

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 Biomedica Collegio 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	<i>Lunch</i>
14.30	Prof. Enrica Capelli/Dr. Lorenzo Lorusso Which biomarkers for CFS? I. microRNA II. microbial dysbiois
16.00-17.00	Discussion



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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	<i>Lunch</i>
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	<i>Lunch</i>
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	<i>Lunch</i>



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. disbiosis of bacteriome and pathological consequences
11.00	Prof. Laura Baldo Bioinformatics after amplicon sequencing
12.00	<i>Lunch</i>
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.

