

Supplementary Table S4 Variables and parameters used in the HGT model

Symbol	Description
Model variables	
A_0	Number of wild-type <i>A. baylyi</i>
A_1	Number of transformants, <i>A. baylyi</i> with pWH1266 plasmid
P	Number of free plasmids
t	Time (h)
Model parameters	
r_0/r_1	Growth rate of A_0 / Growth rate of A_1
d_0/d_1	Death rate of A_0 / Death rate of A_1
K	Carrying capacity of the environment, set as 10^8
μ	Transformation ratio
λ	Copy number of the plasmid in the transformant
θ	Decay rate of free plasmid in the environment
Calibration Parameters	
μ_{ref}	Reference value of transformation ratio
d_{ref}	Reference value of the death rate
K_{μ}	Scale factor of transformation ratio
K_d	Scale factor of death rate