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**Natural products from the microbial world: monitoring
by mass spectrometry**

Natural products have critical functions in the microbial world and in our lives as drugs, pesticides and venoms. Marine microalgal toxins show remarkable biological activities, but their chemical diversity poses a great challenge to analytical methods. We used Mass Spectrometry (MS)-based tools to monitor the presence of marine toxins in seafood and in the environment in a semi-enclosed coastal embayment in Catalonia (Spain, NW Mediterranean Sea). We found that the toxin content per cell during a bloom of *Dinophysis sacculus* increase towards the end of the bloom, which influences monitoring strategies. Moreover, we detected for the first time the presence of emerging toxins such as cyclic imines and ovatoxins in our study area. Another MS-based tool, Imaging MS, enabled us to detect and visualize the spatial distribution of natural products in microbial co-cultures. For example, in microbial communities from termite fungal gardens, the novel pseudoxylallemycins were visualized on guttation droplets from an opportunistic fungus. MS-based analytical techniques are powerful tools to speed up the discovery of natural products and get valuable insights into microbial communities.