XENOWAC II

Challenges and Solutions related to Xenobiotics and Antimicrobial Resistance in the Framework of Urban Wastewater Reuse:

Towards a blue circle society

10-12 October, 2018
LIMASSOL, CYPRUS
GrandResort Hotel
www.xenowac2018.com

Organized and Hosted by:

Πανεπιστήμιο Κύπρου
University of Cyprus

nireas

NEREUS COST Action ES1403

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H2020-MSCA-ITN-2015/675530 ANSWER

ANSWER

#xenowac2018

XENOWAC II

Contents

Foreword by
Conference Host and Chair, Dr. Despo Fatta-Kassinos

It is a great pleasure to welcome you to XENOWAC 2018 Conference, in Limassol, Cyprus.

Nireas International Water Research Center (Nireas-IWRC) of the University of Cyprus is proud to host the **XENOWAC II conference**, a decade after the first XENOWAC conference (XENOWAC I), which took place in Cyprus in March 2009, in the framework of the COST Action 636.

ABOUT XENOWAC II

The Conference embraces the work performed in the framework of NEREUS COST Action ES1403 and H2020-MSCA-ITN-2015/675530 ANSWER, both coordinated by Nireas-IWRC, UCY.

The XENOWAC II Organizing Committee together with the Scientific Committee developed a fascinating scientific program. In response to the increasing problem of water shortage, treated urban wastewater is currently widely reused, considered to be a reliable alternative water source. Regions inhabited by more than 40% of the world's population already are in the situation where water demand exceeds supply. The ever-increasing shortage of water, the increasing needs for food due to the expanding world population, and for irrigation water, both in respect to good quality and quantity, render reuse a 'sine qua non' condition. Although reuse is accompanied by a number of benefits, and major advances have been made with respect to producing safe treated effluents for reuse (e.g. successful removal of nutrients, metals, chemical oxygen demand down to low levels), several important questions are still unanswered and barriers exist regarding the safe/sustainable reuse practices especially in relation to contaminants of emerging concern.

It is a pleasure to welcome you to this leading event for presenting and discussing the latest concepts and developments in the field of contaminants of emerging concern and urban wastewater reuse.

We are confident that XENOWAC II will stimulate valuable discussions among academia, industry and governmental authorities, through inter- and trans-disciplinary networking. XENOWAC II creates a unique international forum for exchanging state-of-the-art information and knowledge sharing.

On behalf of the Conference Organizing Committee,

Dr. Despo Fatta-Kassinos
Conference Host and Chair

A FEW WORDS ABOUT CYPRUS

Cyprus is an island country in the Eastern Mediterranean sea and the third largest and most populous island in the Mediterranean. The earliest known human activity on the island dates to around the 10th millennium BC. Cyprus was settled by Mycenaean Greeks in two waves in the 2nd millennium BC.

The Cyprus Tourism Organisation beautifully describes the island… "Blessed with the beauty of nature's best palette, the scenery of Cyprus unfolds across glittering coasts, rolling mountains, fragrant forests and rugged headlands. From the warm shores of the mainland to the unspoiled and cool oasis of the Troodos mountain range, nature lovers, artists, photographers and explorers will all delight in meeting shy creatures, and discovering rare plants that peep out amidst waterfalls, coves, woodland, winding trails and secluded sands. As the island is on the migration path between Europe, Asia and Africa, Cyprus is a birdwatchers dream, with flocks of flamingos frequenting the salt lakes, and many other significant species passing through or nesting. And deep in the forests, the national animal – the Mouflon – roams freely, while catching a glimpse of this timid, wild sheep a real treat for locals and visitors alike".

DID YOU KNOW THAT...

Did you know that Cyprus is home to some of the oldest water wells in the world? Also, through overseas trade, the island has given its name to the classical latin word for copper through the phrase aes Cyprium, "metal of Cyprus", later shortened to Cuprum.

THE CYPRUS PROBLEM

The Cyprus problem is the ongoing issue of military invasion and continuing Turkish occupation (since 1974) of the northern third of the island, a situation described and deplored in multiple UN reports and resolutions. The Republic of Cyprus has de jure sovereignty over the entire island, including its territorial waters and exclusive economic zone, with the exception of the Sovereign Base Areas of Akrotiri and Dhekelia, which remain under British control according to the London and Zürich Agreements. However, the Republic of Cyprus is de facto partitioned into two main parts: the area under the effective control of the Republic, located in the south and west, and comprising about 59% of the island's area; and the north, administered by the self-declared Turkish Republic of Northern Cyprus, covering about 36% of the island's area. Another nearly 4% of the island's area is covered by the UN buffer zone. The international community considers the northern part of the island as territory of the Republic of Cyprus occupied by Turkish forces. The occupation is viewed as illegal under international law, amounting to illegal occupation of EU territory since Cyprus became a member of the European Union.

Committees

ORGANIZING COMMITTEE

- Despo Fatta-Kassinos, *Nireas International Water Research Center, University of Cyprus, Cyprus*
- Célia Manaia, *Catholic University of Portugal, Portugal*
- Eddie Cytryn, *Agricultural Research Organization, Israel*
- Thomas Berendonk, *Technical University of Dresden, Germany*
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- Josep Maria Bayona, *Spanish National Research Council, Spain*
- Benny Chefetz, *The Hebrew University of Jerusalem, Israel*
- Jaroslav Slobodnik, *Environmental Institute, Slovakia*
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- Lian Lundy, *Middlesex University, United Kingdom*
- Mario Carere, *National Institute of Health, Italy*
- Luc Hornstra, *KWR Watercycle Research Institute, Netherlands*
- Sergio Silva, *Adventech-Advanced Environmental Technologies Lda, Portugal*
- Dominique Darmendrail, *Water JPI Coordinator*
- Valeria Dulio, *Executive Secretary of the NORMAN Network*

Organizers of the ANSWER Young Scientists and Blue Circle Society events

- Irene Michael-Kordatou, *Nireas International Water Research Center, University of Cyprus, Cyprus*
- Lida Ioannou-Ttofa, *Nireas International Water Research Center, University of Cyprus, Cyprus*
- Popi Karaolia, *Nireas International Water Research Center, University of Cyprus, Cyprus*
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- Lida Ioannou-Ttofa, *Nireas International Water Research Center, University of Cyprus, Cyprus*
- Irene Michael-Kordatou, *Nireas International Water Research Center, University of Cyprus,Cyprus*
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- Tanel Tenson, *University of Tartu, Estonia*
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- Fiona Walsh, *Maynooth University, Ireland*
- Dermot Diamond, *Dublin City University, Ireland*
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- Ernesto Liebana, *European Food Safety Authority, Italy*
- Giusy Lofrano, *University of Salerno, Italy*
- Giuseppe Mascolo, *National Research Council, Italy*
- Alfieri Pollice, *IRSA CNR, Water Research Institute, Italy*
- Maria Concetta Tomei, *National Research Council, Italy*
- Giovanni Libralato, *University of Naples Federico II, Italy*
- Ramune Rutkaite, *Kaunas University of Technology, Lithuania*
- Alex Cornelissen, *RTC4Water, Luxembourg*
- Vladan Bozovic, *University of Donja Gorica, Montenegro*
- Tjalf de Boer, *BDS, Netherlands*
- Merle de Kreuk, *Delft University of Technology, Netherlands*
- Alette Langenhoff, *Wageningen University, Netherlands*
- Pawel Krzeminski, *Norwegian Institute for Water Research, Norway*
- Kaare Magne Nielsen, *Oslo and Akershus University College, Norway*
- Ewa Felis, *The Silesian University of Technology, Poland*
- Magdalena Popowska, *University of Warsaw, Poland*
- Isabel Henriques, *University of Aveiro, Portugal*
- Olga Nunes, *University of Porto, Portugal*
- Adrian M.T. Silva, *University of Porto, Portugal*
- Vitor Vilar, *University of Porto, Portugal*
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- Lucian Staicu, *Politehnica University of Bucharest, Romania*
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- Biljana Skrbic, *University of Novi Sad, Serbia*
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- Tina Kosjek, *Jožef Stefan Institute, Slovenia*
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- Damià Barceló, *Catalan Institute for Water Research & Spanish National Research Council, Spain*
- Lubertus Bijlsma, *University Jaume I, Spain*

- Wolfgang Gernjak, *Catalan Institute for Water Research & Catalan Institute for Research and Advanced Studies, Spain*
- Isabel Oller, *CIEMAT – Plataforma Solar de Almería, Spain*
- Mira Petrovic, *Catalan Institute for Water Research & Catalan Institution for Research and Advanced Studies, Spain*
- Benjamin Piña, *Spanish National Research Council, Spain*
- Sara Rodriguez-Mozaz, *Catalan Institute for Water Research, Spain*
- José Antonio Sánchez Pérez, *University of Almería, Spain*
- María Eugenia Suárez Ojeda, *Autonomous University of Barcelona, Spain*
- Anna Ledin, *City of Gothenburg, Sweden*
- Philippe Corvini, *University of Applied Sciences and Arts Northwestern Switzerland, Switzerland*
- Juliane Hollender, *Swiss Federal Institute of Aquatic Science and Technology & Eidgenössische Technische Hochschule (ETH) Zurich, Switzerland*
- Robert Kase, *Swiss Centre for Applied Ecotoxicology Eawag-EPFL, Switzerland*
- Christa McArdell, *Swiss Federal Institute of Aquatic Science and Technology, Switzerland*
- Andreas Schönborn, *Zurich University of Applied Sciences, Switzerland*
- Thomas Wintgens, *University of Applied Sciences in Muttenz, Switzerland*
- Charles Banks, *University of Southampton, United Kingdom*
- Patrick Dunlop, *Ulster University, United Kingdom*
- Pilar Fernandez, *Ulster University, United Kingdom*
- David Graham, *Newcastle University, United Kingdom*
- Hemda Garelick, *Middlesex University, United Kingdom*
- Gianluca Li Puma, *Loughborough University, United Kingdom*
- Mike Revitt, *Middlesex University (Emeritus Professor), United Kingdom*
- Andrew Singer, *NERC Centre for Ecology & Hydrology, United Kingdom*

America

- Andrew Daugulis, *Queen's University Kingston, Canada*
- Patricia Keen, *The University of British Columbia, Canada*
- Domenico Santoro, *Trojan Technologies, Canada*
- Ed Topp, *Agriculture and Agri-Food Canada and University of Western Ontario, Canada*
- Ricardo Antonio Torres Palma, *Universidad de Antioquia, Colombia*
- Dionysios Dionysiou, *University of Cincinnati, United States of America*
- James M. Lazorchak, *USEPA Office of Research and Development (ORD), University of Cincinnati, Thomas More College, United States of America*
- Jean McLain, *University of Arizona, United States of America*
- Marc A. Mills, *USEPA Office of Research and Development, United States of America*
- Amy Pruden, *Virginia Tech, United States of America*
- Susan Richardson, *University of South Carolina, United States of America*

Australia

- Erica Donner, *University of South Australia, Australia*
- Enzo Lombi, *University of South Australia, Australia*
- Kevin Thomas, *Norwegian Institute for Water Research, Norway and University of Queensland, Australia*

Middle East and North Africa

- Olfa Mahjoub, *National Research Institute for Rural Engineering, Water, and Forestry, Tunisia*
- Dror Avisar, *Tel Aviv University, Israel*
- David Weinberg, *Israel Ministry of Health, Israel*
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- Charuvila T. Aravindakumar, *Mahatma Gandhi University, India*
- Halan Prakash, *BITS Pilani K K Birla Goa Campus, India*
- Ooi Boon Seng, *Universiti Sains Malaysia, Malaysia*
- Teik-Thye Lim, *Nanyang Technological University, Singapore*
- Yunho Lee, *Gwangju Institute of Science and Technology, South Korea*

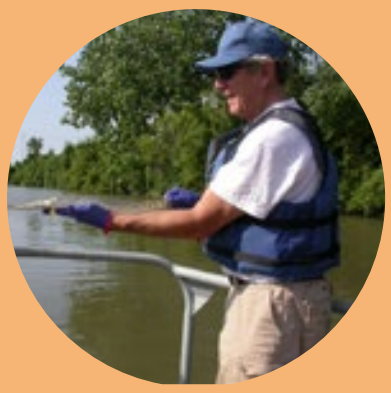
Plenary Speakers

Prof. Susan D. Richardson
University of South Carolina, USA

Susan D. Richardson is the Arthur Sease Williams Professor of Chemistry in the Department of Chemistry and Biochemistry at the University of South Carolina. Prior to coming to USC in January 2014, she was a Research Chemist for several years at the U.S. EPA's National Exposure Research Laboratory in Athens, GA. For the last several years, Susan has been conducting research in water - specifically in the study of toxicologically important disinfection by-products (DBPs). Susan is the recipient of the 2008 American Chemical Society Award for Creative Advancements in Environmental Science & Technology, has received an honorary doctorate from Cape Breton University in Canada (2006), was recently recognized as an ACS Fellow (2016), and was recently elected Vice President / President Elect of the American Society for Mass Spectrometry (2018). She also serves as an Associate Editor of Environmental Science & Technology and for Water Research and is on the Editorial Advisory Board of Rapid Communications in Mass Spectrometry, Journal of Hazardous Materials, Environmental Science and Pollution Research, and Journal of Environmental Sciences. Susan has published more than 140 journal articles and book chapters and has written many invited biennial reviews for the journal Analytical Chemistry - on Emerging Contaminants in Water Analysis and Environmental Mass Spectrometry. She has a Ph.D. in Chemistry from Emory University and a B.S. in Chemistry & Mathematics from Georgia College & State University.

Dr. Ed Topp
Agriculture and Agri-Food Canada and University of Western Ontario, Canada

A native of Montréal, Ed obtained his Ph.D. from the Department of Microbiology at the University of Minnesota in 1988. Since then he has toiled as a research scientist with Agriculture and Agri-Food Canada (AAFC). Ed has adjunct appointments in the Department of Biology at the University of Western Ontario in London, and the Department of Soil and Water Sciences at the University of Florida in Gainesville. Ed's research concerns the interface between agriculture and human and environmental health, and has generated over 250 co-authored publications. In the last decade he has notably led several national studies concerning the fate and management in agro-ecosystems of pharmaceuticals and pathogenic and antibiotic-resistant bacteria carried in organic fertilizers of animal and human [biosolids] origin. Ed has organized a number of international workshops and conference sessions concerning antibiotic resistance, agriculture, and the environment. He is the project coordinator for the Genomics Research and Development Initiative project on antimicrobial resistance, a key component of the innovation pillar of the Canadian Federal Framework for action on antimicrobial resistance. He is a Past-President [2011] of the Canadian Society of Microbiologists, recently received the AAFC 'Gold Harvest Award' for career achievement, the Canadian Public Service Award for Excellence for research contributions, and was elected to the Academie d'Agriculture de France.



Dr. Jim Lazorchak
United States Environmental Protection Agency (USEPA), USA

Jim Lazorchak is an Aquatic Biologist and the Aquatic Facilities Manager in EPA's National Exposure Research Laboratory. He has a Ph.D. in Ecotoxicology from University of Texas at Dallas, a M.S. in Environmental Sciences from University of Texas at Dallas, a M.S. in Aquatic Ecology from Wright State University and a B.S. in Biology from Southeast Missouri State University. He is a member of the Editorial Board of Chemosphereand he is in the Board of Directors of the Society of Environmental Toxicology of North America. His research in his early career centered on developing fish, invertebrate, and plant bioassessment and ecotoxicology methods to assess the biological integrity of lakes, streams, rivers, and estuaries. He has coauthored the EPA bioassessment and whole effluent toxicity testing manuals. He has also collaborated on research on development and utilization of next generation biological tools like genomic methods to to be used for bioassessments and ecotoxicity tests to assess ecosystem health and develop water quality criteria and water quality testing that can be used in regulatory programs for contaminants of emerging concern (i.e., EDCs and pharmaceuticals, PFCs, and pesticides). He also has conducted research on the effects of salt generated from resource extraction activities (oil, gas, coal, and minerals) on aquatic and terrestrial resources. He is learning about invasive toxic Algae like Golden Algae P. parvum. They are invading inland reservoirs due to increases in salinity. His current research is on the use of biological indicators (sediment toxicity, biotic condition and invertebrate and fish tissue concentrations) to assess effectiveness of various remedies to reduce legacy contaminants in sediments of the Great Lakes Areas of Concern (AOCs). His primary research is improving existing and developing new monitoring and analytical methods to be used by states and drinking water utilities for monitoring water quality to help make early management decisions in addressing Harmful Algal Blooms (HABs) and the effects of their toxins. He is also generating ecotoxicity information on cyanobacteria and golden algae toxins. There is a lack of information for estimating safe levels for aquatic life concerning the toxicity of natural toxins produced by cyanobacteria and golden algae. Given the uncertainty of analytical standards for cyanobacteria and golden algae toxins, the cost associated with using them to conduct acute and chronic toxicity tests, and their potential impurities, a new approach using pure cultures and ambient bloom samples is being developed and evaluated.

Professor Dionysiou was born on the Island of Cyprus. He is currently a UNESCO co-Chair Professor on "Water Access and Sustainability" and a Herman Schneider Professor of Environmental Engineering at the University of Cincinnati. He received a Diploma (B.S./M.S.) from the National Technical University of Athens, Greece and an M.S. from Tufts University, both in Chemical Engineering. He received his Ph.D. degree in Environmental Engineering from the University of Cincinnati in 2001. His research interests include (i) physical chemical processes for treatment of surface water, groundwater, and industrial wastewater, (ii) AOPs, (iii) development of advanced functional materials, (iv) UV and solar light-based remediation processes, (v) treatment of contaminants of emerging concern, (vi) remediation of Harmful Algal Blooms/cyanotoxins, (vii) environmental nanotechnology, and (viii) water sustainability.

Dr. Dionysiou is the author or co-author of over 350 refereed journal publications (received over 23,000 citations, H-factor of 78; Google Scholar) and 140 conference proceedings, book chapters, and editorials. Dr. Dionysiou has also edited several books. He has received funding from NSF, EPA, NASA, NOAA/CICEET, USGS, USDA, Ohio Sea Grant, The National Academies of Sciences, Engineering and Medicine/USAID, Cyprus Research Promotion Foundation, and DuPont. He is currently one of the editors of Chemical Engineering Journal (Elsevier), Editor-in-Chief of the Journal of Advanced Oxidation Technologies, and Editor-in-Chief of the Journal of Environmental Engineering (ASCE). He is a member of the Editorial Boards of more than ten other journals. Dr. Dionysiou is fellow of the European Academy of Sciences, fellow of the American Chemical Society (ACS), fellow of the Royal Society of Chemistry (RSC) and recipient of several awards including the Albert Nelson Marquis Lifetime Achievement Award, the 2017ARCADIS/AEESP Frontier in Research Award (2014), the Tufts University Graduate School Alumni Outstanding Career Achievement Award (2012), the Inaugural Super Reviewer Award (2011) and Excellence in Review Award (2008) from the journal Environmental Science and Technology (ACS); the AEESP Dissertation Advisor Award (2008); the NSF CAREER Award (2005); the DuPont Young Professor Award (2005); and several awards at the University of Cincinnati, including the 2017 Rieveschl Award for Distinguished Scientific Research.

Prof. Dionysios (Dion) D. Dionysiou
University of Cincinnati, USA

Prof. Amy Pruden
Virginia Tech,
USA

Amy Pruden is the W. Thomas Rice Professor of Civil and Environmental Engineering at Virginia Tech. Her research focuses on bringing a microbial ecological perspective to understanding and advancing design and management of environmental systems. She is widely known for her work documenting antibiotic resistance genes (ARGs) as environmental contaminants. Her current research, funded by The National Science Foundation, US Department of Agriculture, Water Environment & Reuse Foundation, and the Alfred P. Sloan Foundation, focuses on advancing practical means of antibiotic resistance monitoring, mitigation, and risk assessment in wastewater, recycled water, and other water systems. Pruden is currently the principle investigator on a US Department of Agriculture Coordinated Agricultural Research Project (CAP) aimed at tracking and mitigating antimicrobial resistance from farm-to-fork and is also the Co-Principle Investigator on a National Science Foundation Partnership for International Research and Education (PIRE) grant with the goal of fostering interdisciplinary international collaboration towards Halting Environmental Antimicrobial Resistance Dissemination (HEARD). She has authored over 100 peer-reviewed scientific journal articles and currently serves as an Associate Editor of Environmental Science & Technology. Pruden is the recipient of the Presidential Early Career Award in Science and Engineering and the Paul L. Busch Award for innovation in water research. She holds a B.S. in Biology and a Ph.D. in Environmental Science, both from the University of Cincinnati.

In 1998, Prof. Benny Chefetz graduated the Hebrew University of Jerusalem (Ph.D. degree in the Soil and Water Sciences program). During his Ph.D. study he investigated the transformation of organic matter during composting of municipal solid waste. Following graduation, Dr. Chefetz was a postdoctoral fellow for 2 years at the Department of Chemistry, Ohio State University. During his fellowship, he gained practical knowledge in Environmental Chemistry and expertise in Analytical Chemistry.

Since 2001, Dr. Benny Chefetz has been a faculty member at the Department of Soil and Water Sciences at the Faculty of Agriculture, Food and Environment of the Hebrew University of Jerusalem. In 2014, Dr. Chefetz was promoted to Prof. of Environmental Chemistry. Prof. Chefetz served as the Head of the Department of Soil and Water (2008 – 2013) and since 2011 he is the Director of the Hebrew University Center of Excellence in Agriculture and Environmental Health. Prof. Chefetz served (2013 – 2017) as the Vice Dean for Research, and since October 2017 he serves as the Dean of the Faculty of Agriculture, Food and Environment.

The research group headed by Prof. Chefetz, aims at elucidating the fate and processes of organic pollutants occurring in water, reclaimed wastewater, soils and sediments. An overarching goal is to elucidate physical, chemical and biological processes that influence the behavior of organic pollutants in the agricultural environment. Special interests are: (1) Pharmaceutical compounds in reclaimed wastewater-soil-plant-human continuum; (2) Sorption-desorption behavior of xenobiotics in soils and sediments; (3) Nano particles in the agro-environment: fate and processes; (4) Nature and reactivity of dissolved organic matter in soils.

Prof. Chefetz supervised over 40 M.Sc. and Ph.D. students and received numerous prizes for his excellence in teaching and research. To date, Prof. Chefetz has published more than 80 articles in refereed journals.

Prof. Benny Chefetz
The Hebrew University of Jerusalem,
Israel

Prof. Klaus Kümmerer
Leuphana University,
Germany

Prof. Klaus Kümmerer is full Professor of Sustainable Chemistry and Material Resources, Director of the Institute of Sustainable and Environmental Chemistry at the public Leuphana University and Scientific Director of the International Sustainable Chemistry Collaborative Centre. He was one of the first studying pharmaceuticals in the environment in the 1990s. For his work on pharmaceuticals in the environment he received the Recipharm International Environment Award (Sweden, 2007). In 2015, he was awarded with the "Water Resource Award" of the Rüdiger Kurt Bode-Foundation within the Stifterverbandfür die Deutsche Wissenschaft for his outstanding work on the Benign by Design concept and protection of water resources. His research and teaching is also including Sustainable Chemistry, Sustainable Pharmacy, Material Resources, Aquatic Environmental Chemistry, and Time in Environmental and Sustainability Research. He heads an interdisciplinary research team. Klaus Kümmerer serves in many international committees including the prestigious seminal Global Chemical Outlook by UNEP, EU Technology Platform SusChem Europe, the Commission for Water Research of the German National Science Foundation (DFG, 2011-2017), Executive Board of the subdivision of Sustainable Chemistry in the German Chemical Society. He is also organizer of the Green and Sustainable Chemistry Conference. He has published extensively on these topics in leading peer-reviewed scientific journals of different scientific disciplines, many book contributions and (co)edited many books, e.g. "Pharmaceuticals in the Environment", Springer 3rd edition which is still the standard book in the field, "Green and Sustainable Pharmacy" (with M. Hempel, Springer, 2010); "Xenobiotics in the Urban Water Cycle" (with D. Fatta-Kassinos and K. Bester, Springer, 2010), and "Wastewater Reuse and Current Challenges", "Advanced Treatment Technologies for Urban Wastewater Reuse" (both with D. Fatta-Kassinos and D. Dionysiou, Springer, 2016), "KritischeMetalle in der Großen Transformation" (Springer, 2017). He is founding editor of the scientific and peer-reviewed journals Sustainable Chemistry and Pharmacy, and Current Opinion in Sustainable Chemistry as well as associate editor of Chemosphere and Environmental Pollution.

Keynote Speakers

Pedro Simón
Regional Entity of sanitation and Wastewater Depuracion (ESAMUR),
Spain

Erica Donner
University of South Australia,
Australia

David Weinberg
Ministry of Health,
Israel

Teik-Thye Lim
Nanyang Technological University,
Singapore

Peiying Hong
King Abdullah University of Science and Technology,
Saudi Arabia

Yunho Lee
Gwangju Institute of Science and Technology,
South Korea

Harrie Besselink
BioDetection Systems b.v.,
The Netherlands

Special Keynote Seminar

Prof. Gianluca Li Puma
Loughborough University,
United Kingdom

Gianluca Li Puma is Editor of "Journal of Hazardous Materials" (Elsevier). He is professor of Chemical and Environmental Engineering at Loughborough University and leads "Environmental Nanocatalysis and Photoreaction Engineering" research in the fields of photocatalysis, environmental nanocatalysis, advanced oxidation processes, environmental applications, solar energy conversion and solar engineering. Current research is focusing on process intensification for the removal of contaminants of emerging concern and water reuse using microfluidics technology, oscillatory flow technology, photochemical, photoelectrochemical and bioelectrochemical systems.

He has participated as committee member or as programme chair in the organization of over 50 international conferences in catalysis, engineering and environmental science, including at ACS National Meetings and Expositions, World Congress of Chemical Engineering, SPEA, EAAOP, IWA AGRO, R&R, IAP series. He is member of the International Advisory Board of the Nireas International Water Research Center in Cyprus (Nireas - IWRC), the EPSRC Solar-Fuel Network (UK) and UK Management Committee Member of EU COST Action ES1403 on New and Emerging Challenges and Opportunities in Wastewater Reuse (NEREUS).

Programme at a glance

MAJOR CONFERENCE CATEGORIES

- Big Blue Talks
- Keynote Lectures
- Joint Presentation (academia & industry)
- Parallel Sessions – Oral Presentations
- Parallel Sessions - Round Table Discussions
- Panel Discussion
- Water JPI Event
- NEREUS COST Action ES1403 Management Committee Meeting
- Poster Awards Ceremony
- Science Slam

ORAL PRESENTATION CATEGORIES

- Fate of contaminants within UWTPs
- Fate of contaminants in downstream environments
- New tools and methods in wastewater monitoring
- Removal of contaminants
- Supporting risk assessment
- Effect-based bioassays
- Uptake in crops
- Policy development
- Special Keynote Seminar

WEDNESDAY, 10 OCTOBER 2018

07:45 – 08:30	Foyer	Registration
08:30 – 09:00	Hall A	Opening Ceremony
09:00 – 09:20	Hall A	Achievements of the NEREUS COST Action ES1403 and the ANSWER project (H2020-MSCA-ITN-2015/675530)
BIG BLUE TALKS		
09:20 – 10:05	Hall A	What is in the wastewater? Setting the Scene
10:05 – 10:50	Hall A	Humans, agriculture and the environment; wastewater management considerations within the One Health Framework
10:50 – 11:15	Foyer	Coffee Break
PARALLEL SESSIONS – Oral Presentations		
11:15 – 12:45	Hall A	Removal of contaminants
	Hall B	Fate of contaminants in downstream environments
	Hall C	New tools and methods in wastewater monitoring
12:45 – 14:00	Anthea Restaurant	Lunch
BIG BLUE TALK		
14:00 – 14:45	Hall A	Overview of existing and next generation whole effluent toxicity testing methods for assessing wastewater toxicity
KEYNOTE LECTURE		
14:45 – 15:10	Hall A	Production of high-quality reclaimed water for urban water reuse
15:10 – 15:25	Hall A	Welcome Speech
PARALLEL SESSIONS – Oral Presentations		
15:25 – 16:55	Hall A	Removal of contaminants
	Hall B	Fate of contaminants in downstream environments
	Hall C	Supporting risk assessment
16:55 – 17:20	Foyer	Coffee Break – Poster Session I
PARALLEL SESSIONS: Round Table Discussion I		
17:20 – 18:35	Onisillos	Wastewater reuse in the circular economy era
	Tefkros	
	Evagoras	
17:20 – 18:35	Hall C	Tackling unknowns, risks and barriers for enhancing wastewater reuse
	Hall B	
	Hall A	
18:45 – 19:45	Evagoras	NEREUS COST Action ES1403 Management Committee Meeting
20:00	GrandResort Pool Area	Poolside Cocktail

THURSDAY, 11 OCTOBER 2018

BIG BLUE TALKS		
08:30 – 09:15	Hall A	Advances and challenges for the removal of contaminants of emerging concern in wastewater treatment
9:15 – 10:00	Hall A	Antimicrobial resistance: From urban wastewater treatment plants to the environment
JOINT PRESENTATION (academia & industry)		
10:00 – 10:30	Hall A	Developing the next generation of UV-based advanced oxidation technologies using a dual wavelength approach: UV_{254nm}/ H_2O_2 and UV_{185nm}/ H_2O
10:30 – 11:00	Foyer	Coffee Break
PARALLEL SESSIONS – Oral Presentations		
11:00 – 12:30	Hall A	Removal of contaminants I
	Hall C	Fate of contaminants in downstream environments
	Hall B	Removal of contaminants II
	Tefkros	Effect-based bioassays
	Evagoras	Uptake in crops
12:30 – 13:45	Anthea Restaurant	Lunch
KEYNOTE LECTURES		
13:45 – 14:10	Hall A	Elimination of contaminants of concern during oxidative and photochemical treatment of municipal wastewaters
14:10 – 14:35		Antibiotic resistant bacteria in Saudi Arabian wastewater and the use of low cost sustainable treatment technologies against them
14:35 – 16:35	**Hall A**	**WATER JPI EVENT** *(Please refer to page 38 for the detailed programme)*
16:35 – 17:00	Foyer	Coffee Break – Poster Session II
PARALLEL SESSIONS: Round Table Discussion III		
17:00 – 18:15	Hall B Hall C	Wastewater treatment and reuse cost
20:15	Karatello Restaurant	Dinner by the Castle *Gathering time: 19:45* *Gathering point: GrandResort Hotel (reception area)*

FRIDAY, 12 OCTOBER 2018

BIG BLUE TALK		
09:00 – 09:45	Hall A	Irrigation with reclaimed wastewater: New source of water or emerging problem?
KEYNOTE LECTURES		
09:45 – 10:10	Hall A	Application of effect-based bioassays in water quality assessment
10:10 – 10:35		Assessing transmission and exposure pathways in non-potable urban water reuse: An Australian perspective
10:35 – 11:00	Foyer	Coffee Break
PARALLEL SESSIONS – Oral Presentations		
11:00 – 12:30	Hall A	Removal of contaminants
	Hall C	Policy development
	Hall B	Fate of contaminants within UWTPs
	Evagoras	Special Keynote Seminar: How to get your paper published: An editor's perspective
12:30 – 13:30	Anthea Restaurant	Lunch
BIG BLUE TALK		
13:30 – 14:15	Hall A	Do we need a new paradigm for mastering existing and future challenges of the urban water cycle?
KEYNOTE LECTURES		
14:15 – 14:40	Hall A	Water reuse in Murcia Region: Experience, challenges and needs
14:40 – 15:05		Effluent re-use in Israel - Health related regulations and management
15:05 – 15:30	Foyer	Coffee Break
15:30 – 16:45	Hall A	**PANEL DISCUSSION** The future of water management
16:45 – 17:00		Poster Awards Ceremony
17:00 – 18:00		SCIENCE SLAM
18:00 – 18:15		**Closing of the event**

Conference Analytical Programme

WEDNESDAY, 10 OCTOBER 2018

07:45 – 08:30	**Foyer**	**Registration**
08:30 – 09:00	**Hall A**	**Opening Ceremony**
		Opening Address *Despo Fatta-Kassinos, Conference Host and Chair, Nireas-IWRC, University of Cyprus, Cyprus* Opening Address *Costas Kadis, Minister of Agriculture, Rural Development and Environment, Cyprus* Welcome Speech *Dominique Darmendrail, Water JPI Coordinator*
09:00 – 09:20	**Hall A**	**Setting the background of the conference**
		Achievements of the NEREUS COST Action ES1403 and the ANSWER project (H2020-MSCA-ITN-2015/675530). *Despo Fatta-Kassinos, Conference Host and Chair, Nireas-IWRC, University of Cyprus, Cyprus*
09:20 – 10:05	**Hall A**	**BIG BLUE TALK**
		What is in the wastewater? Setting the Scene. *Susan D. Richardson, University of South Carolina, USA* Introduced by: Irene Michael-Kordatou, Nireas-IWRC, University of Cyprus, Cyprus
10:05 – 10:50	**Hall A**	**BIG BLUE TALK**
		Humans, agriculture and the environment; wastewater management considerations within the One Health Framework. *Ed Topp, Agriculture and Agri-Food Canada and University of Western Ontario, Canada* Introduced by: Irene Michael-Kordatou, Nireas-IWRC, University of Cyprus, Cyprus
10:50 – 11:15	Foyer	Coffee Break
11:15 – 12:45	**PARALLEL SESSIONS – Oral Presentations**	
	Hall A	**Removal of contaminants** *Chaired by: Javier Marugán and Nikolaos Xekoukoulotakis*
		Antibiotics and antibiotic-resistant bacteria removal in urban wastewater by heterogeneous photocatalysis using UVA-LEDS. *Francesco Biancullo, Nuno F. F. Moreira, Ana Rita Ribeiro, Sergio Silva, Olga Nunes, Joaquim L. Faria, Adrian M.T. Silva*
		Inactivation of cefotaxime resistant *Escherichia coli* in WWTP secondary effluents by continuous solar photo-fenton process in raceway pond reactors. *José Antonio Sánchez Pérez, Ana Agüera, Ana Belen Esteban Garcia, Irene De La Obra*
		Induction of natural transformation in *Acinetobacter baylyi* in response to disinfection strategies. *Nicolas Augsburger, Peiying Hong*
		Removal of antibiotic-resistant bacteria and resistance genes (ARB&ARGs) from urban wastewater effluents by solar- and UV-C-driven oxidation processes. *Stella G. Michael, Irene Michael-Kordatou, Maria Inmaculada Polo López, Jaqueline Rocha, Ana Martinez-Piernas, Pilar Fernandez-Ibáñez, Ana Agüera, Célia Manaia, Despo Fatta-Kassinos*

		Inactivation of enteric total and beta-lactamase resistant *Escherichia coli* in urban wastewater by solar photo-Fenton at neutral pH in raceway pond reactors. *Luigi Rizzo, Antonino Fiorentino, Ana Belen Esteban Garcia, José Antonio Sánchez Pérez, Ana Agüera*
		Evaluation of technical membrane filtration for the removal of antibiotic resistance genes in free extracellular DNA. *Katarzyna Slipko, Daniela Reif, Norbert Kreuzinger*
	Hall B	**Fate of contaminants in downstream environments** *Chaired by: Eddie Cytryn and Enzo Lombi*
		Antibiotic resistance genes distribution and microbiomes along the soil-plant continuum in *Vicia Faba* fields in Catalonia. *Francisco Cerqueira, Víctor Matamoros, Goffe Elsinga, Luc Hornstra, Josep Bayona, Benjamin Pina*
		Identifying antibiotics triggering the dissemination of resistance genes at low concentrations. *Xavier Bellanger, Cédric Pradalier, Hélène Guilloteau, Magali de la Cruz Barron, Véronica Roman, Christophe Merlin*
		Antibiotic resistance profile of environmental bacteria in an agricultural area infiltrated with treated wastewater from a small-scale rural wastewater treatment plant: A seasonal study. *Elena Radu, Markus Woegerbauer, Richard A. Gottsberger, Ernis Saracevic, Norbert Kreuzinger*
		A combined modelling and experimental approach to study relevant bacterial subsurface processes. *Aparna Chandrasekar, David Kneis, Martin Binder, Sascha Krenek, Rudolf Liedl*
		The potential for macrolide residues to select for antibiotic resistance in the aquatic environment. *Isobel C Stanton, Aimee Murray, Lihong Zhang, Jason Snape, William Gaze*
		How the presence of copper influence the retention of ciprofloxacin in biosolid-amended soils? *Stéphanie Sayen, Elise Berrier, Nicolas Nuns, Emmanuel Guillon*
	Hall C	**New tools and methods in wastewater monitoring** *Chaired by: Valeria Dulio and Luc Hornstra*
		MicroGlo: A panel of fast and sensitive antibiotic biosensors. *Tjalf de Boer, Miriam Smits, Sander Loenen, Bram Brouwer*
		Fluorescence spectrometry as early warning tool for online compliance assessment of wastewater reuse. *Heidemarie Schaar, Andreas Winkelbauer, Sascha Weilguni, Ernis Saracevic, Jörg Krampe, Norbert Kreuzinger*
		Non-target screening in treated wastewater reuse: a new tool for process evaluation? *Giuseppe Mascolo, Sapia Murgolo, Johann Müller, Uwe Hübner, Jörg Drewes*
		Application of passive sampling to evaluate the chemical pollution of treated wastewater intended for reuse. *Nikiforos Alygizakis, Jakub Urík, Vasiliki G. Beretsou, Peter Oswald, Branislav Vrana, Nikolaos S. Thomaidis, Despo Fatta-Kassinos, Jaroslav Slobodnik*

		Highlights to accelerate water quality improvement during artificial recharge: Some outcomes from ACWAPUR project. *Cristina Valhondo, Lurdes Martínez-landa, Jesús Carrera, Silvia Diaz-Cruz, Stefano Amalfitano, Caterina Levantesi*
12:45 – 14:00	Anthea Restaurant	Lunch
14:00 – 14:45	**Hall A**	**BIG BLUE TALK**
		Overview of existing and next generation whole effluent toxicity testing methods for assessing wastewater toxicity. *Jim Lazorchak, United States Environmental Protection Agency, USA* Introduced by: Irene Michael-Kordatou, Nireas-IWRC, University of Cyprus, Cyprus
14:45 – 15:10	**Hall A**	**KEYNOTE**
		Production of high-quality reclaimed water for urban water reuse. *Teik-Thye Lim, Nanyang Technological University, Singapore* Introduced by: Lida Ioannou-Ttofa, Nireas-IWRC, University of Cyprus, Cyprus
15:10 – 15:25	Hall A	Welcome Speech *Constantinos Christofides, Rector, University of Cyprus, Cyprus*
15:25 – 16:55	**PARALLEL SESSIONS - Oral presentations**	
	Hall A	**Removal of contaminants** *Chaired by: Maria Concetta Tomei and Pawel Krzeminski*
		Tertiary wastewater treatment of emerging organic contaminants using constructed wetlands. *Nicolas Kalogerakis, Stavros Christofilopoulos, Evdokia Syranidou, Eleni Manousaki, Danae Venieri*
		Removal of five micropollutants by the microalga *Acutodesmus obliquus*. *Theo Reymann, Oliver Olsson, Martin Kerner, Klaus Kümmerer*
		Intensification of heterogeneous TiO_2 photocatalysis using the NETmix photoreactor under microscale illumination for oxytetracycline oxidation. *Jonathan Espindola, Raquel Cristóvão, Rui Boaventura, Madalena Dias, José Carlos Lopes, Vítor Vilar*
		Advanced oxidation technologies for removal of contaminants of emerging concern. TRICERATOPS Project. *Isabel Oller, Ana Ruiz-Delgado, Melina Roccamante, Irene Salmerón García, Laura Ponce Robles, Sixto Malato*
		Degradation of organic pollutants in water by nickel based activated peroxo compounds. *Santosh Kokate, Halan Prakash*
		Towards zero-liquid discharge for the treatment of micropollutants in potable reuse applications: integrating AOPs with biofiltration processes. *Federica Piras, Iolanda Pio, Giuseppe Mele, Aida Ancona, Tiziano Pastore, Oronzo Santoro, Emiliano De Dominicis, Elisa Gritti, Domenico Santoro*

	Hall B	**Fate of contaminants in downstream environments** *Chaired by: Célia Manaia and Danae Venieri*
		Impact of wastewater treatment plants on the occurrence of antibiotic resistance genes in the plant effluent and the receiving surface water. A European overview. *Damiano Cacace, Despo Fatta-Kassinos, Celia Manaia, Norbert Kreuzinger, Eddie Cytryn, Christophe Merlin, Luigi Rizzo, Thomas Schwartz, Marcus Rybicki, Lida Ioannou-Ttofa, Popi Karaolia, Hemda Garelick, Heike Schmitt, Daisy DeVriers, Carsten Schwermer, Sureyya Merik, Thomas Berendonk*
		Impact of reuse grade wastewater, antibiotics, and microplastics on pristine aquatic microbial communities. *Gianluca Corno, Jessica Subirats, Andrea Di Cesare, Antonino Fiorentino, Sara Rodriguez-Mozaz, Carles Borrego, Ester Eckert*
		Using next generation sequencing to reveal human impact on aquatic reservoirs of antibiotic resistant bacteria at the catchment scale. *Jennifer Holden, Lihong Zhang, Sebastien Raguideau, William Gaze, Andrew Singer, Andrew Mead, Christopher Quince, Elizabeth Wellington, Holly Tipper*
		Environmental ARG pollution monitoring across the Rhine River – A tempo-spatial study. *Gabriela Paulus, Luc Hornstra, Gertjan Medema*
		Pharmaceutical residues in groundwater in the area of Oued Souhil, Tunisia: do we have to worry about the impact of water reuse in agriculture? *Walid Chmingui, Monica Brienza, Serge Chiron, Abdelaziz Sebei, Amel Jemai, Olfa Mahjoub*
		Keeping the river clean! Successful pilot to minimize iodinated contrast media in surface waters in Mülheim an der Ruhr, Germany (the MERK'MAL project). *Jochen Tuerk, Verena Thoene, Andrea Boergers, Clemens Strehl, Frank Fligge, Marcus Bloser, David Schwesig, Wolf Merkel*
	Hall C	**Supporting risk assessment** *Chaired by: Henrik Rasmus Andersen and Dimitra Lambropoulou*
		Correlation of water quality parameters with the eutrophic state of a dam in Cyprus enriched with tertiary treated wastewater through multiple linear regression analysis. *Maria G. Antoniou, Georgia P. Hadjiouraniou, Nikoletta Tsiarta, Evangelos Daskalakis*
		Methods for determining selective endpoints of antimicrobials for environmental risk assessment. *Aimee Murray, Isobel C Stanton, Lihong Zhang, Jason Snape, William Gaze*
		Urban stormwater use: an assessment of potentials to impacts on human health using *E. coli* as an indicator. *Lian Lundy, Mike Revitt, Bryan Ellis*
		The effects of dilution on biodegradation of pharmaceuticals and a metagenomics analysis: implication for environmental risk assessment. *Simone Bagnis, Mark Fitzsimons, Jason Snape, Alan Tappin, Gabriella Vale Do Pereira, Sean Comber*

		Bisphenols in environment, food and biological fluids. *Ester Heath, Marjeta Česen, Kaja Lenarcic, Vesna Mislej, Marjeta Strazar, Marija Sollner Dolenc, Ana Kovacic, Urska Blaznik, Dimitra Lambropoulou, Maria Laimou-Geraniou, Janja Snoj Tratnik, Milena Horvat, Darja Mazej, David Heath, Tina Kosjek*
		A coliform-targeted metagenomic method facilitating human exposure estimates to antibiotic resistance genes in waters impacted by faecal pollution. *Anne Leonard, Xiaole Yin, Tong Zhang, Mamie Hui, William Gaze*
16:55 – 17:20	Foyer	Coffee Break - Poster Session I
17:20 – 18:35	**PARALLEL SESSIONS - Round Table Discussions**	
	ROUND TABLE DISCUSSION I Wastewater reuse in the circular economy era. *Organized by the NEREUS COST Action ES1403 – Working Group 5*	
	Onisillos	From a threatening inevitability to an array of benefits. *Moderators:* *David Weinberg - Ministry of Health, Israel* *Thomas Berendonk - Technische Universität Dresden, Germany* Assistant Moderators: Roberto Marano and Aparna Chandrasekar
	Tefkros	How can we apply the "polluter pays" principle in wastewater reuse scenarios? *Moderators:* *Lian Lundy - Middlesex University, United Kingdom* *Bernd Gawlik - Joint Research Center, European Commission* Assistant Moderators: Vasiliki Beretsou and Đorđe Tadić
	Evagoras	How can we enhance the communication between scientists and policy makers? *Moderators:* *Norbert Kreuzinger - Vienna University of Technology, Austria* *Dominique Darmendrail - Water JPI Coordinator* Assistant Moderators: Elena Radu and Ioannis Kampouris
	ROUND TABLE DISCUSSION II Tackling unknowns, risks and barriers for enhancing wastewater reuse. *Organized by the NEREUS COST Action ES1403 – Working Groups 1, 2 and 3*	
	Hall C	The big unknowns concerning a safe and sustainable wastewater reuse. *Moderators:* *Ed Topp - Agriculture and Agri-Food Canada and University of Western Ontario, Canada* *Ernesto Liebana - European Food Safety Authority, Italy* Assistant Moderators: Popi Karaolia and Francisco Diogo de Almeida Cerqueira
	Hall B	Monitoring big or monitoring smart? *Moderators:* *Jaroslav Slobodnik - Environmental Institute, Slovakia* *Susan Richardson - University of South Carolina, USA* Assistant Moderators: Nikiforos Alygizakis and Ian Zammit
	Hall A	Risks associated to human and ecological health. *Moderators:* *Célia Manaia - Catholic University of Portugal, Portugal* *Jim Lazorchak - United States Environmental Protection Agency (US EPA)* Assistant Moderators: Katarzyna Ślipko and Nazareno Scaccia
18:45 – 19:45	**Evagoras**	**NEREUS COST Action ES1403 Final Management Committee Meeting**
20:00	GrandResort Pool Area	Poolside Cocktail

THURSDAY, 11 OCTOBER 2018

08:30 – 09:15	**Hall A**	**BIG BLUE TALK**
		Advances and challenges for the removal of contaminants of emerging concern in wastewater treatment. *Dionysios (Dion) D. Dionysiou, University of Cincinnati, USA* Introduced by: Irene Michael-Kordatou, Nireas-IWRC, University of Cyprus, Cyprus
09:15 – 10:00	**Hall A**	**BIG BLUE TALK**
		Antimicrobial resistance: From urban wastewater treatment plants to the environment. *Amy Pruden, Virginia Tech, USA* Introduced by: Irene Michael-Kordatou, Nireas-IWRC, University of Cyprus, Cyprus
10:00 – 10:30	**Hall A**	**JOINT PRESENTATION (academia & industry)**
		Developing the next generation of UV-based advanced oxidation technologies using a dual wavelength approach: UV_{254nm}/ H_2O_2 and UV_{185nm}/ H_2O. *Domenico Santoro, Trojan Technologies Italia, Italy* *Wolfgang Gernjak, Catalan Institute for Water Research, Spain* Introduced by: Serena Caucci, United Nations University, Germany
10:30 – 11:00	Foyer	Coffee Break
11:00 – 12:30	**PARALLEL SESSIONS – Oral Presentations**	
	Hall A	**Removal of contaminants I** *Chaired by: Giuseppe Mascolo and Marie-Noëlle Pons*
		Importance of metabolites, synthesis intermediates and transformation products of macrolide antibiotics in urban wastewater - a case study at the wastewater treatment plant of the city of Zagreb. *Ivan Senta, Ivona Krizman-Matasic, Petra Kostanjevecki, Marijan Ahel, Senka Terzic*
		Removal of PPCPs in municipal wastewater effluent by advanced non-oxidative treatment - a laboratory scale case study from Serbia. *Ivana Ivančev-Tumbas, Minja Bogunović, Marjeta Česen, Jelena Prodanović, Aleksandra Tubić, Ester Heath*
		Unravelling the performance of UV and UV/H_2O_2 towards pharmaceuticals removal in a wide range of water and wastewater matrices. *Alessio Cibati, Rafale Gonzalez Olmos, Ignasi Rodriguez-roda, Sara Rodriguez-Mozaz, Gianluigi Buttiglieri*
		A combined electrochemical and nanofiltration treatment for organic micropollutant removal and wastewater reuse. *Emmanuel Mousset, Marie-Noelle Pons*
		Formation and fate of ozonation transformation products in full-scale wastewater treatment. *Christa McArdell, Marc Boehler, Ewa Borowska, Marc Bourgin, Julian Fleiner, Juliane Hollender, Cornelia Kienle, Rebekka Teichler, Jennifer Schollee, Hansruedi Siegrist, Urs Von Gunten*

		Removal of antibiotics and antibiotic resistance genes by full-scale AOPs. *Jorge Rodríguez-Chueca, Saulo Varela Della Giustina, Jaqueline Rocha, Telma Fernandes, Cristina Pablos, Angel Encinas, Sara Rodriguez-Mozaz, Celia Manaia, Javier Marugán*
	Hall C	**Fate of contaminants in downstream environments** *Chaired by: Alex Cornelissen and María Eugenia Suárez Ojeda*
		N-nitrosation of amines is a sink for NO in soil: Impact on denitrification. *Monica Brienza, Rayana Manasfi, Serge Chiron*
		Pharmaceuticals in soil leachates after raw and treated sludge spreading: impact of sludge treatments. *Dominique Patureau, Marjolaine Bourdat-Deschamps, Nathalie Bernet, Paulina Molina, Julien Michel, Sabine Houot*
		Presence of antibiotics and antibiotic resistance at a long term wastewater reuse site spray irrigating effluent on agricultural lands. *Alison Franklin, Clinton Williams, Danielle Andrews-Brown, Emily Woodward, Jean McLain, John (Jack) Watson*
		Streambed biofilms as sink and source of wastewater-associated bacteria and antibiotic resistance genes. *Carles Borrego, Jessica Subirats, Xavier Triadó-margarit, Ladislav Mandaric, Vicenç Acuña, José Luís Balcázar, Sergi Sabater*
		Dissemination of antibiotic resistant microbial communities and genes from hospital and municipal wastewater to downstream environments. *Barbara Drigo, Jan Bell, Gianluca Brunetti, Samuel Aleer, Michael Short, Henrietta Venter, Christopher Saint, Enzo Lombi, Erica Donner*
		The effect of the wastewater irrigation on the dissemination of antibiotic resistance genes in subsoil passages. *Ioannis Kampouris, Stefanie Heß, Damiano Cacace, Steffen Kunze, Thomas Berendonk*
	Hall B	**Removal of contaminants II** *Chaired by: Philippe Corvini and Gianluca Corno*
		Elimination of antibiotics and carbapenem resistant ***Klebsiella pneumoniae*** in municipal and hospital waste waters by UV-C and UV-C/persulfate. *Ricardo A. Torres-Palma, Efraim Serna-Galvis, Lorena Salazar-Ospina, Natalia Jimenez, Nancy Pino*
		Efficiency of constructed wetland systems for wastewater treatment: removal of microbial pathogens and elimination of antibiotic resistance genes. *Andreas Kaliakatsos, Nicolas Kalogerakis, Thrasivoulos Manios, Iosifina Gounaki, Danae Venieri*
		Evaluation of full scale constructed wetlands in removing antibiotics and antibiotic resistance genes. *Nurul 'Azyyati Sabri, Heike Schmitt, Bas Van Der Zaan, Henk Gerritsen, Tina Zuidema, Huub Rijnaarts, Alette Langenhoff*

		Elimination of transforming activity and gene degradation during UV and UV/H_2O_2 treatment of plasmid-encoded antibiotic resistance genes. *Yunho Lee, Younggun Yoon*
		Effects of single pulse silver, copper, and zinc selective pressure on wastewater microbial diversity and antibiotic resistance. *Gianluca Brunetti, Sotirios Vasileiadis, Barbara Drigo, Xiayuan Wu, Christopher Saint, Enzo Lombi, Erica Donner*
		Evolution of antibiotics concentration, associated resistance genes and bacterial functional groups along three urban sludge treatment lines. *Nicolas Sertillanges, Marjolaine Bourdat-deschamps, Sabine Houot, Bernet Nathalie, Claire-sophie Haudin, Cournoyer Benoît, Sylvie Nazaret, Galia Wessam, Emilie Bourgeois, Laurence Marjolet, Dominique Patureau*
	Tefkros	**Effect-based bioassays** *Chaired by: Benjamin Piña and Olfa Mahjoub*
		Use of effect-based *in vitro* bioassays for the monitoring of process performance. *Viviane Yargeau, Adamo Petosa, Meghan Marshall, Paul Westlund, Vince Pileggi*
		On the ecotoxicity of pharmaceuticals and their photo-transformation mixtures. *Maria Tarapoulouzi, Marlen Vasquez, Dimitra Lambropoulou, Despo Fatta-Kassinos*
		Integrating chemical and effect-based analysis to assess ofloxacin and its transformation products during UV-C and UV-C/H_2O_2 oxidation. *Vasiliki G. Beretsou, Irene Michael-Kordatou, Harrie Besselink, Nikolaos S. Thomaidis, Despo Fatta-Kassinos*
		How effect-based activity profiling can contribute to safer irrigation water - the example of the planar-YES. *Andreas Schoenborn, Tamara Mainetti*
		Critical aspects in the elimination of pharmaceutical contaminants from hospital wastewaters with fungal treatment: chemical and ecotoxicological evaluation. *Sara Rodriguez-Mozaz, Daniel Lucas, Marina Badia-fabregat, Francesc Catellet-rovira, José Luís Balcázar, Marta Villagrasa, Montserrat Sarra, Gloria Caminal, Teresa Vicent, Damia Barcelo*
	Evagoras	**Uptake in crops** *Chaired by: Costas Michael and Josep Maria Bayona*
		Carbamazepine metabolism in a plant-endophyte system. *Peter Schröder, Andres Sauvetre*
		Occurrence of contaminants of emerging concern in real field agricultural soils and tomato crops irrigated with reclaimed wastewater. *Ana Martinez-Piernas, Patricia Plaza-Bolaños, Elisa García-gómez, Pilar Fernandez-Ibáñez, Ana Agüera*
		Identification and structural elucidation of antibiotic's metabolites in lettuce. *Đorđe Tadić, Nikiforos Alygizakis, Michal Gramblicka, Robert Mistrik, Benjamin Piña, Josep Bayona*
		Effects on tomato fruit quality attributes resulted from the exposure of plants to three widely prescribed pharmaceutically active compounds. *Anastasis Christou, Marios Kyriakou, Egli Georgiadou, Evroula Hapeshi, Popi Karaolia, Costas Michael, Vassilis Fotopoulos, Despo Fatta-Kassinos*

		Modelling the fate of organic microcontaminants in wastewater treatment and agricultural reuse – Experiences from two existing cases. *Fabio Polesel, Mariano Gonzalez Garcia, Riccardo Delli Compagni, Kerstin J.f. Von Borries, Zhen Zhang, Marco Gabrielli, Carmen Fernandez Lopez, Andrea Turolla, Manuela Antonelli, Luca Vezzaro, Stefan Trapp*
		Impacts of agricultural practices on the occurrence of pharmaceutical active compounds in soil and plants under wastewater reuse for irrigation in Tunisia. *Olfa Mahjoub, Walid Chmingui, Evroula Hapeshi, Vasiliki G. Beretsou, Popi Karaolia, Amel Jemai, Despo Fatta-Kassinos*
12:30 – 13:45	Anthea Restaurant	Lunch
13:45 – 14:10	**Hall A**	**KEYNOTE**
		Elimination of contaminants of concern during oxidative and photochemical treatment of municipal wastewaters. *Yunho Lee, Gwangju Institute of Science and Technology, South Korea* Introduced by: Lida Ioannou-Ttofa, Nireas-IWRC, University of Cyprus, Cyprus
14:10 – 14:35	**Hall A**	**KEYNOTE**
		Antibiotic-resistant bacteria in Saudi Arabian wastewater and the use of low cost sustainable treatment technologies against them. *Peiying Hong, King Abdullah University of Science and Technology, Saudi Arabia* Introduced by: Lida Ioannou-Ttofa, Nireas-IWRC, University of Cyprus, Cyprus
14:35 – 16:35	**Hall A**	**Water JPI Event** *(Please refer to page 38 for the detailed programme)*
16:35 – 17:00	Foyer	Coffee Break – Poster Session II
17:00 – 18:15	**PARALLEL SESSIONS - Round Table Discussions**	
	ROUND TABLE DISCUSSION III Wastewater treatment and reuse cost. *Organized by the NEREUS COST Action ES1403 – Working Groups 1, 3 and 4*	
	Hall B	State of the art of existing technologies with respect to sustainable and safe wastewater reuse. *Moderators:* *Luigi Rizzo - University of Salerno, Italy* *Wolfgang Gernjak - Catalan Institute for Water Research & Catalan Institute for Research and Advanced Studies, Spain* Assistant Moderators: Ana Rita Lado Ribeiro and Franscesco Biancullo
	Hall C	Current, emerging and future cost related to technologies and wastewater reuse. *Moderators:* *Heidemarie Schaar, Vienna University of Technology, Austria* *Dionisis Mantzavinos - University of Patras, Greece* Assistant Moderators: Gianuario Fortunato and Gabriela Karina Paulus
20:15	Karatello Restaurant	Dinner by the castle *Gathering time: 19:45* *Gathering point: GrandResort Hotel (reception area)*

FRIDAY, 12 OCTOBER 2018

09:00 – 09:45	**Hall A**	**BIG BLUE TALK**
		Irrigation with reclaimed wastewater: New source of water or emerging problem? *Benny Chefetz, The Hebrew University of Jerusalem, Israel* Introduced by: Irene Michael-Kordatou, Nireas-IWRC, University of Cyprus, Cyprus
09:45 – 10:10	**Hall A**	**KEYNOTE**
		Application of effect-based bioassays in water quality assessment. *Harrie Besselink, BioDetection Systems b.v., The Netherlands* Introduced by: Lida Ioannou-Ttofa, Nireas-IWRC, University of Cyprus, Cyprus
10:10 – 10:35	**Hall A**	**KEYNOTE**
		Assessing transmission and exposure pathways in non-potable urban water reuse: An Australian perspective. *Erica Donner, University of South Australia, Australia* Introduced by: Lida Ioannou-Ttofa, Nireas-IWRC, University of Cyprus, Cyprus
10:35 – 11:00	Foyer	Coffee Break
11:00 – 12:30	**PARALLEL SESSIONS – Oral Presentations**	
	Hall A	**Removal of contaminants** *Chaired by: Ricardo Antonio Torres Palma and Vitor Vilar*
		Evaluation of the efficiency of the ozonation process in continuous mode for the removal of phytotoxicity, antibiotics and antibiotic resistance from urban wastewater. *Iakovos C. Iakovides, Nuno F.F. Moreira, Telma Fernandes, Ana Rita Ribeiro, Lida Ioannou-Ttofa, Irene Michael-Kordatou, Fernando R. Pereira, Célia Manaia, Olga Nunes, Adrian M.T. Silva, Despo Fatta-Kassinos*
		Removal of contaminants of emerging concern in a hybrid reactor, the three step Bio-Ozone-Bio (BO_3B) process. *Alette Langenhoff, Arnoud de Wilt, Koen van Gijn, Tom Verhoek, Huub Rijnaarts*
		Are disinfection processes able to control the release of antibiotic-resistant bacteria in the environment? A comparative assessment involving PAA, PFA and UV. *Cecilia De Flora, Roberta Maffettone, Siva Sarathy, Kati Bell, Caterina Levantesi, Domenico Santoro*
		Reuse of wastewater to produce water suitable for field irrigation-Samsø Denmark. *Ariadni Droumpali, Sabine Lindholst, Michelle Lison Rebsdorf, Per Rasmussen, Kamilla Kaarsholm, Jessica Bengtsson, Emmanuel Joncquez, Jörn Haase, Niels Mikkelsen, Nicolas Heinenen, Caroline Kragelund, Henrik Rasmus Andersen*
		Characterisation of wastewater effluents in the Danube river basin with target and non-target chemical screening techniques, *in vitro* bioassays and antibiotic resistant genes analysis. *Nikiforos Alygizakis, Harrie Besselink, Gabriela Paulus, Peter Oswald, Martina Oswaldova, Nikolaos S. Thomaidis, Luc Hornstra, Peter Behnisch, Jaroslav Slobodnik*
		Removal of pharmaceuticals in wastewater. *Riitta Keiski, Satu Ojala, Mohamed Zbair, Felipe Lopes Da Silva, Minna Pirilä, Mika Huuhtanen, Kirsi Vähäkangas, Marjo Huovinen, Rachid Brahmi, Kaisu Ainassaari, Asmaa Drif, Mohamed Bensitel, Michael Bottlinger, Oliver Stein, Buddhika Rathnayake, Khawer Safquat, Hamza Khallok, Marko Huttula, Sergio Botelho*

	Hall C	**Policy development** *Chaired by: Ester Heath and Viviane Yargeu*
		Treated wastewater reuse in agricultural irrigation – risk assessment, policy development and communication. *Lian Lundy, Mike Revitt*
		Water reuse in the context of a "One Health Approach": antimicrobial resistance and International policy needs. *Serena Caucci*
		Law and contaminants of concern in urban water supply - a research agenda. *Jennifer McKay*
		Health impacts of phthalates in Ireland: A wastewater epidemiology approach *Catherine Allen, Lisa Jones, Fiona Regan, Anthony Staines, Jenny Lawler*
		Regulatory uncertainty in Australia. *Danielle Fopp*
	Hall B	**Fate of contaminants within UWTPs** *Chaired by: Christa McArdell and Christophe Merlin*
		Robust discrimination of resistome and microbiome signatures in hospital and urban effluents. *Elena Buelow, Andreu Rico, Margaux Gaschet, Sean P. Kennedy, Jose Lourenço, Marie-Cecile Ploy, Dagot Christophe*
		Cell free DNA removal by membrane filtration assessed by spiking with plasmids carrying antibiotic resistance genes, and monitored using qPCR. *Pawel Krzeminski, Edward Feys, Marc Anglès d'Auriac, Aina Wennberg, Wolfgang Uhl*
		Description of the fate of NPEOs in wastewater treatment systems through modeling. *Özlem Karahan Özgün*
		Cycling of BPA and its alternatives during water treatment. *Ana Kovacic, Marjeta Česen, Celine Gys, Adrian Covaci, Tina Kosjek, Ester Heath*
		Assessing the fate of engineered nanoparticles in urban wastewater and during wastewater treatment. *Enzo Lombi, Erica Donner, Gianluca Brunetti, Kirk Scheckel, Ryo Sekine*
		Bacteria feeding on antibiotics – eating the poisonous. *Philippe Corvini, Boris Kolvenbach, Hans-Peter Kohler, Benjamin Ricken*
11:00 – 12:30	**Evagoras**	**Special Keynote Seminar** How to get your paper published: An editor's perspective. *Gianluca Li Puma, Loughborough University, United Kingdom* Introduced by: Damiano Cacace, Technische Universität Dresden, Germany
12:30 – 13:30	Anthea Restaurant	Lunch
13:30 – 14:15	**Hall A**	**BIG BLUE TALK**
		Do we need a new paradigm for mastering existing and future challenges of the urban water cycle? *Klaus Kümmerer, Leuphana University, Germany* Introduced by: Irene Michael-Kordatou, Nireas-IWRC, University of Cyprus, Cyprus

14:15 – 14:40	**Hall A**	**KEYNOTE**
		Water reuse in Murcia Region: Experience, challenges and needs. *Pedro Simón, Regional Entity of sanitation and Wastewater Depuracion (ESAMUR), Spain* Introduced by: Lida Ioannou-Ttofa, Nireas-IWRC, University of Cyprus, Cyprus
14:40 – 15:05	**Hall A**	**KEYNOTE**
		Effluent re-use in Israel - Health related regulations and management. *David Weinberg, Ministry of Health, Israel* Introduced by: Lida Ioannou-Ttofa, Nireas-IWRC, University of Cyprus, Cyprus
15:05 – 15:30	Foyer	Coffee Break
15:30 – 16:45	**Hall A**	**PANEL DISCUSSION** The future of water management. *Moderators:* *Despo Fatta-Kassinos, Nireas-IWRC, University of Cyprus, Cyprus* *Norbert Kreuzinger, Vienna University of Technology, Austria*
16:45 - 17:00	Hall A	**Poster Awards Ceremony** Poster Awards Selection Committee: *Christophe Dagot, University of Limoges, France* *José Antonio Sánchez Pérez, University of Almería, Spain* *Markus Wögerbauer, Austrian Agency for Health and Food Safety, Austria* Awards will be presented by Socrates Metaxas, Manager, Water Board of Lemesos *Introduced by: Gabriela K. Paulus, KWR Watercycle Research Institute, The Netherlands*
17:00 – 18:00	**Hall A**	**SCIENCE SLAM** *Coordinated by Marlen I. Vasquez and Heidemarie Schaar*
18:00 – 18:15	**Hall A**	**Closing of the event** *NEREUS COST Action ES1403 Vice Chair: C. Manaia* *NEREUS COST Action ES1403 Chair: D. Fatta-Kassinos*

Abstract | Title

10 October, 2018

1 Effect of ozone-/ UV- process combination on antibiotic resistance genes and hygienically relevant bacteria during wastewater treatment
Norman Hembach, Johannes Alexander, Christian Hiller, Arne Wieland, Thomas Schwartz

2 Degradation of micropollutants in WWTP secondary effluents by continuous flow solar photo-Fenton in open reactors at acidic and neutral pH
José Antonio Sánchez Pérez, Sandra Arzate, José Luis García Sánchez, Marina Campos

3 Catalytic hydrogenation of pharmaceuticals in water medium over various metal supported catalysts: A promising process
Nantia Pantelidou, Petros Savva, Costas Costa

4 Photocatalytic wastewater treatment by immobilised cerium doped zinc oxide: Degradation of antibiotics and inactivation of antibiotic-resistant bacteria
Ian Zammit, Vincenzo Vaiano, Ana Rita Ribeiro, Adrian M.T. Silva, Célia Manaia, Luigi Rizzo

5 Valorisation of lupanine: Bioprocess development for the removal of a toxic alkaloid from industrial wastewater.
Stella Parmaki, Ioannis Vyrides, Marlen Vasquez, Ana T. A. P. Mota, Raquel A. M. Teixeira, Frederico C. Ferreira, Carlos A. M. Afonso, Chryssoula Drouza, Michalis Koutinas

6 Use of a commercial iron fertilizer (Fe^{3+}-EDDHA) as effective solar disinfectant agent to treat fresh-cut wastewater for reusing purposes
Maria Inmaculada Polo Lopez, Samira Nahim Granados, Isabel Oller, Sixto Malato, José Antonio Sánchez Pérez

7 Investigation of the combined coagulation and adsorption process for removal of benzophenone and caffeine from water
Minja Bogunović, Tijana Marjanović, Ivana Ivančev-Tumbas

8 Determination of agonistic and antagonistic effects in the course of a two-line full scale ozonisation with a biological post-treatment
Nicolai Bätz, Fabian Itzel, Linda Gehrmann, Torsten Schmidt, Jochen Tuerk

9 Tertiary treatment of urban wastewater spiked with oxytetracycline by an UVC/H_2O_2 photochemical system using an innovative NETmix photoreactor
Jonathan Espindola, Raquel Cristóvão, Rui Boaventura, Madalena Dias, José Carlos Lopes, Vítor Vilar

10 Removal of carbamazepine, its human metabolites and photo transformation products by clay - a natural and sustainable material
Lamia Mahouachi, Morten Suk, Wolf-Ulrich Palm, Klaus Kümmerer

11 Synthesis of MnOx and MnOx/Ag modified TiO_2 for photocatalytic applications: Inactivation of the herbicide clopyralid in aqueous suspensions.
Chrisanthi Berberidou, Ioannis Poulios

12 Preparation and application of floating chitosan and TiO_2-graphene oxide based photocatalysts for the degradation of antibiotic drug mixture under simulated solar irradiation
Anastasia Koltsakidou, Anna Ofryodopoulou, Myrsini Papageorgiou, Dimitra Lambropoulou

13 Strategies to achieve a continuous PhACs removal from hospital wastewater with fungus
Josep Anton Mir-tutusaus, Josefina Toran, Sara Rodriguez-Mozaz, Marta Llorca, Marta Villagrasa, Damia Barcelo, Gloria Caminal, Paqui Blanquez, Montserrat Sarra

14 The removal of As(V) ions by lime modified fly ash and reuse of the exhausted adsorbent as an additive for construction material
Milica Karanac, Maja Djolic, Djordje Veljović, Vladana Rajaković-ognjanović, Zlate Veličković, Vladimir Pavićević, Aleksandar Marinković

15 Determination of biological degradation, sorption and mass balance of pharmaceutical compounds in a conventional WWTP
Isabel Mª Martínez-Alcalá, Francisco Pellicer-Martínez, Jose Manuel Guillén-Navarro, Agustín Lahora

16 Removal of micropollutants by ozonation in wastewater matrices
Ana Rita Ribeiro, Nuno F.F. Moreira, Marta O. Barbosa, Fernando R. Pereira, Gianluca Li Puma, Adrian M.T. Silva

17 Identification and removal of contaminants of emerging concern in landfill leachate
Ana Ruiz-Delgado, Elisa García-Gómez, Patricia Plaza-Bolaños, Sixto Malato, Isabel Oller, Ana Agüera

18 Removal of antibiotics in aqueous media by using new synthesized bio-based PET-TiO_2 photocatalysts
Dimitra Lambropoulou

19 Molecular and cell culture methods for removal of enterovirus and human norovirus in wastewater for direct potable reuse
Suzanne Young, Nicole Rockey, Krista Wigginton, Brian Pecson, Tamar Kohn

20 High rate activated sludge system: suitable approach to redirect organic matter to biomethanization in urban wastewater treatment plants.
Carlos Ramos, Maria Eugenia Suárez-Ojeda, Javier Claros, Laura Pastor, Julio Pérez, Julián Carrera

11 October, 2018

1 Spread of antibiotic resistance genes in riverbeds by sedimentation of wastewater particles and associated microbes
Philip Brown, Ewa Borowska, Thomas Schwartz, Harald Horn

2 Antibiotic resistance genes distribution in microbiomes from Lycopersicon esculentum fields in Catalonia
Francisco Cerqueira, Víctor Matamoros, Josep Bayona, Benjamin Pina

3 High limits of quantification of antibiotic resistance genes may mask the impacts of water reuse in soils
Gianuario Fortunato, Ivone Vaz-moreira, Cristina Becerra-castro, Olga Nunes, Célia Manaia

4 Compartmentalization of class 1 integrons and IncP-1 plasmids in the Orne river (France), an aquatic ecosystem impacted by urban and industrial anthropogenic pressures
Magali de la Cruz Barron, Xavier Bellanger, Hélène Guilloteau, Emmanuelle Montarges-Pelletier, Christophe Merlin

5 Abundance of macrolide resistance genes and bacterial community composition from urban river sediments contaminated with macrolide antibiotics
Milena Milaković, Juan José González-Plaza, Ines Sviličić Petrić, Ana Šimatović, Nikolina Udikovic Kolic

6 Fate of metolachlor and terbuthylazine in surface water and related drinking water treatment plant
Dimitra Papagiannaki, Rita Binetti

7 In-situ monitoring of wastewater nutrients using autonomous sensing platforms
Dermot Diamond Diamond, Andrew Donohoe, Gareth Lacour, Margaret McCaul

8 Ultra-trace levels analysis of target microcystins and nodularin, suspect organic toxins and untarget screening in surface water
Lydia Balest, Pier Paolo Abis, Giuseppe Mascolo

9 Method development for the analysis of phthalates in environmental matrices
Lisa Jones, Catherine Allen, Fiona Regan, Jenny Lawler

10 Towards a diversity of beta-lactam resistance genes in a municipal wastewater treatment plant
Tereza Stachurová, Kateřina Malachová, Hana Piková, Katerina Svobodova

11 Extractive spectrophotometric determination study on Chromium(VI) from environmental samples
Umesh Barache, Shashikant Gaikwad

12 Identifying the range of sub-inhibitory concentrations of antibiotics triggering bacterial functions of relevant interest
Marie-Noelle Pons, Kévin Petitcolas, Cédric Pradalier, Hélène Guilloteau, Cécile Lemaitre, Christophe Merlin

13 Functional metagenomics reveals the presence of both known and novel antibiotic resistance genes in environment impacted by elevated concentrations of antibiotics
Ana Simatovic, Juan José González-Plaza, Milena Milaković, Ana Bielen, Nikolina Udiković-Kolić

14 Beta-lactamase resistance plasmids among gram-negative rods
Marta Piotrowska, Rafał Ostrowski, Magdalena Popowska

15 Identification and quantification of antibiotic-resistant bacteria & genes in an aquaculture facility which uses bioactive filters.
Aidan O'Flaherty, Fiona Walsh

16 Determination of chlorate in food and water: validation study and analysis of drinking water and food samples
Agapios Agapiou, Panayiotis Constantinou, Despo Christodoulou

17 Plant-associated bacteria as potential carriers of antibiotic resistance from the environment to humans
Nazareno Scaccia, Ivone Vaz-moreira, Célia Manaia

18 Occurrence and bioaccumulation of antibiotics in vegetables – field study
Đorđe Tadić, Víctor Matamoros, Benjamin Pina, Josep Bayona

19 Emerging risks of chemical and microbiological contamination in the reuse of wastewater for agricultural irrigation: integrated study – ROUSSEAU
Silvia Diaz-Cruz, Damia Barcelo, Miquel Salgot, Amadeo R Fernández-alda, Montserrat Folch, Jesus Carrera, Mª Jesus Martínez, Mª Pau Serra-roig, Cristina Valhondo, Ana Soler de la Vega, Giovanny Garcia

20 Removal of antibiotic compounds from aqueous solutions with the use of biochar
Marinos Stylianou, Anastasis Christou, Costas Michael, Agapios Agapiou, Panos Papanastasiou, Despo Fatta-Kassinos

21 Characterization of biochar produced in a small scale kiln for environmental applications
Marinos Stylianou, Anastasis Christou, Polycarpos Polycarpou, Costas Michael, Agapios Agapiou, Panos Papanastasiou, Despo Fatta-Kassinos

22 Plasmid- and Integron-associated antibiotic resistance genes in a wastewater-soil-crop continuum
Roberto Marano, Edouard Jurkevitch, Eddie Cytryn

23 Multi-residue determination and occurrence of PPCPs in soil and beetroot crops irrigated with treated wastewater effluent: Assessment of heavy metal content on PPCP accumulation
Ioannis K. Kalavrouziotis

Water JPI Event

THURSDAY, 11 OCTOBER 2018

14.35 - 14.55	**Hall A**	**Introduction**

		• Presentation of the aims of the side event
		• Presentation of the Joint Programme Initiatives
		  • *Water*
		  • *Oceans*
		  • *Antimicrobial resistance*

14.55 - 15:35	**Hall A**	**Session I: Knowledge Hub on Emerging Pollutants**

		• An example: the Water JPI Knowledge Hub on emerging pollutants (concept, objectives, first outputs)
		• Lessons learnt for knowledge transfer experiences
		• Roundtable discussions (moderated by JPI representatives)
		  • *Developing Policy brief*
		  • *Suggestions on the knowledge hub concept*

15:35 - 16:15	**Hall A**	**Session II: Future Research Funding: ERA-Net Cofund on Emerging Pollutants**

		• Presentation of ERA-Net Cofund Emerging Pollutants of JPIs Water, Oceans, Antimicrobial Resistance
		• Feedback round on the proposed topic areas:
		  i. Understanding and predicting the environmental behaviour and effects of emerging pollutants
		  ii. Risk assessment and management of emerging pollutants and pathogens from aquatic ecosystems
		  iii. Strategies to reduce emerging pollutants including pathogens

16.15 - 16.35	**Hall A**	**Conclusions / Roadmap for future actions**

Social Events

WELCOME RECEPTION

Date: Wednesday, 10 October

Time: 19:15 – 20:45

Venue: Pool Area, GrandResort Hotel

Dress code: Informal (Cocktail, Business casual)

The Cocktail Reception will take place at the pool area of GrandResort Hotel. Here, you will have the chance to enjoy a variety of local traditional drinks along with some canapes, catch up with your friends and colleagues, while listening to music and enjoying a beautiful view.

DINNER

Date: Thursday, 11 June

Time: 20:00

Gathering time: 19:45

Gathering point: GrandResort Hotel (reception area)

Venue: Karatello Restaurant, Limassol Medieval Castle

Dress code: Smart casual

Overlooking the majestic Medieval Castle in the heart of the old town of Limassol, adjacent to the Carobmill Museum, Karatello manages to create a perfect amalgamation of the classic and the modern. Bus transfers will be provided to all participants. Traditional meze dinner will be served while music and entertainment will keep you on the dance floor.

Practical Information

TIME ZONE, COUNTRY CODE AND PHONES

Cyprus is two hours ahead of GMT. The international dialing code for Cyprus is +357. While public pay phones can be found around the island taking pre-paid phone cards you can also purchase a local SIM card for your mobile phone if planning to make many calls or stay on for a longer duration.

MONEY AND EXCHANGE

Cyprus uses the euro currency; however banks exchange all major currencies. ATMs are located around the town and tourist resorts for cash withdrawals. Most shops, restaurants and hotels accept all major credit cards. Bank Opening Hours: Monday to Friday morning 8:00 – 14:30. Banks at Larnaka and Pafos International Airport provide exchange bureau services on a 24-hour service. Exchange facilities are also available at the Limassol Harbour.

USEFUL PHONE NUMBERS

Police and all Emergencies	112, 199
Flight Information	77778833 (Larnaka and Pafos Airports)
Pharmacies after Hours	90901415
Doctors on Call	90901435
Directory Inquiries	11892, 11822, 11800, 11833, 11811

CLIMATE

Cyprus enjoys a Mediterranean climate with long dry summers from mid-May to mid-October and with mild winters from December to February, which are separated by short autumn and spring seasons.

TIPPING

Because of the 10% service charge levied in hotels and restaurants, a tip is not obligatory, but small change is always welcome. Taxi-drivers, porters, hairdressers etc., always appreciate a small tip.

ELECTRIC CURRENT – VOLTAGE

The supply in Cyprus is 240 volts, a.c. 50Hz. Sockets are usually 13 amp, square pin in most buildings. Many hotels provide adaptors upon request from the reception.

GENERAL SHOPPING HOURS

Shop opening times vary depending on their type and location, though shops normally open between 07:00 and 09:00. During the period November 1st – March 31st shops close at 19:30 on Monday, Tuesday, Thursday and Friday, at 15:00 on Wednesday, and at 19:00 on Saturday. For the period April 1st – October 31st shops close at 20:00 on Monday, Tuesday, Thursday and Friday, at 15:00 on Wednesday and, at 19:30 on Saturday.

CHEMIST PHARMACIES / DRUG STORES

They stay open during shopping hours. Late night chemists are listed in the daily papers.

INSURANCE

It is recommended that participants arrange insurance for medical expenses, loss and accidents occurring during the conference. The organizers cannot be held responsible for any losses, damages or injuries.

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Biochemistry

- Automated biochemical analyzers
- HbA1c and lipid measurement analyzers

Immunology

- Automated molecular analyzers

Haematology

- Haematology analyzers
- Blood coagulation analyzers (PT, APTT, INR)

Molecular Diagnostics

- Automated molecular analyzers

Microbiology

- Urological analyzers

Blood Banks/Blood Centers

- Automated ELISA analyzers

Near-Patient Testing Systems

- Meters for Troponin, NT-proBNP, CK-MB, D-Dimer and Myoglobin
- Glucose meter
- Cholesterol, triglyceride and lactic acid meters
- Prothrombin Time Meter (PT,APTT,INR)

Pathology-Histology

- Microtomes
- Cryostats
- Tissue Processors
- Embedding Centers
- Automated immunohistochemistry and in-situ Hybridization analyzers
- Automated analyzers of special stains
- Automated H & E analyzers
- Digital Pathology, Slide scanners

Laminar Flow Chambers

- Laminar Flow Chambers
- Microbiological safety class I, II, III, chambers horizontal and vertical
- Chambers of cytotoxic distribution, increased safety
- Clean Air Line Systems, gas exhausters

Environment

- Supply, installation and technical support for Air Pollution Monitoring and Measuring Equipment
- Assembly and technical support for mobile air quality measurement units (caravans)
- Microtox toxicity test systems
- Water testing
- COD, BOD, Kjeldahl, Dumas, Soxhlet analysers

Food Testing

- Milk and Wine analysers
- Meat, Dairy, Olive analysers
- Grain, Feed and Forage Analysers

Laboratory Devices

- Laboratory mixers
- Vortex Shakers
- Magnetic heated plates
- Cooling incubation chambers
- Microscopy
- Simple and analytical scales
- pH meters, conductivity meters, oxygen meters, turbidimeters etc
- Water testing
- Polarimeters laboratory, optical and automatic
- Refractometers
- Pipettes, single channel/multichannel
- Volumetric and dosing fluid system

Centrifuges

- Single use centrifuges
- Microhaematocrit centrifuges
- Centrifuges of small, medium and large capacity
- Refrigerated centrifuges
- PCR / molecular biology centrifuges
- Centrifugal blood bags
- Centrifuges for IVF-Cord Blood units

Laboratory Furnaces/ Decontamination

- Incubators
- Cooling Incubators (with Compressor or Peltier)
- Ovens for general & special applications (single/double door)
- Dry sterilizing ovens
- Liquid /steam sterilization ovens
- CO_2 Ovens
- Vacuum ovens
- Moisture chambers
- Water baths, oil baths, ultrasonic baths

Analytical Chemistry Instruments

- GC , LC, HPLC, UPLC, ICP, Mass Spectrometry
- Ion Chromatography
- Spectrophotometers
- Fluorometers

Laboratory Consumables

- Plastic consumables
- Glass consumables
- Nutritional ingredients
- Laboratory filters
- Educational products

Chemicals

- Analytical Chemicals & Solvents
- Environmental Standards
- Food Standards
- Water Standards
- Clinical Standards

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