



MicroCokit Project TRAINING SCHOOL

Methods for detecting and quantifying aquatic microbial communities



Water Research Institute, National Research Council (IRSA-CNR),
Research Area RM1, Rome – Italy April 4th-6th, 2017



Training School participants: twenty-one young people from seven different EU and non-EU countries (United Kingdom, Sweden, Germany, Czech Republic, France, South Africa and Italy) took part enthusiastically in the Course.

MicroCokit Project - *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 involves 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) was conceived for research into and identification of aquatic indicators based on microbial communities and linked to anthropogenic pressures. It fosters the transfer of knowledge among the partners through seconded staff from academia to companies and vice versa with the final goal of bringing to the market faster, sensitive and robust tools for assessing water quality based on quantitative real time PCR (qPCR), Fluorescence in situ Hybridization (FISH) and Microarray techniques.

The three day **Training Course** aimed to disseminate the results and molecular bio-tools used for the characterization of microbial communities in the natural environment and under different anthropogenic pressures. IRSA-CNR made the Institute facilities available in order to provide a theoretical and practical course.

Training School Organizers and contact person: Anna Barra Caracciolo, Paola Grenni

On the 1st day of the Course, lectures were focused on molecular methods for characterizing natural microbial communities with particular regard to *qPCR/RT-qPCR*, *Direct Epifluorescence microscope methods* and *Microarray* and *OMIC* methods. The teachers were members of the MicroCokit partnership (Anna Barra Caracciolo and Paola Grenni from IRSA-CNR, Rebecca Sanders from LGC, D. Conduto from JRC, L. Medlin from MBA and G. Mengs from NTBC).



The 2nd and 3rd days consisted of interactive lab lessons involving teachers and students where the methodologies were shown step-by-step (e.g. sample processing, use of instruments, data elaboration). The *MarieCurie* Post-Docs (M.L. Saccà and M. Di Lenola) involved in the Project contributed to the lab training. The Training School was also promoted by SETAC ILB.

