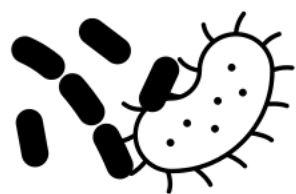


Bacterial community



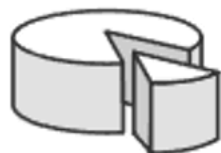
three species

Omics data



method

Numerical approaches



Ideal case

Revealing the dynamics and mechanisms of bacterial interactions in cheese production with metabolic modelling (*in revision*)

Highlight pathway of interest
Generate mechanistic hypothesis

Integrate heterogeneous data
Generate robust GSMN
Bacterial interaction rules
Generic approach



Hundred species



Discrete approaches



worst case

Reasoning-based metabolic modelling of cooperation and competition potentials in large-scale microbial communities (*in prep.*)

Accuracy

Scalability

Tradeoff

Enrichment of the discrete approach