Unveiling a New Antimicrobial Peptide with Efficacy Against *P. aeruginosa* and *K. pneumoniae* from Mangrove-Derived *Paenibacillus thiaminolyticus* NNS5-6 and Genomic Analysis

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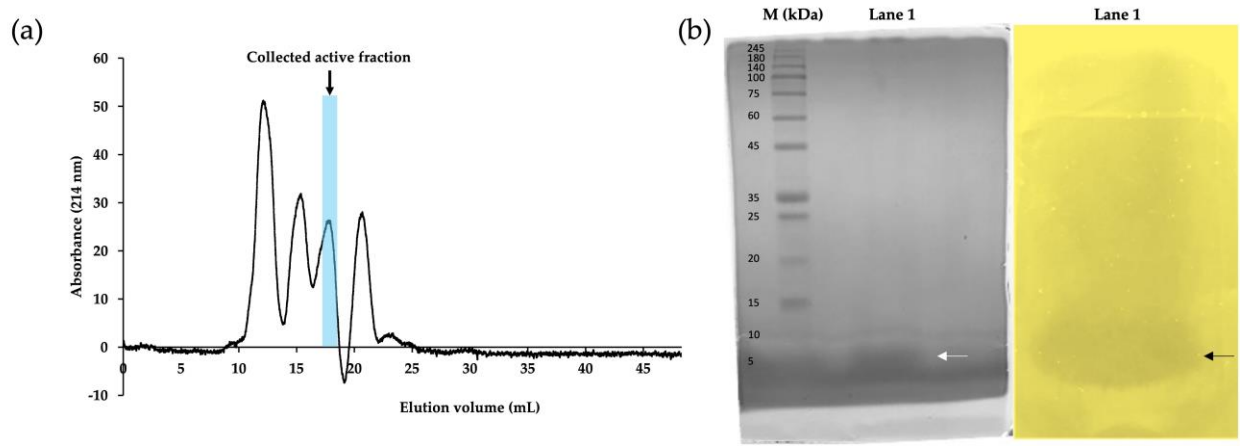

Figure S1. The purification of NNS5-6 AMP was performed using size-exclusion chromatography. The blue area indicates the collected active fractions (**a**). The peptide band of the purified AMP (white arrow) was estimated for molecular weight by SDS-PAGE, compared to a protein marker (M). The active protein band showed an inhibition zone (black arrow) as determined using soft agar overlay assay against *P. aeruginosa* TISTR 357 (Lane 1) (**b**).

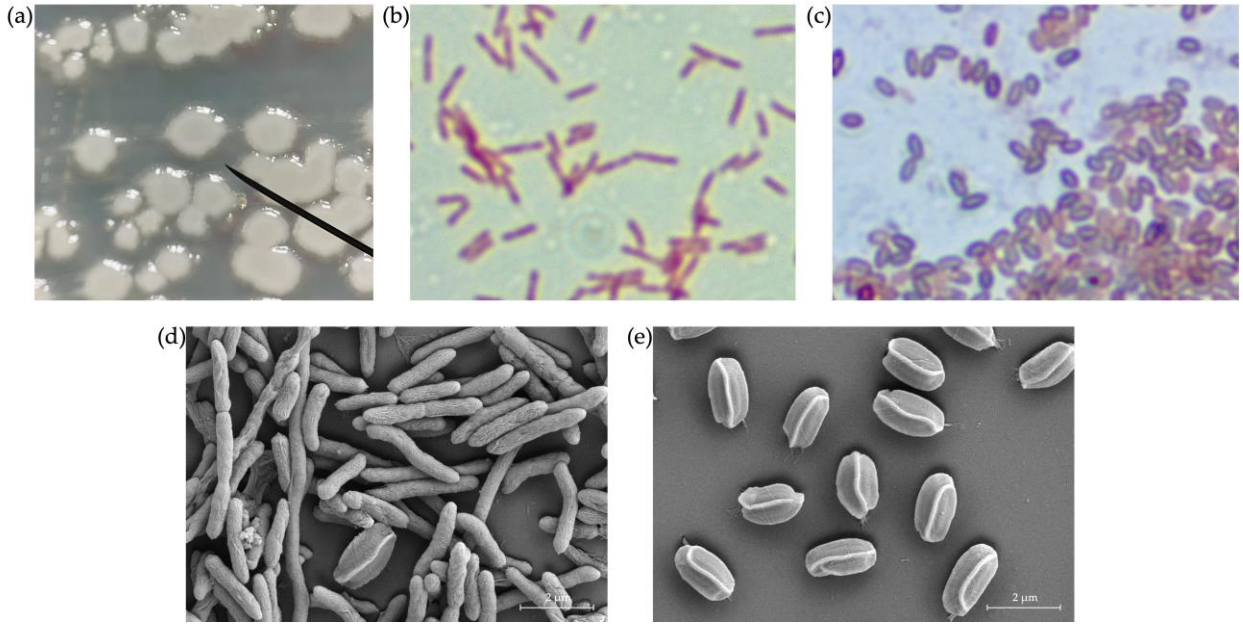

Figure S2. The physical characteristics of NNS5-6 are shown: the single colony morphology on MH agar was determined under a stereo microscope (**a**). Gram-stained vegetative cells (**b**), and malachite green-stained endospores (**c**) were observed under a light microscope at 1000× magnification. High-resolution images taken by SEM revealed vegetative cell (**d**) and endospore (**e**) morphology at 10,000× magnification.