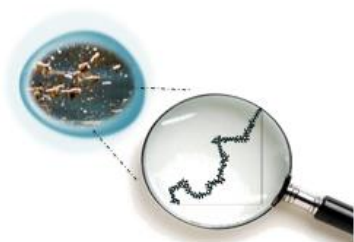


<b>Title</b>	Toxic algal metabolites in the North Adriatic Sea: identification, risk assessment and early warning systems
<b>PI</b>	BOGIALLI Sara
<b>Research Group</b>	Analytical Chemistry – DiSC
<b>Curriculum</b>	Scienze Chimiche
<b>Contact</b>	<b>web:</b> <a href="http://www.chimica.unipd.it/analitica/">http://www.chimica.unipd.it/analitica/</a> ; <a href="http://www.chimica.unipd.it/sara.bogialli/">http://www.chimica.unipd.it/sara.bogialli/</a>
	<b>email:</b> sara.bogialli@unipd.it

**Project description:**

Estuarine, marine, or freshwater phytoplankton species can cause extensive blooms also called ‘red tides’. Sometimes, red tides are associated with the production of secondary metabolites, designated as toxins, and for this reason generally described as ‘‘harmful algal blooms’’ (HABs). HABs can affect public health and ecosystems in different ways. A comprehensive risk management on human exposure to toxic algal metabolites, whose production is actually unpredictable, is limited by reliable analytical tools for monitoring as many toxic algal metabolites as possible.

**Objective/skills: Identification of target and non-target microalgal metabolites in algal cultures, marine waters and sediments, air and aerosol, and fisheries products by liquid chromatography coupled to high resolution mass spectrometry (LC-HRMS).**

**Publications:**

1. Liquid chromatography-high resolution mass spectrometric methods for the surveillance monitoring of cyanotoxins in freshwaters  
**Sara Bogialli**, Claudio Bortolini, Iole Maria Di Gangi, Federica Nigro Di Gregorio, Luca Lucentini, Gabriella Favaro, Paolo Pastore. *Talanta* **2017**, 170, 332-330. DOI: 10.1016/j.talanta.2017.04.033.
2. First evidence of MC-HtyR associated to a *Plankthothrix rubescens* blooming in an Italian lake based on a LC-MS method for routinely analysis of twelve microcystins in freshwaters. F. Nigro Di Gregorio, **S. Bogialli**, E. Ferretti, L. Lucentini, *Microchem. J.* **2017**, 130, 329-335. DOI: 10.1016/j.microc.2016.10.012.
3. Non-target screening with high-resolution mass spectrometry: critical review using a collaborative trial on water analysis  
Emma L. Schymanski et al. *Anal Bioanal Chem*, **2015**, 407 (21), 6237-6255. DOI: 10.1007/s00216-015-8681-7.
4. Management of a Toxic Cyanobacterium Bloom (*Plankthothrix rubescens*) Affecting an Italian Drinking Water Basin: A Case Study.  
**Sara Bogialli**, Federica Nigro di Gregorio, Luca Lucentini, Emanuele Ferretti, Massimo Ottaviani, Nicola Ungaro, Pier Paolo Abis, Matteo Cannarozzi de Grazia, *Environ. Sci. Technol.*, **2013**, 47, 574-583. DOI: 10.1021/es302260p.

**Collaborations/Network:**

Department of Biology, University of Padua; Department of Chemical and Pharmaceutical Sciences-University of Ferrara; Italian National Health Institute; Marine Centre of Cesenatico.

**Research funding:**

Private agreement