

JOINT EVENT

31<sup>st</sup> Euro Global Summit and Expo on Vaccines & Vaccination

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4<sup>th</sup> World Congress and Exhibition on Antibiotics and Antibiotic Resistance

June 14-16, 2018 Barcelona, Spain

**Antibacterial and anti-biofilm activity of novel compounds of arctic marine origin****Klara Stensvåg**

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Nature is still a probable source of novel antibiotics since almost 70% of the drugs approved today are based on knowledge from natural sources. Since few new commercial antibiotics are approved during the last decades, the rather little studied marine environment and molecules thereof, are regarded as very interesting because of the close connection, often in symbiotic relationship, between different organisms and microorganisms to each other. Marine resources like invertebrates, microalgae, plants, marine bacteria and fungi together with biological rest raw material, are thus promising for exploring novel antimicrobials with unique antibacterial strategies and anti-biofilm properties. In this context, both marine proteins/peptides and secondary metabolites are interesting because of their bioactivities against antibiotic resistant human pathogenic bacteria in the first place which also can define novel targets in pathogenic bacteria. Secondly, their structural motives/pharmacophores might be usable to design novel synthetic marine natural products mimics with promising antimicrobial and antibiofilm properties. We have characterized several new classes of marine AMPs and explored their mode of action by different tests. The organisms that produce these bioactives are collected from the Arctic or/and sub-Arctic region and can be very diverse covering biological resources from microalgae to invertebrates. This talk will cover different approaches in bioprospecting that include characterization of mechanisms of actions, SAR studies and give examples of designed new marine mimicking molecules as candidates of novel lead compounds of antimicrobials and anti-biofilm active compounds. The talk will also refer to the recently established Centre for new Antibacterial Strategies (CANS) at UiT.

**Biography**

Klara Stensvåg completed her PhD and Postdoctoral studies at Arctic University of Norway (UiT). She is a Professor in Marine Biotechnology at The Norwegian College of Fishery Science at UiT. She has published more than 44 papers in reputed journals and has been serving as an Editorial Board Member for reputed journals. She is the Head of the research group in Marine Bioprospecting. Her research concerns antimicrobial compounds and genes of marine origin as source of developing novel antibacterial compounds with new mechanisms of actions against antimicrobial resistant bacteria.

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