



2015 Aquatic Sciences Meeting

Aquatic Sciences: Global And Regional Perspectives — North Meets South

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ABSTRACT

EVOLUTION OF THE TOXIN DIVERSITY IN THE OLIGO-MESOTROPHIC ENVIRONMENT OF LAKE GARDA (ITALY)

Hepatotoxic microcystins (MC) are the most common bioactive metabolites produced by cyanobacteria. They are non ribosomal cyclic peptides with remarkable chemical stability and are therefore potentially accumulated in aquatic organisms. During blooms they can easily reach levels of mg/L. This class of natural toxins possess a high chemical diversity, with more than 90 variants described in literature, each of them having a different toxicity. MC can be responsible of acute and chronic intoxications, and are potentially carcinogenic. In this presentation we report the results of a 5 years survey conducted in an oligo-mesotrophic environment (Lake Garda, Northern Italy) in which we have analyzed the MC quantity and diversity on a monthly basis. The lake is basically populated by a single dominant MC producer (*Planktothrix rubescens*), therefore our dataset can describe the evolution of the toxic profile of this species. The investigation showed a seasonal pattern of toxin production (with typical late summer-early autumn peaks), a limited toxin diversity (with five variants accounting for the totality of the MC content), with a certain degree of fluctuation in the MC diversity.

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DETAILS

Oral presentation

Session #:034

Date: 2/23/2015

Time: 16:15

Location: Room D (Floor -3)

Presentation is given by student: No



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