

"Unravelling and exploiting Mediterranean sea microbial diversity and ecology for xenobiotic's and pollutants' clean up"

EU Project N. 266473 – FP7 Theme 2 – CP-FP-SICA

The International Conference

MedRem-2014 "Microbial Resource Management for Polluted Marine Environments and Bioremediation"

A Conference stemming from the EU project ULIXES, GA-266473

Hammamet, Tunisia 16-18 January 2014

Milan, Chania, Tunis, 9 September 2013

Dear Colleague,

It is a pleasure to announce that the ULIXES international conference MedRem-2014 on Microbial Resource Management for Polluted Marine Environments and Bioremediation" is now open and welcomes scientists from the Mediterranean countries, Europe and the world working on oil and pollutants bioremediation and related topics.

The conference will be held in Hammamet, Tunisia on 16-18 January 2014. The conference is organized in Tunisia favoring the participation of scientists and stakeholders from the Southern coast of the Mediterranean Sea. Tunisia is well connected to most of the locations in the Mediterranean Sea basin and the rest of Europe. Besides academic scientific audience and speakers, employees and stakeholders from public authorities, SMEs and large firms operating in the oil and gas production and trading industry and in the environmental biotechnology sectors are invited to participate.

The ULIXES conference aims to discuss new advancements in bioremediation technology capable to clean up polluted marine sites under a sustainable development perspective. The program includes different sections focused on the microbiology, molecular ecology and genomics, proteomics and metabolomics of marine polluted ecosystems. A session will be devoted to the discussion on the technological advance and to the new developed products/processes potentially applicable to marine sites restoration and in general to bioremediation of polluted environments.

With your participation, the ULIXES conference will improve its key role in spreading scientific excellence in the field of bioremediation and environmental protection.

Below you can find some scientific and practical information about the conference and you can obtain further information on the conference website http://www.ulixes.unimi.it

We hope you will be able to participate to this exciting event and to contribute to the scientific discussion on bioremediation and environmental protection.

On behalf of MedRem-2014 Organizing Committee

Prof. Daniele Daffonchio University of Milan Italy

Prof. Nicolas Kalogerakis Technical University of Crete Greece

Prof. Ameur Cherif University of Tunis El Manar

Tunisia

ULIXES



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Marine and terrestrial environments worldwide are threatened by a high risk of pollution, constantly increased over the last centuries. The major contamination sources are represented by the development of extractive and transformation industries, by oil product storage and transport systems including cargo and oil-tankers and by the high impact of the increasing population. For instance among marine habitats, the areas characterized by a slow water turnover are specifically subjected to higher risk of pollution that might compromise the marine biodiversity and ecosystem preservation.

Bioremediation is nowadays recognized as the most promising among cleanup technologies for site restoration. Microorganisms are the key players of energy and element cycle in the environments. Ecosystems contaminated by hydrocarbons, organohalogenated compounds, heavy metals, micropollutants, among others, are a precious source of microbes specifically adapted to cope with the stress induced by pollution and harboring the catabolic properties involved in biodegradation. A deep investigation of polluted sites, hence represents the best strategy to design site-tailored bioremediation practices. In this context there is a requirement for improved cultivation strategies aimed to discover new microbial species and setup valuable microbial consortia for bioremediation purposes.

On the other side, the cultivation-independent and OMICs methodologies developed in the last decades represent powerful tools for novel microbial resources mining, allowing the elucidation of biodegrading metabolic pathway and the identification of novel products of biotechnological interest, including enzymes, biosurfactants and bioemulsifiers.

The ULIXES conference aims to discuss new advancements in bioremediation technology and in the clean up polluted marine sites under a sustainability perspective. The program includes different sections focused on the microbiology, molecular ecology and genomics, proteomics and metabolomics of polluted ecosystems. A session will be devoted to the discussion on the technological advance and to the new developed products/processes potentially applicable in site restoration. The Conference will also offer a discussion platform on the technology transfer and the contribution of industry in bioremediation advances.

The conference foresees the contribution of eminent scientists working in the field of bioremediation. Plenary and Keynote Lectures will be given by scientists from all over the world including Europe, USA and China. Confirmed speakers include:

FEDERICO AULENTA, Rome (IT) PHILIPPE CORVINI, Basel (CH) MANUEL FERRER, Madrid (ES) TERRY C. HAZEN, Knoxville (USA) BERNARD OLLIVIER, Aix-Marseille (F) IBRAHIM M. BANAT, Londonderry (IR) FRANCESCA DE FERRA, S. Donato Mi (IT) IAN M. HEAD, Newcastle (UK) REINER MECKENSTOCK, Neuherberg (DE) XIAO XIANG, Shanghai (CN)

A large series of topics will be covered including biodiversity, Omics technologies, aerobic and anaerobic hydrocarbon degradation, reductive dehalogenation, novel biocatalysts and products for bioremediation, advanced bioremediation treatments and technologies, and bioremediation and

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industry. Studies on marine and freshwater environments as well as from soil and sediments are welcome under the sessions and topics. A list of the session foreseen during the conference and the related topics is as follows:

Session I: Microbial diversity and ecology of polluted marine ecosystem

- Microbial abundance and diversity in marine contaminated sites
- Microbial diversity in Mediterranean Sea polluted sites
- Functionality exploration of the metabolic active microbes in polluted sites
- Physiological and genetic features of degrading microbes

Session II: Application of OMICs technologies for bioremediation

- OMICs for biodiversity monitoring in polluted ecosystem
- Application of OMICs in Mediterranean polluted marine sites
- Metabolic networks in contaminated sites
- Mining novel microbial resources for bioremediation

Session III: Hydrocarbon degrading microbes: metabolism, physiology and ecology

- Aerobic and anaerobic degradation of oil hydrocarbons
- Metabolism, physiology and ecology of oil hydrocarbon degraders
- Physiology and metabolism under pressure and other extreme conditions
- Biosurfactant producers for enhanced oil removal

Session IV: Microbiology of organohalogenated and other recalcitrant compounds

- Bioremediation of chlorinated solvents
- Bioremediation of polychlorobyphenils
- Bioremediation of micropollutants
- Bioremediation of heavy metals contaminated sites

Session V: Novel biocatalytic processes and products for enhanced bioremediation

- Small scale bioprocesses
- Nanoparticles in bioremediation technology
- Bioreactors for water reclamation
- Monitoring bioremediation treatments

Session VI: Bioremediation treatments and technologies

- Ex-situ experiments
- In-situ experiments
- Biosensors and in-situ monitoring tools
- Eco-compatibility of innovative bioremediation processes and products

Session VII: Bioremediation and industry

- Effective strategies for cleanup of polluted ecosystems: economic perspective & benchmarking
- Industrial relevant processes in oil management and bioremediation

The scientific aspects of the conference will be driven by a qualified international scientific committee including members of the research community from the two sides of the Mediterranean Basin, the European side and the North African and Middle East side. The scientists included in the scientific committee are:

Yasser R. Abdel-Fattah (CSAT, Egypt) Mohamed Blaghen (University Hassan II, Morocco) Nico Boon (Ghent University, Belgium) Sara Borin (University of Milan, Italy) Ameur Cherif (University of Tunis El Manar, Tunisia) Daniele Daffonchio (University of Milan, Italy) Fabio Fava (University of Bologna, Italy) Manuel Ferrer (CSIC, Spain) Peter N. Golyshin (Bangor University, UK) Nicolas Kalogerakis (Technical University of Crete, Greece) Mirko Magagnini (EcoTechSystems, Italy) Hanan I. Malkawi (Yarmouk University, Jordan) Michail M. Yakimov (IAMC, CNR, Italy) ULIXES



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The organizational aspects of the conference will be managed by the scientific committee in combination with a series of qualified expert from Tunisian and International Scientific institutions:

Yasser R. Abdel-Fattah (CSAT, Egypt) Mohamed Blaghen (University Hassan II, Morocco) **Nico Boon** (Ghent University, Belgium) Ameur Cherif (University of Tunis El Manar/Manouba, Tunisia) Daniele Daffonchio (University of Milan, Italy) Fabio Fava (University of Bologna, Italy) Manuel Ferrer (CSIC, Spain) Peter N. Golyshin (Bangor University, UK) Atef Jaouani (University of Tunis El Manar, Tunisia) Nicolas Kalogerakis (Technical University of Crete, Greece) Mirko Magagnini (EcoTechSystems, Italy) Hanan I. Malkawi (Yarmouk University, Jordan) Francesca Mapelli (University of Milan, Italy) Imen Ouzari (University of Tunis El Manar, Tunisia) Noura Raddadi (University of Bologna, Italy) Michail M. Yakimov (IAMC, CNR, Italy) Giulio Zanaroli (University of Bologna, Italy)

DATES & VENUE

Conference MedRem-2014, 16-18 January 2014, Tej Sultan Hotel, Hammamet, Tunisia.

CONFERENCE WEBSITE, REGISTRATION & ABSTRACT SUBMISSION

The conference website is hosted on the server of the University of Milan within the ULIXES website at <u>http://www.ulixes.unimi.it</u>. Registration and abstract submission are made exclusively online under the section 'Subscription' of the website. For further information, please contact: Tel./Fax: +216-70527882, <u>ulixes.conference@unimi.it</u> or <u>ulixes.conference@gmail.com</u>.

ABSTRACTS & DEADLINES

The scientific committee invites to submit online abstracts for oral and poster presentations. Abstracts in English not exceeding 250 words will appear in the Conference proceeding book. Submission deadline: October 15th, 2013 (For All: this gives rooms to eventually extend the deadline to October 31st, 2013). Acceptance notification: November 16th, 2013

CONFERENCE FEES & PAYMENTS

Registration fee includes: Conference attendance, Conference documents, coffee breaks, lunches, dinners, hotel accommodation for three nights in a shared double room and special Gala dinner.

- Tunisian and South Mediterranean participants	280 TND	These are indicative fees. For details
- Participants from other countries	250 €	please see the conference website

Payment to the conference should be made by bank transfer by using the following coordinates: - Account holder: "Association Tunisienne d'Ecologie Microbienne" ATEM

- Bank: Banque Internationale Arabe de Tunisie (BIAT)
- Agency: BIAT Agency le Campus
- IBAN: TN59 0811 0010 0220 0366 1242
- SWIFT code: BIATTNTT
- Please mention "ULIXES Conference" along with the participant name in payment

FOR FURTHER INFORMATION: http://www.ulixes.unimi.it