European Network on Myalgic Encephalomyelitis/Chronic Fatigue Syndrome

COST action CA15111

Training School
"OMICS TECHNOLOGIES AND BIOINFORMATICS APPLICATIONS IN ME/CFS RESEARCH"

17 – 22 JULY 2017,

Residenza Universitaria BiomedicaCollegio S.Caterina, Via L. Giulotto, 12, Pavia, Italia

Program

Monday, 17 July 2017 **Introduction to the training school**:	
10.30	Welcome **R. Ardino,** President of the "Associazione Malati di CFS/AMCFS-Onlus"
11.00	Participants' presentations
12.00	**Dr. Lorenzo Lorusso,** Pitfalls in diagnostic procedure for CFS Lack of specific biomarkers and the consequences in diagnostics: the case of ME/CFS
12.00	Discussion
13.00	*Lunch*
14.30	**Prof. Enrica Capelli/Dr. Lorenzo Lorusso** Which biomarkers for CFS? I. microRNA II.microbial dysbioisis
16.00-17.00	Discussion

Tuesday, 18 July 2017	
Gene expression and miRNA	
9.00	**Prof. Enrica Capelli** Micro RNA sequencing and quantitation: which samples, which technological approaches?
11.00	Laboratory practical activities: RNA extraction (sample, methods, yields, quality check, sequencing flow chart)
13.00	*Lunch*
14.30-17.30	**Prof. Simone Marini** Bioinformatics of miRNA sequence data I.miRNA annotation II.Identification of new miRNA III. Statistical evaluation
Wednesday, 19 July 2017	
Analysis of miRNAs	
9.00	miRNA Laboratory practice activities: miRNA expression tests (type of tests, technologies…)
11.00	Discussion
13.00	*Lunch*
14.30	Laboratory practice activities: miRNA in biological fluids
16.00	Discussion
Thursday, 20 July 2017	
Analysis of miRNAs	
9.00	**Prof. Enrica Capelli/Dr. Valeria D'Argenio** miRNA libraries and sequencing procedures
11.00	**Prof. Enrica Capelli** DNA extraction (type of sample, technologies, strategies, metagenomics approaches)
13.00	*Lunch*

14.30-17.30	Microbiota and CFS Laboratory practice activities: metagenomics approaches to characterize microbial communities I.16s amplicon II.ITS 1 amplicon
Friday, 21 July 2017	
9.00	**Dr. Simona Panelli** I. microbial identification by culture independent methods II. disbyosis of bacteriome and pathological consequences
11.00	**Prof. Laura Baldo** Bioinformatics after amplicon sequencing
12.00	*Lunch*
14.30	**Dr. Simona Panelli** Mycoma characterization (principles and strategies)
16.00	**Prof. Laura Baldo** Statistical analysis of metagenomica data
Saturday, 22 July 2017	
9.00	**Prof. Enrica Capelli/ Dr. Lorenzo Lorusso** Biomarkers for ME/CFS: designing researches for biomarkers discovery using micro-RNA and/or microbial composition (each participant)
11.00	Evaluations and Discussion
12.00	Lunch
14.30	**Prof. Enrica Capelli/ Dr. Lorenzo Lorusso** Conclusive remarks.