

CIESM Congress Session : Microbial techniques and applications

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Moderator's Synthesis

This session included presentations on the use of different methodological approaches in applications such as antimicrobial discovery, biodegradation of polyaromatic hydrocarbons, interference with biofilm development and ecological impact of pollution. There was an active discussion with the speakers and the audience about different technical approaches and their limitations. With respect to antimicrobial discovery, which is a “hot” topic in terms of microbial applications, there was a general concern on the danger of exploitation of producing species (i.e. sponges, etc.), specially protected ones. As an alternative, the use of sustainable sources such as by-products from fish industry was presented in the session. A second concern in antimicrobial discovery evidenced in the discussion was the limitation caused by techniques from disciplines outside microbiology such as the determination and prediction of chemical structures of bioactive compounds.

From a broader perspective, the audience discussed the importance of genomic and metagenomics methods and the need to develop methods that allow us to assess the confidence level of the results and conclusions provided by these methods. This can be made extensive to other “omics” methods. The need for collaboration between specialists in different microbial techniques was pointed out as important for developing applications, given the high specialization level of the different available techniques. Finally, it was suggested that an effort should be made to develop microbial applications that anticipate or prevent problems and not only applications to solve problems. The audience was positive about the current status of microbiological techniques and the opportunities for future applications.

