Contribution ID: **69**   Type: **Talk**

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

Tuesday, 5 October 2021 16:00 (15 minutes)

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.

Primary authors: Dr CAPORALE, Andrea (CNR - Istituto di Cristllografia); Dr MARDIROSSIAN, Mario (Department of Medicine, Surgery and Health Sciences, University of Trieste,); Dr SCOCCHI, Marco (Dept. of Life Sciences, University of Trieste); Dr RONCEVIC, Tomislav (Department of Physics, Faculty of Science and Mathematics University of Split); Dr TOSSI, Alessandro (Dept. of Life Sciences, University of Trieste)

Presenter: Dr CAPORALE, Andrea (CNR - Istituto di Cristllografia)

Session Classification: Session