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FOR ANDROID



FOR IOS



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AUSPICES



School of Biology
Aristotle University of Thessaloniki



DEMOKRITOS
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“ Equality

We are fully committed to fostering an inclusive and equitable environment at ICTC13, where every attendee is welcomed and valued, regardless of gender, race, ethnicity, nationality, sexual orientation, disability, or any other characteristic. We strive to provide equal opportunities and necessary accommodations for all participants. We also expect all attendees to respect and appreciate the diversity within our community. ”

“ Code of conduct

We are dedicated to maintaining a safe and respectful environment at ICTC13. We enforce a zero-tolerance policy for any form of harassment, including but not limited to sexist language, racist behavior, transphobia, ableism, and homophobia. All attendees are expected to treat each other with respect and kindness. Any behavior that makes others feel uncomfortable or unsafe will not be tolerated. If you experience or witness harassment, please report it to our staff or security team immediately. ”

WELCOME MESSAGE

Dear colleagues, friends, and fellow cyanobacteria enthusiasts,

It is with great excitement and sincere pleasure that we welcome you to the **13th International Conference on Toxic Cyanobacteria (ICTC13)**, set against the inspiring backdrop of **Chania, Crete, Greece**, a land where science, philosophy, and discovery have deep and enduring roots.

As we gather here to share cutting-edge research, foster collaborations, and address the global challenges posed by toxic cyanobacteria, we are especially proud to celebrate and encourage the contributions of **emerging scientists and early-career researchers**. Your energy, fresh perspectives, and innovative ideas are the lifeblood of this field and the foundation of its future.

Hosting ICTC13 in Greece offers a unique opportunity to connect our modern scientific pursuits with the ancient legacy of thinkers like **Aristotle, Hippocrates, and Theophrastus**, visionaries who laid the groundwork for biology, medicine, and environmental understanding. Their spirit of curiosity and inquiry continues to resonate with us today as we explore the complexities of cyanobacterial dynamics, toxicity, and ecosystem impact.

Chania, located on the westernmost side of Crete, is a city where history and culture intertwine seamlessly. Its Old Town, with narrow, winding streets, showcases a blend of **Venetian, Ottoman, and Greek architecture**, offering a walk back in time. The iconic Venetian harbor, adorned with a historic lighthouse, provides a picturesque waterfront that reflects the city's rich maritime heritage. Beyond its historical allure, Chania boasts stunning beaches like Balos and Elafonissi, and a vibrant culinary scene that captures the essence of **Cretan hospitality**.

We hope that beyond the scientific sessions, you take time to explore the rich culture, history, and natural beauty of Chania, from sun-drenched coastlines to timeless ruins, finding inspiration not only in data and dialogue, but also in the shared human story of seeking knowledge.

Welcome to ICTC13. Let's make this a meeting to remember!

Warm regards,

The ICTC13 Organizing Committee

Spyros Gkelis, *Aristotle University of Thessaloniki*

Anastasia Hiskia, *NCSR Demokritos*

Triantafyllos (Tri) Kaloudis, *EYDAP SA & NCSR Demokritos*

Theodoros Triantis, *NCSR Demokritos*

Sevasti Zervou, *NCSR Demokritos*

COMMITTEES

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Anastasia Hiskia, NCSR Demokritos
Triantafyllos (Tri) Kaloudis, EYDAP SA & NCSR Demokritos
Theodoros Triantis, NCSR Demokritos
Sevasti – Kiriaki Zervou, NCSR Demokritos

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Cawthron Institute, *New Zealand*

Arash Zamyadi

Monash University, *Australia*

Sevasti – Kiriaki Zervou

NCSR Demokritos, *Greece*

KEYNOTE & INVITED SPEAKERS



Elke Dittmann

University of Potsdam, Germany

“ Keynote Speech

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



Petr Dvořák

Palacký University Olomouc, Czech Republic

“ *Taxonomy of cyanobacteria in the age of large genomic datasets* **”**



Pedro Leão

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

“ *“Cultured and uncultured cyanobacteria as sources of unique enzymes”* **”**



Timo Niedermeyer

Freie Universität Berlin, Germany

“ *“Microcystins – a pharmacist’s perspective”* **”**



Hans Paerl

University of North Carolina – Chapel Hill, USA

“ *“Mitigating harmful cyanobacterial blooms (CyanoHABs) in an increasingly chaotic and extreme global climate”* **”**



Daniel Petras

University of California Riverside, USA

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



Ernani Pinto

University of São Paulo, Brazil

"Metabolomic Insights into Cyanobacteria: From Toxicity Profiling to Novel Bioactive Compounds"



Nico Salmaso

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

"Taxonomic and functional metagenomic assessment of cyanobacteria"



Petra Visser

University of Amsterdam, the Netherlands

"Effective in-lake measures to control cyanobacterial blooms"



Eleni Voultsiadou

Aristotle University of Thessaloniki, Greece

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



Anusuya Willis

Australian National Algae Culture Collection, CSIRO

Keynote Speech
"Genomic diversity and adaptation: The global spread of *Raphidiopsis raciborskii*"

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

01 - 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 Utikuma 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

MONDAY 5 MAY

 **IMPERIAL MAIN HALL**

11:44 – 11:56	O10 - 77 Updates of CyanoMetDB - a comprehensive public database of secondary metabolites from cyanobacteria Janssen E <i>Eawag, Dübendorf, Switzerland</i>
11:56 – 12:08	O11 - 240 (Ahp)-Cyclodepsipeptide and its possible detoxification pathway Sieber S <i>Department of Chemistry, University of Zurich, Switzerland</i>
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 <i>HUN-REN Balaton Limnological Research Institute, Tihany, Hungary</i>
12:20 – 12:35	Sponsored Lecture "Unlocking the Fourth Dimension. The Age of 4D Omics" Speaker: Dorian Myrtai
	
12:35 – 13:00	INVITED TALK 2 Metabolomic Insights into Cyanobacteria: From Toxicity Profiling to Novel Bioactive Compounds Pinto Ernani <i>University of Sao Paulo, Brazil</i>
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 <i>Freie Universität Berlin, Germany</i>
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 <i>Istituto Superiore di Sanità, Rome, Italy</i>
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 <i>Autonomous University of Madrid, Spain</i>

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**

17:00 – 17:06

F1 - 17 | Integrating cyanotoxin detection using LC-MS Triple Quadrupole with cell viability assessment

Widhiastuti F

Algae and Organic Matter (AOM) Laboratory, The University of New South Wales, Sydney, Australia

17:06 – 17:12

F2 - 215 | Real-time observation of modified microcystin synthesis in *Microcystis aeruginosa* and modified anabaenopeptin synthesis in *Planktothrix agardhii*

Morón Asensio R

University of Innsbruck, Mondsee, Austria

17:12 – 17:18

F3 - 219 | Bioprospecting cholinergic ligands from a marine cyanobacteria of the genus *Oscillatoria*

Araoz R

CEA/JOLIOT/DTMS/SIMoS, Gif sur Yvette, France

SESSION 5

Detection and monitoring of cyanometabolites

Chairs: **E. Faassen, D. Beach**

F14 - 16 | Prevalence of Toxic *Microcoleus* and Anatoxins in Shubenacadie-Grand Lake, NS, Canada

Morris H

Dalhousie University - Department of Civil & Resources Engineering, Halifax, Canada

F15 - 238 | First reports of nodularin production by *Nostochopsis* spp. from New York State, USA and New South Wales, Australia

Webster A

SUNY College of Environmental Science and Forestry, Syracuse, United States

F16 - 134 | Insights into cyanometabolite profiles in Lake Sapanca through seasons and years

Miele V

University of Naples Federico II, Italy

MONDAY 5 MAY

📍 IMPERIAL MAIN HALL

📍 IMPERIAL 4

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



MONDAY 5 MAY

📍 IMPERIAL MAIN HALL

📍 IMPERIAL 4

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

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

 **IMPERIAL MAIN HALL**

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

CANCELLED

PROGRAM

TUESDAY 6 MAY

 **IMPERIAL MAIN HALL**

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

WEDNESDAY 7 MAY

 **IMPERIAL MAIN HALL**

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, Pandleton, 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



WEDNESDAY 7 MAY

 **IMPERIAL MAIN HALL**

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

Welker M

German Environment Agency, Berlin, Germany

16:00 – 16:30

Break

WEDNESDAY 7 MAY

📍 IMPERIAL MAIN HALL

📍 IMPERIAL 4

	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, Türkiye</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>



WEDNESDAY 7 MAY

📍 IMPERIAL MAIN HALL

📍 IMPERIAL 4

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

WEDNESDAY 7 MAY

📍 IMPERIAL MAIN HALL

📍 IMPERIAL 4

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



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

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

14:30-14:45

Cyanobacteria: A Free and Open Journal by and for Our Community

Pinto E

University of Sao Paulo, Brazil

14:45 – 15:15

ICTC14 Proposals

15:15 – 15:45

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, Dübendorf, 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 <i>Microcystis</i> 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 <i>Microcystis</i> colonies
Myriam Bormans
CNRS, University of Rennes, France |
| P13-62 | Hapalosins are produced by terrestrial symbiotic <i>Nostoc</i> sp. KJV10
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 *Chrysosporum ovalisporum* 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
Laboratoire 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



-
- 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 Põrmujärv – 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 <i>Raphidiopsis raciborskii</i> cells, saxitoxin and neo-saxitoxin using g-C ₃ N ₄ 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

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

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EYDAP is the leading company in the water supply, sewerage and wastewater treatment sector in Greece, supplying Attica with drinking water the quality of which is ranked among the best in Europe. It is indicative that the European Benchmarking Co-operation, in its international evaluation of water companies, rated EYDAP's water with 99.6% for its quality, a value higher than the average rating among Western European water companies. The main water sources and the reservoirs used are located in pure areas, free from agricultural and industrial activity, so that the Greek Capital is supplied with excellent quality water. The transport of most of the untreated water is carried out through aqueducts by the force of gravity, actively contributing to the reduction of the environmental footprint. EYDAP, with a sense of responsibility towards consumers, continuously invests in new technologies, as well as in new activities within and outside its area of responsibility, focusing on the development of new WWTPs and wastewater treatment projects in East Attica, always following the principles of the circular economy. The Company is aligned with ESG criteria related to environmental protection, society empowerment and corporate governance strengthening. EYDAP's vision is the uninterrupted provision of high quality water supply and wastewater services in its activity area, while its mission is to provide quality and cheap water to more and more citizens and to return it back to the nature clean, through the efficient management of all available resources, with social sensitivity and with a view to contributing to social welfare.

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A Speaker Preview Desk will be operating throughout the Congress. Speakers and presenting authors are kindly requested to hand in their presentation (PowerPoint) at least one (1) hour before their scheduled presentation time. For presentations scheduled early in the morning, you are kindly requested to hand in your presentation the day before.



Certificate of attendance

A certificate of attendance will be sent to each registered participant, after the end of the Congress.



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The Congress Secretariat desk will be at the entrance of the Conference Hall and will operate throughout the scientific program hours.

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ABOUT THE VENUE

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The conference will be held at the **MINOAN PALACE RESORT**.

It is situated in the cosmopolitan area of Platanias, 10 km west of the town of Chania and only a 20-minute drive from the Chania International Airport.

The small but long shaped village of Platanias where the conference will take place, is the main tourist resort of Chania Prefecture. Platanias is ideal for people who want a seaside holiday with a busy nightlife, bars, restaurants, a large 7-kilometres long sandy beach and countless hotels.

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EYDAP, always committed to high quality services, feels responsible for even the last drop of water that reaches our homes. With advanced technology and expertise, respect for the environment and a profound belief in society, EYDAP takes good care of our lives.



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EYDAP ensures drinking water quality.

EYDAP supplies Athens with high quality water, among the best in Europe. The main water sources and the reservoirs used are located in pure areas, free from agricultural and industrial activity, so that Athens is supplied with high quality water, while the water is transported naturally by gravity, thus with low energy consumption. With a sense of responsibility towards consumers, and with continuous investment in technology, EYDAP ensures that drinking water is one of the best in Europe.

The European Benchmarking Co-operation, during its international evaluation of water supply companies, rated EYDAP's water with 99.6% for its quality, a higher value than the average rating among water supply companies in Western Europe. EYDAP carries out daily quality checks on both raw and drinking water, having established an appropriate framework of control to ensure that the water supplied to the consuming public is safe.

In order to monitor water quality, about 1.000 representative points have been selected throughout EYDAP's water supply system:

- in the reservoirs from which it derives,
- in the four Water Treatment Plants, and
- at representative points in the distribution network

Every day, 365 days a year, samples are taken and analyses are carried out, according to a defined complex program, in the Company's ISO 17025 accredited chemical and microbiological laboratories, where the most modern analytical methods are applied with state-of-the-art laboratory equipment.

In fact, the samples checked, particularly on drinking water, exceed the required by the legal requirement. Indicatively, the number of drinking water samples tested for microbiological parameters exceeds 9,000 per year, compared to the 3,300 required by the legislation.

Monitoring is also carried out in real time, with the online monitoring of critical quality parameters in both raw and drinking water, with the help of sophisticated systems that send real-time telemetry results and, in case of extreme values, timely alerts.

In the water supply network, there are about 1000 drinking water monitoring points (700 for chlorine measurements and 300 for combined chlorine and other parameters) always according to the requirements of the legislation.

Most recently, 150 new drinking water quality control points were added to enrich the sampling points and to cover the new networks received by EYDAP.

Safety is one of the main pillars of the Company's strategy and is not limited only to the analysis of qualitative factors, but is active in a wide range of activities such as:

- investment in infrastructure, technology and staff training
- protecting reservoirs and aqueducts by complying with strict legislation
- prevention and readiness to deal with risks
- the specification of strict sanitary requirements for procedures and materials for the abstraction, treatment and distribution of drinking
- the systematic monitoring of international trends

In addition, the Company participates in research projects that offer multiple benefits for better water management and the application of innovative technologies and techniques for monitoring water quality and biosecurity, and systematically keeps up with international trends.

At EYDAP we operate with responsibility towards society, with the aim of ensuring the safety of both people and the environment. Our ultimate goal, through continuous investment in infrastructure projects and innovative applications, is to ensure the quality of drinking water and to continue to produce superior quality water, accessible to all, using science and technology.



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