

Supplementary Information for:

Oxidative stress in the oral cavity is driven by individual-specific bacterial communities

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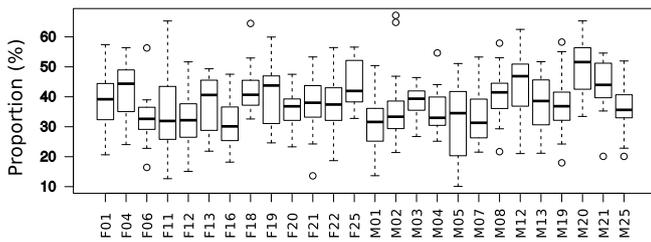
This Additional Files supplement includes:

Supplementary Figure S1.....	page 2
Supplementary Figure S2.....	page 3
Supplementary Figure S3.....	page 4
Supplementary Figure S4.....	page 4
Supplementary Figure S5.....	pages 4-28
Supplementary Figure S6.....	page 29
Supplementary Figure S7.....	pages 30
Supplementary Figure S8.....	pages 31-35

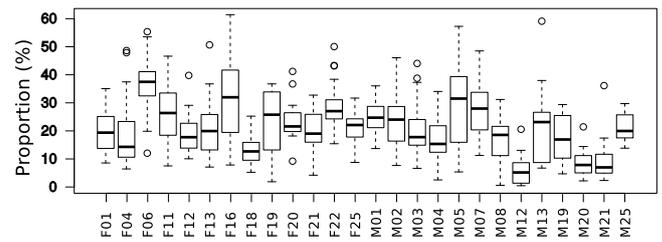
Supplementary Figure S1:

Composition of the salivary microbiome of the 26 volunteers. Boxplots show the proportion of the eight most prevalent bacterial OTUs. The box represents middle 50% of scores which fall within the inter-quartile range, while median marks the mid-point.

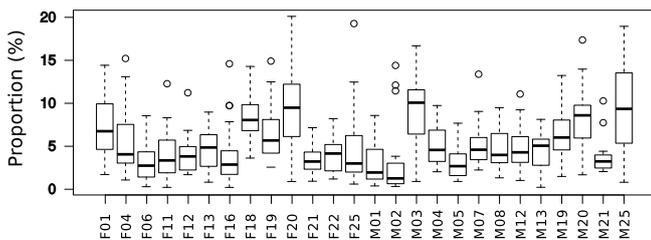
Streptococcus.0



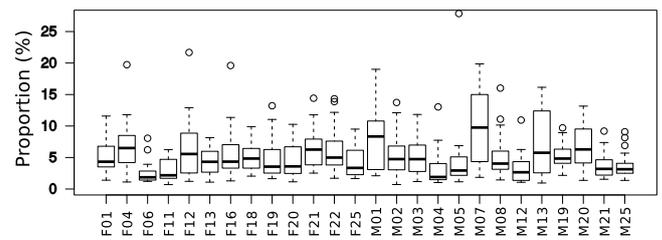
Rothia.1



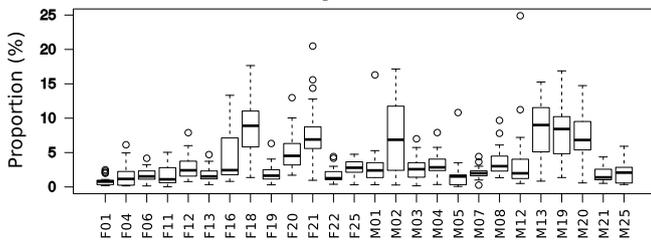
Granulicatella.2



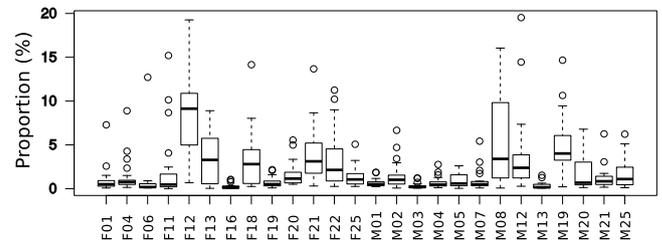
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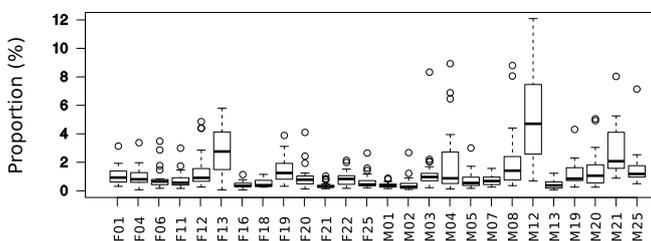
Atopobium.3



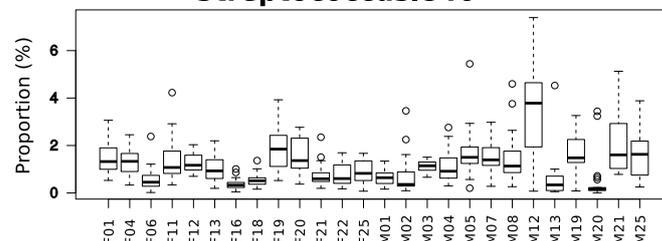
Saccharibacteria.4



Gemella.6

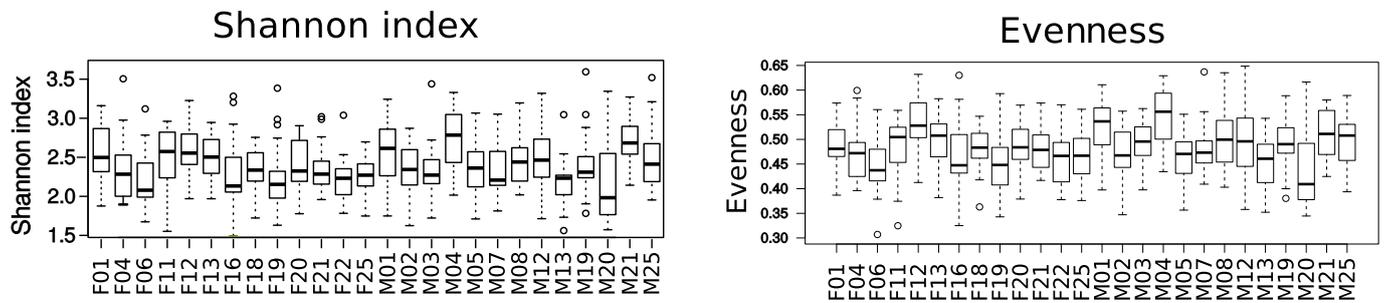


Streptococcus.846



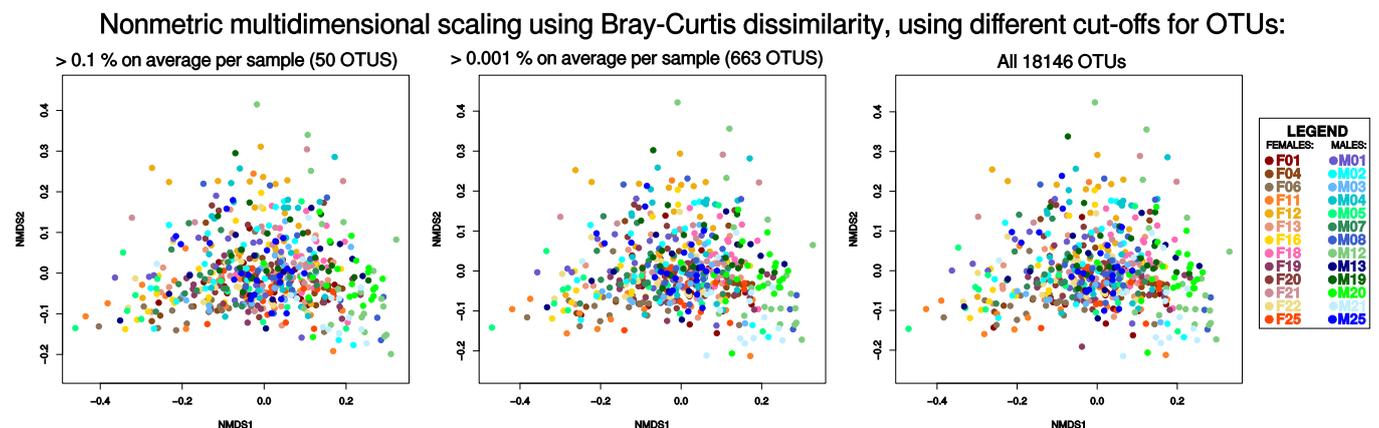
Supplementary Figure S3:

Bixplots showing Shannon diversity index and evenness index for each of the volunteers. The box represents middle 50% of scores which fall within the inter-quartile range, while median marks the mid-point.



Supplementary Figure S4:

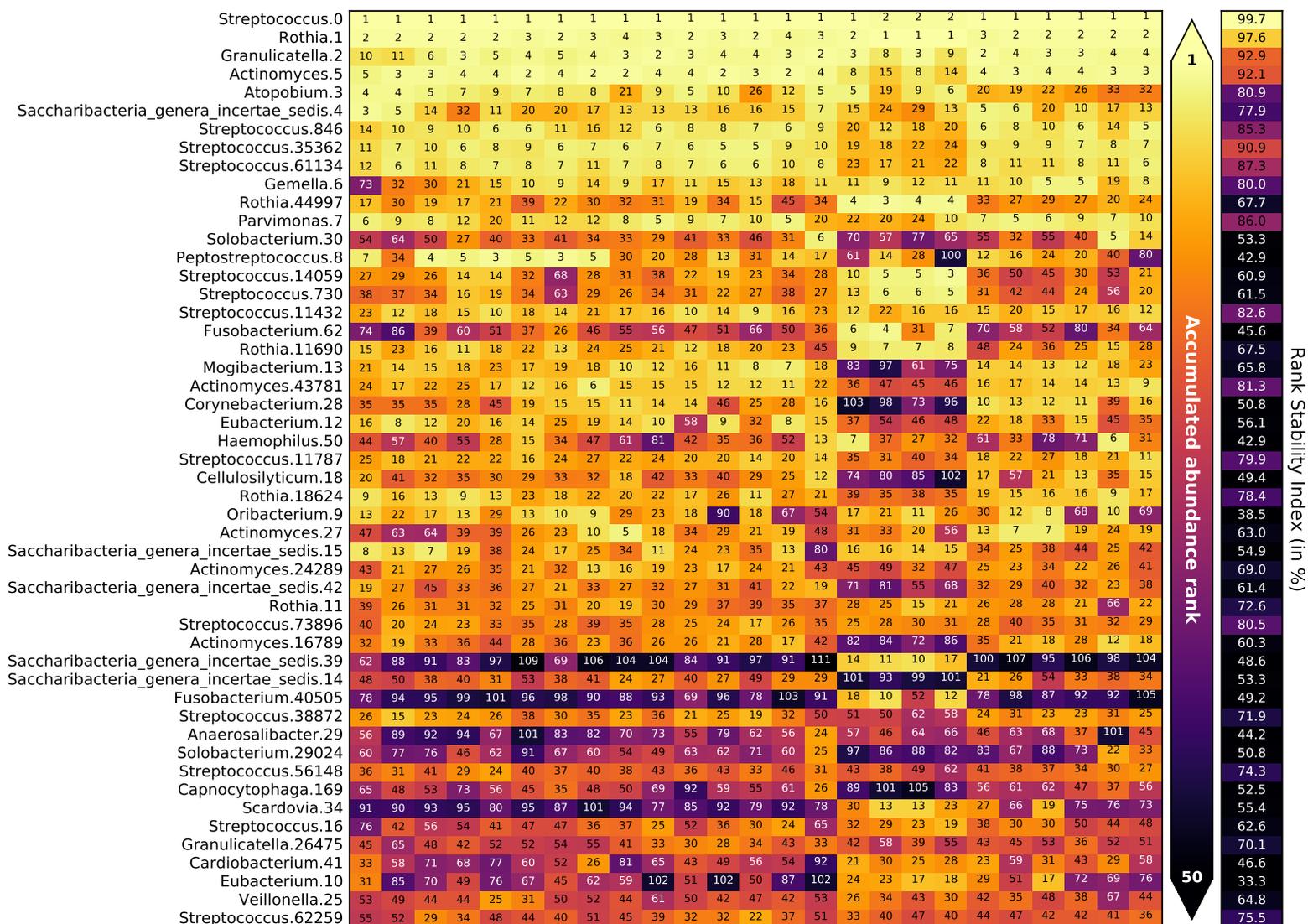
Comparison of NMDS ordinations of the 551 saliva samples including all 18,146 OTUs, the OTUs with average proportion > 0.001 % (687 OTUs) and the OTUs with average proportion > 0.1 % (50 OTUs). These three ordination did not result to be significantly different ($p < 0.001$).



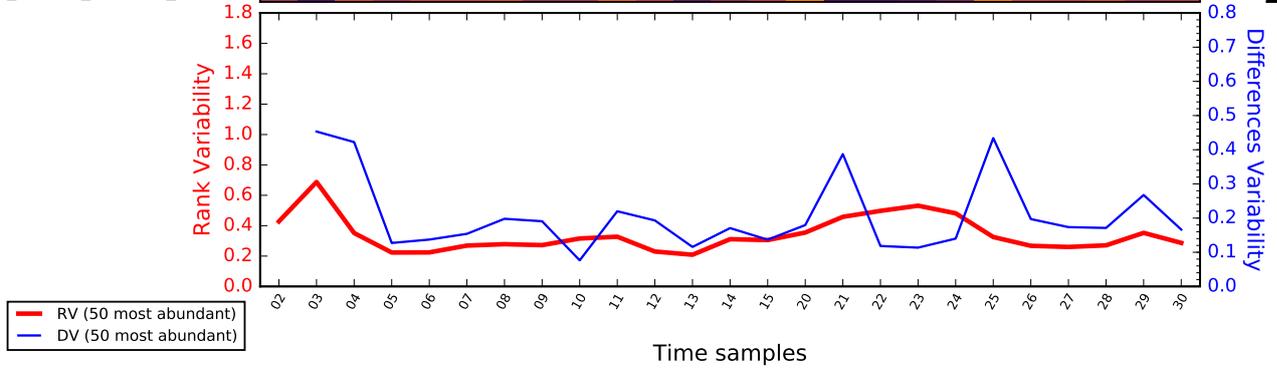
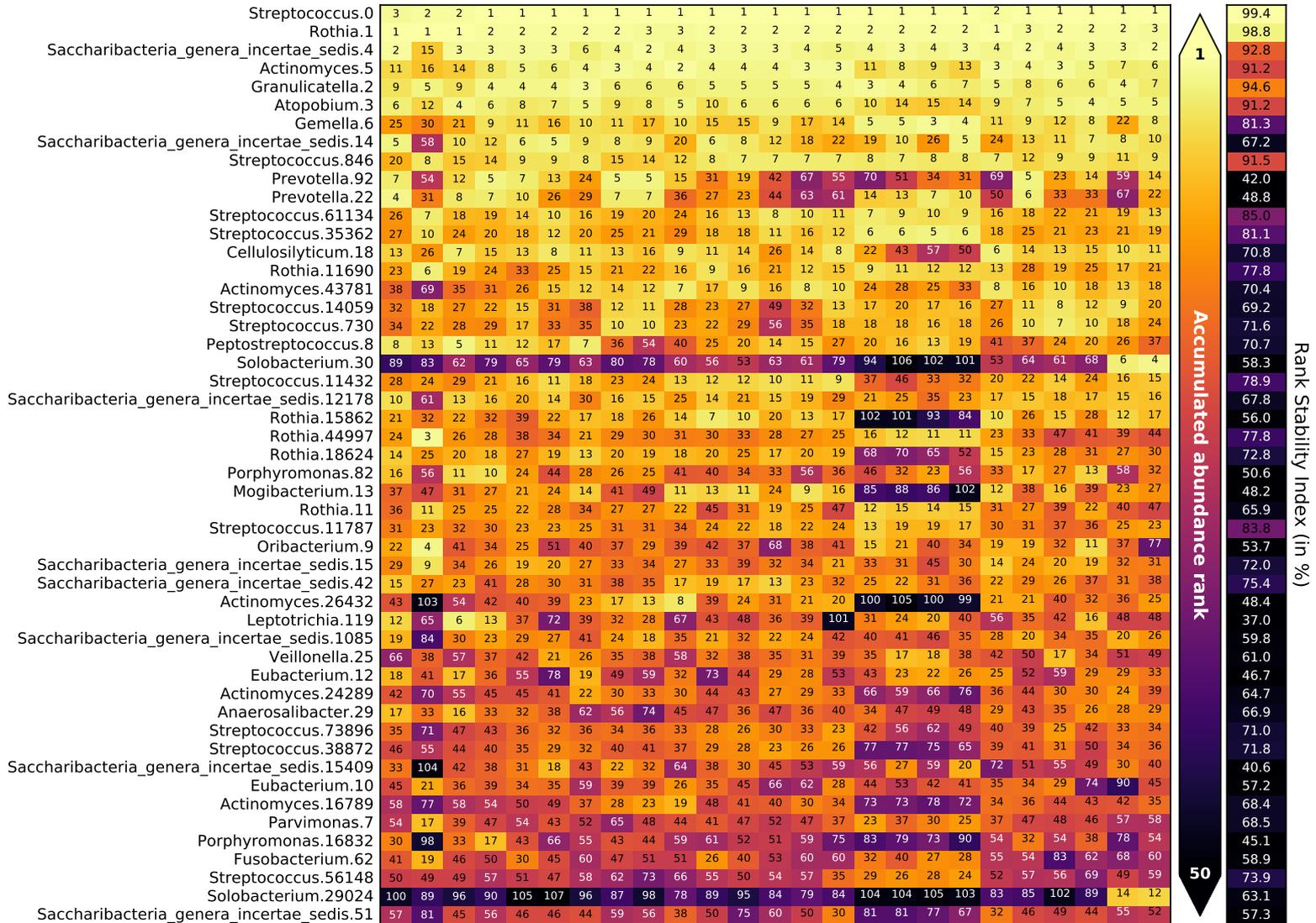
Supplementary Figure S5:

Temporal variability of 50 most prevalent OTUs in the 24 volunteers. The volunteers F18 and F11 (the most and the less stable) are shown in the Figure 2.

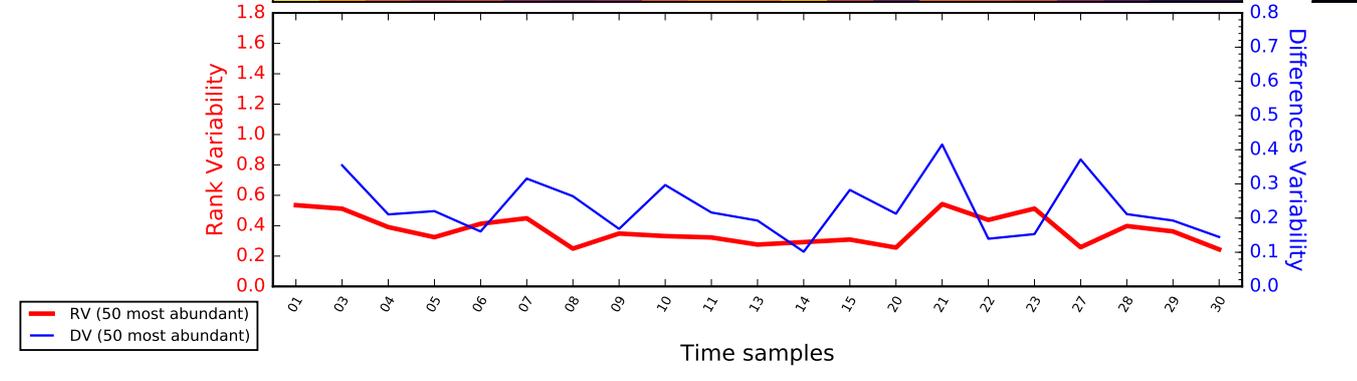
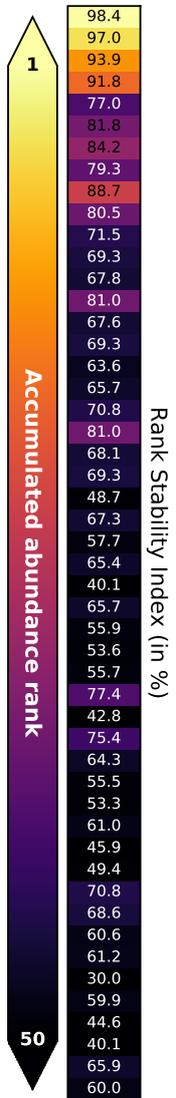
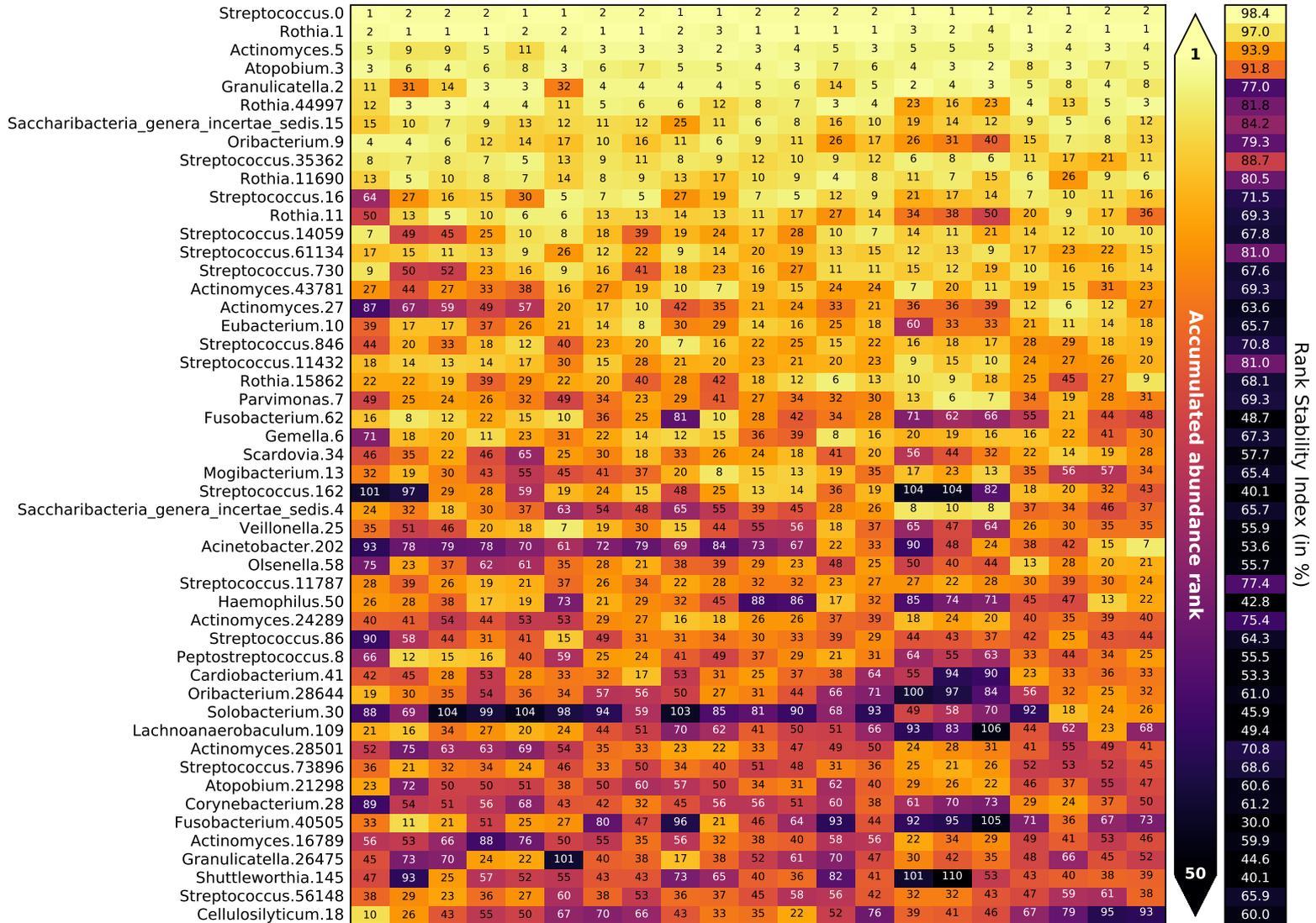
F04: rank matrix & stability



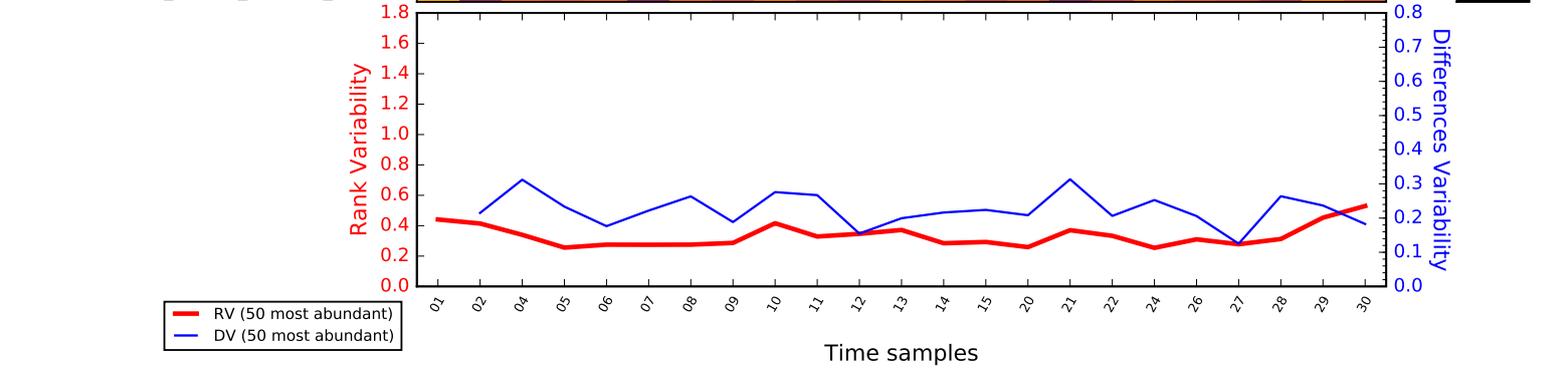
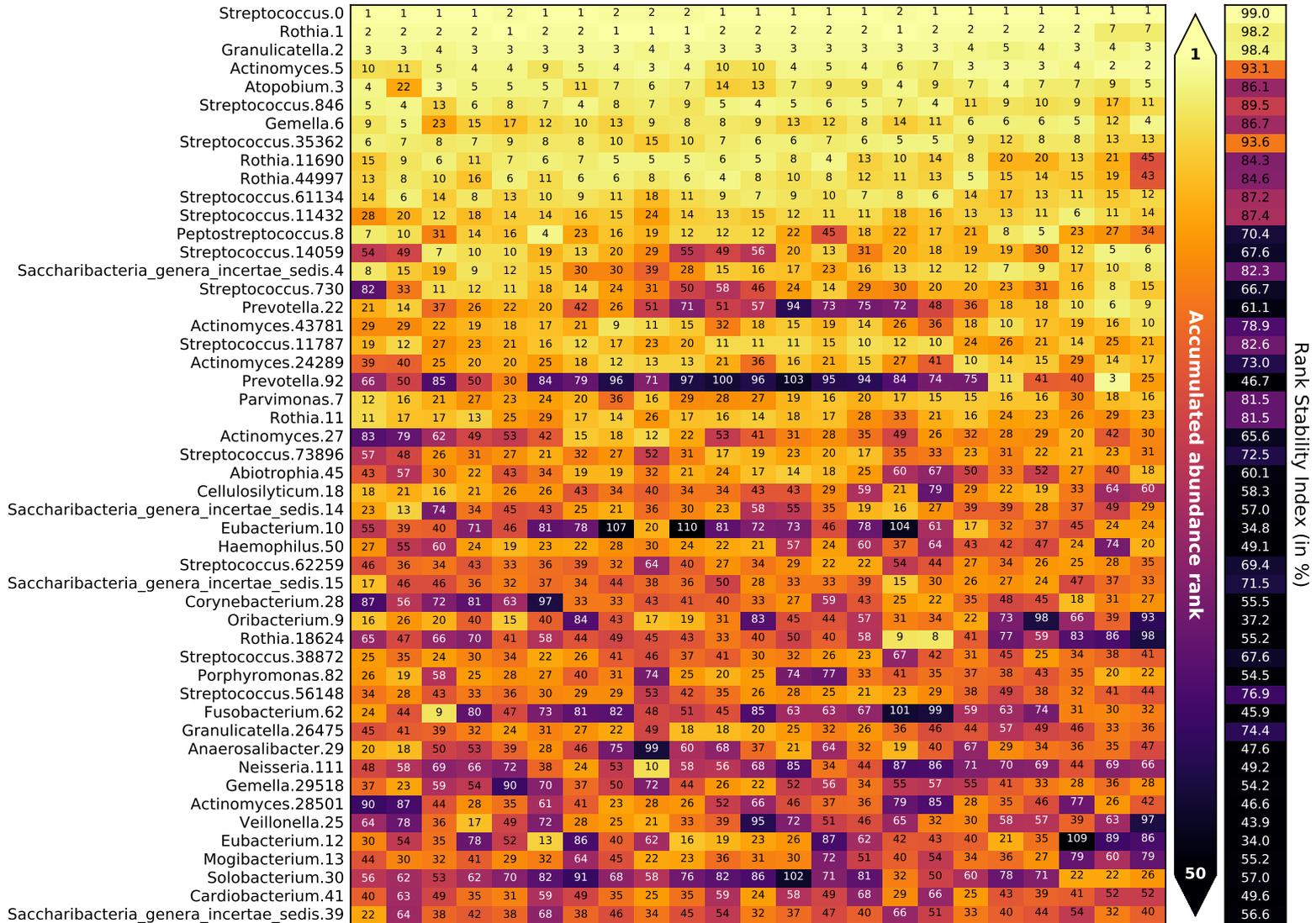
F12: rank matrix & stability



F16: rank matrix & stability

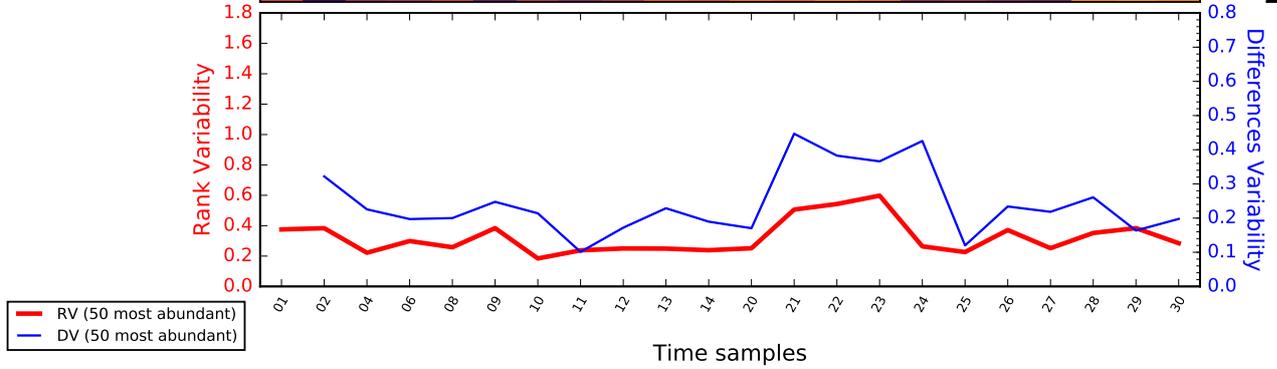
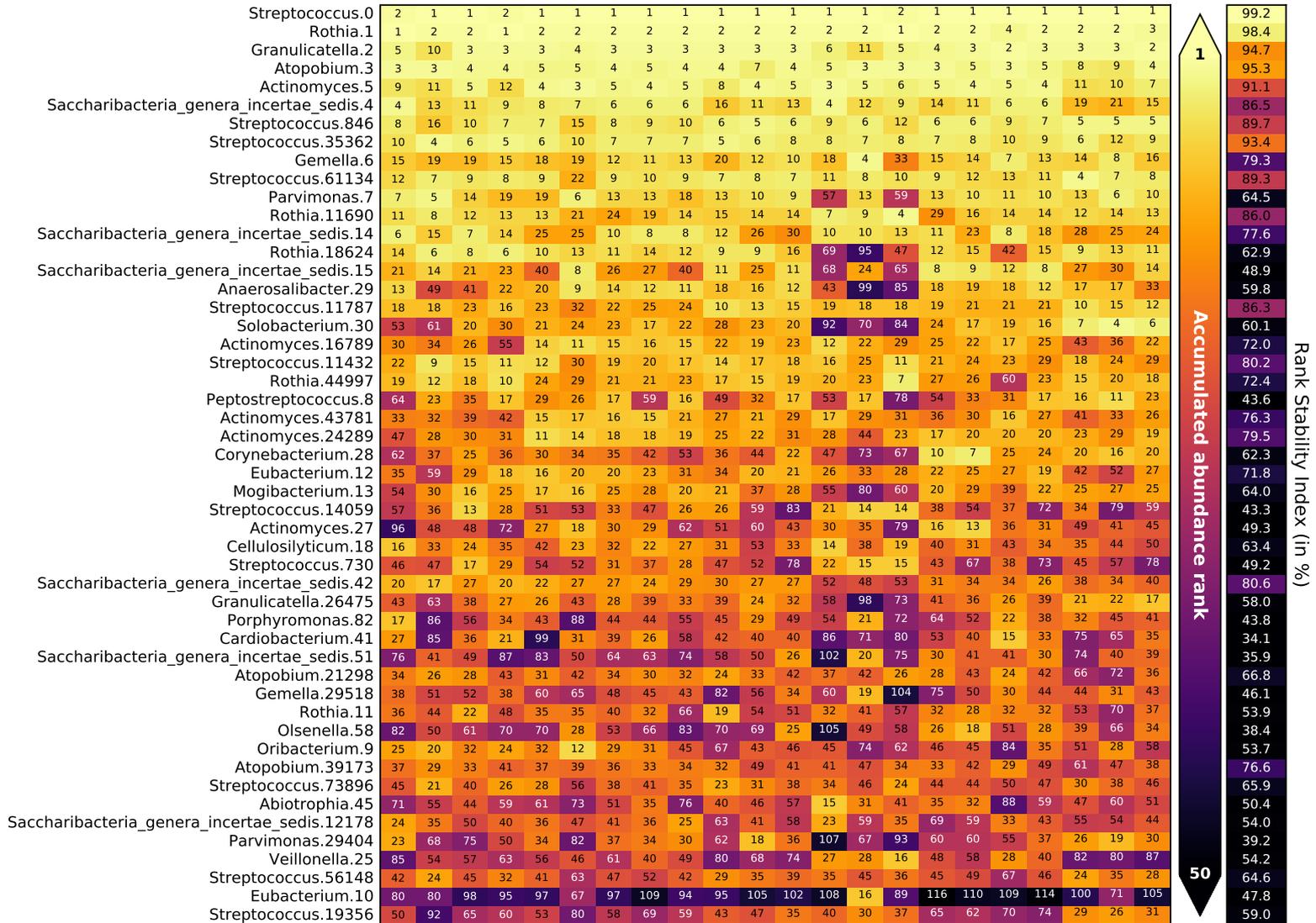


F19: rank matrix & stability

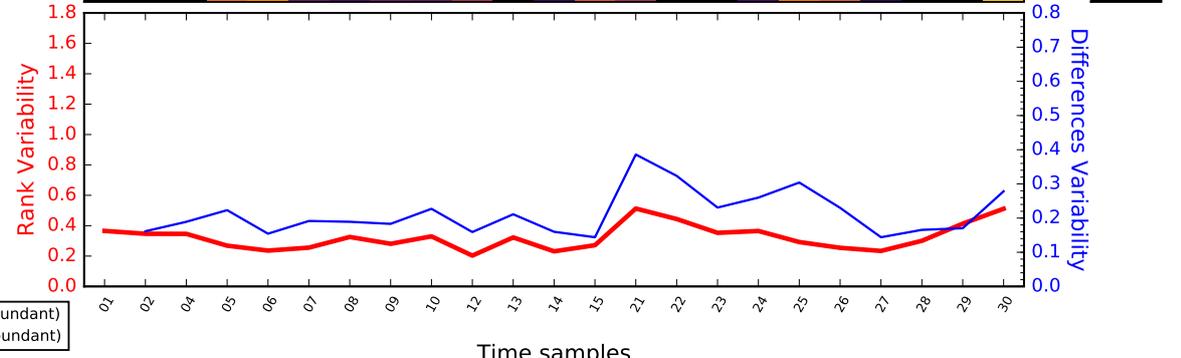
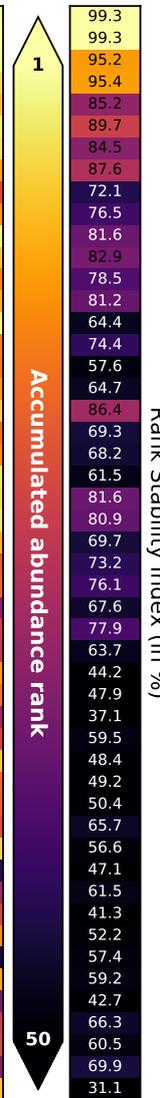
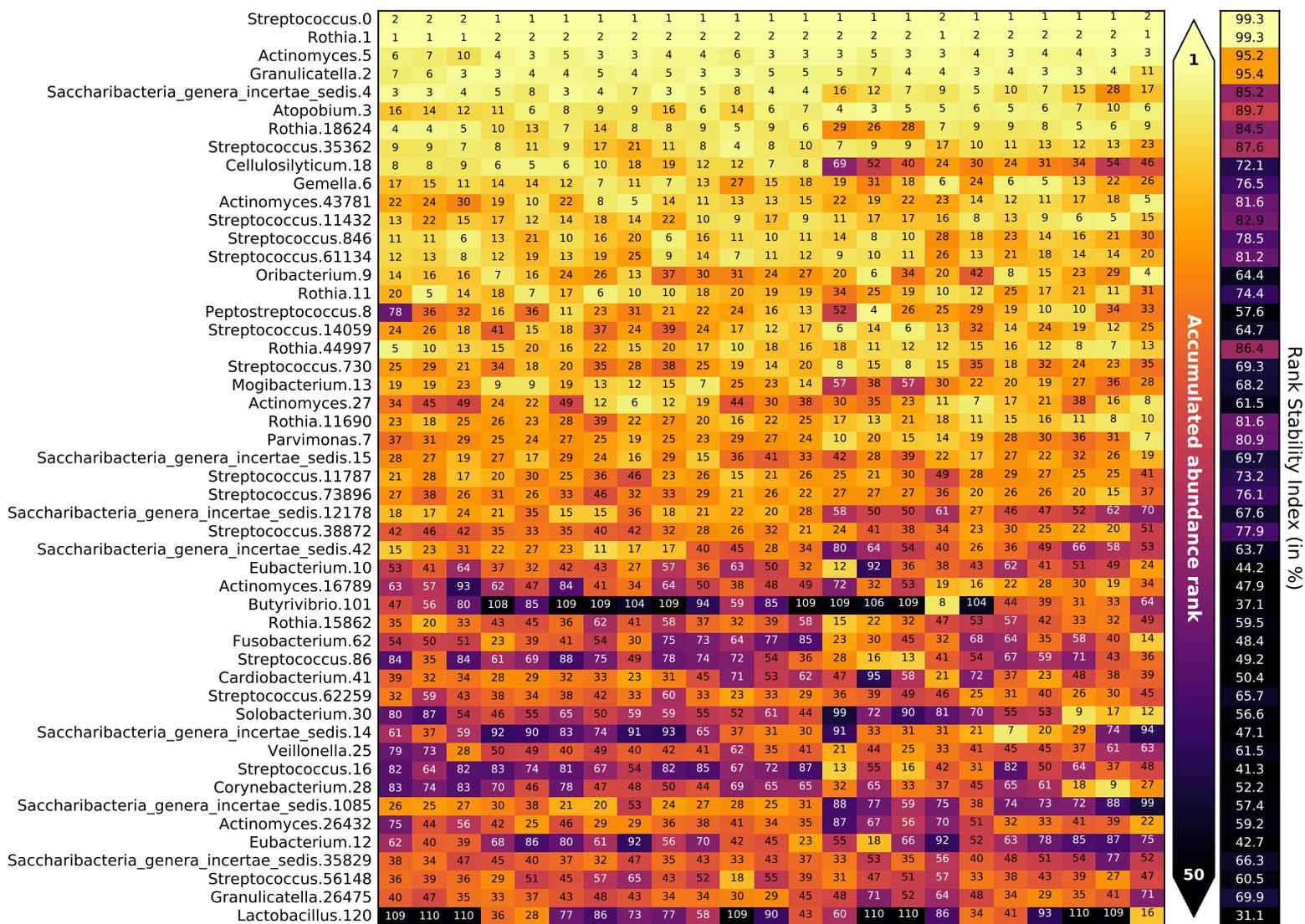


— RV (50 most abundant)
— DV (50 most abundant)

F20: rank matrix & stability

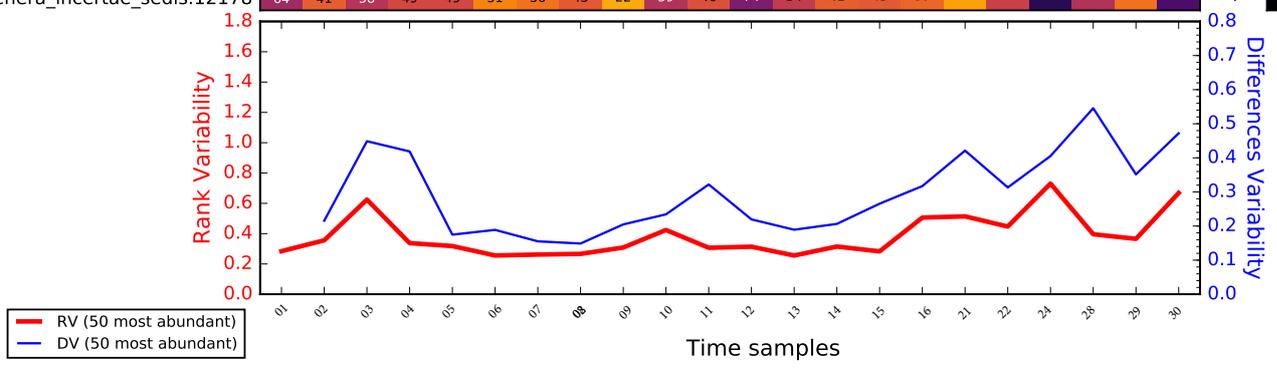
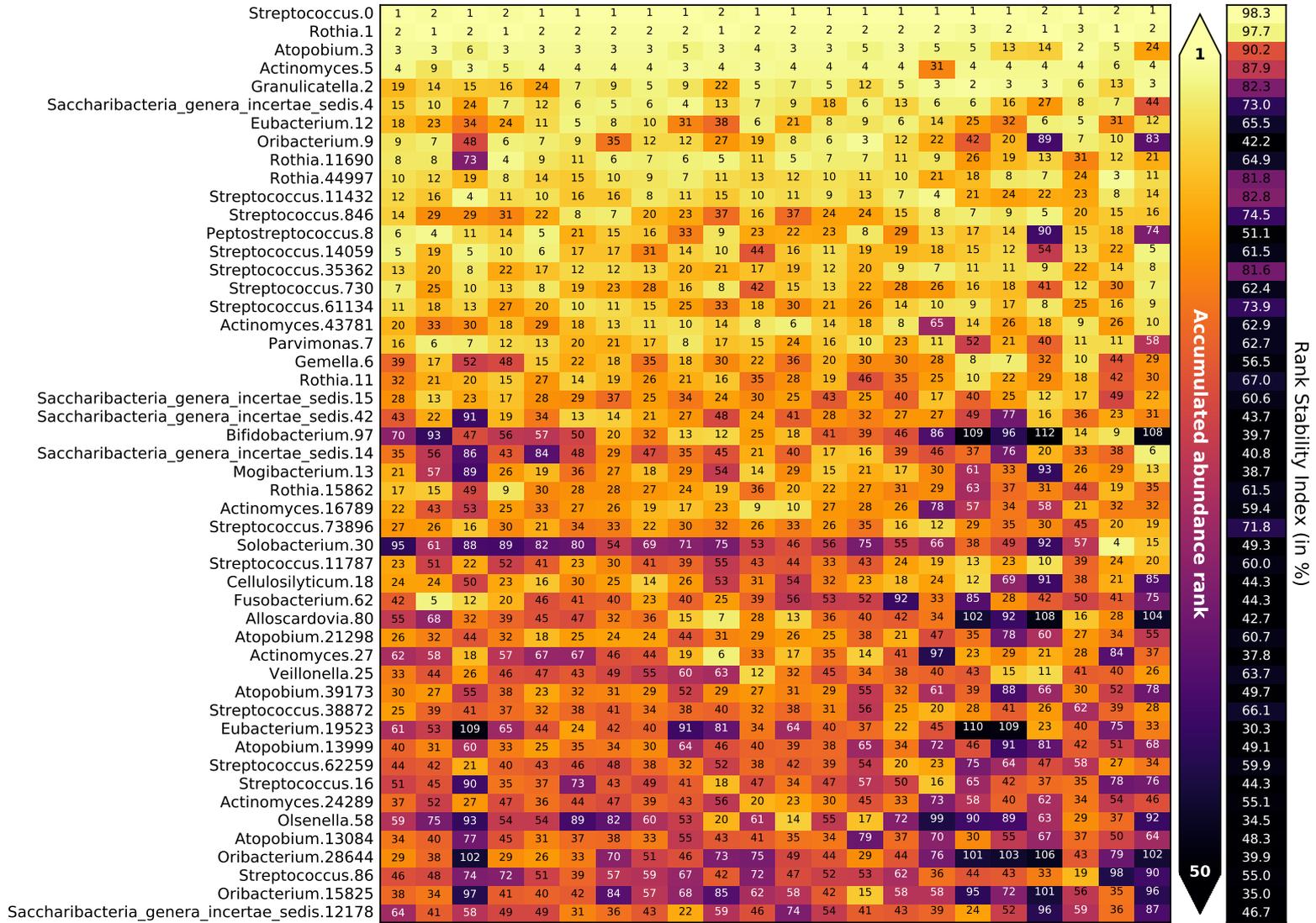


F22: rank matrix & stability

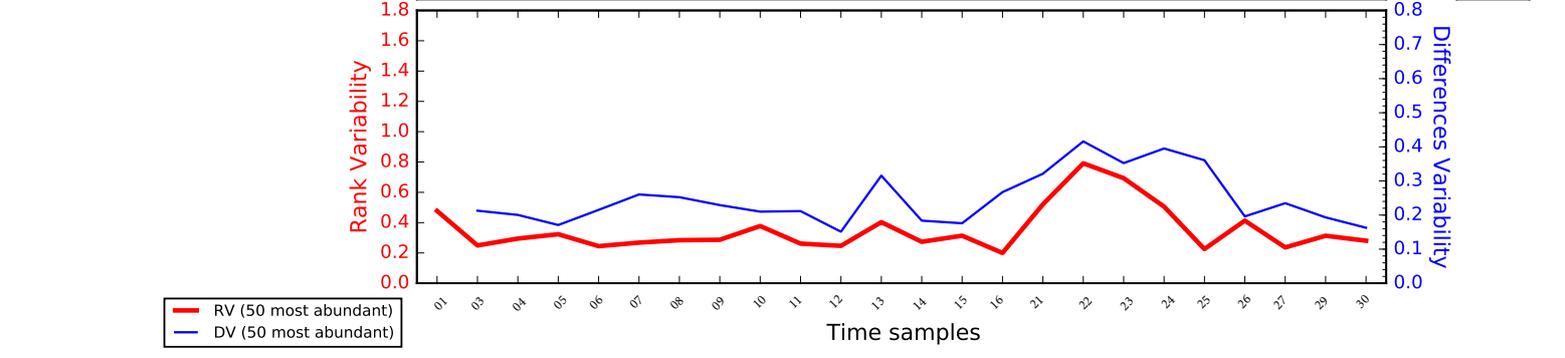
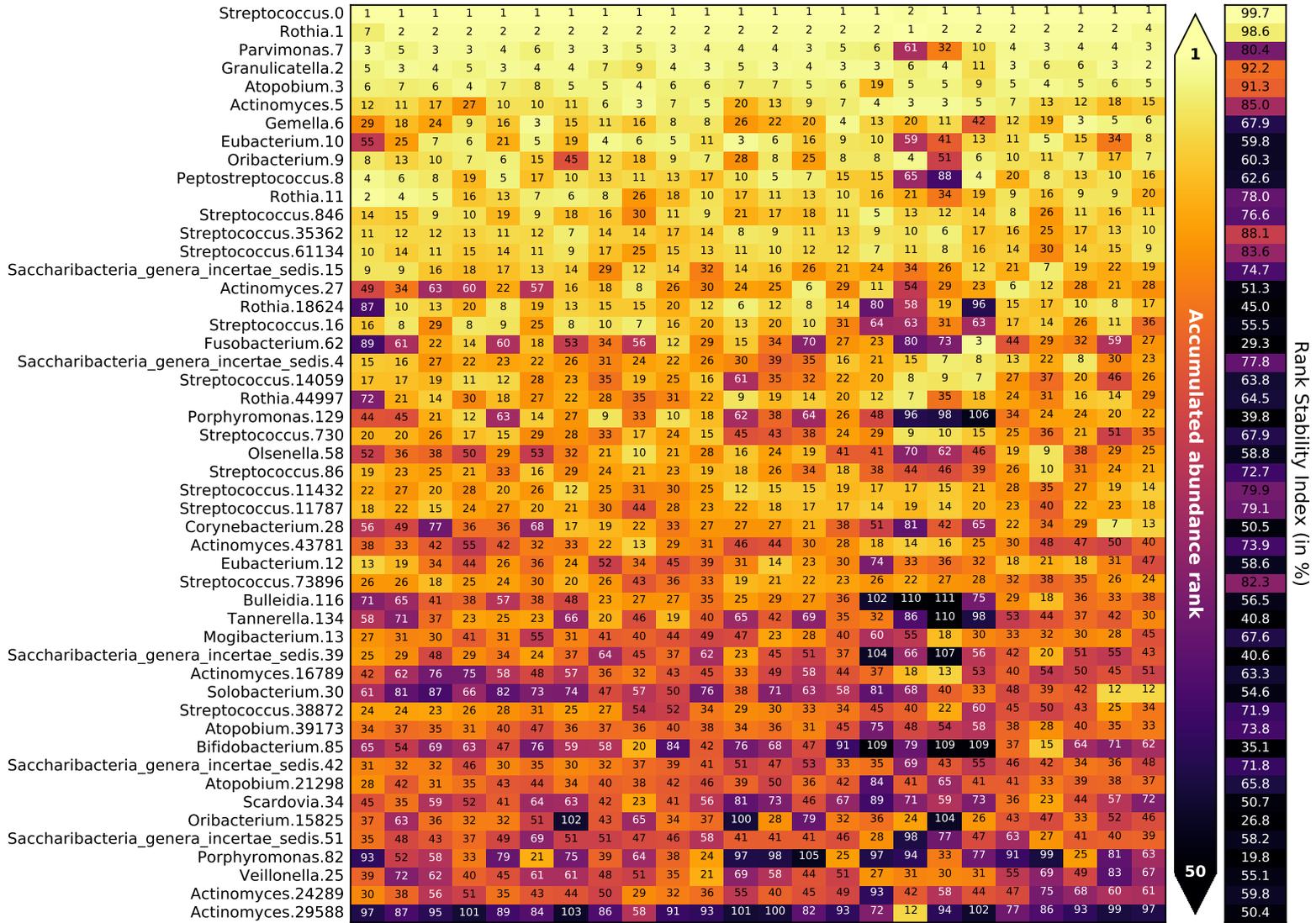


— RV (50 most abundant)
— DV (50 most abundant)

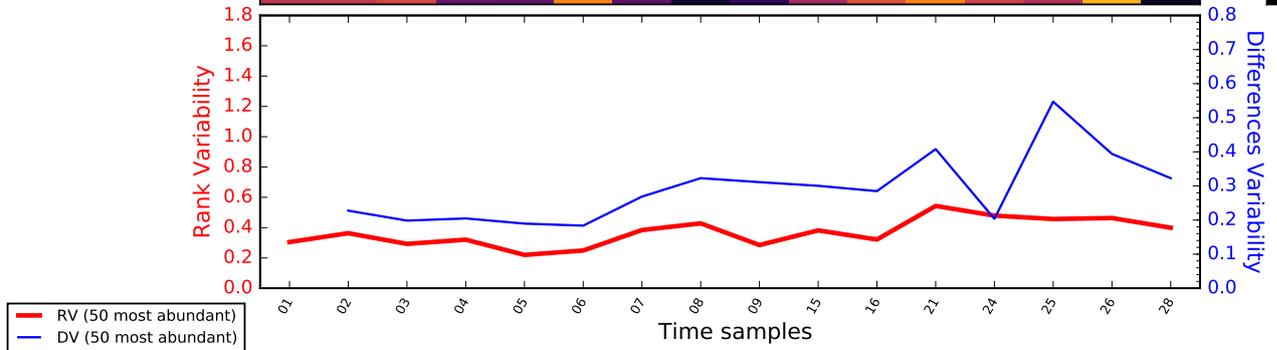
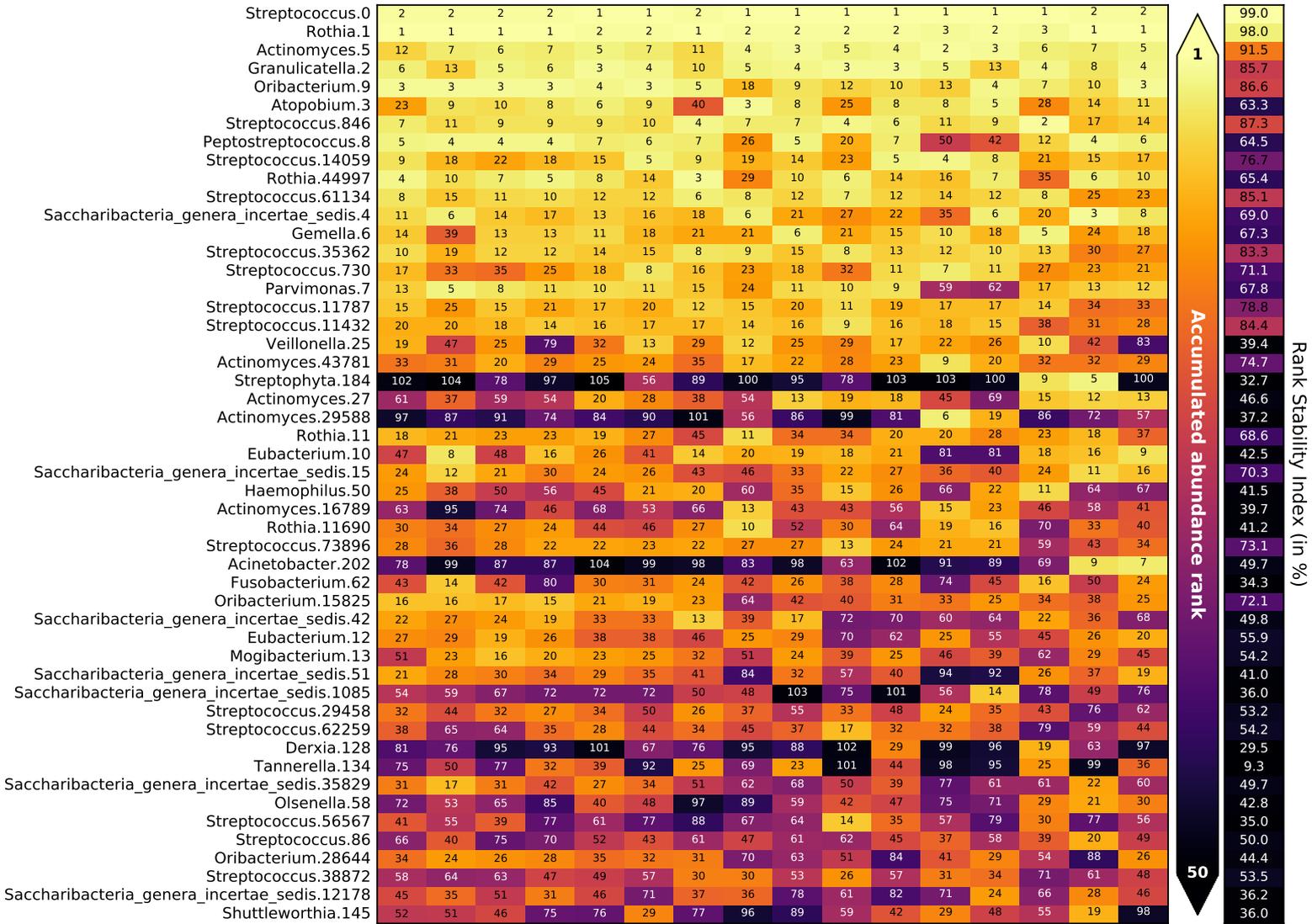
M02: rank matrix & stability



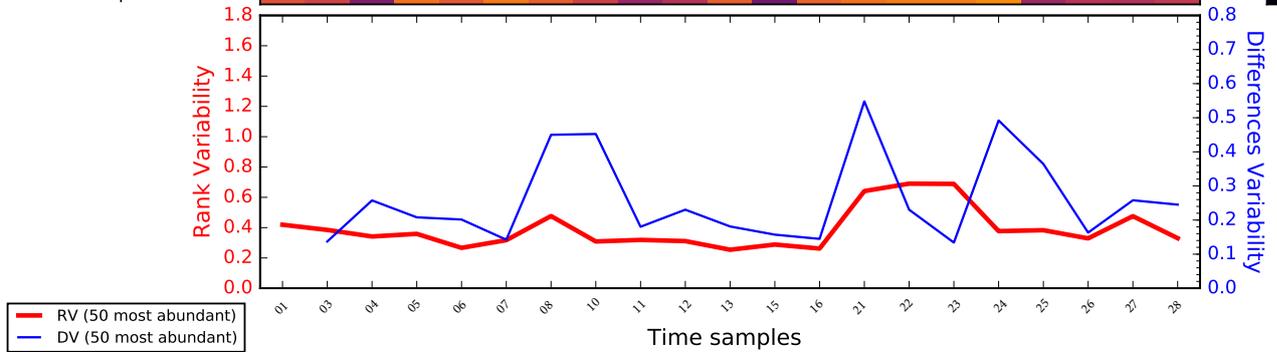
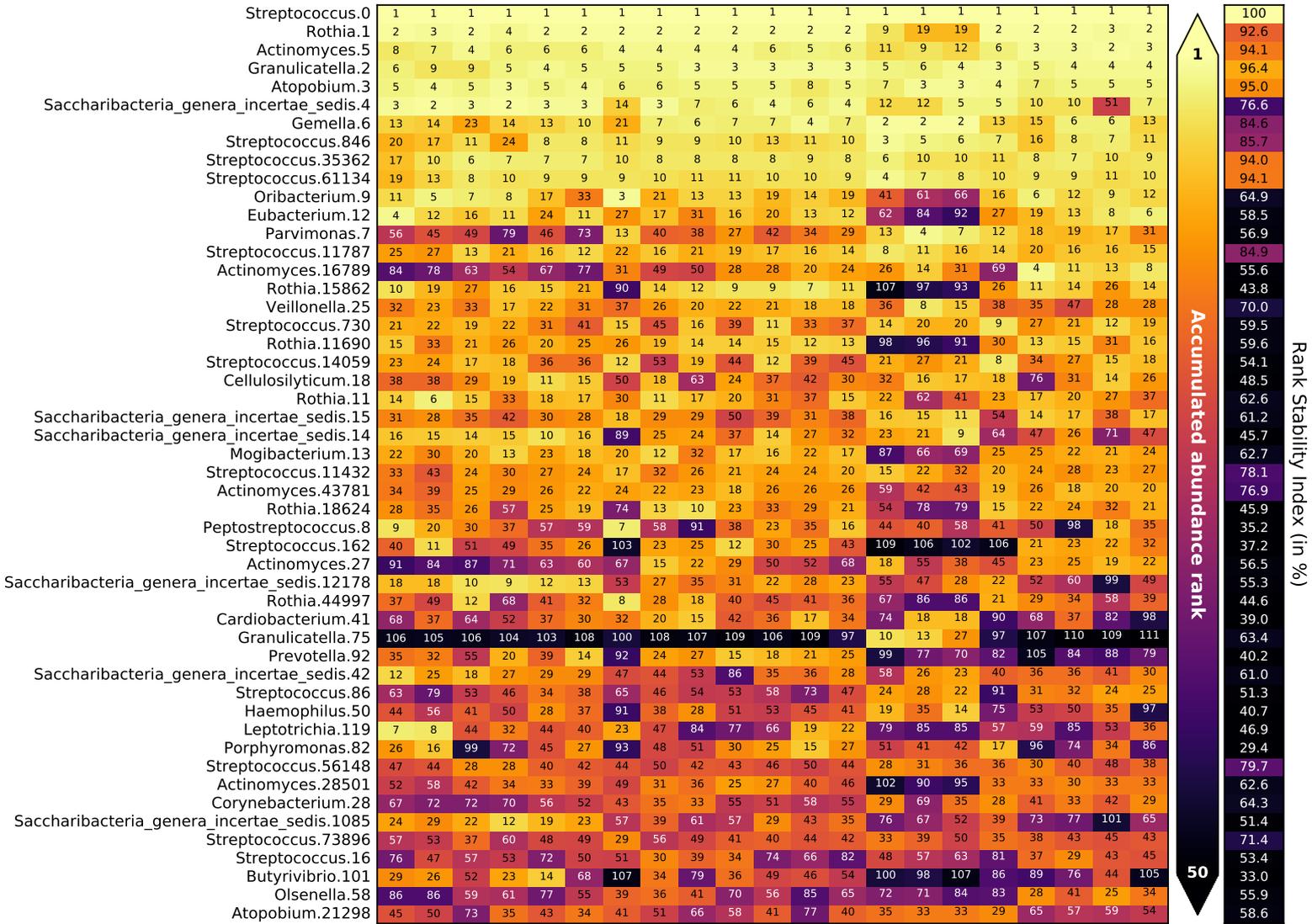
M04: rank matrix & stability



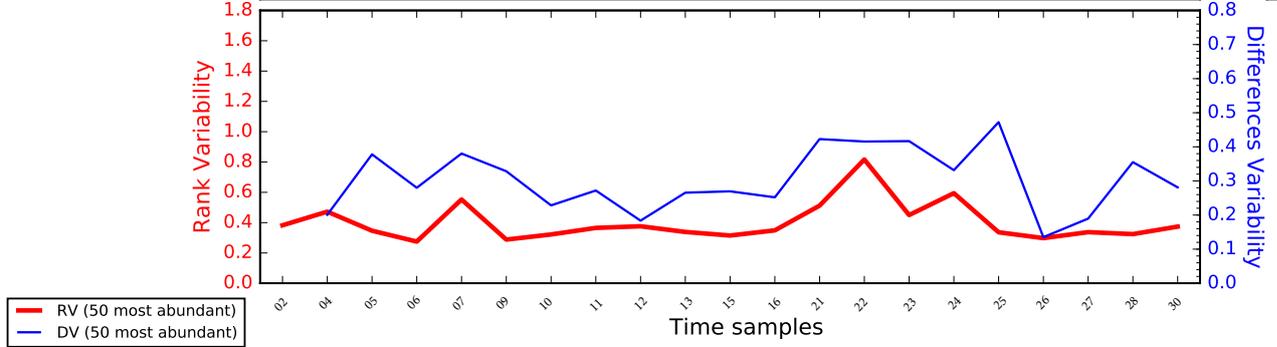
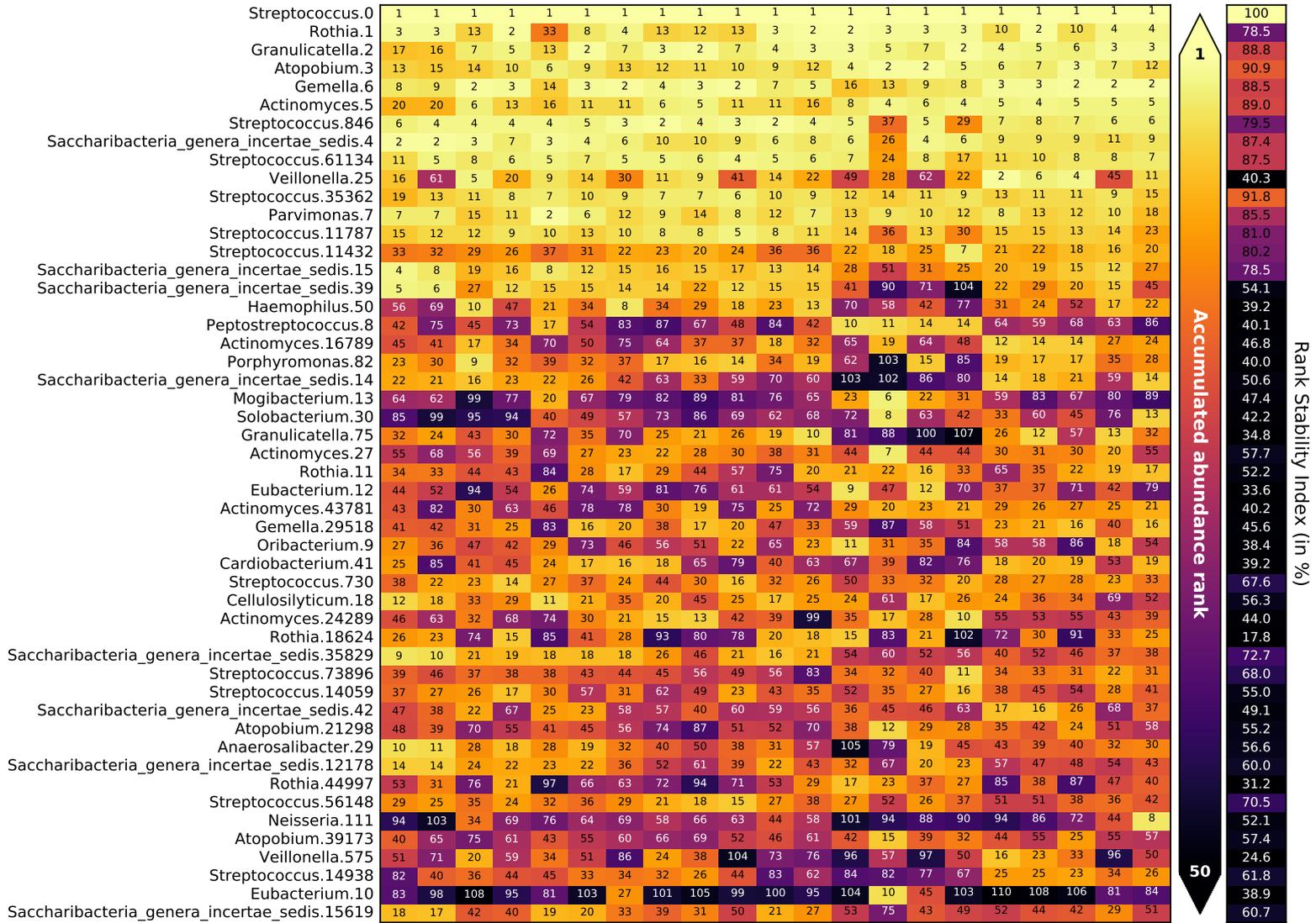
M05: rank matrix & stability



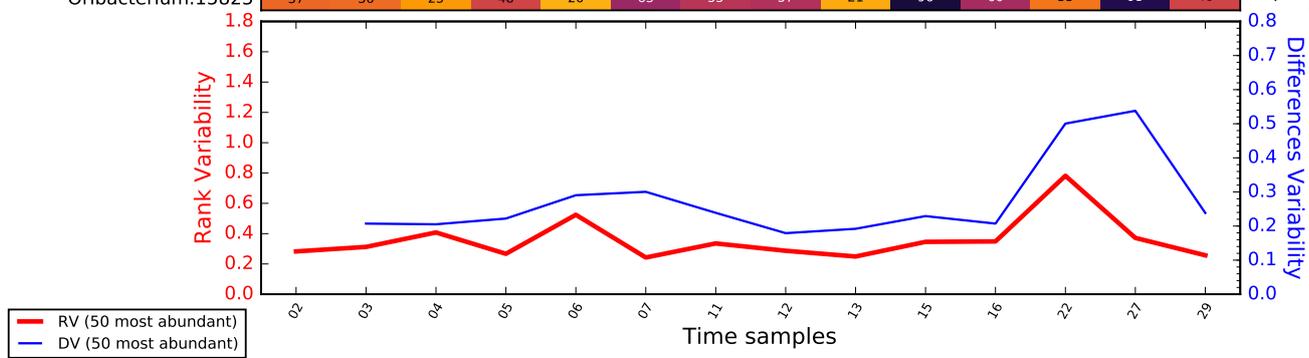
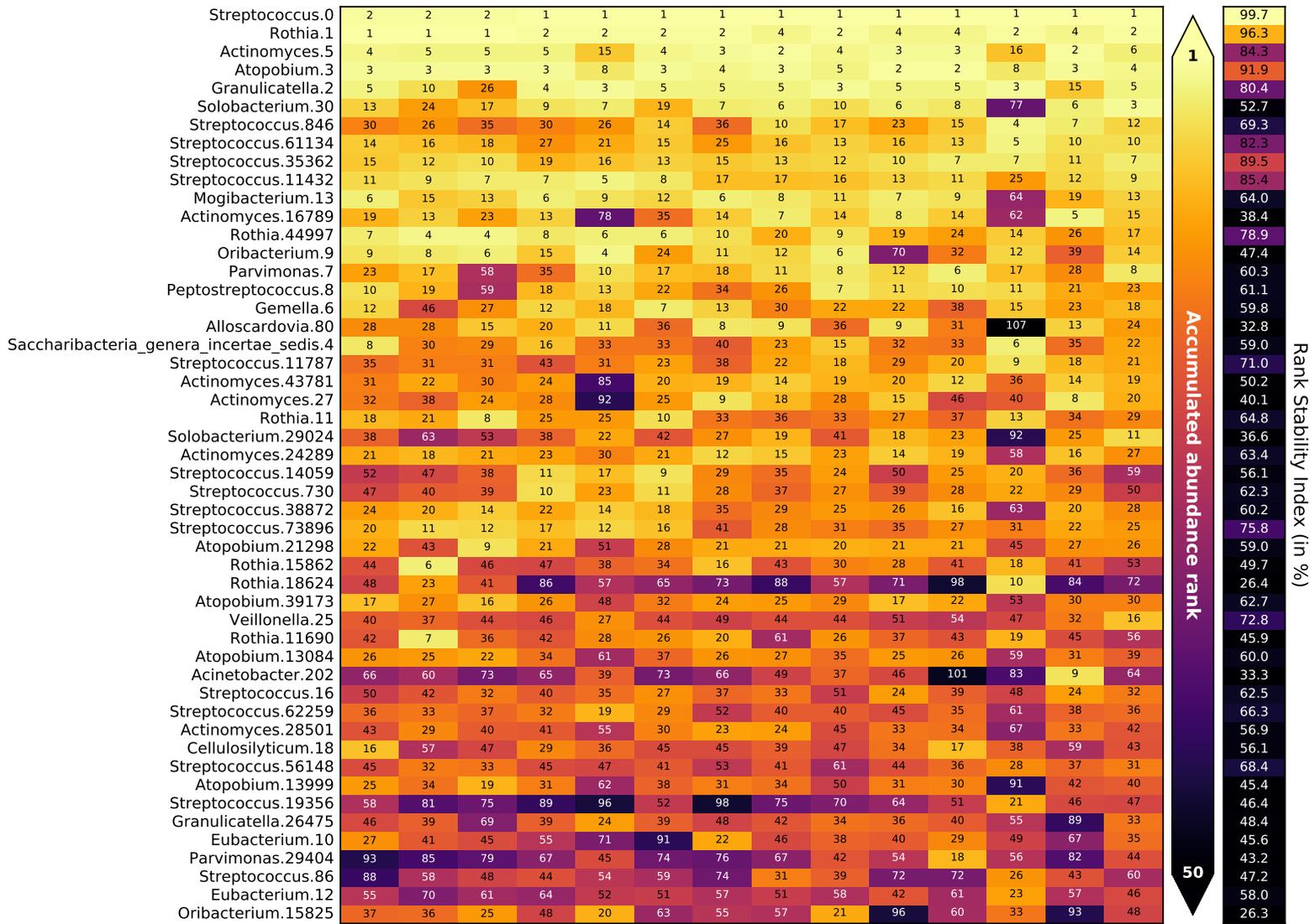
M08: rank matrix & stability



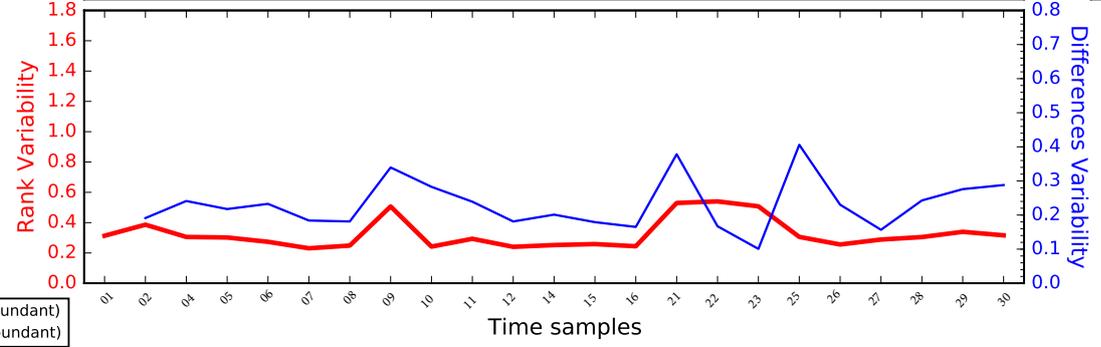
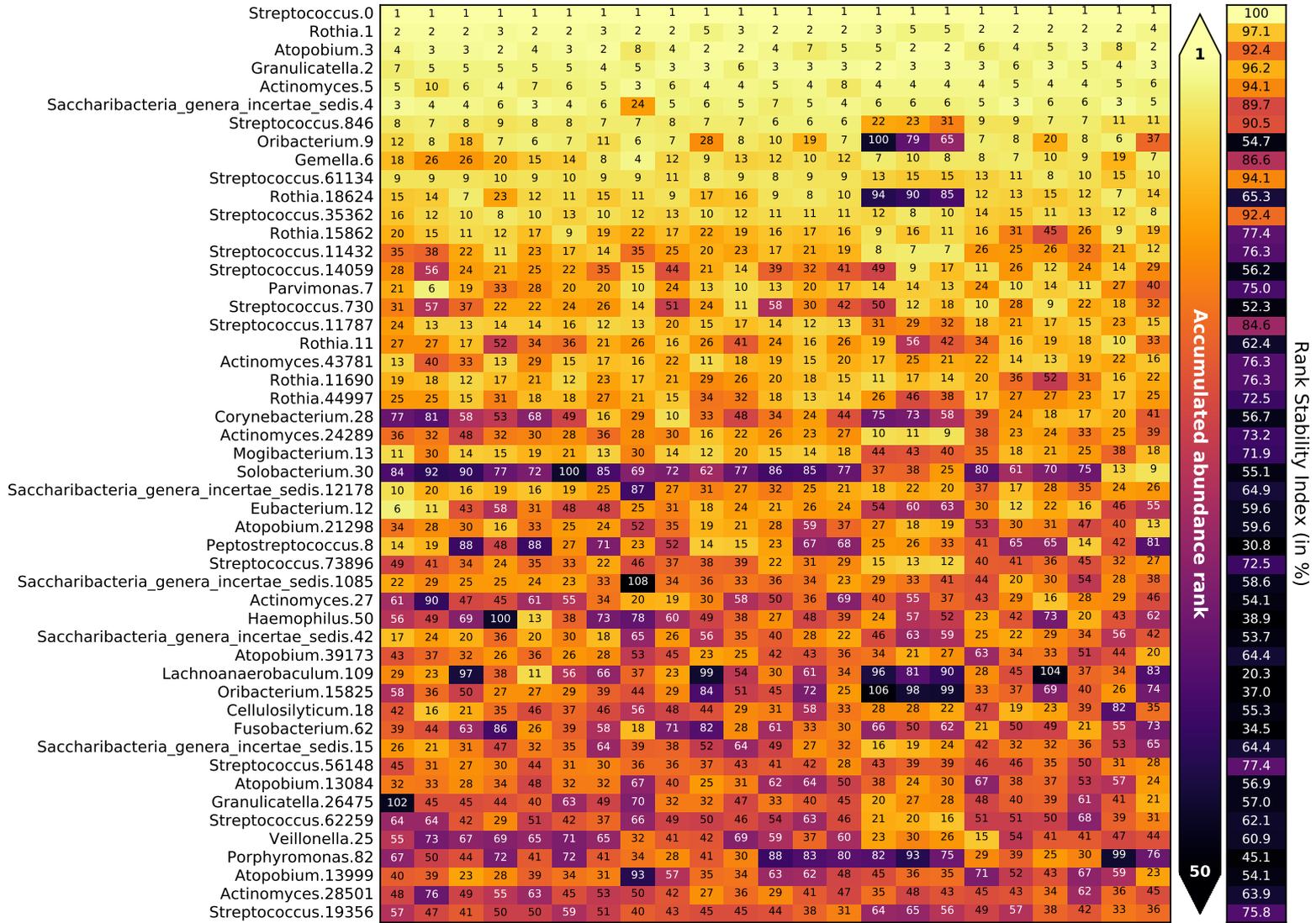
M12: rank matrix & stability



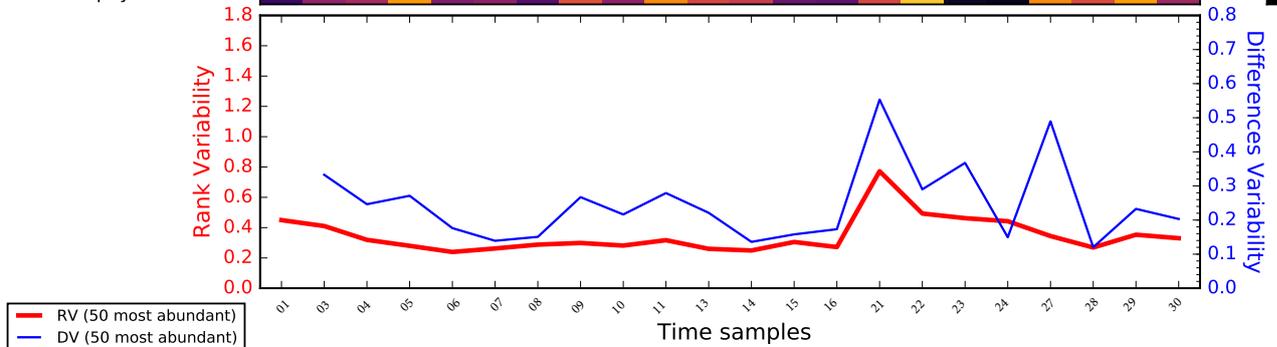
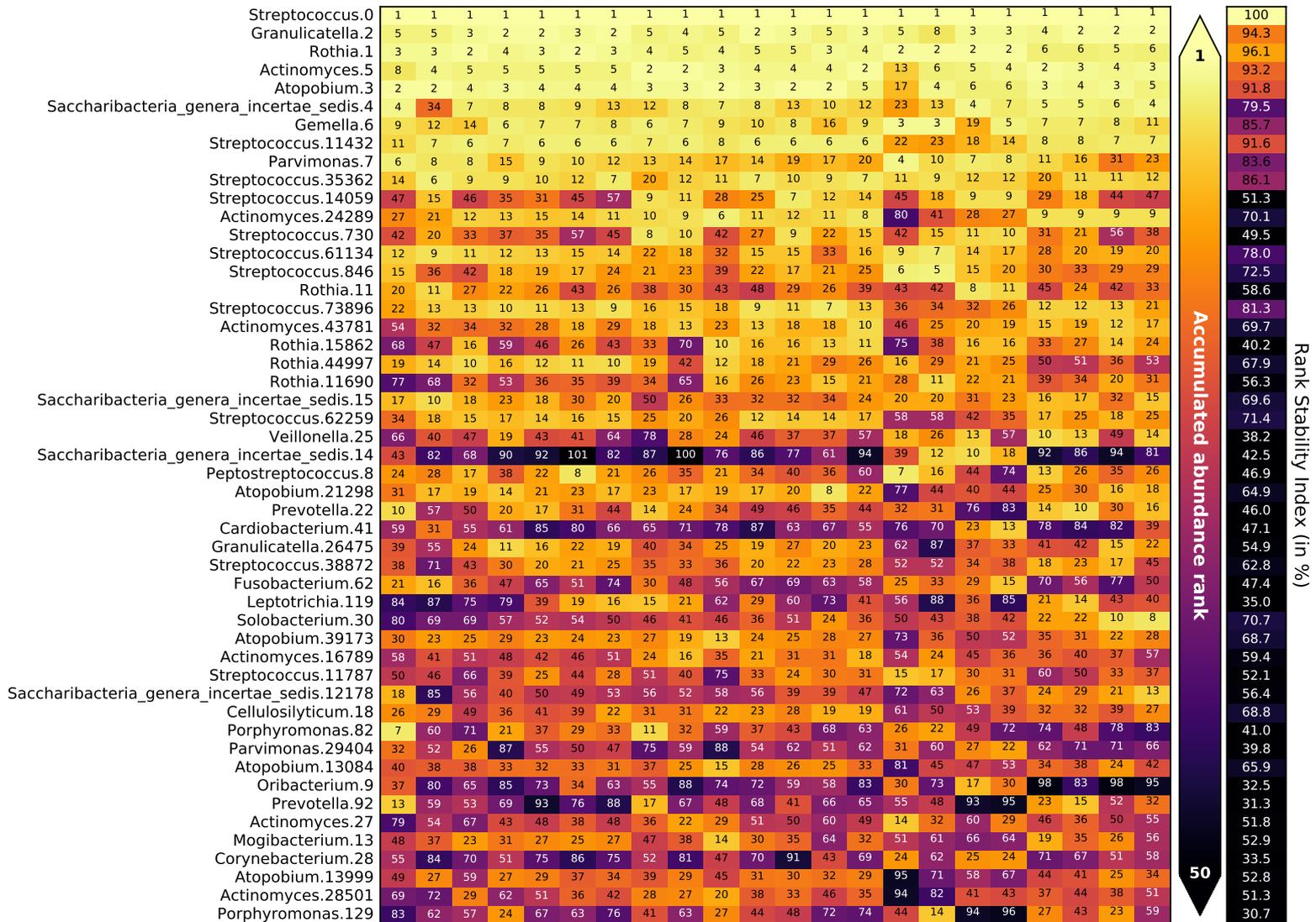
M13: rank matrix & stability



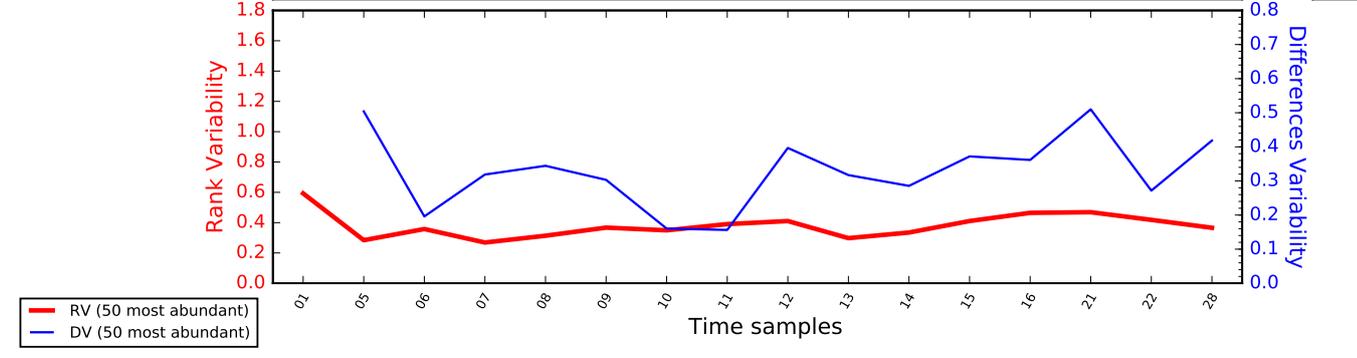
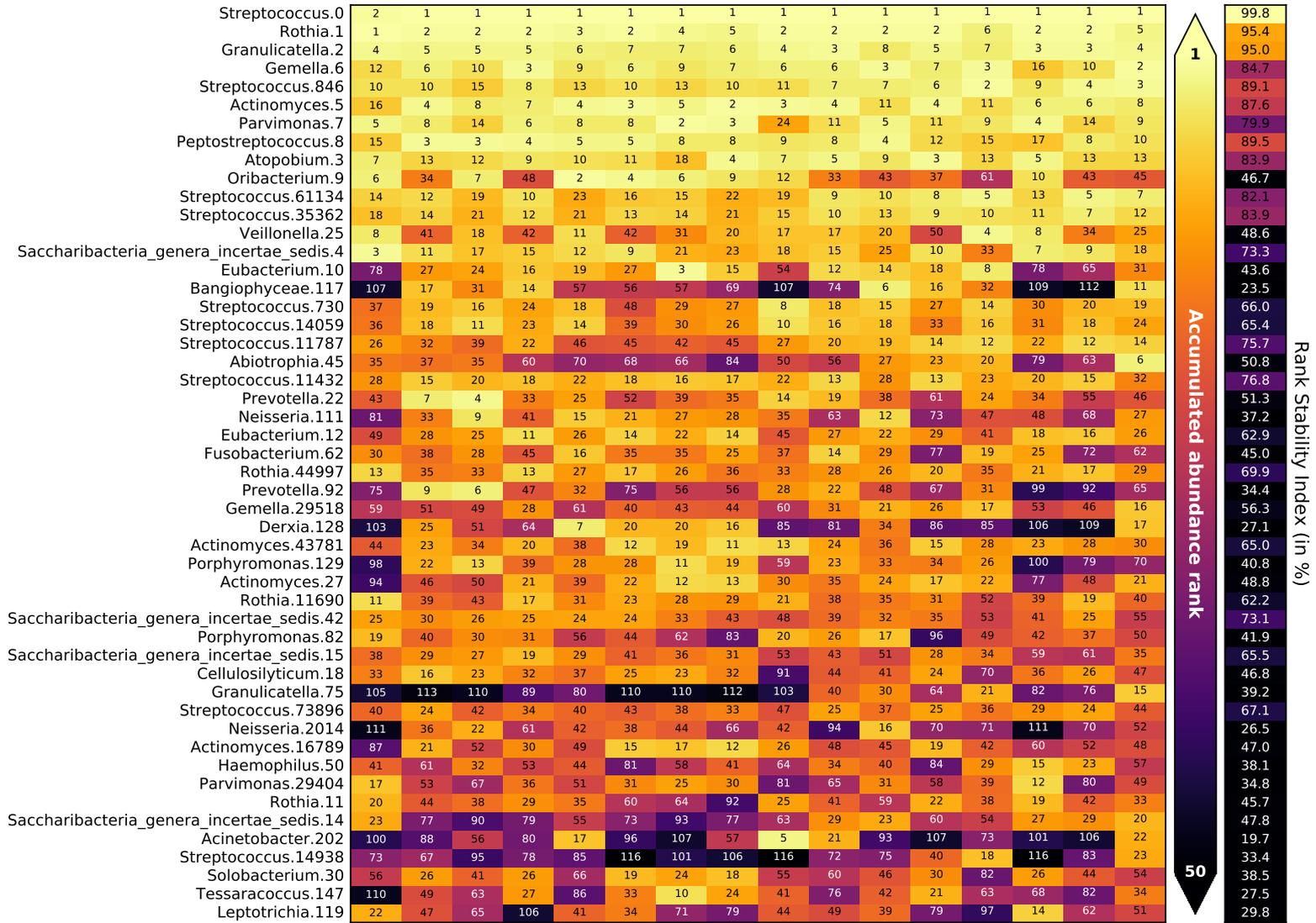
M19: rank matrix & stability



M20: rank matrix & stability

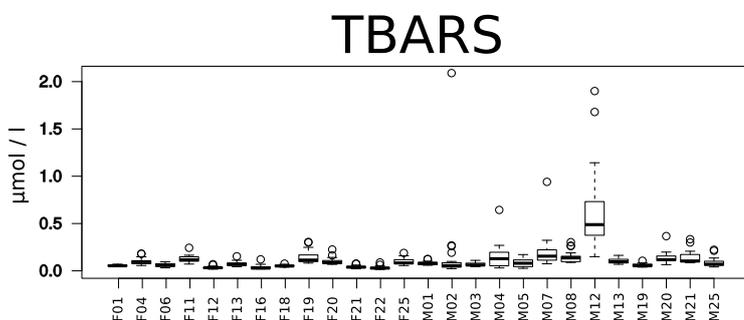
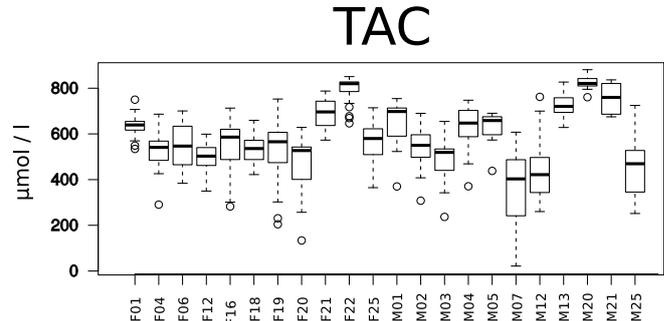
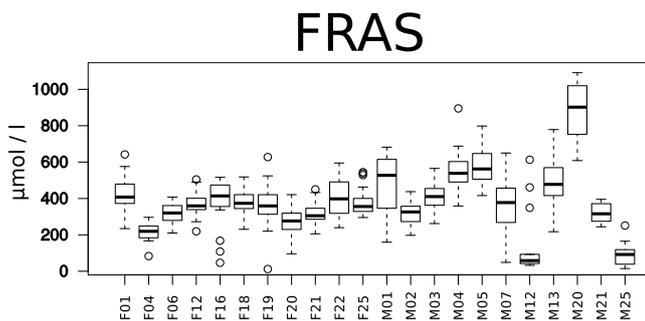
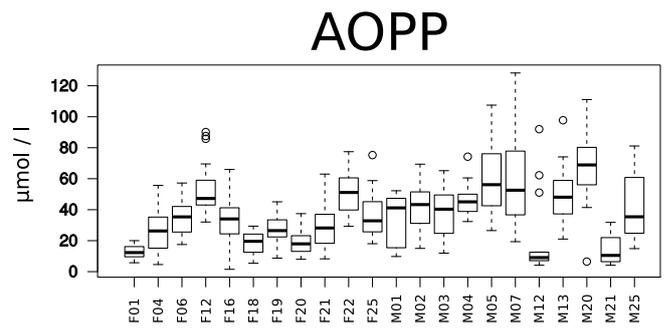
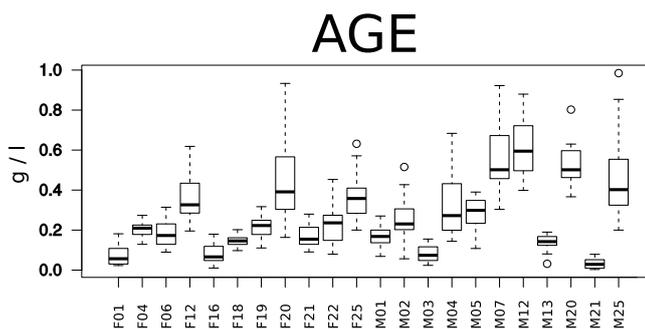


M21: rank matrix & stability



Supplementary Figure S6:

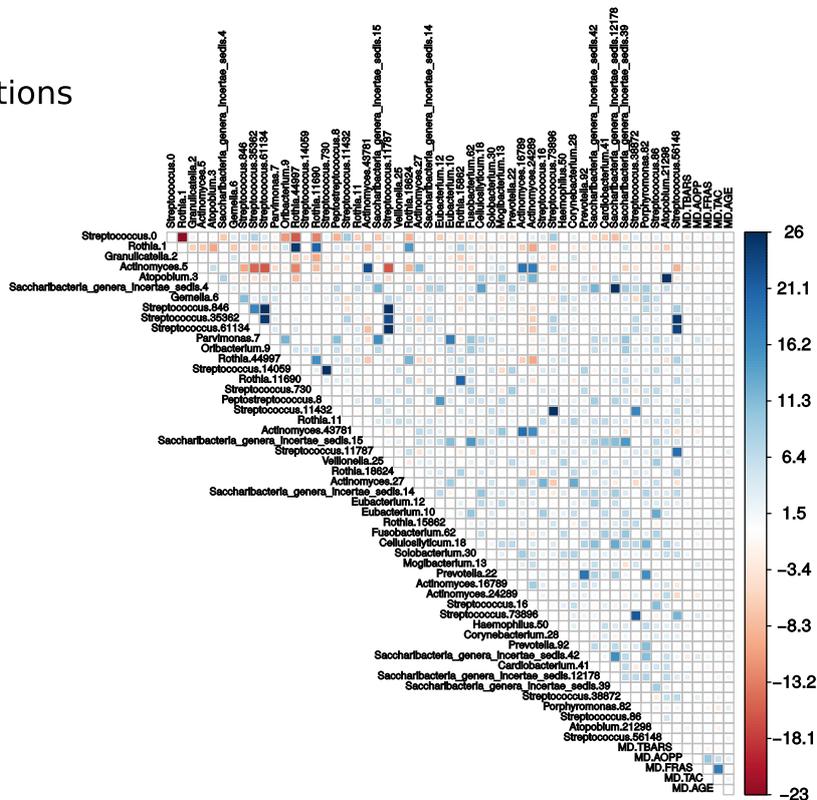
Boxplots showing values of AGE, AOPP, FRAS, TAC and TBARS for each volunteer. The box represents middle 50% of scores which fall within the inter-quartile range, while median marks the mid-point.



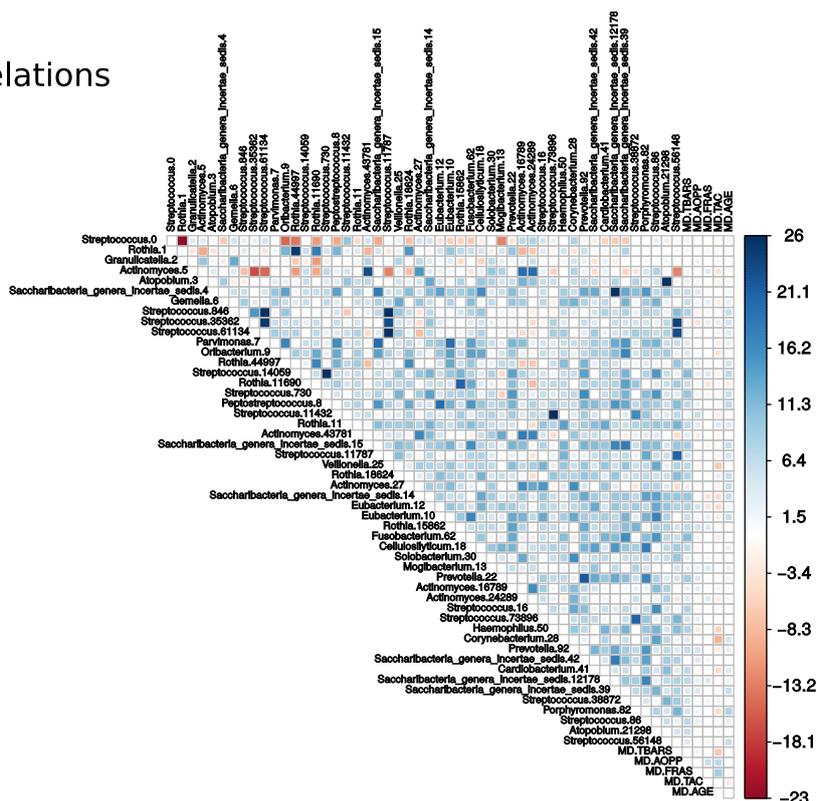
Supplementary Figure S7:

Correlation plots summarizing Pearson's and Spearman's correlations on intra-individual level. Both temporally direct and lagged correlations were calculated. The color bar on the right of each panel indicates in how many individuals a negative (red) or a positive (blue) correlation was detected.

Pearson's correlations



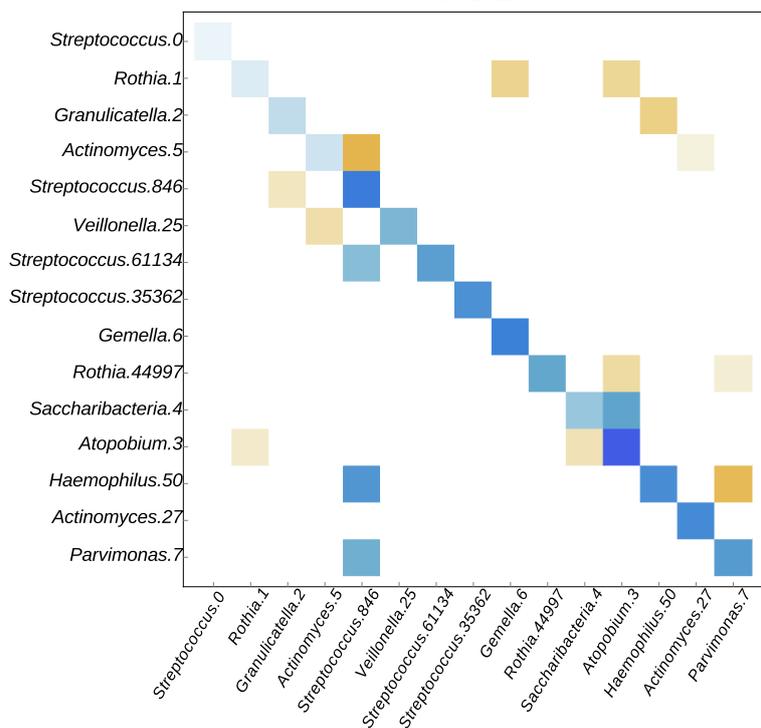
Spearman's correlations



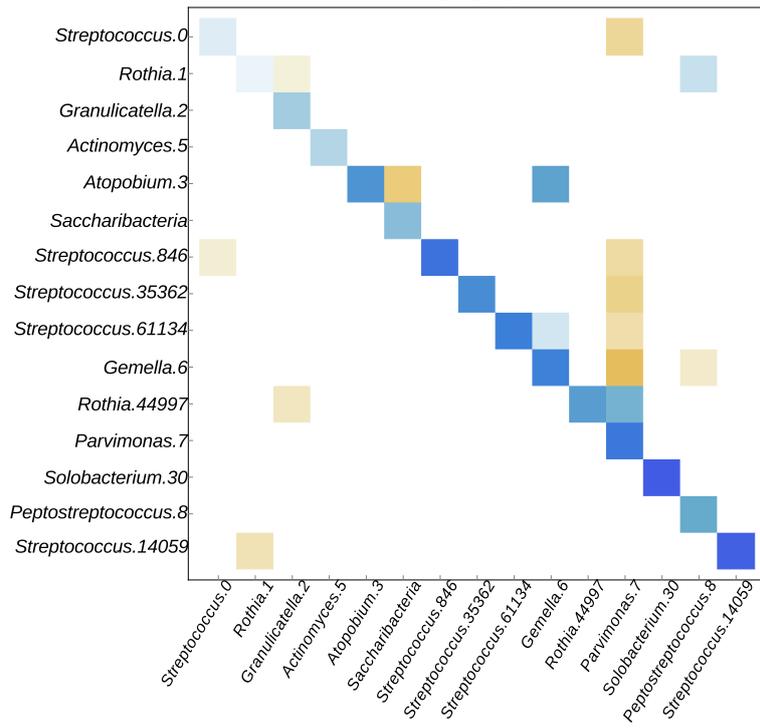
Supplementary Figure S8:

Community interaction plots between the 15 most prevalent OTUs per sample based on the Lotka-Volterra model. This dynamic model of ecological interactions in temporal samples series counts with the situation in which the OTU #1 interacts with OTU #2, but the OTU #2 does not have to interact necessarily with OTU #1. In each case, the blue color represents negative interaction between two OTUs, whereas orange represents positive interactions. The diagonal in the matrix represents the auto-interaction of each OTU. The interaction values were normalized at a logarithmic scale for representative purposes.

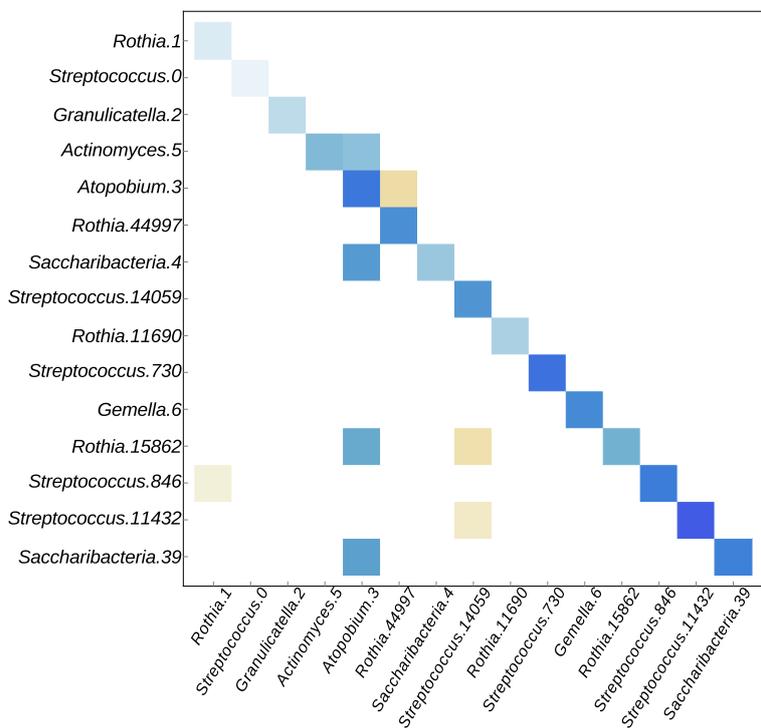
F01



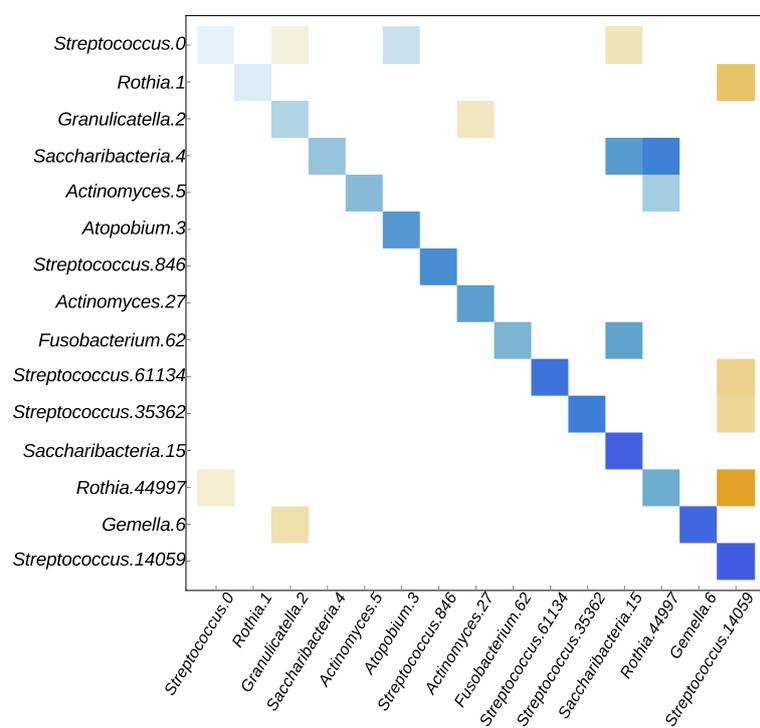
F04

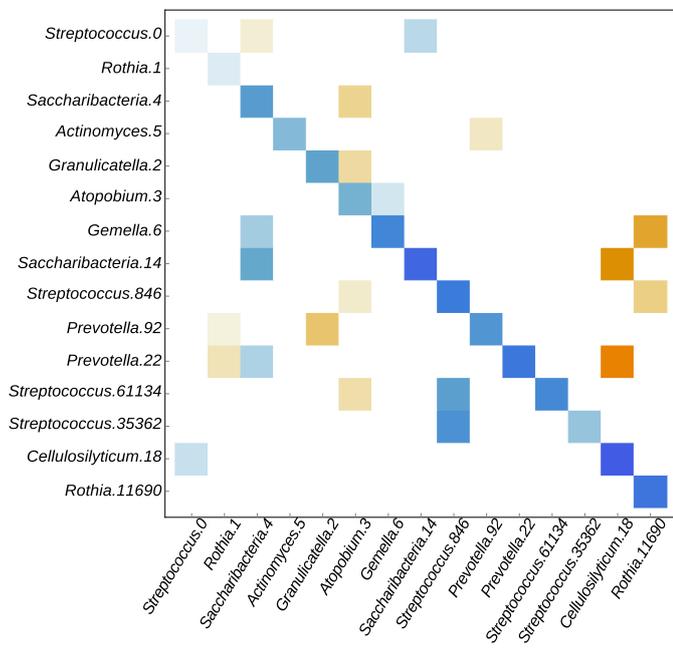
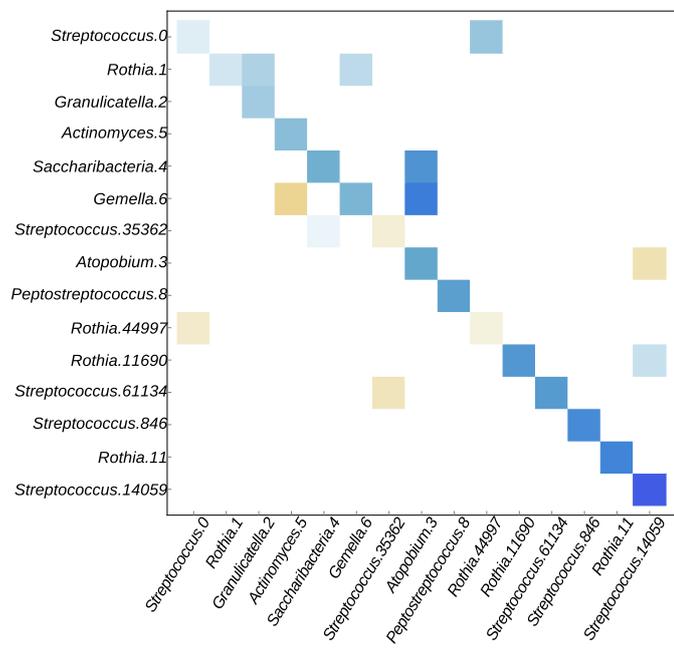
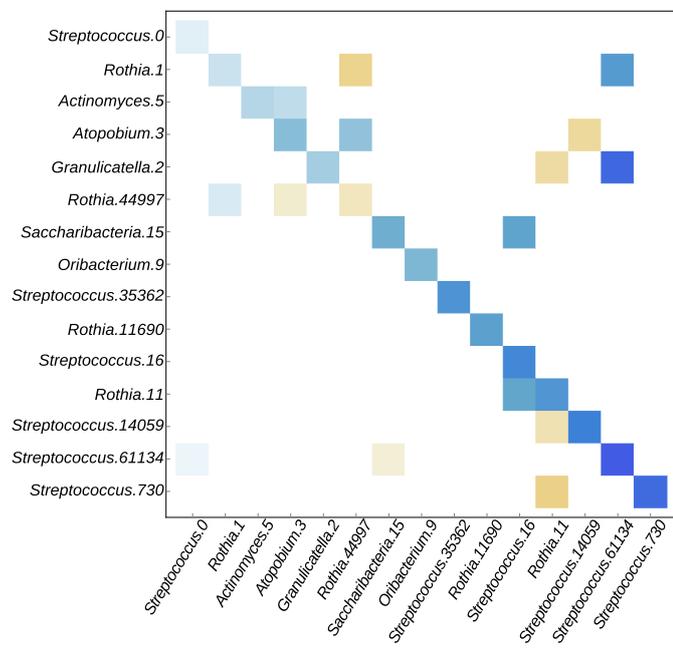
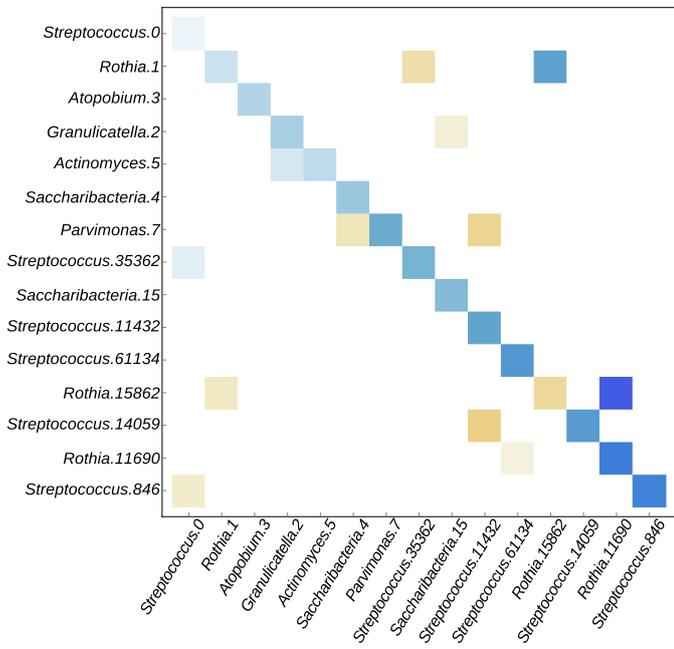
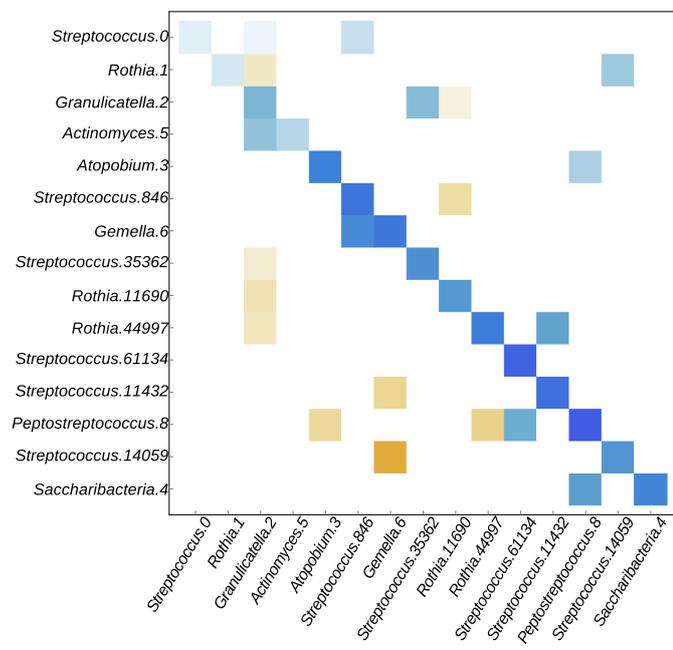
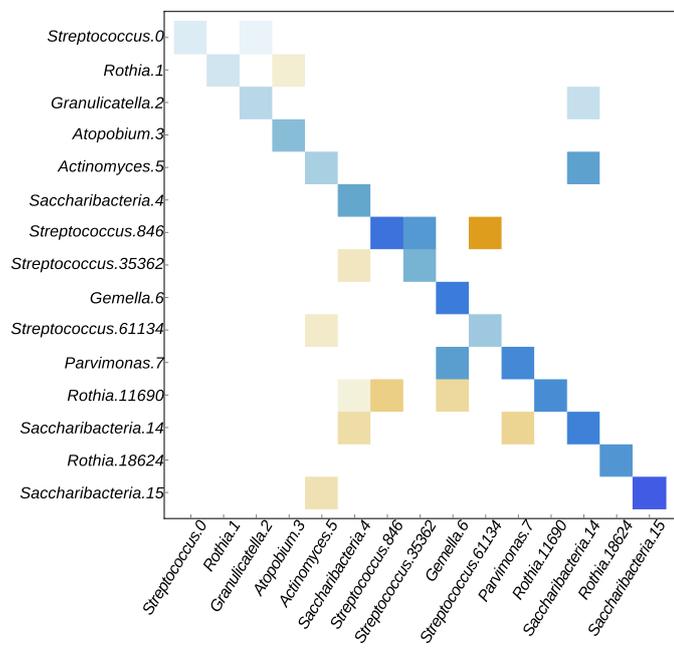


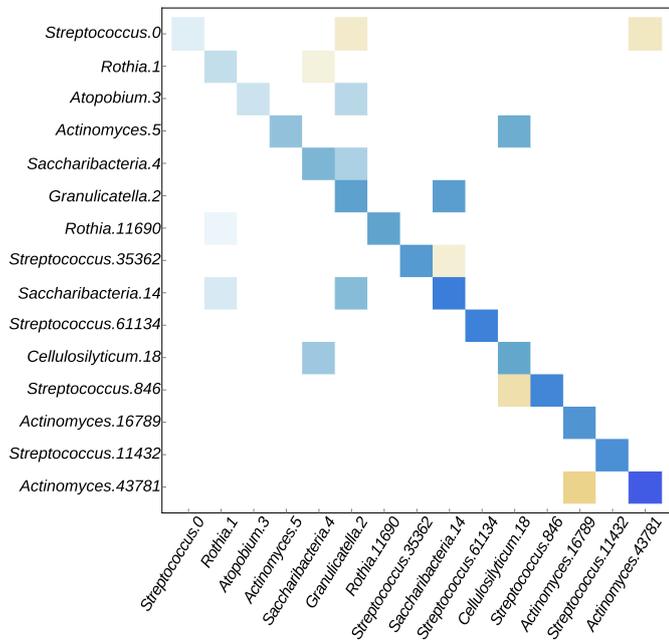
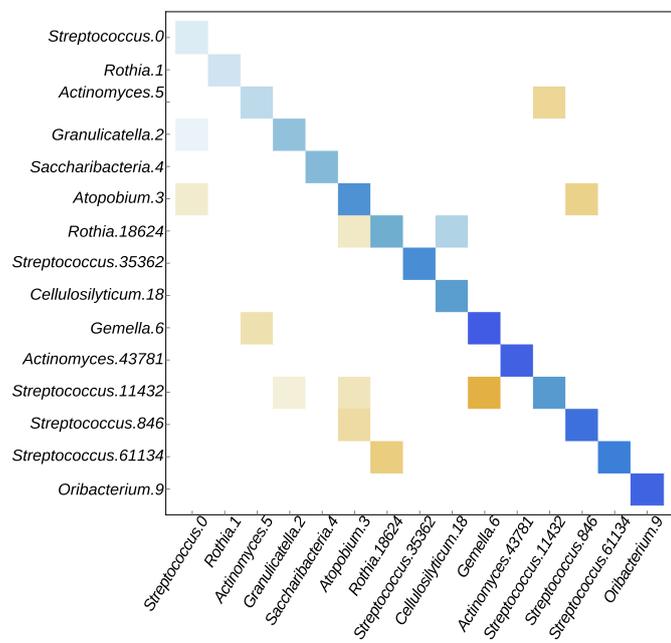
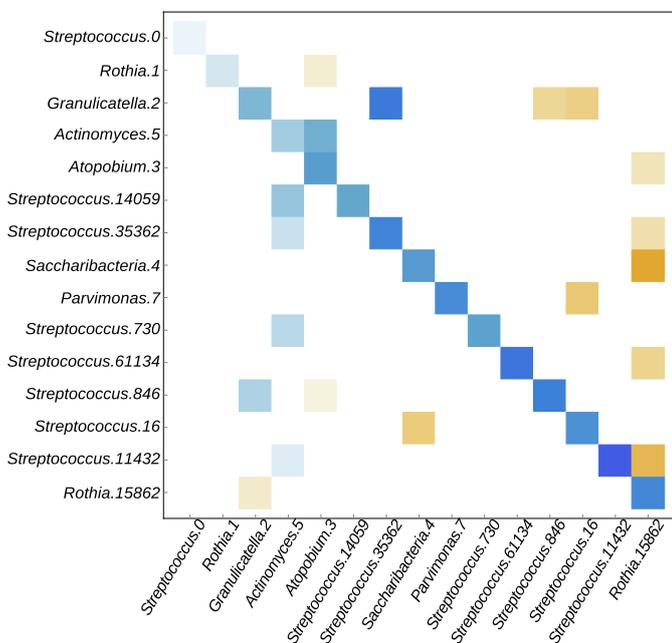
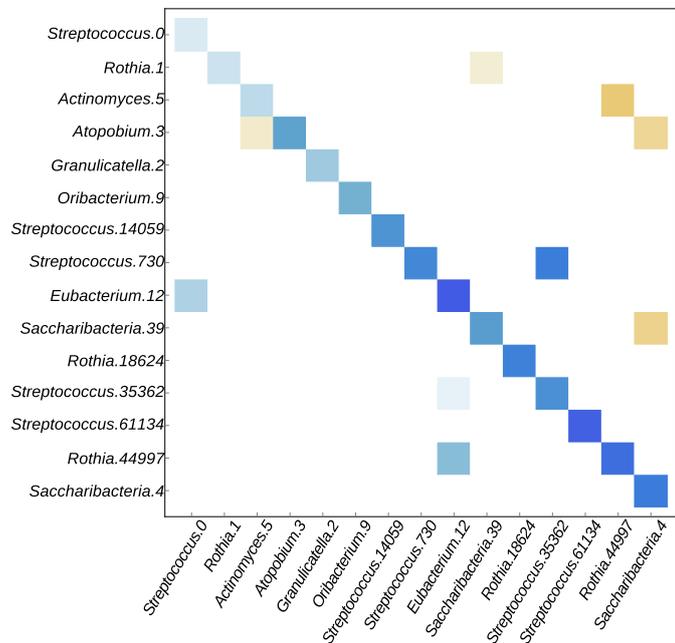
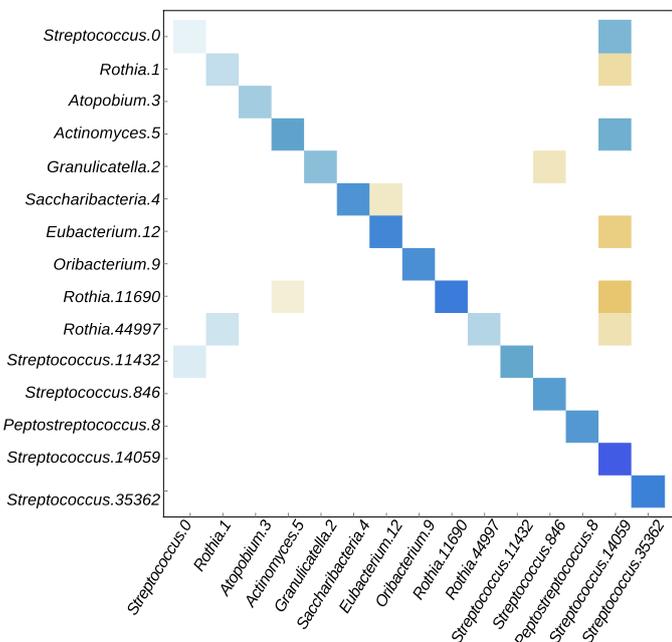
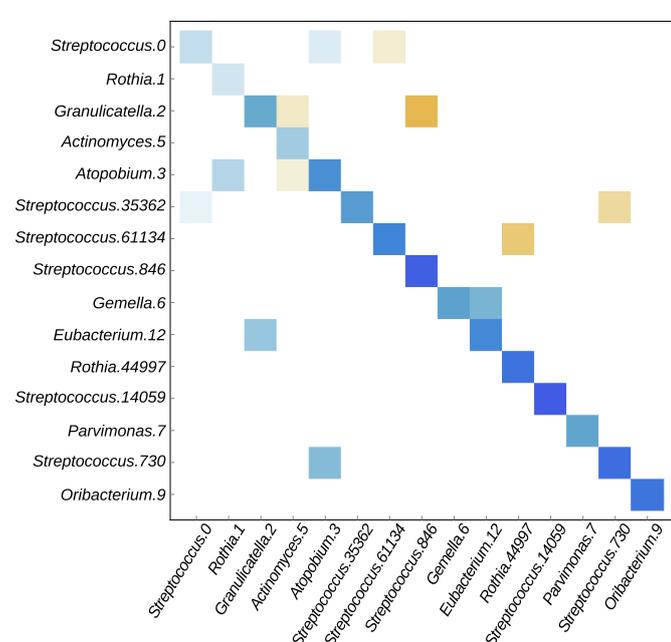
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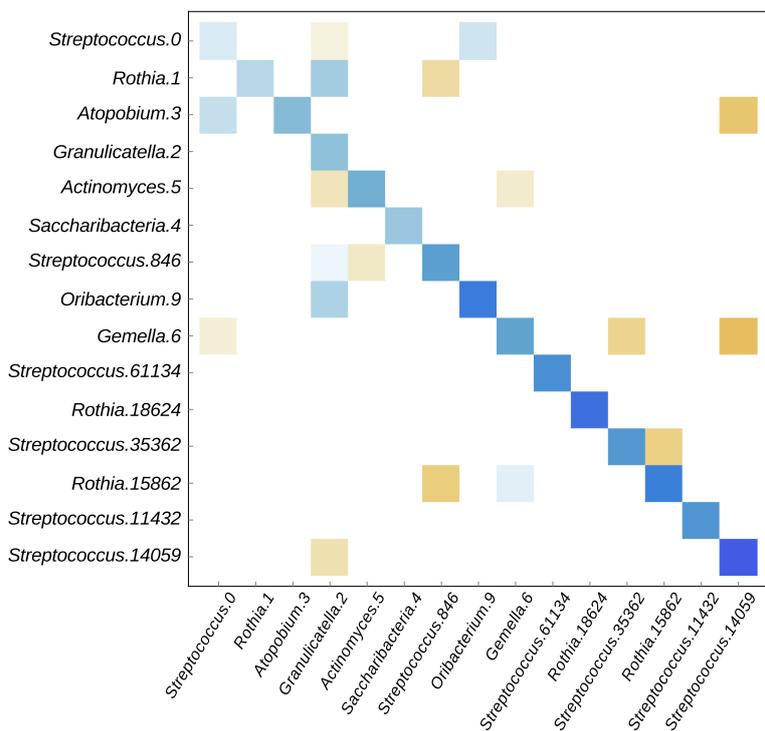
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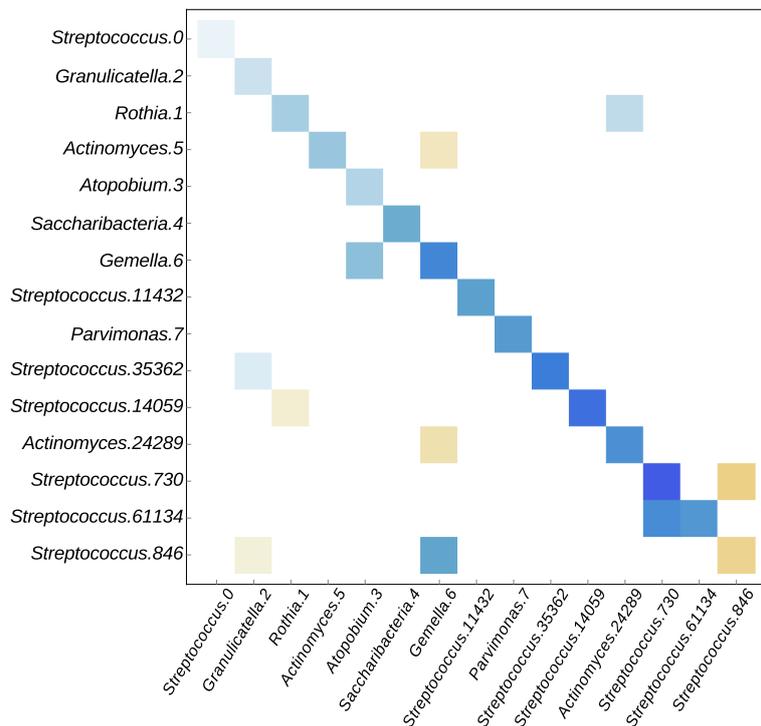
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F21**F22****F25****M01****M02****M03**

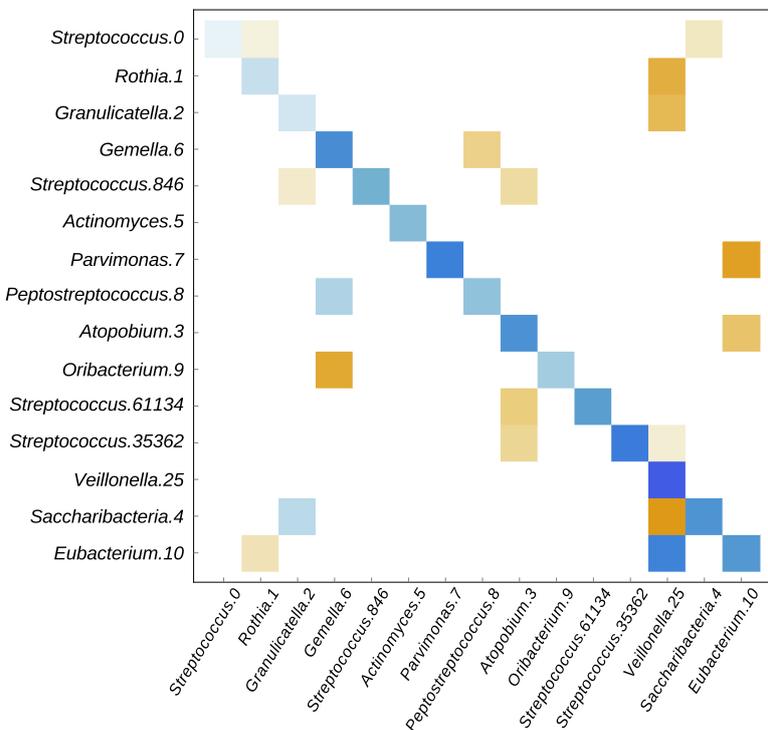
M19



M20



M21



M25

