

抗菌胜肽可廣效性對抗多重抗藥性菌株

Broad-spectrum activity of a novel antibiotic peptide against multidrug-resistant
veterinary isolates

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摘要 Abstract

The emergence of multidrug resistant (MDR) and extensively drug resistant (XDR) bacteria has become a medical and veterinary problem. Antimicrobial peptides (AMPs) show potential to overcome antibiotic resistance and could be used therapeutically. A novel AMP (AMP2041) was developed in silico and its microbiocidal activity against MDR clinical strains isolated from cattle (n = 6), dogs (n = 8), and pigs (n = 20) was evaluated.

多重抗藥性菌株及廣泛抗藥菌株病原菌出現已成為醫學與獸醫學治療上的大問題,而抗菌胜肽的發現具有解決抗藥性菌株問題潛力並可以應用於治療上,抗菌胜肽 AMP2041 開發後並於牛,犬,豬評估其抗菌效果.

AMP2041 showed strong antimicrobial activity against all Gram-positive and Gram-negative MDR clinical strains tested. Within 20 min of incubation, there was complete killing of *Pseudomonas aeruginosa* ATCC 27953 and a 90% reduction of colony count for *Escherichia coli* ATCC 25922. For *Staphylococcus aureus* ATCC 25923, a 90% reduction of colony count was observed within 120 min of incubation.

結果顯示,抗菌胜肽對臨床測試之格蘭氏陽性菌及陰性菌俱有強力殺菌力,培養 20 分鐘內可以完全殺滅綠膿桿菌菌株,大腸桿菌減少約 90%,培養 120 分鐘後金黃色葡萄球菌減少 90%菌落數.