Conference

Antimicrobial peptides (AMPs): Analysis, synthetic design and biological analysis.

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The increase of resistance to antibiotics,[1] also due to a systematic and widespread misuse and abuse of these drugs, is a tremendous problem of healthcare systems and society. Multiple resistance to antibiotics is a global threat aggravated by the lack of novel alternative and effective therapeutic agents.[2] The most worrying multidrug-resistant pathogens are listed by the World Health Organization under the acronym "ESKAPE",[3] (i.e., *Enterococcus faecium, Staphylococcus aureus, Klebsiella pneumoniae, Acinetobacter baumannii, Pseudomonas aeruginosa, Enterobacter spp.*) as needing urgent and prompt discovery of new antimicrobials.

Antimicrobial peptides (AMPs) are potentially suitable to alternatives to conventional antibiotics[4] or effective adjuvant drugs allowing conventional antibiotics to overcome resistance .[2,5] In this scenario, our research activity focuses on identifying, analyzing, synthesizing and testing new AMPs of natural origin, and their optimized synthetic variants. Here, we present a hierarchical approach applied to *Taenia solium* peptides (TSO8), whose sequence is compared with other native AMPs, analyzed to determine potential active fragments, and then synthesized to obtain preliminary functional (MIC, cytotoxicity) and structural (CD) characteristics.

References

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