

13th International Conference on **toxic** cyanobacteria

Chania, Crete
4-8 May 2025



PROGRAM

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PROGRAM

SUNDAY 4 MAY

📍 IMPERIAL MAIN HALL

📍 IMPERIAL 4

14:00 – 18:00

WORKSHOP

Mass spectrometry-based metabolomics for cyano-metabolites

Trainers: **Corinna Brungs, Sofia Iliakopoulou, Daniel Petras, Robin Schmid**

19:00 – 19:30

Opening Ceremony

19:30 – 20:10

OPENING LECTURE

Marine biodiversity 25 centuries ago: Human knowledge and uses of marine organisms as depicted in ancient Greek literature

Voultsiadou Eleni

Aristotle University of Thessaloniki, Greece

20:10 – 21:10

Welcome Cocktail

MONDAY 5 MAY

📍 IMPERIAL MAIN HALL

08:25 – 08:35 Welcome, announcements

SESSION 1

Cyanobacteria metabolites and their properties

Chairs: **A. Kust, T. Kaloudis**

08:35 – 09:00

KEYNOTE TALK 1

Dissecting the Role of Microcystin on the Carbon Concentrating Mechanism of *Microcystis aeruginosa*

Dittmann Elke

University of Potsdam, Germany

09:00 – 09:12

O1 - 263 | Relationship between Clickable Cyanotoxin Content and Labeling by Click Reaction in Bloom-Forming Cyanobacteria *Microcystis aeruginosa* and *Planktothrix agardhii*

Kurmayer R

Research Department for Limnology, Univ. Innsbruck, Mondsee, Austria



09:12 – 09:24 **O2 - 247** | The Role of Interacting Anthropogenic and Climatic Drivers on the Late 20th Century Development of Harmful Cyanobacterial blooms in Utkikuma Lake, Alberta

Patterson T

Dept. of Earth Sciences, Carleton University, Ottawa, Canada

09:24 – 09:36 **O3 - 164** | Methods and Reference Materials for Measurement of Complex Anatoxin Profiles in Benthic Cyanobacteria

Beach D

Biotoxin Metrology, National Research Council Canada, Halifax, Canada

09:36 – 09:48 **O4 - 23** | Identification of 7-Deoxy-desulfo-argino-cylindrospermopsin, the Missing Piece in Cylindrospermopsin Biosynthesis

Mejean A

Paris Cité University, Paris, France

09:48 – 10:00 **O5 - 224** | Searching for the cylindrospermopsin producer in a Dutch estuarine shellfish production area

Faassen E

Wageningen Food Safety Research, Netherlands

10:00 – 10:12 **O6 - 197** | OMICs characterization of *Kamptonema* strains from BACA and PCC reveals taxonomic and cyanometabolite diversity

Cordeiro R

CIBIO-Açores, Ponta Delgada, Portugal

10:12 – 10:24 **O7 - 177** | Metabolic profile of *Raphidiopsis raciborskii* extracts

Tokodi N

Laboratory of Metabolomics, Jagiellonian University, Krakow, Poland

10:24 – 10:50

INVITED TALK 1

Functional Metabolomics Approaches for Understanding Microbial Community Dynamics at the Molecular Level

Petras Daniel

University of California Riverside, USA

10:50 – 11:20

Break

SESSION 2

Cyanobacteria metabolites and their properties

Chairs: **S. Zervou, R. Kurmayer**

11:20 – 11:32 **O8 - 112** | Peptides from Baltic cyanobacteria as potent anti SARS-CoV-2 agents

Cegłowska M

Institute of Oceanology Polish Academy of Sciences Sopot, Poland

11:32 – 11:44 **O9 - 229** | A metabolomics approach to investigate the responses of *Microcystis aeruginosa* to UV-B stress

Zervou S

Institute of Nanoscience and Nanotechnology, NCSR Demokritos, Athens, Greece

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- 11:44 – 11:56 **O10 - 77** | Updates of CyanoMetDB - a comprehensive public database of secondary metabolites from cyanobacteria
Janssen E
Eawag, Dübendorf, Switzerland
- 11:56 – 12:08 **O11 - 240** | (Ahp)-Cyclodepsipeptide and its possible detoxification pathway
Sieber S
Department of Chemistry, University of Zurich, Switzerland
- 12:08 – 12:20 **O12 - 178** | Selected peptides (microcystins, anabaenopeptins and microginins) of past and present cyanobacterial presence in a large shallow lake (Lake Balaton)
Vasas G
HUN-REN Balaton Limnological Research Institute, Tihany, Hungary

12:20 – 12:35 Sponsored Lecture **Target Analysis** — Dorian Myrtai

 **targetanalysis**
THE SCIENCE OF WHAT IS REAL

INVITED TALK 2
12:35 – 13:00 Metabolomic Insights into Cyanobacteria: From Toxicity Profiling to Novel Bioactive Compounds
Pinto Ernani
University of Sao Paulo, Brazil

13:00 – 14:00 **Lunch**

14:00 – 15:00 **Posters**

SESSION 3

Effects of cyanometabolites

Chairs: **E. Janssen, A. Quesada**

- 15:00 – 15:25 **INVITED TALK 3**
Microcystins – a pharmacist's perspective
Niedermeyer Timo
Freie Universität Berlin, Germany
- 15:25 – 15:37 **O13 - 143** | In vitro study of the intestinal and renal detoxification of Microcystin-LR catalyzed by Glutathione-S-Transferase (GST): organ and species differences
Testai E
Istituto Superiore di Sanità, Rome, Italy
- 15:37 – 15:49 **O14 - 226** | Integrating multilevel technologies for early warning of cyanobacterial blooms: from the next generation sequencing to the space
Quesada A
Autonomous University of Madrid, Spain



- 15:49 – 16:01 **O15 - 36** | Distinct ecotoxicological impacts induced by different *Microcystis* genotypes to Medaka fish
Marie B
CNRS / MNHN, France
- 16:01 – 16:13 **O16 - 277** | Ecosystem risk and mammalian susceptibility of the stable, lipid soluble toxin aetokthonotoxin (AETX) from the epiphytic cyanobacterium *Aetokthonos hydrillicola*
Wilde S
University of Georgia, Athens, United States
- 16:13 – 16:25 **O17 - 221** | Tracking harmful cyanobacteria and their effects on the Eastern oyster, *Crassostrea virginica*, in Louisiana estuaries using integrative methods
Stauffer B
University of Louisiana at Lafayette, Lafayette, United States

16:25 – 17:00

Break

 **IMPERIAL MAIN HALL**

 **IMPERIAL 4**

	SESSION 4 Cyanometabolites and their properties Chairs: D. Dziga, E. Martínez-Ruiz	SESSION 5 Detection and monitoring of cyanometabolites Chairs: E. Faassen, D. Beach
17:00 – 17:06	F1 -17 Integrating cyanotoxin detection using LC-MS Triple Quadrupole with cell viability assessment Widhiastuti F <i>Algae and Organic Matter (AOM) Laboratory, The University of New South Wales, Sydney, Australia</i>	F14 -16 Prevalence of Toxic <i>Microcoleus</i> and Anatoxins in Shubenacadie-Grand Lake, NS, Canada Morris H <i>Dalhousie University - Department of Civil & Resources Engineering, Halifax, Canada</i>
17:06 – 17:12	F2 - 215 Real-time observation of modified microcystin synthesis in <i>Microcystis aeruginosa</i> and modified anabaenopeptin synthesis in <i>Planktothrix agardhii</i> Morón Asensio R <i>University of Innsbruck, Mondsee, Austria</i>	F15 - 238 First reports of nodularin production by <i>Nostochopsis</i> spp. from New York State, USA and New South Wales, Australia Webster A <i>SUNY College of Environmental Science and Forestry, Syracuse, United States</i>
17:12 – 17:18	F3 - 219 Bioprospecting cholinergic ligands from a marine cyanobacteria of the genus <i>Oscillatoria</i> Araoz R <i>CEA/JOLIOT/DTMS/SIMoS, Gif sur Yvette, France</i>	F16 - 134 Insights into cyanometabolite profiles in Lake Sapanca through seasons and years Miele V <i>University of Naples Federico II, Italy</i>

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17:18 – 17:24	<p>F4 - 31 <i>Microcystis</i> sp. AE03 strain in Dal Lake harbors cylindrospermopsin and microcystin synthetase gene cluster</p> <p>Bashir A <i>University of Kashmir, Srinagar, India</i></p>	<p>F17 - 119 Strain and environment affect toxin production by the toxic cyanobacteria, <i>Umezakia natans</i> (previously <i>Chrysochloris ovalisporum</i>)</p> <p>Chuang A <i>Griffith University, Meadowbrook, Australia</i></p>
17:24 – 17:30	<p>F5 - 4 Portfolio of cyanobacterial secondary metabolites and their biotransformation potential in surface waters</p> <p>Wang X <i>Eawag, Swiss Federal Institute of Aquatic Science and Technology, Duebendorf, Switzerland</i></p>	<p>F18 - 171 What if N and/or P loadings would not have been reduced? Decadal scale model simulations of MC concentrations in Lake Müggelsee</p> <p>Schampera C <i>German Environment Agency, Berlin, Germany</i></p>
17:30 – 17:36	<p>F6 - 208 Evading toxins: microcystin persists at low temperature and light</p> <p>North R <i>University of Missouri-Columbia, United States</i></p>	<p>F19 - 230 High-frequency monitoring of lentic water bodies with autonomous aquatic drones guided by AI techniques and dynamical models</p> <p>Besada Portas E <i>Universidad Complutense de Madrid, Spain</i></p>
17:36 – 17:42	<p>F7 - 233 Effects of environmentally relevant concentrations of the antibiotic azithromycin on <i>Daphnia-Microcystis</i> interaction</p> <p>Celano M <i>Federal University of Rio de Janeiro - UFRJ, Brazil</i></p>	<p>F20 - 69 Biotic interactions shape the realised niche of toxic cyanobacteria</p> <p>Ntetsika P <i>EAWAG/ETHZ Switzerland</i></p>
17:42 – 17:48	<p>F8 - 14 First study evaluating toxic effects of guanitoxin and synthetic insecticide combination on fish</p> <p>Passos L <i>University of São Paulo (USP), Piracicaba, Brazil</i></p>	<p>F21 - 159 Identification of ecologically relevant microcystin degraders in Lake Zurich</p> <p>Ginesi S <i>University of Zurich, Switzerland</i></p>
17:48 – 17:54	<p>F9 - 167 Crustacean zooplankton feeding on cyanobacteria and potentially toxic <i>Microcystis</i></p> <p>Agasild H <i>Estonian University of Life Sciences, Estonia</i></p>	<p>F22 - 106 Algal-rithm: Automated Classification of Harmful Microalgae using Convolutional Neural Networks</p> <p>Lancaster A <i>Robert Gordon University, Aberdeen, United Kingdom</i></p>



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17:54 – 18:00	<p>F10 - 117 Plant Growth Promoting Rhizobacteria-Mediated Bioremediation for Alleviating Phytotoxicity in <i>Vicia faba</i> Exposed to Cyanobacterial Crude Extract Containing Microcystins: Human Health Risk Assessment</p> <p>Elidrissi El Yallouli N <i>Water, Biodiversity and Climate Change Laboratory, Cadi Ayyad University, Marrakech, Morocco</i></p>	<p>F23 - 270 Ultrasensitive Non-Competitive Microcystin-LR Assay Using a Two-Nanobody Sandwich Format with a positive readout</p> <p>Gonzalez G <i>Facultad de Química, Udelar, Montevideo, Uruguay</i></p>
18:00 – 18:06	<p>F11 - 86 Unveiling the interaction of highly toxic microcystin analogues in contact with virgin, artificially and naturally aged microplastics</p> <p>Souza Moura D <i>Robert Gordon University, Aberdeen, United Kingdom</i></p>	<p>F24 - 54 Characterization of Cyanobacteria and Cyanotoxins in a National Park in Nova Scotia, Canada</p> <p>Macdonald S <i>Dalhousie University, Halifax, Canada</i></p>
18:06 – 18:12	<p>F12 - 71 Extracts of the lichen <i>Pseudevernia furfuracea</i> (L.) Zopf as a source of novel anticyanobacterial agents</p> <p>Essadki Y <i>Water, Biodiversity and Climate Change Laboratory, Marrakech, Morocco</i></p>	<p>F25 - 170 The importance of stakeholder engagement and citizen involvement for successful lake restoration - lessons learned from Lake Vansjø, Norway</p> <p>Haande S <i>Norwegian Institute for Water Research, OSLO, Norway</i></p>
18:12 – 18:18	<p>F13 - 22 Investigation into the mode of action of aetokthonotoxin</p> <p>Rebhahn V <i>Freie Universität Berlin, Germany</i></p>	<p>F26 - 281 The Development of QPCR Assay for the Detection of Anatoxin and Guanitoxin Producing Cyanobacteria</p> <p>Mark van Asten <i>University of NSW, Sydney, Australia, Phytogigene, Inc.</i></p>

TUESDAY 6 MAY

IMPERIAL MAIN HALL

08:25 – 08:30 Welcome, announcements

SESSION 6

Ecology and Taxonomy

Chairs: L. Kelly, S. Gkelis

08:30 – 08:55

KEYNOTE TALK 2

Genomic diversity and adaptation: the global spread of *Raphidiopsis raciborskii*

Willis Anusuya

Australian National Algae Culture Collection, CSIRO Hobart, Tasmania, Australia

09:00 – 09:12

O18 - 203 | Small cysts going up, lake hairs disappearing: Is it all Greek to you? Unravelling the Greek language contribution in Cyanobacteria

Gkelis S

Aristotle University of Thessaloniki, Greece

09:12 – 09:24

O19 - 249 | Gas vesicle genotype diversity in *Planktothrix rubescens*: Exploring drivers of seasonal and interannual variability

Knapp D

Limnological Station, University of Zurich, Kilchberg, Switzerland

09:24 – 09:36

O20 - 84 | Unveiling Cyanobacterial Diversity at LEGE-CC: Taxonomic Legacy and Future Prospects

Hentschke G

CIIMAR, Portugal

09:36 – 09:48

O21 - 241 | Dynamics of Cyanobacterial blooms and associated microbial communities in rainwater harvesting ponds

Akcaalan R.

Istanbul University, Turkey

09:48 – 10:00

O22 - 181 | Critical salinity thresholds and iron limitation: Decoding the role of salinity on growth and toxicity of cyanobacterial blooms

Creed I

University of Toronto, Canada

10:00 – 10:12

O23 - 175 | Ironing out the answer: What limits cyanobacteria in freshwater lakes in the Canadian Prairies?

Trick C

University of Toronto, Canada

10:12 – 10:24

O24 - 237 | Nutrition strategy and non-algal turbidity sustained the dominance and alternative shifts of bloom-forming filamentous cyanobacteria: a case study in large shallow Lake Honghu, China

Song L.

Institute of Hydrobiology, Chinese Academy of Sciences, Wuhan, China



TUESDAY 6 MAY

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10:24 – 10:49

INVITED TALK 4

Taxonomy of cyanobacteria in the age of large genomic datasets

Dvořák Petr

Palacky University Olomouc, Czech Republic

10:50 – 11:30

Break

SESSION 7

Ecology and Taxonomy

Chairs: **I. Jasser, T. Dreher**

11:30 – 11:42

O25 - 32 | Multilevel Analysis of Thermal Stress Impact on Energy Budget and Photosynthetic Performance in *Microcystis aeruginosa*

Liran O

Kinneret Limnological Laboratory, Israel Oceanographic and Limnology Research, Migdal, Israel

11:42 – 11:54

O26 - 256 | Combined effects of abiotic and biotic stressors on cyanobacterial metabolism

Martínez-Ruiz E

Institute of Freshwater Ecology and Inland Fisheries- IGB, Germany

11:54 – 12:06

O27 - 205 | Are toxic cyanobacteria competitively superior at elevated carbon dioxide and temperature?

Wejnerowski Ł

Institute of Environmental Biology, Adam Mickiewicz University, Poznań, Poland

12:06 – 12:18

O28 - 214 | Complex interaction between cyanophage CL131 and freshwater cyanobacterium *Aphanizomenon flos-aquae* during the viral infection

Dziga D

Jagiellonian University, Kraków, Poland

12:18 – 12:30

O29 - 96 | Genomic insights into Raphidiopsis (*Cylindrospermopsis*) *brookii* isolates from northwest Ohio

Brown K

Bowling Green State University, Bowling Green, United States

12:30 – 12:42

O30 - 258 | CyanoHABs nuisance transference across a freshwater-marine continuum in a coastal lagoon complex (Rio de Janeiro, Brazil) and its potential associated risks

Vilar M, Celano M

Federal University of Rio de Janeiro, Brazil

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12:42 – 12:54 **O31 - 33** | Defining the Nostocales ADA clade (*Anabaena-Dolichospermum-Aphanizomenon-Cuspidothrix*) through genome sequencing

Dreher T

Oregon State University, Corvallis, United States

12:54 – 13:06 **O32 - 40** | Understanding the scale and drivers of benthic *Microcoleus* blooms: Insights from 20 years of monitoring in Aotearoa-New Zealand

Kelly L

Cawthron Institute, Nelson, New Zealand

13:06 – 14:00

Lunch

14:00 – 16:15

Posters

16:30 – 20:00

Excursion Chania

WEDNESDAY 7 MAY

 IMPERIAL MAIN HALL

08:25 – 08:30 Welcome, announcements

SESSION 8

Monitoring and modelling in a changing environment

Chairs: M. Kokociński, L. Song

08:30 – 08:55

INVITED TALK 5

Taxonomic and functional metagenomic assessment of cyanobacteria

Salmaso Nico*Research and Innovation Centre Fondazione Edmund Mach (FEM), Italy*

09:00 – 09:12

O33 - 89 | AI Meets Microscopy: Revolutionizing Algal Bloom Monitoring with Machine Learning and Image Segmentation**Zamyadi A***Monash University, Melbourne, Australia*

09:12 – 09:24

O34 - 196 | Development of novel monitoring techniques to address cyanobacterial blooms in Ecuador**Van der Heyden C.***Health and Water Technology Research Centre - University of Applied Sciences and Arts HOGENT, Gent, Belgium*

09:24 – 09:36

O35 - 251 | Metabolomics for the detection of cyanopeptides from cultures, blooms and sediment cores**McMullin D.***Carleton University, Ottawa, Canada*

09:36 – 09:48

O36 - 24 | Sudden harmful algal blooms emphasize the detrimental effects of re-eutrophication on the long-term stability of lake restoration**Kong X***Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences, Nanjing, China*

09:48 – 10:00

O37 - 108 | Mitigating Realistic Cyanotoxin Health Risks and Enhancing *Vicia faba* Productivity through Innovative Water Treatment**Oudra B***Univ. Cadi Ayyad Faculty of Science Semlalia, Marrakech, Morocco*

10:00 – 10:12

O38 - 149 | Diversity and distribution of cyanotoxins along geographical and climatic gradients in Poland and Lithuania**Jasser I***Uniwersytet Warszawski, Wydział Biologii, Warszawa, Poland*

10:12 – 10:24

O39 - 271 | Diversity and Toxicity of Marine Benthic Cyanobacterial Proliferations from Florida (USA)**Berthold D***Fort Lauderdale Research and Education Center, University of Florida, Davie, United States*

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10:25 – 10:40

Sponsored Lecture

EYDAP – Athens Water Supply & Sewerage Company S.A



10:40 – 11:05

INVITED TALK 6

Cultured and uncultured cyanobacteria as sources of unique enzymes

Leão Pedro

*CIIMAR – Interdisciplinary Centre of Marine and Environmental Research,
University of Porto, Portugal*

11:05 – 11:30

Break

SESSION 9

Monitoring and modelling in a changing environment

Chairs: **R. Akcaalan, G. Bullerjahn**

11:30 – 11:42

O40 - 139 | The uncertain future of the Burgundy Blood Alga in Peri-alpine Lakes

Ibelings B

University of Geneva, Switzerland

11:42 – 11:54

O41 - 246 | Extra-Tropical Storms as an Emergent Contributor to Harmful Algal Bloom Development in the Canadian Maritimes

Roe H.

Queen's University Belfast, United Kingdom

11:54 – 12:06

O42 - 6 | Enhancing Harmful Algal Bloom Predictions by Coupling Machine Learning Models with a Data Assimilation Technique

Sahoo D

Clemson University, South Carolina Water Resources Center, Pendleton, United States

12:06 – 12:18

O43 - 87 | Persistence of potentially toxin-generating cyanobacteria in drinking water treatment plants across Eastern Australia

Chu X

UNSW, Kensington, Australia

12:18 – 12:30

O44 - 101 | Phylogenomics of anatoxin-a-producing *Microcoleus* species at a local and global geographic scale

Gonzalez D

Laboratory of Microbiology, University of Neuchâtel, Switzerland

12:30 – 12:42

O45 - 88 | Significance of cyanotoxins in lakes for irrigation and drinking water for livestock

Ballot A

Norwegian Institute for Water Research, Oslo, Norway



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12:42 – 12:54 **O46 -127** | Taxonomic, metabolic, and toxigenic diversity of cyanobacteria in the Sacramento-San Joaquin Delta: Insights from genome-resolved metagenomics and environmental drivers

Kust A

Innovative Genomics Institute, University of California, USA

13:00 – 14:00

Lunch

14:00 – 15:00

Posters

SESSION 10

Exposure, toxicology & effects – One Health

Chairs: I. Chorus, B. Ibelings

15:00 – 15:12 **O47 - 182** | Comparison of the impact of differentiated cyanobacterial morphotypes and bacterial communities in relation to complex water quality threats - an intercontinental study

Mankiewicz-Boczek J

University of Lodz, Faculty of Biology and Environmental Protection, Łódź, Poland

15:12 – 15:24

O48 - 202 | Toxic cyanobacteria's journey from aquatic to terrestrial environments: Soil colonization and Impacts on microbiome, crops, and cyanotoxin risks

Lee J

Ohio State University, Columbus, United States

15:24 – 15:36

O49 - 8 | From water to fork: accumulation of microcystins in fruits and vegetables

Van Hassel W

Sciensano, Brussels, Belgium

15:36 – 15:48

O50 - 236 | Unmonitored Risks: Cyanotoxins in Marine Seafood and Their Impacts on Food Security

Peacock M

Northwest Indian College, Bellingham, United States

15:48 – 16:00

O51 - 82 | Macrophyte-associated toxic cyanobacteria in a mesotrophic urban lake – abundance of toxins and risk assessment

Fastner J

German Environment Agency, Berlin, Germany

16:00 – 16:30

Break

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	SESSION 11 Ecology and genomics Chairs: J. Mankiewicz-Boczek, A. Willis	SESSION 12 Risk assessment & management Chairs: C. Wiegand, W. Van Hassel
16:30 – 16:36	F27 - 243 Introducing BCCM/ULC: A public culture collection for ex situ conservation of cyanobacterial diversity and support of taxonomic and genomic studies Christodoulou M <i>BCCM/ULC, University of Liège, Belgium</i>	F43 - 291 Exploring the Ecotoxicity of Metal-Organic Frameworks for Sustainable Water Treatment and Cyanobacterial Bloom Management Meriç Albay <i>Department of Marine and Freshwater Resource Management, Istanbul University, Turkiye</i>
16:36 – 16:42	F28 - 189 Genomic approach on the taxonomic diversity and biosynthetic gene clusters of cyanobacteria with insights on strains microbiome and virome Luz R <i>CIBIO, Research Centre in Biodiversity and Genetic Resources, University of the Azores, Portugal</i>	F44 - 209 Inhibitory effect of aqueous extracts of <i>Pistia stratiotes</i> and <i>Pontederia crassipes</i> on cyanobacteria <i>Microcystis aeruginosa</i> and the defensive role of its microbiota associated Silva L <i>Federal University of Rio de Janeiro, Brazil</i>
16:42 – 16:48	F29 - 81 Seasonal population dynamics of <i>Microcystis aeruginosa</i> and associated cyanophages in the river Moselle Hartenfels H <i>Federal Institute of Hydrology, Koblenz, Germany</i>	F45 - 91 Scalable Hydrogen Peroxide Dosing Solutions for Tackling Toxic Cyanobacteria Raikhlin O <i>Melbourne Water, Australia</i>
16:48 – 16:54	F30 - 222 Cyanobacterial Community Composition in Biocrusts from Lahul-Spiti Cold Desert of Indian Trans-Himalayan Region Singh Y <i>Central University of Punjab, Bathinda, India</i>	F46 - 231 From Lab to Lake, Evaluating Efficacy of Emerging Nanobubble Ozone Technology (NBOT) for Cyanobacterial Harmful Algal Bloom (CHAB) Control Raymond H <i>Ohio State University, Columbus, United States</i>
16:54 – 17:00	F31 - 53 Temporal changes in the genome and associated micro-biome in lab-grown marine Cyanobacteria over a decade reveal adaptive selection Dutta S <i>CSIR Indian Institute of Chemical Biology, Kolkata, India</i>	F47 - 21 Uncovering the cytotoxicity of cyanopeptides in <i>Microcystis</i> extracts on three fish cell lines Huré A <i>University of Reims Champagne-Ardenne, France</i>



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17:00 – 17:06	<p>F32 - 264 Interaction between freshwater cyanobacteria and cyanophages; new tools for investigation of the infection cycle and its dynamics</p> <p>Klimczak B <i>Jagiellonian University, Krakow, Poland</i></p>	<p>F48 - 64 Application of non-thermal plasma processes as a green approach for the treatment of cyanobacteria and cyano-metabolites of health concern</p> <p>Simonazzi M <i>University of Bologna, Ravenna, Italy</i></p>
17:06 – 17:12	<p>F33 - 113 Defining Seasonally Variant Modules of Biosynthesis Encoded by Bloom-Forming Cyanobacteria <i>Microcystis</i> & <i>Dolichospermum</i> in Western Lake Erie</p> <p>Hart L <i>Chemical Biology, University of Michigan, Ann Arbor, United States</i></p>	<p>F49 - 110 Contamination of irrigation water with cyanobacterial toxins (microcystins): assessment of their phytotoxicity and health risk, case study Lalla Takerkoust Lake, Marrakech, Morocco</p> <p>Lahrouni M <i>Water, Biodiversity and Climate Change Laboratory, Cadi Ayyad University, Marrakech, Morocco</i></p>
17:12 – 17:18	<p>F34 - 194 Conserved Marker Genes Reveal <i>Microcystis</i> Strain Diversity and Dynamics in Western Lake Erie</p> <p>Kiledal A <i>University of Michigan, Ann Arbor, United States</i></p>	<p>F50 - 227 Low cyanobacteria concentration but high risks derived from multotoxicity</p> <p>Perona E <i>Autonomous University of Madrid, Spain</i></p>
17:18 – 17:24	<p>F35 - 269 Environmental factors influencing cyanobacteria dynamics in contrasting urban lakes</p> <p>Johnston L <i>Dalhousie University, Halifax, Canada</i></p>	<p>F51 - 144 Management and communication of cyanobacteria risks in recreational waters, an international comparison</p> <p>Franklin D <i>Bournemouth University, Poole, United Kingdom</i></p>
17:24 – 17:30	<p>F36 - 30 Genetic divergence of non-toxic and toxic <i>Microcoleus</i> leading to vitamin auxotrophy</p> <p>Francis M <i>University of Auckland, New Zealand</i></p>	<p>F52 - 158 Microbial Community Response to Hydrogen Peroxide Treatment: a microcosm experiment in an eutrophic pond</p> <p>Köker L <i>Istanbul University, Faculty of Aquatic Sciences, İstanbul, Türkiye</i></p>
17:30 – 17:36	<p>F37 - 61 Genetic and metabolic diversity of cyanobacteria on the rock-water interface in Alpine mountains and effects on the local environment</p> <p>Oliveira J <i>WSL, Birmensdorf, Switzerland</i></p>	<p>F53 - 102 Effect of Nanobubbles on Ozone Delivery and Harmful Algae Mitigation</p> <p>Morón-López J <i>Arizona State University, Tempe, United States</i></p>

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17:36 – 17:42	<p>F38 - 210 Genomic insights into adaptations to survival and toxicity of cyanobacteria in hot springs: a case study comprising cyanobacterial genomes from Europe, Iceland, and Central Asia</p> <p>Rudak A <i>University of Warsaw, Poland</i></p>	<p>F54 - 193 Evaluation of ultrasound for management of harmful algal blooms in sequential drinking water reservoirs</p> <p>Weavers L <i>Ohio State University, Columbus, United States</i></p>
17:42 – 17:48	<p>F39 - 146 Effects of cyanosphere bacteria on the growth of the anatoxin-a producing <i>Microcoleus</i></p> <p>Corset M <i>University of Neuchâtel, Switzerland</i></p>	<p>F55 - 140 A Strategy combining Ed5cation, Citizen Science, and Digital Tools to Manage Toxic Benthic Cyanobacteria</p> <p>Junier P <i>University of Neuchâtel, Switzerland</i></p>
17:48 – 17:54	<p>F40 - 151 Digging deep in the toxicity of <i>Trichormus variabilis</i>: toxicity and toxin production</p> <p>Kaminski A <i>Jagiellonian University, Laboratory of Metabolomics, Krakow, Poland</i></p>	<p>F56 - 268 Digital tools for sustainable management of water resources</p> <p>Li J <i>Lund University, Sweden</i></p>
17:54 – 18:00	<p>F41 - 121 A Native Fish Species (<i>Cnesterodon decemmaculatus</i>) as a Bioindicator of Microcystis Bloom Toxicity</p> <p>Badagian N <i>Universidad de la República, Montevideo, Uruguay</i></p>	<p>F57 - 147 Lessons learned – One year of monitoring toxic benthic cyanobacteria in a mesotrophic lake</p> <p>Meissner S <i>Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB), Berlin, Germany</i></p>
18:00 – 18:06	<p>F42-68 Comparing Aquatic Environmental DNA and Sedimentary DNA to Investigate Cyanobacterial Community Dynamics Across a Trophic Gradient</p> <p>Jasser I <i>University of Warsaw, Poland</i></p>	<p>F58 - 79 Ultrasound is of limited use for the mitigation of cyanobacterial bloom development in slow-flowing waters</p> <p>Van Wichelen J <i>Research institute for Nature and Forest (INBO), Brussels, Belgium</i></p>
19:30	<p>Farewell party</p>	



THURSDAY 8 MAY


 IMPERIAL MAIN HALL

08:55 – 09:00 Welcome, announcements

SESSION 13

Risk assessment and management

Chairs: **T. Triantis, A. Zamyadi**

- 09:00 – 09:12 **O52 - 188** | CYANOACTION Effective Lake management: reducing cyanobacteria by actions in the catchment
Wiegand C
ECOBIO (UMR 6553 CNRS) University of Rennes, France
-
- 09:12 – 09:24 **O53 - 186** | A sustainable and innovative management system for toxic cyanobacteria blooming of surface waters with combined energy production, sustainable agriculture, and food safety (CYANOTECH)
Antoniou M
Cyprus University of Technology, Department of Chemical Engineering, Limassol, Cyprus
-
- 09:24 – 09:36 **O54 - 191** | Playing to combat cyanobacteria: A multi-stakeholder consensus-building approach to address eutrophication in waterbodies
Quiblier C
MCAM, National Museum of Natural History, Paris, France
-
- 09:36 – 09:48 **O55 - 265** | 20years of experiences with cyanobacterial blooms management: Big thinks depends on small details
Marsalek B
Institute of Botany Academy of Sciences, Czech Republic
-
- 09:48 – 10:00 **O56 - 201** | Effects of hydroxyl radicals (H₂O₂/UVC) on natural organic matter from a cyanobacterial bloom
Iliakopoulou S
Institute of Nanoscience and Nanotechnology, NCSR Demokritos, Athens, Greece
-
- 10:00 – 10:12 **O57 - 253** | Controlling cyanobacterial blooms with hydrogen peroxide: implications for non-target species and the role of green algae
Weenink E
University of Amsterdam, Netherlands
-
- 10:12 – 10:24 **O58 - 114** | Full-Scale Preventive Algaecide Treatment of Cyanobacterial Harmful Algal Blooms in a Reservoir Used for Potable Water Production
Seo Y
University of Toledo, United States
-
- 10:24 – 10:35 **Sponsored Lecture Gold Standard Diagnostics**
Rapid Testing Solutions — Rich Quashne
- 
-
- 10:35 – 11:00 **INVITED TALK 7**
 Mitigating harmful cyanobacterial blooms (CyanoHABs) in an increasingly chaotic and extreme global climate
Paerl Hans
University of North Carolina – Chapel Hill, USA

THURSDAY 8 MAY

 **IMPERIAL MAIN HALL**

11:00 – 11:30

Break

SESSION 14

Risk assessment and management

Chairs: **A. Hiskia, B. Marsalek**

11:30 – 11:42

O59 - 185 | System analysis guided eutrophication control and mitigation of cyanobacterial blooms

Lurling M

Wageningen University, Netherlands

11:42 – 11:54

O60 - 103 | Effectiveness of algicidal bacteria in controlling harmful cyanobacteria in different bloom stages

Kokociński M

Adam Mickiewicz University, Poznań, Poland

11:54 – 12:06

O61 - 272 | Application rate and temperature effects of copper- and peroxide-based algaecides on spring and fall microcystin-producing *Planktothrix* blooms

Laughinghouse D

University of Florida, Davie, United States

12:06 – 12:18

O62 - 248 | Hot summers raise public awareness of toxic cyanobacterial blooms

Van de Waal D

Netherlands Institute of Ecology, Wageningen, The Netherlands

12:18 – 12:30

O63 - 200 | Cyanotoxins pool size in cyanobacteria exposed to sub-lethal antibiotics concentrations

Manganelli M

Istituto Superiore di Sanità, Rome, Italy

INVITED TALK 8

12:30 – 12:55

Effective in-lake measures to control cyanobacterial blooms

Visser Petra

University of Amsterdam, the Netherlands

13:00 – 14:00

Lunch

14:00 – 14:15

Updates from ISSHA - the International Society for the Study of Harmful Algae

Van de Waal D

President, ISSHA Council

14:15 – 14:30

Changes in WHO Cyanotoxin guidance - summarised in a new technical document

Chorus I

Leibniz Institute for Freshwater Biology and Inland Fisheries

14:30 – 15:00

ICTC14 Proposals

15:00 – 15:30

Closing - ICTC14 announcement

ICTC13 WORKSHOP

Mass spectrometry-based metabolomics for cyano-metabolites

Sunday May 4th, 2025 | 14:00-18:00, Hall IMPERIAL 4



Corinna Brungs
University of Vienna



Sofia Iliakopoulou
EYDAP-NCSR Demokritos



Daniel Petras
UC Riverside



Robin Schmid
mzioTeam

- **Beginner to expert level**
- **Non-target MS analysis**
- **Metabolomics & transformation product discovery**
- **mzmine**
Feature detection, compound annotation, statistical analysis, molecular networking, automatic library generation
- **GNPS2**
Compute infrastructure, workflows, FAIR data sharing, molecular networking

WORKSHOP FEES

Regular

€ 50

Students

Complimentary

Free admission for students registered in ICTC13

mzmine

mzIO

GNPS2

POSTERS

Detection and elucidation of toxins and metabolites

- P1-19** Cyano-metabolites in Lake Marathonas (Greece) by LC-MS untargeted analysis and molecular networking in GNPS
Ioannis Kontogiannis
 AquOmixLab, EYDAP SA, Athens, Greece
-
- P2-78** Reactivity of cyanobacteria metabolites with ozone: Multi-compound competition kinetics and transformation products
Elisabeth (Lilli) Janssen
 Eawag, Dubendorf, Switzerland
-
- P3-9** Towards a better evaluation of fish contamination: application of a validated UHPLC-MS/MS method for microcystins analysis
Wannes Hugo R. Van Hassel
 Sciensano, Brussels, Belgium
-
- P4-228** Cyanobacterial toxins and peptides in Lakes Vegoritis and Great Prespa, Greece
Sevasti - Kiriaki Zervou
 Institute of Nanoscience and Nanotechnology (INN), NCSR Demokritos, Athens, Greece
-
- P5-10** Moonlighting activity of threonine synthase in cyanobacterial cell death
Wonjae Kim
 Korea University, Seoul, South Korea
-
- P6-29** MC-LR and AFM1 in milk: quantification potential and toxicological analysis
Julien Masquelier
 Sciensano, Brussels, Belgium
-
- P7-28** Application-ready quantitative methodologies for cyanotoxins in environmental and food matrices
Dr Julien Masquelier
 Sciensano, Brussels, Belgium
-
- P8-38** Development of Targeted and Non-Target Methods for Multiclass Analysis of Cyanotoxins
Lydia Zamlynny
 Dalhousie University, Halifax, Canada
-
- P9-65** Harnessing the biosynthetic capabilities of *Microcystis* freshwater cyanobacteria through a multi-omics and synthetic biology approach
Sierra Hefferan
 University of Michigan, Ann Arbor, United States
-
- P10-49** From a Single Toxin to a Toxin Network: New Insights into Aetokthonotoxin Derivatives
Franziska Schanbacher
 Freie Universität Berlin, Germany
-
- P11-52** A Novel Lateral Flow Assay that Detects Acetylcholine Receptor Ligand Toxin Anatoxin-a (ATX-a)
Dr Lance Ford
 Attogene, Austin, United States
-
- P12-59** Detection and quantification of cyanotoxins in the mucilage of natural *Microcystis* colonies
Myriam Bormans
 CNRS, University of Rennes, France
-
- P13-62** Hapalosins are produced by terrestrial symbiotic *Nostoc* sp. KVJ10
Anton Liaimer
 UiT- the Arctic University of Norway, Tromsø, Norway

-
- P14-72** Gene copy numbers impact the accumulation of cyanophycin in toxic and non-toxic *Microcoleus*
Nagasaijanani Rajpirathap
University of Auckland, New Zealand
-
- P15-83** Immunoreagents and immunoassays for the rapid analysis of dihydroanatoxins
Josep V. Mercader
IATA-CSIC, Paterna, Spain
-
- P16-98** Searching antibacterial activity of cyanobacteria: a contribution to the Blue-Green Age of antibiotic discovery?
Elsa Dias
National Institute of Health Dr. Ricardo Jorge (INSA), Lisboa, Portugal
-
- P17-104** Microcystin production in *Scytonema cf. javanicum* from semi-arid river basins as adaptation to global warming scenarios
Antonia D. Asencio
Miguel Hernández University, Elche, Spain
-
- P18-190** Development and certification of a dietary supplement reference material for multiple classes of cyanobacterial toxins
Krista Thomas
National Research Council of Canada (NRC), Halifax, Canada
-
- P19-105** Feasibility studies on the production of calibration solutions for guanitoxin
Krista Thomas
National Research Council of Canada (NRC), Halifax, Canada
-
- P20-137** Verification of Broad Cross-Reactivity of an ELISA for Microcystins using Nineteen Quantitative Reference Materials
Ingunn Samdal
Norwegian Veterinary Institute, Norway
-
- P21-138** One-step solid phase extraction method for simultaneous targeted and untargeted analysis of cyanotoxins and other micropollutants in water samples
Alina Gialleli
AquOmixLab, Athens Water Supply and Sewerage Company, Athens, Greece
-
- P22-148** Unexpected occurrence of marine secondary metabolites in inland waters of post-mining lakes in north-west of Czechia
Lenka Štenclová
Free University of Berlin, Germany
-
- P23-169** Paper Spray High-Resolution Tandem Mass Spectrometry (PS-HRMS/MS) for Rapid, Multi-class Cyanotoxin Analysis
Daniel Beach
Biotoxin Metrology, National Research Council Canada, Halifax, Canada
-
- P24-192** Growth and cylindrospermopsin production in *Chrysochloris ovalsporum* under varying salinity conditions
Claudia D'Alterio
University of Naples Federico II, Naples, Italy
-
- P25-212** An SPE-UPLC-MS/MS analytical method for microcystins monitoring in the raw and drinking water of the city of Thessaloniki
Chrysa Gkementzoglou
EYATH SA, Thessaloniki, Greece
-
- P26-213** Focusing on the removal of taste and odor compounds: MIB and Geosmin monitoring in raw and drinking water of Thessaloniki
Nikoletta Xanthopoulou
EYATH SA, Thessaloniki, Greece
-

- P27-216** Lifetime and Degradation Products of Anatoxins in Long-Term Storage
Zac Triumph
 State University of New York College of Environmental Science and Forestry, United States
- P28-234** Synthetic Approach to Anatoxin-a and Related Congeners for Use as Certified Reference Materials
Jamie Nunziata
 State University of New York College of Environmental Science and Forestry, United States
- P29-261** First Report of Canine Poisoning by Microcystins in Norway
Christopher Miles
 Norwegian Veterinary Institute, Ås, Norway
- P30-273** Metabologenomics of *Raphidiopsis* Species
Jessica Moretto
 University of Florida, Fort Lauderdale, United States
- P31-286** Quantification of gene involved in anatoxin A production and diversity of cyanobacteria in a French lake
Yann Hechard
 1Laboratoire EBI, UMR CNRS 7267, Université de Poitiers, France
- P32-289** Analytical approaches for better mitigation of human and animal health threats from cyanobacterial toxins
Andrew Turner
 Centre for Environment Fisheries and Aquaculture Science, Weymouth, UK

Ecology and taxonomy

- P33-12** Intra-specific response in akinete production under stress conditions in *Raphidiopsis raciborskii*.
Catalina Ríos-Henríquez
 Aquatic Ecology Group, University of Potsdam, Germany
- P34-179** Seasonal succession of phytoplankton and driving factors of cyanobacteria blooms in shallow urban ponds in Brussels
Laure Roman
 Université Libre de Bruxelles, Brussels, Belgium
- P35-18** Cyanobacteria Diversity Assessment from Semi-arid Precinct of Rajasthan, India using Polyphasic Approach
Sonam Sonam
 Central University of Rajasthan, Ajmer, India
- P36-74** *Gloeotrichia echinulata* genome sequences from the US indicate a tight species cluster of cyanotoxin-negative and geosmin-positive genomes
Theo Dreher
 Oregon State University, United States
- P37-34** More than just disorder - metabolite diversity of *Microcystis* strains shows tight correspondence to genotype and may contribute to ecotype specificities
Benjamin Marie
 MNHN / CNRS, Paris, France
- P38-55** The global rise in filamentous, benthic *Microcoleus* proliferations – a review of their ecology, toxin production and research needs
Laura Kelly, Susie Wood
 Cawthron Institute, Nelson, New Zealand
- P39-99** Evaluating the nifH gene marker in cyanobacteria taxonomy: fragment length and pseudogene presence
Spyros Gkelis
 Aristotle University of Thessaloniki, Greece



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- P40-133** Investigating the ecology and temporal dynamics of *Microcoleus* species in a Swiss river
Sami Zhioua
University of Neuchâtel, Switzerland
-
- P41-135** The mixing regime as a driver of seasonal succession and long-term composition of phytoplankton in shallow Lake Balaton
Vera Istvánovics
HUN-REN-BME Water Research Group, Budapest, Hungary
-
- P42-145** Cyanobacteria community status of two natural lakes in Greece
Urania Lortou
The Goulandris Natural History Museum- Greek Biotope/Wetland Centre, Athens, Greece
-
- P43-165** New taxa of filamentous rock-inhabiting cyanobacteria from Finland
Maria Christodoulou
BCCM/ULC, University of Liège, Belgium
-
- P44-162** Genomics at the forefront: A new dawn in the delineation of cryptic cyanobacterial species
Aniket Saraf
Institut Pasteur, Paris, France
-
- P45-206** Metagenomics study of extremophile cyanobacteria biodiversity in Bolivian Altiplano environments.
Vitor Vasconcelos
CIIMAR - UP, Matosinhos, Portugal
-
- P46-211** São Miguel Island as a Hotspot for Cyanobacterial Diversity: A Polyphasic Taxonomic Study
Vitor Vasconcelos
CIIMAR/CIMAR LA, Universidade do Porto, Portugal
-
- P47-7** Associations of invasive cyanobacterial species and phytoplankton community structure with abiotic influences in post-glacial temperate lakes under the climate change
Agnieszka Rudak
University of Warsaw, Poland
-
- P48-275** CyanoSeq: a curated reference database of cyanobacterial 16S rRNA sequences
Forrest Lefler
University of Florida, United States
-
- P49-274** Insights into the structure and function of a *Dolichospermum*-dominated cyanoHAB in Lake Okeechobee, Florida, USA
Forrest Lefler
University of Florida, United States
-
- P50-285** Trade-off between interpretability and predictivity for forecasting algal bloom using machine learning and in situ monitoring data
Kun Shan
Chongqing Institute of Green and Intelligent Technology, Chinese Academy of Sciences, China
-
- P51-287** Pole-to-Pole cyanobacterial diversity under climate warming: Evaluation of long-read sequencing for understanding community composition at species-level
Konstantin Seeger
Human and Environmental Toxicology, University of Konstanz, Germany
-

Exposure, risk assessment and management, public engagement

-
- P52-25** Identification and Monitoring of benthic cyanotoxin-producers in Austrian bathing water
Magdalena Purker
Austrian Agency for Health and Food Safety, Vienna, Austria
-

-
- P53-239** Planktonic and benthic cyanobacteria under participatory monitoring
Luc Brient
Consultant, Audierne, France
-
- P54-141** Control of planktonic cyanobacteria in preventive treatment with hydrogen peroxide to maintain recreational activities in freshwater lakes. Implementation of an application method.
Luc Brient
Consultant, Audierne, France
-
- P55-168** Lake Pörmujärv – a heavily polluted water body forced local active residents to seek scientific solutions
Kristel Panksep
Estonian University of Life Sciences, Tartu, Estonia
-
- P56-48** In Vivo Potential Androgenic Effects Induced by Pure Cyanotoxins (Microcystin-LR, Cylindrospermopsin)
Antonio Casas Rodríguez
Area of Toxicology, Faculty of Pharmacy, University of Sevilla, Spain
-
- P57-47** In Vitro Evaluation of the Androgen Receptor Transactivation by Arsenic, Cadmium and their Binary Combinations with Cylindrospermopsin.
Antonio Casas Rodríguez
Area of Toxicology, Faculty of Pharmacy, University of Sevilla, Spain
-
- P58-35** Employing Ozonation as a Pre-oxidation Method for Managing Toxic Cyanobacteria and their Cyanotoxins
Nikoletta Tsiarta
Department of Chemical Engineering, Cyprus University of Technology, Limassol, Cyprus
-
- P59-180** Toxic benthic cyanobacteria in Southern German lakes
Florian Maximilian Gibis
Technical University of Munich, Iffeldorf, Germany
-
- P60-94** Empowering natural resource professionals to combat harmful algal blooms in privately-owned recreational and agricultural ponds
Heather Nix
Clemson University Extension, Greenville, United States
-
- P61-67** Ultrasound as a tool for cyanobacterial control: Evidence of changes in the phytoplankton community
Viviana Almanza, Enrique Mora
WaterIQ Technologies, LLC, Jhonson City, United States
-
- P62-85** Photocatalytic removal of *Raphidiopsis raciborskii* cells, saxitoxin and neo-saxitoxin using g-C₃N₄ coated beads and low-cost LED irradiation
Indira Menezes
Robert Gordon University, Aberdeen, United Kingdom
-
- P63-90** Harmful and Nuisance Cyanobacteria in Water Supply Systems: Exploring Accumulation Phenomenon and Use of Ozone Nanobubbles for Mitigation
Arash Zamyadi
Monash University, Melbourne, Australia
-
- P64-120** Simple and Efficient Risk Assessment of Microcystin Variants in Fish Using a Single-Domain Antibody Preconcentration and MALDI-ToF detection
Beatriz Brena
Universidad de la Republica, Montevideo, Uruguay
-



P65-107

Bacterial communities as important biological elements for nutrient-cycling in sequential-sedimentation biofiltration systems – a nature-based solution preventing accelerated eutrophication

Arnoldo Font Najera

European Regional Centre for Ecohydrology of the Polish Academy of Sciences, Lodz, Poland

P66-109

Hydroponic culture of Strawberry (*Fragaria vulgaris*) using Microcystins-contaminated water: Effects on plant physiology, antioxidant defense, microcystins transfer and health risk assessment

Brahim Oudra

Univ. Cadi Ayyad Faculty of Science, Marrakech, Morocco

P67-115

Breaking Down the Bottles: Do Marketed Bacterial Consortia Live Up to Their Cyanobacteria Harmful Algal Blooms Control Claims?

Young Seo

University of Toledo, United States

P68-130

Searching for appropriate measures to avoid problematic cyanobacterial blooms in the Province of East Flanders (Belgium)

Wim Van Nieuwenhuyze

Provincial Centre of Environmental Research, Ghent, Belgium

P69-223

Fish kills at Athalassa lake of the Athalassa National Forest Park in Cyprus due to cyanobacterial blooming

Maria G. Antoniou

Cyprus University of Technology, Limassol, Cyprus

P70-250

Differential resistance pattern of cyanobacteria species against hydrogen peroxide

Allan Santos

UFRJ, Rio de Janeiro, Brazil

P71-232

Emergent Macrophytes as Sustainable Solutions For Mitigating the Eutrophication and Cyanobacterial bloom: A Comparative Study in an Economic Circular Perspective

Allan Santos

Federal University of Rio de Janeiro, Brazil

P72-244

Pilot-scale CWPO process for effective removal of toxic cyanobacteria and cyanotoxins: A sustainable approach

Antonio Quesada

Universidad Autónoma de Madrid, Spain

P73-254

Toxicity studies of terrestrial cyanobacteria isolated from a copper mine tailing site and loess environments intended for restoration and bioremediation

Ivan Dudas

Åbo Akademi University, Turku, Finland

Genetics, omics, and biotechnology

P74-11

Enhanced mechanical properties of living and regenerative building materials by filamentous *Leptolyngbya boryana*

Yongjun Son

Korea University, Seoul, South Korea

P75-37

From Blooms to Bioactives: Investigating the chemical diversity and the toxic potential of *Microcystis* (Cyanobacteria)

Michella Dawra

Molecules of Communication and adaptation of Microorganisms laboratory (MCAM) - The French National Museum of Natural History, CNRS, Sorbonne University, Paris, France

-
- P76-45** Inducing cyanobactericidal responses in the microbiome of *Myriophyllum spicatum* against *Microcystis aeruginosa* and associated microbial community dynamics
Seonah Jeong
Korea Research Institute of Bioscience and Biotechnology, Daejeon, South Korea
-
- P77-57** Understanding the growth inhibition of *Microcystis* by *Cyanobium*: A transcriptome-based interaction study
So-Ra Ko
Korea Research Institute of Bioscience & Biotechnology, Daejeon, South Korea
-
- P78-60** Exploring interactions of MC-producing and non-producing *M. aeruginosa* with members of its phycosphere
Rebecca Große
Universität Potsdam, Germany
-
- P79-128** Toxicity assessment of aquatic and terrestrial *Nostoc* strains using bioinformatics and zebrafish embryo biotests
Petar Davidović
University of Novi Sad, Department for Biology and Ecology, Serbia
-
- P80-100** Metabolomic Profile Analysis after CRISPR-Cas9-Mediated Disruption of Microcystin Synthesis in *Microcystis flos-aquae* TAU-MAC 1510
Markos Mathioudakis
Aristotle University Of Thessaloniki, Greece
-
- P81-153** Possibilities and limitations of environmental cyanobacterial biomass application in biotechnology
Judita Koreivienė
Nature Research Centre, Vilnius, Lithuania
-
- P82-154** Evaluation of *Microcystis aeruginosa* biomass extracts against plant pathogens
Judita Koreivienė
Laboratory of Algology and Microbial Ecology, Nature Research Centre, Vilnius, Lithuania
-
- P83-173** Baltic cyanobacteria – source of anticancer compounds
Marta Cegłowska
Institute of Oceanology Polish Academy of Sciences, Sopot, Poland
-
- P84-157** Potential of Cyanobacterial Blooms for Sustainable Biodiesel Production
Ayça Oğuz Çam
Istanbul University, Turkey
-
- P85-150** Exploring Phycobiliprotein Diversity and Extraction Potential from Wild Freshwater Cyanobacterial Biomass
Jūratė Karosienė
Nature Research Centre, Vilnius, Lithuania
-
- P86-155** Evaluating Wild Cyanobacteria Biomass as a Sustainable Feedstock for Eco-Friendly Biocompounds
Jūratė Kasperovičienė
Nature Research Centre, Lithuania
-
- P87-225** Detection of Bacterial Communities in a Cyanobacteria Bloom and Culture Samples by Nanopore Sequencing Approach
Zuhal Zengin
Department of Marine and Freshwater Resources Management, Faculty of Aquatic Sciences, Istanbul University, Turkey
-
- P88-257** Innovative strategies to cultivate and optimize Guanitoxin production in *Sphaerospermopsis torques-reginae* (Cyanobacteria, Nostocaceae)
Kelly Fernandes
Center for Nuclear Energy in Agriculture, University of São Paulo, Piracicaba, Brazil
-



P89-288 Unveiling Bioactive Siderophores: Leveraging Computational Metabolomics to Investigate Mediterranean Deep-Sea Actinobacteria
Polyzois A
 National and Kapodistrian University of Athens, Greece

P90-262 Phytotoxicity and Phytostimulant Effects of Secondary Metabolites from *Sphaerospermopsis torques-reginae* ITEP-024 in Cucumber (*Cucumis sativus*)
Rafaella Bizo Menezes
 Centro de Energia Nuclear na Agricultura (CENA), Universidade de São Paulo (USP), Piracicaba, Brazil

Monitoring and modelling in a changing environment

P91-92 Environmental Monitoring: Advancing Cyanobacterial Bloom Monitoring through Remote Sensing and In Situ Observations in Three Italian Lakes
Mohammed Ajaoud
 Parthenope University of Naples, Italy

P92-156 Hydrodynamic effects on the aggregation and fragmentation of *Microcystis* colonies
Yuri Sinzato
 University of Amsterdam, Netherlands

P93-204 Warming surface as key driver to cHABs: A case study from Lake Dianchi, China
Zhongzhao Duan
 Kunming University, Kunming, China

P94-15 Temperature regulation of microcystin degradation
Kevin Wyatt
 The Ohio State University, Columbus, United States

P95-46 Bubble plumes promote deeper and longer recruitment of *Microcystis*
Rob Uittenbogaard
 Hydro-Key Ltd (retired from Deltares), Haelen, Netherlands

P96-51 Environmental Impact Assessment: an advanced approach to the remote identification of Harmful Algal Blooms using Spectral Signatures.
Cristiano Ciccarelli
 Università Parthenope di Napoli, Italy

P97-129 What explain the variability in cyanobacterial community composition and cyanotoxin production in nearby shallow lakes located in Moselle (France)?
Siham Mesli
 MNHN Paris, France

P98-93 Toxin-Producing Cyanobacterial Blooms in the Waters of Blue Infrastructure of Lublin City (Eastern Poland): Implications for Water Quality and Ecological Status
Magdalena Toporowska
 University of Life Sciences in Lublin, Poland

P99-95 Climate change vs. nutrient control? Changes in river hydrology trigger cyanobacterial blooms
Julia Kleinteich
 Federal Institute of Hydrology, Koblenz, Germany

P100-116 Anatoxin biosynthesis gene abundance predicts anatoxin concentration in benthic cyanobacteria mats
Janice Lawrence
 University of New Brunswick, Canada

-
- P101-118** Divergent Cyanobacterial Responses to Climate Change in Temperate and Tropical Lakes
Kevin Erratt
University of Toronto, Canada
-
- P102-125** Exploring the dynamics of cyanobacteria growth in urban ponds of Brussels using the CYBLOOM model
Nathalie Gypens
Université Libre de Bruxelles (ULB), Brussels, Belgium
-
- P103-163** Assessing the frequency of microcystin biodegrader and *mlrA* gene detection in Lake Zurich
Valeria Staccoli
University of Zurich, Switzerland
-
- P104-242** Activation and bio-decontamination of water by cold atmospheric plasma, towards green fertilizer with lower environmental impact
Mário Janda
Division of environmental physics, Comenius University in Bratislava, Slovakia
-
- P105-252** Disappearance of *Planktothrix rubescens* in a drinking water reservoir over the years (Sapanca Lake, Türkiye)
Meriç Albay
Istanbul University, Faculty of Aquatic Sciences, Istanbul, Turkey
-
- P106-187** Biotechnological potential of cyanobacterial blooms for sustainable and environmental solutions
Kelly Fernandes
Universidade de São Paulo, Piracicaba, Brazil
-
- P107-267** Engaging Citizen Scientists in Research on Toxic Cyanobacterial Harmful Algal blooms
Jing Li
Lund University, Sweden
-
- P108-280** Exploring the role of climate change in toxic benthic cyanobacterial proliferation in Lake Lugano (Switzerland and Italy)
Camilla Capelli
University of Applied Sciences and Arts of Southern Switzerland, Mendrisio, Switzerland
-
- P109-245** Portable device for electrochemical detection of saxitoxin based on covalent organic polymers
Lurdes Goncalves
International Iberian Nanotechnology Laboratory, Braga, Portugal
-
- P110-69** Biotic interactions shape the realised niche of toxic cyanobacteria
Ntetsika P
EAWAG/ETHZ Switzerland
-

Toxicology and effects on ecosystems. One health

-
- P111-27** Impact of *Microcystis aeruginosa* on Fish Appetite Through Intestinal Inflammation
Xuexiu Chang
University of Windsor, Canada
-
- P112-176** Toxicity of *Raphidiopsis raciborskii* extracts
Nada Tokodi
Laboratory of Metabolomics, Jagiellonian University, Krakow, Poland
-
- P113-39** How insecticides affect the toxicity of natural organophosphate guanitoxin during Zebrafish embryo-larval development
Larissa Passos, Ernani Pinto
University of São Paulo (USP), Piracicaba, Brazil
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