# Mara Simonazzi

**PhD student (1st Nov 2019 – present)**
University of Bologna (Italy)
Dep. Biological, Geological and Environmental Sciences (BiGEA), Via Sant'Alberto, 163, 48123, Ravenna (RA)

ORCID

**Place and date of birth**
Rimini (Italy), 1st October 1992
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## Research interests

Microalgae and cyanobacteria · Toxins · Drinking water monitoring · Water treatment · Biotechnology applications · Microalgal cultivation · Bioactive compounds · Phytodepuration

## Language knowledge

**Italian**
Native

**English**
Proficient (B2/C1)

**Finnish**
Basic (A1)

**Norwegian (Nynorsk)**
Basic (A1)

**Spanish**
Basic (A1)

Common EU Reference for Languages

## Technical skills

Identification and isolation of microalgae and cyanobacteria; culturing techniques

PAM fluorimetry

Biomass characterization (lipids, protein, polysaccharides, pigments, organic C and N) with spectrophotometric methods, GC-MS/MS and CHN analyser

Ion chromatography for nutrient analyses (N, P, S)

Ecotoxicity bioassays

Toxins determination LC-MS/MS

Molecular techniques (DNA extraction, PCR, cloning, genome data analysis)

Statistical data analysis and processing

## IT skills

**Advance user:**
Office © suite, Windows operating system, Mendeley Ltd, PAST 3.0

**Basic knowledge:**
UNIX shell command, R, OriginLab, ArcGIS/QGIS, MEGA, antiSMASH

## Publications

**Simonazzi M.** et al. **2021**. Production of polyhydroxybutyrate by the cyanobacterium cf. *Anabaena* sp. International Journal of Biological Macromolecules, 191 (2021) 92-99

**Simonazzi M.**, et al. **2019**. Use of waste carbon dioxide and pre-treated liquid digestate from biogas process for *Phaeodactylum tricornutum* cultivation in photobioreactors and open ponds. Bioresource Technology, 292, 121921

## Education

2014 – 2017 **M.Sc. Marine Biology**, University of Bologna, Italy. 110/110 cum laude

2011 – 2014 **B.Sc. Biological Sciences**, University of Urbino, Italy. 109/110

2006 – 2011 **State Scientific Highschool**, Liceo Scientifico G. Marconi Pesaro, Italy. 100/100

## Research experience

06 May 2019 – 31 Oct. 2019 **Post-graduate scholarship**, University of Bologna, Italy. Inter-laboratories procedures for calibration of fluorometric tools used in microalgae and cyanobacteria detection in drinking water

11 Jun. 2018 – 11 Dec. 2018 **Post-graduate scholarship**, University of Bologna, Italy. Spectrophotometric methods and fluorometric probes for cyanobacteria monitoring in drinking water

30 Nov. 2016 – 14 Dec. 2017 **Trainee graduating student**, University of Bologna and Micoperi Blue Growth, Ravenna, Italy. (M.Sc. Thesis preparation)

## International experience

01 Nov. 2021 – 01 Mar. 2022 **Research mobility**, University of Helsinki, Finland. Discovery of new secondary metabolites from cyanobacteria through bioinformatics. Erasmus+ Mobility for Traineeship.

18 Jan. 2016 – 18 Apr. 2016 **Trainee**, Fjor fish population decline along Norwegian coasts due to local pollution. Erasmus+ Mobility for Traineeship.

## Teaching activities

2019 -2022 **Teaching tutor**, University of Bologna, Italy. "Plant biology" (B.Sc. students)

2018 – 2022 **(Co)-Supervisor** of **4 M.Sc.** and **1 B.Sc. thesis**. University of Bologna

## Conferences

22-27 May 2022 **Poster**. 12th International Conference on Toxic Cyanobacteria, Toledo, OH (USA). Evaluation of pre-oxidation drinking water treatments for the removal of cyanotoxins produced by *Microcystis aeruginosa*

12 Nov. 2021 **Oral communication**. Annual Scientific meeting, Phycology working group, Italian Botanical Society, online and Catania, Italy. Biosynthesis of polyhydroxybutyrate (PHB) by Cyanobacteria for bio-plastic production

8-10 Sep. 2021 **Oral communication.** VII International Plant Science Conference (IPSC). Insight into the use of chlorinated oxidants for the removal of cyanobacterial toxins produced by *Microcystis aeruginosa*: good practice for drinking water plants

24-25 Sep. 2020 **Poster.** NaToxAq-Natural Toxins: Environmental Fate and Safe Water Supply. (online) Degradation of cyanotoxins produced by the cyanobacterium *Microcystis aeruginosa* using chlorine-based compounds: implication for drinking water management.

15-16 Nov. 2019 **Oral communication**. Annual Scientific meeting, Phycology working group, Italian Botanical Society, Bari, Italy. Removal of total and extra-cellular cyanotoxins from *Microcystis aeruginosa* using chlorinated compounds.

05 July 2019 **Poster**. VII National Workshop on Green Chemistry, Italian Chemistry Society, Padova. Cultivation of the microalga *Phaeodactylum tricornutum* using waste products from anaerobic digestion.

16-17 Nov. 2018 **Oral communication**. Annual Scientific meeting, Phycology working group, Italian Botanical Society, Catania, Italy. Microalgae monitoring in freshwater reservoirs intended for human consumption: application of innovative fluorimetric tools.

## Training courses

03 Feb. 2020 – 07 Feb. 2020 **Metabarcoding and metagenomic data processing and analyses: a practical overview**. Stazione Zoologica Anthon Dohrn, Naples, Italy

29 Jul. 2019 – 02 Aug. 2019 **Determination Course of Freshwater and Terrestrial Cyanobacteria**. University of South Bohemia, Czech Republic

19-22 Feb. 2018 **Theoretical-practical course of Multi-techniques for the study of the ecology of phytoplankton**. Società Italiana di Biologia Marina (SIBM), University of Naples Federico II, Italy

## Awards

2020 **Best Poster Award**, NaToxAq-Natural Toxins: Environmental Fate and Safe Water Supply. International conference 24th-25th September 2020 (online).