Developing E. coli-E. coli co-cultures to overcome barriers of heterologous tryptamine biosynthesis

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Article begins on next page
Glucose or glycerol

Engineered shikimate pathway

Chorismate

phenylalanine & tyrosine

TrpB

TrpE

Fbr

TrpD

TrpC

TrpA

TrpB

Tryptophan

Biosensor-assisted cell selection

Tryptamine

Tryptophan

N

H

O

H

O

NH₂

Inhibited growth of low producers

Normal growth of high producers

Central metabolism

TDC
Figure 4

(A) Tryptophan and tryptamine concentration (mg/L)

(B) Tryptophan and tryptamine concentration (mg/L)
Figure 5

(A) Tryptophan and tryptamine concentration (mg/L) for different BTS1:XYD ratios.

(B) Tryptophan and tryptamine concentration (mg/L) for different BTS1:XYD ratios.

Bar graphs showing the concentration of tryptophan and tryptamine for various ratios of BTS1:XYD, ranging from 19:1 to 1:19, with BMS1 as a reference point at 1:1.
Figure S1

The bar graph shows the tryptophan concentration (mg/L) for two different samples: BTH3 and XTH. BTH3 has a significantly higher tryptophan concentration compared to XTH.
Figure S2

(A) Tryptophan and tryptamine concentration (mg/L) for BMC2 and BMS. (B) Same data for BMC2 and BMS.