

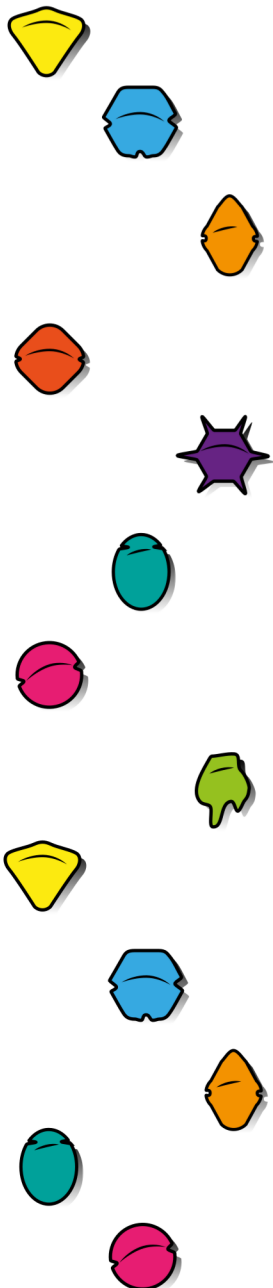
ICHA

LA PAZ Baja California Sur October 10-15

19th INTERNATIONAL
CONFERENCE ON
HARMFUL ALGAE
MEXICO 2021

www.icha2021.com

ABSTRACT BOOK



CONVENOR



ORGANIZED BY



FIRST
VIRTUAL
MEETING

Cyanotoxins in pelagic and benthic zones of lakes in the Italian perialpine region

Leonardo Cerasino, Adriano Boscaini and Nico Salmaso

Fondazione Edmund Mach, via E. Mach, 1 San Michele all'Adige, Italy.

Cyanobacteria constitute a health hazard in freshwater environments due to the ability to produce toxic metabolites. Animals and humans can be harmed upon exposure to water containing high levels of cyanotoxins that can occur during intense blooms. *Planktothrix rubescens* and *Tychonema bourrellyi* are the main responsible of toxins production (microcystins and anatoxins, respectively) in pelagic environments of the Italian subalpine lakes. In particular, in Lake Garda, the largest Italian water basin, *T. bourrellyi* has become year after year dominant over the other toxigenic cyanobacteria, leading to pelagic concentrations of anatoxin-a higher than microcystins'. This shift has important implications for the management of the lake, considering that chemical, physical and toxicological characteristics of anatoxin-a and microcystins are very different. Besides the risks connected to the presence of toxins in the pelagic zone, a new issue has emerged from recent investigations conducted in the frame of the Eco-AlpsWater project (financed by the EU-Interreg Alpine Space programme): remarkable quantities of homoanatoxin-a have been found in biofilms collected from rocks in different sites of Lake Garda shores. Further studies are on the way to identify the producing organism(s). This finding is the first report of cyanotoxins in benthic mats in the area, highlighting the necessity of more deep studies on the occurrence of toxic benthic cyanobacteria in lacustrine (and riverine) environments in the Italian perialpine region.

