

Supplementary Information for

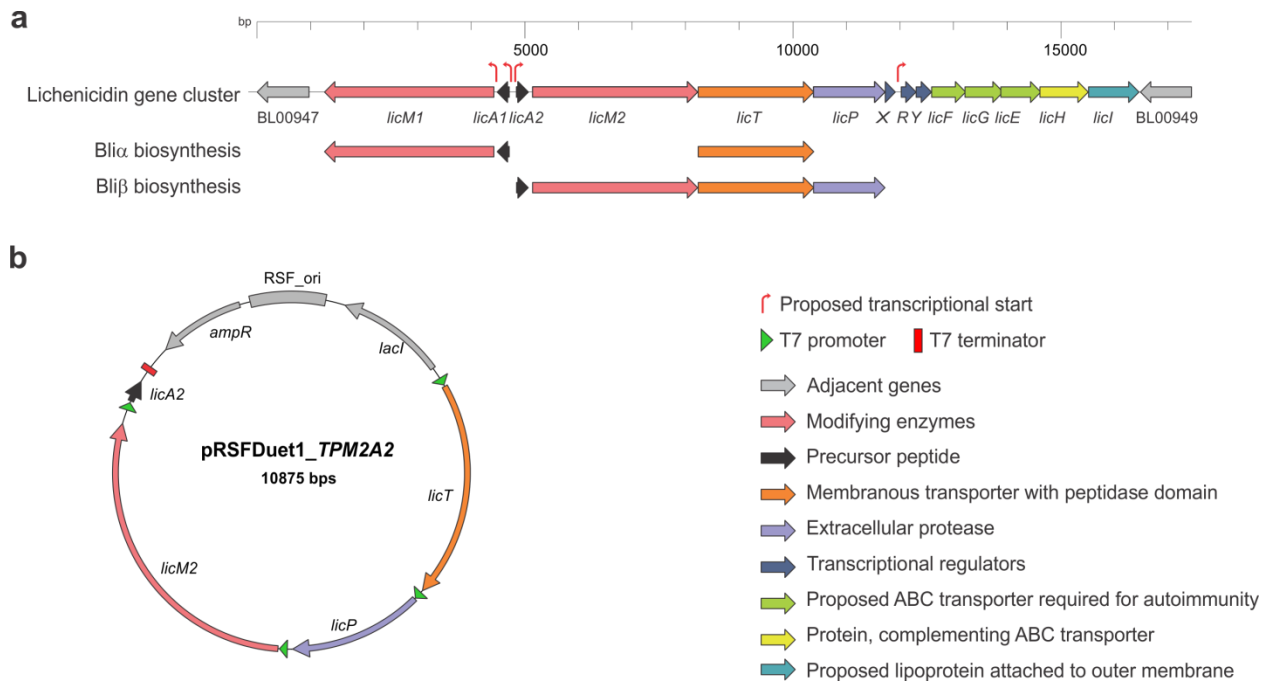
**Towards biocontained cell factories: An Evolutionary Adapted
Escherichia coli Strain Produces a New-to-nature Bioactive
Lantibiotic Containing Thienopyrrole-Alanine**

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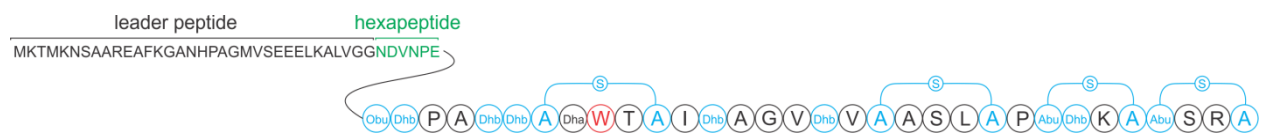
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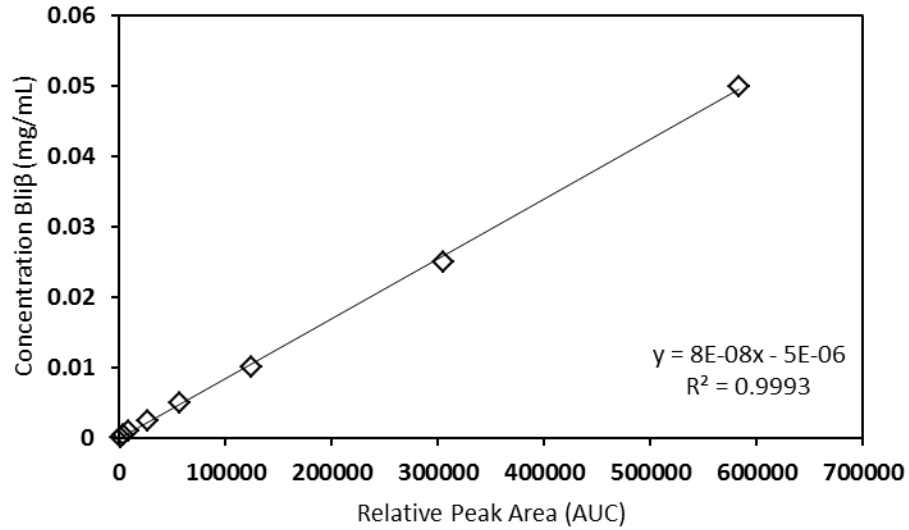
Supplementary figure S1: Genetic background for lichenicidin expression. (a) Gene cluster coding for the biosynthesis of lichenicidin as isolated from *Bacillus licheniformis*. Genes required for expression of the single peptides Bli α and Bli β in *E. coli*. (b) Genetic setup for high-level production of Bli β in *E. coli* as published earlier.



Supplementary figure S2: Amino acid sequence of the full length precursor peptide of Bliβ.

Supplementary table S1: Theoretical and measured nominal masses of Bli β and Bli β ([3,2]Tpa⁹) detected with high-resolving ESI-Orbitrap-MS.

Compound	Theoretical mass	nominal	Measured nominal mass	Mass error (ppm)
Bli β		3019.3601	3019.3617	0.5
Bli β [3,2]Tpa		3025.3166	3025.3227	2.03



Supplementary figure S4: Bliβ standard curve. Liquid stocks of purified Bliβ peptide were prepared in 70% ACN. Concentrations applied for MS measurements were in the range 0.0001 mg mL⁻¹ to 0.5 mg mL⁻¹. The concentration was plotted against the resulting peak area in MRM measurements as stated in the methods section. Line of best fit and coefficient of determination R² were calculated as indicated.