

**Announcement of**  
**Microcokit Project TRAINING SCHOOL**  
*Methods for detecting and quantifying aquatic microbial communities*  
Rome, April 4-6, 2017  
IRSA-CNR, Area della Ricerca RM1



**Training Course Overview and Objectives**





**MicroCokit - *Microbial Community-based sequencing analysis linked to anthropogenic pressures: MicroCoKit to address the water quality* - is a FP7 Marie Curie Industry-Academia Partnerships and Pathways project funded under the FP7-PEOPLE-2012-IAPP call. It is a close cooperation between academic groups (CNR-IRSA-IT, EU-JRC, MBA-UK) and leading private enterprises (LGC-UK and NTBC-Spain).**

**The MicroCokit project, coordinated by CNR-IRSA, has been conceived to investigate and identify aquatic indicators based on microbial communities linked to anthropogenic pressures. It fosters the transfer of knowledge among the partners through seconded staff from academia to company and vice versa with the final goal to bring to the market faster, sensitive and robust tools to assess the water quality based on quantitative real time PCR (qPCR) and Fluorescence in situ Hybridization (FISH) techniques.**

**The three day Training Course is aimed to disseminate molecular bio-tools for the characterization of microbial communities under different anthropogenic pressures.**

**This informative course is beneficial for personnel involved with, or participating in, molecular biology-related and biotechnological research, other technical operations and basic/applied research.**

**The course will be presented by the Project Partners involved in the MicroCokit Marie Curie Action and will show molecular methods used to sample and to assess natural microbial communities.**

 <p><b>Who can attend?</b></p>	<p>✓ Young Researchers, PhD students and/or technical/policy-making staff with a background in microbiology, biochemistry, environmental chemistry</p>
 <p><b>Applications by 18 March 2017</b></p>	<p>To apply, please provide:</p> <ul style="list-style-type: none"> <li>✓ A cover letter with an expression of interest and a paragraph describing your relevant scientific activities related to this Training School;</li> <li>✓ Curriculum Vitae (CV).</li> </ul> <p>All applications should be submitted to:  <b>Anna Barra Caracciolo</b> (<a href="mailto:barracaracciolo@irsa.cnr.it">barracaracciolo@irsa.cnr.it</a>) or  <b>Paola Grenni</b> (<a href="mailto:grenni@irsa.cnr.it">grenni@irsa.cnr.it</a>) <b>by 16 March 2017 by e-mail.</b></p> <p>Successful applicants will be contacted directly by e-mail by 22 March 2017</p>
 <p><b>Selection Criteria</b></p>	<p>Applicants will be evaluated on the basis of two main criteria:</p> <ol style="list-style-type: none"> <li>1. CV and relevance of applicants' studies and research experience to the topics of the Training School programme;</li> <li>2. Application date</li> </ol>
 <p><b>Costs</b></p>	<p>Course fee: free, paid by the MicroCokit Project for <b>15-20 Participants</b></p> <p>Each applicant needs to pay travel and living costs</p> <p>Travel and accommodation must be arranged by each participant after the receipt of the acceptance e-mail.</p>

## *Draft Program*

### **Tuesday 4th April**

*IRSA-CNR Area della Ricerca RM1 - Via Salaria km 29,300*  
*Monterotondo—Rome*

**12:30 - 13:30** Registration

**13:30** Overview of the Marie Curie - MicroCokit Project, Introduction and Course objectives (Molecular methods to characterize natural microbial communities, overview on PCR-based methods and OMIC methods)

**14:00** Principles and basic considerations of qPCR/RT-qPCR

**14:30** Metagenomics: a closer look at microbial diversity

**15:00 - 15:20** Coffee break

**15:20** Direct Epifluorescence microscope methods

**15:50** Microarray

**16:30** Discussion and Questions

**17:00** end of the first day

### **Wednesday- 5th April**

*IRSA-CNR Area della Ricerca RM1 - Via Salaria km 29,300 Monterotondo*

**9.00 - 12.30 Laboratory demo**

Participants will be organised in small groups for the laboratory demonstrations

**Fluorescence *In Situ* Hybridization analysis (FISH)**

Practical considerations: primer design, assay optimisation and validation, normalisation, data analysis and troubleshooting of **qPCR/RT-qPCR**

**12.30 14.00 Lunch**

**14.00 – 18.00 Laboratory demo**

Participants will be organised in small groups for the laboratory demonstrations

**Fluorescence *In Situ* Hybridization analysis (FISH)**

Practical considerations: primer design, assay optimisation and validation, normalisation, data analysis and troubleshooting of **qPCR/RT-qPCR**.

**Thursday – 6 th April**

*IRSA-CNR Area della Ricerca RM1 - Via Salaria km 29,300 Monterotondo*

**9.00 – 12.30** Laboratory demo: **Microarray**

**12.30 – 13.00** Conclusive remarks and distribution of certificates

**14.00 – 14.30** Tutors are available for specific details and discussion about the techniques used in laboratory demos.

**List of main Teachers:**

**Anna Barra Caracciolo**, IRSA-CNR, (Rome, Italy)

**Paola Grenni**, IRSA-CNR, (Rome Italy)

**Linda Medlin** MBA (London, UK)

**Rebecca Sanders** (LGC, London)

**Gerardo Mengs** NTBC, (Madrid, Spain)

**Diana Conduto** EC-JRC (Ispra, Italy)

**Martina Di Lenola**, IRSA-CNR, (Rome, Italy)

**Fabio Riccobono**, Bio-Fab Research (Rome, Italy)



JOINT RESEARCH CENTRE  
Institute for Environment and Sustainability (IES)

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**Area Tecnica**

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