

Supplementary Table S3 Variables and parameters used in the VGT model

Symbol	Description
Model variables	
M0	Number of <i>E. coli</i> MG1655
M1	Number of <i>E. coli</i> MG1655 with RP4
t	Time (h)
Model parameters	
r_0/r_1	Growth rate of M0/Growth rate of M1
d_0/d_1	Death rate of M0 / Death rate of M1
K	Carrying capacity of the environment, set as 10^8
α	Probability of plasmid loss
β	Conjugative transfer ratio
Calibration Parameters	
α_{ref}	Reference value of plasmid loss probability
β_{ref}	Reference value of conjugation ratio
K_{α}	Plasmid loss ratio coefficient
K_{β}	Conjugation ratio coefficient