

# Supplementary figures for

## **Gut microbiota individuality is contingent on temporal scale and age in wild meerkats**

Alice Risely\*, Dominik W. Schmid, Nadine Müller-Klein, Kerstin Wilhelm , Tim. H. Clutten-Brock, Marta B.  
Manser, & Simone Sommer

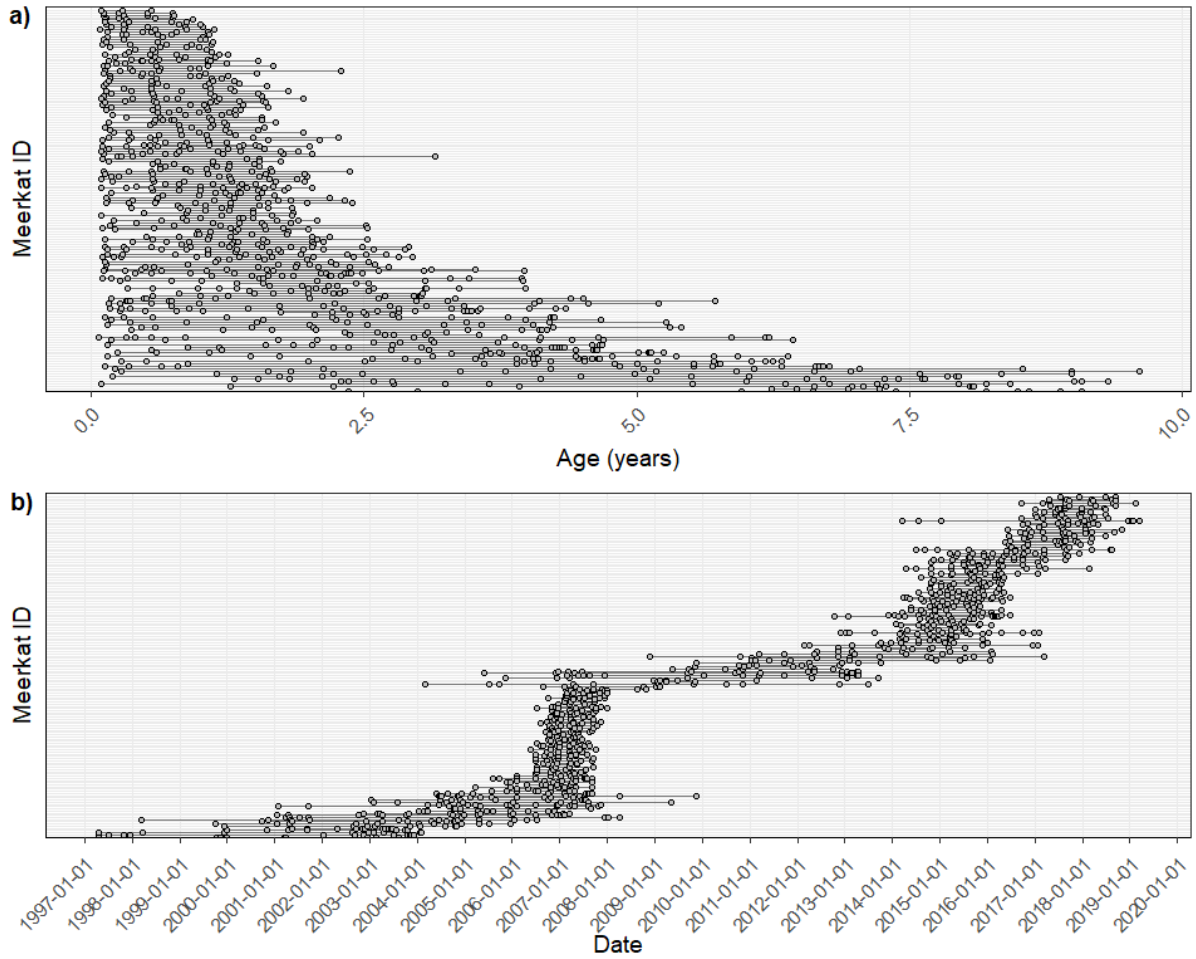
\*Corresponding author. Email: [alice.risely@uni-ulm.de](mailto:alice.risely@uni-ulm.de)

### **This PDF file includes:**

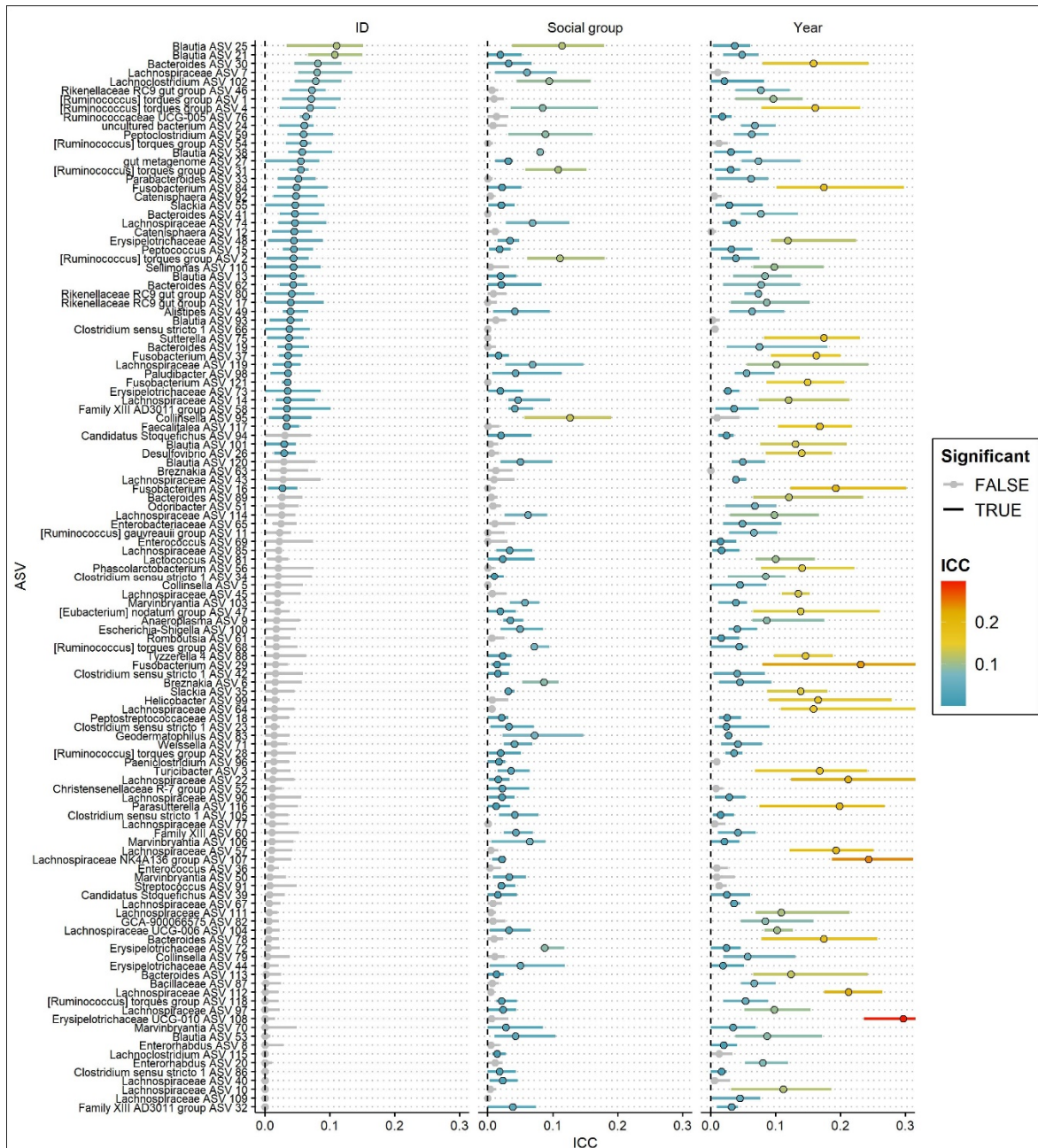
Figs. S1 to S7

Supplementary tables provides in a separate excel file.

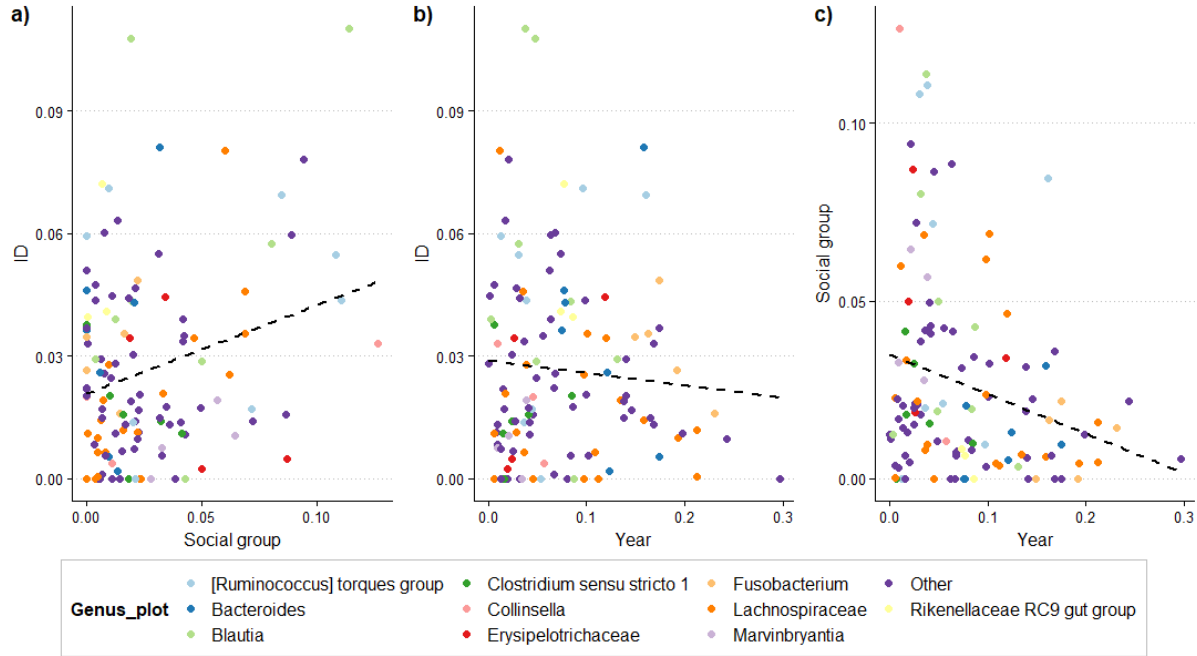
**Supplementary figure 1)** Sampling timelines ordered by a) meerkat age; and b) date the sample was taken.



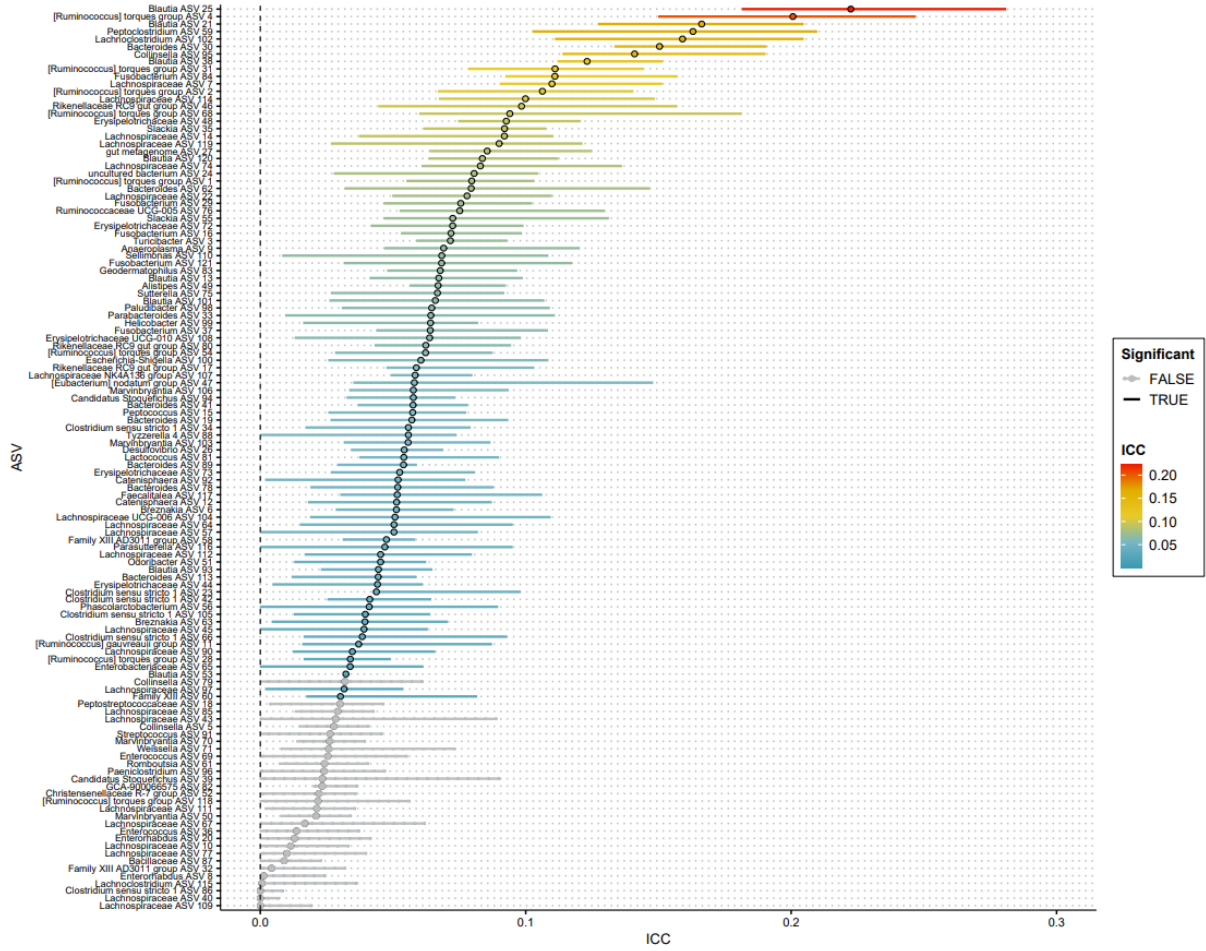
**Supplementary figure 2)** Contributions of meerkat identity, social group, and year of sample collection on the abundances of 121 ASVs that were detected in at least 30% of samples. Point colours are scaled by their relative effect size (ICC), and greyed out if they are not significant. ASVs are ordered by contributions of meerkat identity.



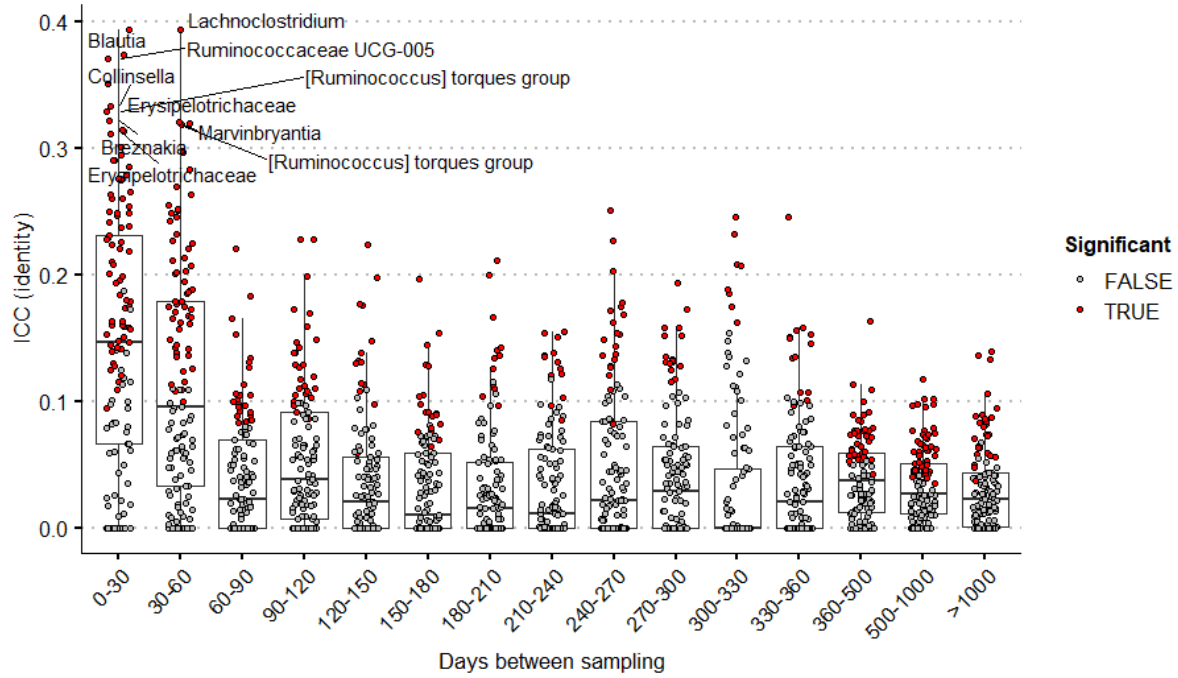
**Supplementary figure 3)** Correlations between ICC as a function of a) identity and social group; b) identity and year; and c) social group and year.



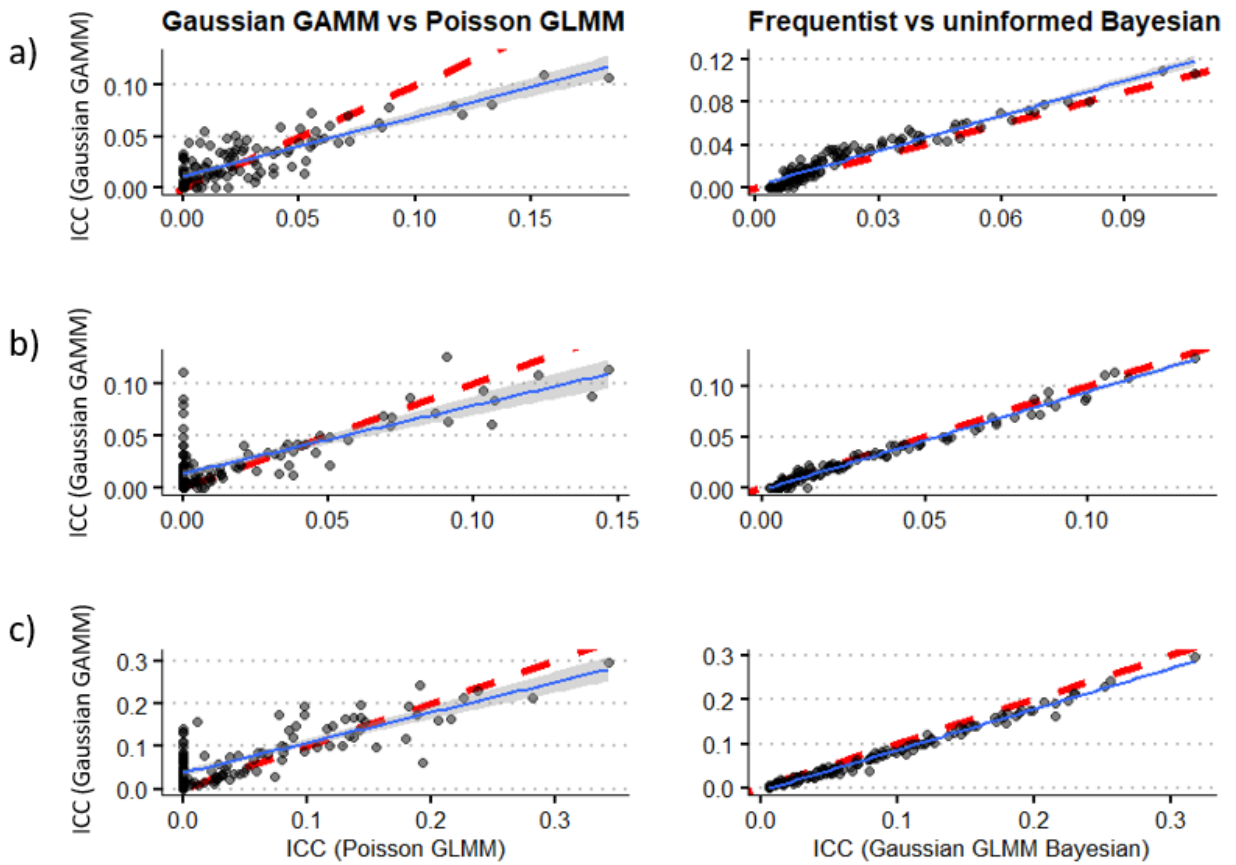
**Supplementary figure 4)** Contributions of individual identity in explaining the abundances of 121 ASVs with prevalence over 30% when social group and year of sample collection are excluded from models.



**Supplementary figure 5)** ICC estimates for individual identity for 121 ASVs with prevalence over 30%, when data are categorized based on longitudinal sampling period. ASVs which are significantly repeatable are indicated in red. The genera for ASVs with ICC over 0.3 are indicated.



**Supplementary figure 6)** Comparison of ICC for a) individual identity, b) social group, and c) year of sample collection for 121 ASVs when using the reported approach (GAMM with Gaussian distribution), versus ICC values from a Poisson GLM (left panel) and a Gaussian GLM using an uninformed Bayesian framework (right panel). The red dashed line indicates the 1:1 line.



**Supplementary figure 7)** Correlation between a) meerkat age when the first and second sample was taken for the analysis of ASV turnover between consecutive samples; and b) meerkat age (at second sample) and the number of days between samples.

