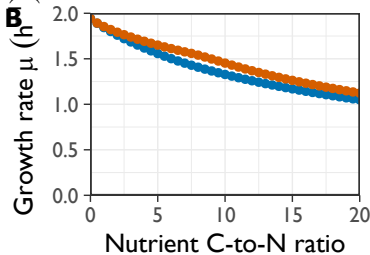
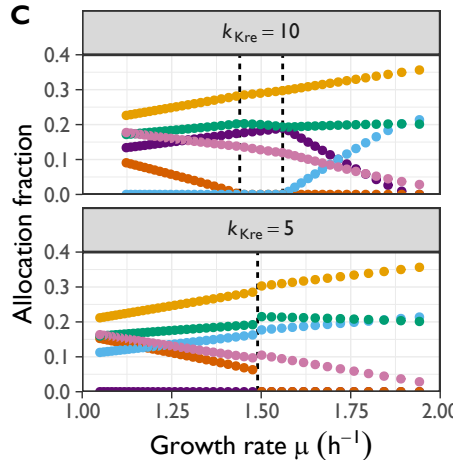


A

Recycling rate

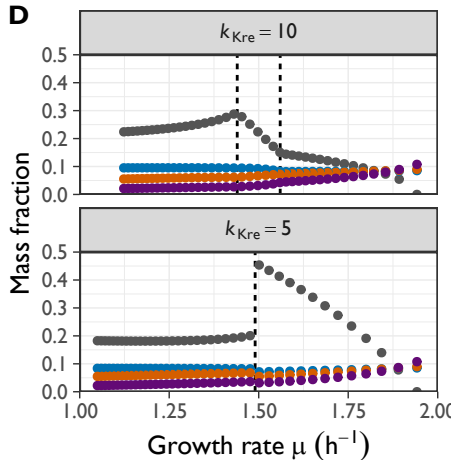
$k_{Kre} = 10$ (orange)

$k_{Kre} = 5$ (blue)

C

Protein

- ribosome R
- amino acid synthesis E_{Af}
- carbon uptake E_C
- ketoacid excretion E_{Kex}
- ketoacid recycling E_{Kre}
- nitrogen uptake E_N

D

Metabolite

- ketoacid k
- carbon c
- amino acid a
- nitrogen n