.77)  | 0.04 (0.02–1.23) | 0.50 (0.20–5.82)  |
| Betaproteobacteria        | 0.01 (0.01–0.34)                     | 0.06 (0.00–0.58)  | 0.01 (0.00–0.71) | 0.18 (0.01–0.32)  |
| Burkholderiales           | 0.01 (0.01–0.34)                     | 0.06 (0.00–0.58)  | 0.01 (0.00–0.71) | 0.18 (0.01–0.32)  |
| Alcaligenaceae            | 0.01 (0.01–0.34)                     | 0.06 (0.00–0.57)  | 0.01 (0.00–0.71) | 0.18 (0.01–0.32)  |
| <i>Sutterella</i>         | 0.01 (0.01–0.34)                     | 0.06 (0.00–0.57)  | 0.01 (0.00–0.71) | 0.18 (0.01–0.32)  |
| Gammaproteobacteria       | 0.08 (0.03–0.64)                     | 0.16 (0.03–1.17)  | 0.02 (0.02–0.49) | 0.22 (0.17–5.73)  |
| Aeromonadales             | 0.03 (0.00–0.27)                     | 0.15 (0.00–1.08)  | 0.01 (0.00–0.38) | 0.13 (0.07–0.95)  |
| Succinivibrionaceae       | 0.03 (0.00–0.27)                     | 0.15 (0.00–1.08)  | 0.01 (0.00–0.38) | 0.13 (0.07–0.95)  |
| <i>Anaerobiospirillum</i> | 0.00 (0.00–0.27)                     | 0.15 (0.00–1.08)  | 0.01 (0.00–0.38) | 0.06 (0.00–0.95)  |
| Enterobacteriales         | 0.04 (0.00–0.08)                     | 0.07 (0.01–0.10)  | 0.02 (0.00–0.05) | 0.11 (0.06–5.56)  |
| Enterobacteriaceae        | 0.04 (0.00–0.08)                     | 0.07 (0.01–0.10)  | 0.02 (0.00–0.05) | 0.11 (0.06–5.56)  |
| <i>Escherichia</i>        | 0.04 (0.00–0.08)                     | 0.06 (0.01–0.08)  | 0.01 (0.00–0.05) | 0.11 (0.05–0.15)  |

Taxa present in at least three of five dogs (day 0, 14, 28, or 42) were included in this analysis.