SUPPLEMENTARY APPENDIX

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to:
Enhanced natamycin production by co-expression of Vitreoscilla hemoglobin and antibiotic positive regulators in Streptomyces gilvosporeus

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Supplemental data

Supplementary Table 1  The primers used in this study

| Primers used for construction of the pIMEP::pimE | Sequences (5’—3’) | Underlined sequences |
|-------------------------------------------------|--------------------|---------------------|
| *pimE*-F                                         | CGGGATCCATGTTCGAGAACCCAGCA | BamH I |
| *pimE*-R                                         | CGGGATCCCTAATGATGATGATGATGATGGGCGGCTTGACGTCCTCCG | BamH I His |

| Primers used for construction of the pIMEP::pimM | Sequences (5’—3’) | Underlined sequences |
|-------------------------------------------------|--------------------|---------------------|
| *pimM*-F                                         | CGGGATCCCATGCGAGCCTTGATA | BamH I |
| *pimM*-R                                         | CGGAATTCCTCAATGATGATGATGATGATGACTTCACGAGTCGTCCAC | EcoR I His |

| Primers used for constructing the pIMEP::pimE::pimM | Sequences (5’—3’) | Underlined sequences |
|--------------------------------------------------|--------------------|---------------------|
| Perm-F                                           | CGGAATTCCTCAATGATGATGATGATGATGATGACTTCACGAGTCGTCCAC | EcoR I Mun 1 Spe 1 |
| *pimM*-R                                         | CGGGATCCCATGCGAGCCTTGATA | EcoR I His |

| Primers used for construction of the pIMEP::vgb | Sequences (5’—3’) | Underlined sequences |
|-------------------------------------------------|--------------------|---------------------|
| *vgb*-F                                         | CGGGGTACCATGTTAGATCAACAAACTAT | Kpn 1 |
| *vgb*-R                                         | CGGGGTACCATTAAATGATGATGATGATGAT | Kpn 1 |

| Primers used for construction of the pIMEP::pimE::vgb | Sequences (5’—3’) | Underlined sequences |
|--------------------------------------------------|--------------------|---------------------|
| Perm-F                                           | GCACAAATGGGCTGCGCAACTGTTGGGAG | Mun 1 |
| *vgb*-R                                         | GCAGATCTTAATGATGATGATGATGATGAT | Spe 1 |

| Primers used for plasmid integration confirmation | Sequences (5’—3’) | Underlined sequences |
|--------------------------------------------------|--------------------|---------------------|
| P1-F                                             | GCGATTAAGTTGGTAACGC |                    |
Figure S1. Comparison of natamycin production between the recipient strain and the recombinant strain *S. gilvosporeus/pIM229EP::vgb* by shake flask cultures. Comparison of natamycin production (a) and growth curves (b) of *S. gilvosporeus*S139 (■) and *S. gilvosporeus/pIM229EP::vgb* (▼) in 250 mL-shake flask cultures for five days. Natamycin bioassay (c) of the two strains (4th-day fermentation broth) using *S. cerevisiae* W303-1A as an indicator strain: (1) *S. gilvosporeus* S139; (2) *S. gilvosporeus/pIM229EP::vgb.*

Note: All values are means from triplicate experiments, and the error bars show standard deviation. DCW, dry cell weight.