Nasal microbiome disruption and recovery after mupirocin treatment in *Staphylococcus aureus* carriers and noncarriers

Authors

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Supplementary information file
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## Supplementary table 1. Risk factors for *S. aureus* acquisition

| Cohorts                  | Noncarrier | Carrier |
|--------------------------|------------|---------|
| Total                    | 8          | 8       |
| Hormonal contraception  | 1          | 4       |
| **Dairy consumption**    |            |         |
| Daily                    | 6          | 6       |
| Weekly                   | 1          | 1       |
| Monthly                  | 0          | 1       |
| **Disinfectants**        |            |         |
| Daily                    | 3          | 1       |
| Weekly                   | 2          | 1       |
| **Smoking**              |            |         |
| Daily                    | 1          | 0       |
| **Alcohol consumption**  |            |         |
| Daily                    | 1          | 2       |
| Weekly                   | 2          | 2       |
| Monthly                  | 2          | 3       |
| < 1x per month            | 2          | 1       |
| **Nose picking**         |            |         |
| Daily                    | 5          | 2       |
| Weekly                   | 2          | 5       |
| Monthly                  |            | 1       |
| < 1x per month            | 1          |         |
| **Household size**       |            |         |
| 1                        |            | 1       |
| 2                        |            | 5       |
| 3                        |            | 3       |
| 4                        |            | 1       |
| **Team sport or communal gym** |        |       |
| Weekly                   | 2          | 2       |
| Monthly                  |            | 1       |
| **Sauna visits**         |            |         |
| < 1x per month            | 1          | 3       |
| **Healthcare or beauty practice** |       |       |
| < 1x per month            | 1          | 2       |
| **Public transport**     |            |         |
| Daily                    | 1          | 4       |
| Weekly                   | 0          | 3       |
| Monthly                  | 1          | 0       |
| < 1x per month            | 3          | 1       |
Supplementary Figure 1. *S. aureus* culture dynamics in carriers and noncarriers.

Sampling took place at screening time points S1 and S2. During the study phase, nasal samples were taken 1 day pre-treatment (D0) and 2 days (D7), 1 month (M1), 3 months (M3) and 6 months (M6) post-treatment. *S. aureus*-positive cultures are depicted as black dots, with bacterial load given on the y-axis. The vertical dotted line shows time of treatment. Spa-typing results are given as dot labels. Recolonization was defined as a *S. aureus* positive culture (>8 CFU/ml) post-decolonization.
Supplementary Figure 2. Nasal microbiota of study participants in time.

Shown are the detailed species proportions in nasal samples from 8 S. aureus carriers (top panel) and noncarriers (bottom panel), inferred through 16S rRNA metabarcoding. Samples were taken immediately before decolonization (D0) and after 7 days (D7) and 1 (M1), 3 (M3), and 6 (M6) months.
Supplementary Figure 3. Rarefaction plot

Rarefaction curves showing the number of sequences per sample and the belonging species richness uncovered; carriers in red, noncarriers in blue. Curves reaching a plateau mean that a deeper sequencing would not result in significant species richness increase.