

DSV 2017 Seminars



UNIVERSITÀ
DEGLI STUDI DI TRIESTE



DIPARTIMENTO DI
SCIENZE DELLA VITA

PhD Program in *Environmental Life Sciences*

Wednesday, 19 December 2017 12:00

Seminar room, 1st Floor, Q Building

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Host: Aurelia Tubaro

Analytical strategies for the identification of marine biotoxins. Focus on Palytoxins

Microalgae are vitally important to marine ecosystems. Most of the algal species are not harmful, however a small number of species produces potent toxins. During harmful algal blooms (HAB), these toxins can be transferred to humans through the food web but also through inhalation of marine aerosols and/or skin contact resulting in severe health problems and significant economic losses.

Since the late 90s', hundreds of cases of respiratory illness and/or dermatitis have been repeatedly recorded in people from the whole Mediterranean area concomitantly with massive proliferations of the benthic dinoflagellate *Ostreopsis cf. ovata*. Thanks to development of a liquid chromatography-high resolution mass spectrometry (LC-HRMS) method, our group identified *O. cf. ovata* as a producer of congeners of palytoxin, a highly potent toxin whose inhalation hazard was however unknown.

In this seminar the multidisciplinary effort among chemists, toxicologists, marine biologists and ecologists which led to clarify most of the key issues related to the palytoxin group of toxins in domestic and open-air environments will be presented.

