

SUPPLEMENTARY DATA

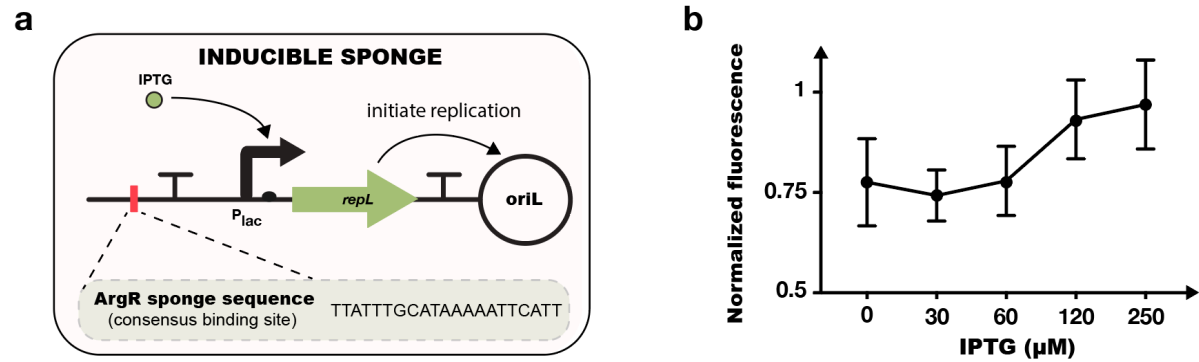


Figure S1. Tunable control of the ArgR sponge system with inducible copy number plasmid. (a) Schematic view of the design of the inducible ArgR sponge system. **(b)** ArgR sponge effect is enhanced as IPTG increases the plasmid copy number (0.6 mM arginine treatment). Error bars show standard error from $n = 3$ biological replicates.

Table S1. Mutations found in ArgA* in the strain of ArgA*/ Δ argR at cycle 6

Colony #	Mutation
1	<i>A197R</i>
2	None
3	<i>Y15H</i>
4	<i>Y15H</i>
5	<i>Y15H</i>
6	<i>Y15H</i>
7	<i>Y15H, T93H</i>
8	<i>Y15H</i>

Table S2. Pinene tolerance library sponge sequences

Sponge	Forward Sequence
AcrR	GATTTACATACATTTNTGAATGTATGTA
SoxR	GAACCCTCAAGTTAACTTGAGG
MarR	ACTAATTACTTGCCAGGGCAAGTAAT
OmpR	TTTACTTTTTGGTTACATCTA
UlaR	TGATTAATCATGAACAATCA
NsrR	GATGCATTTAAAATACATC

Table S3. Top five hits with associated OD₆₀₀ in pinene tolerance screen

Dual Sponge	Colony OD ₆₀₀
SoxR-UlaR	0.694
AcrR-AcrR	0.389
SoxR-MarR	0.364
SoxR-OmpR	0.29
MarR-NsrR	0.264