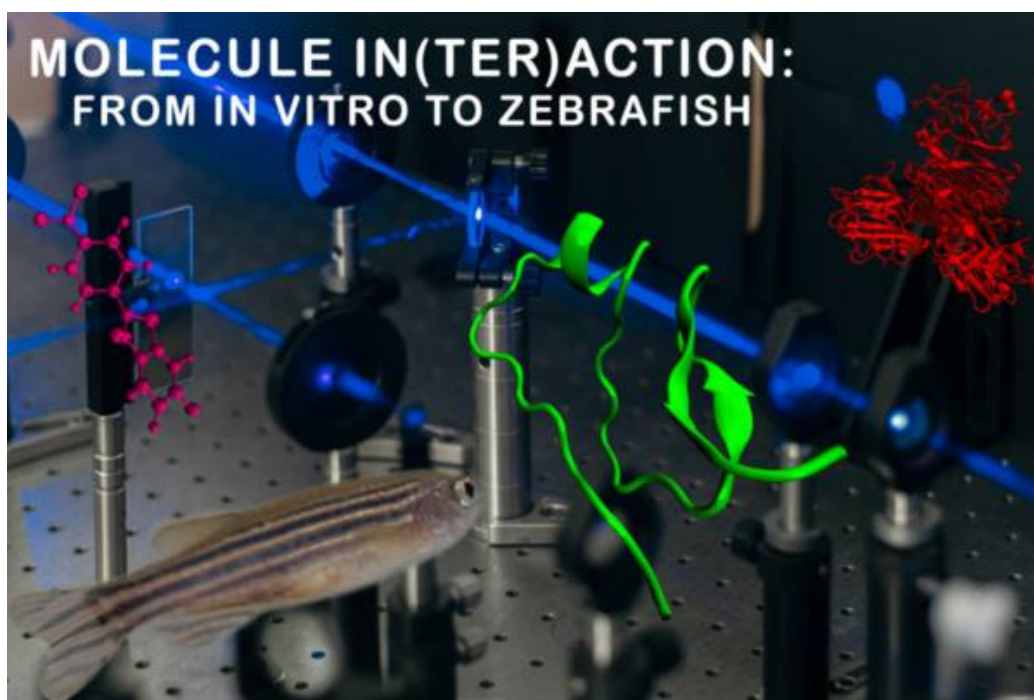




UNIVERSITÀ
DEGLI STUDI
DI PALERMO



Training School 2018

Palermo, 6 - 9 February 2018



Program

This interdisciplinary school will provide theoretical and practical training on state of the art methods to explore the Molecular Interactions, Structure and Conformation Dynamics.

Advanced Spectroscopy and Microscopy Techniques will be presented together with the use of the Zebrafish Model as a tool for live imaging and molecular biology analysis.

Day 1 - Tuesday, Febr 6th	
10:30	Registration and Welcome Address <u>Maurizio Leone</u> University of Palermo, Dept. of Physics and Chemistry & ATeN Center/CHAB
11:30	Opening <u>Vincenzo Cavalieri</u> University of Palermo, Dept. of Biological, Chemical and Pharmaceutical Sciences and Technologies & ATeN Center/CHAB
12:30	TOPIC: Introduction to the Zebrafish model <u>Valeria Vetri</u> University of Palermo, Dept. of Physics and Chemistry & ATeN Center/CHAB
13:30	TOPIC: Fluorescence Microscopy methods to study molecular interactions in live cells.
15:00	Lunch with teachers
17:00-19:00	Practical Session Zebrafish Lab. Practical Sessions (Students divided in small groups will perform experiment trials in the following labs) Pulsed EPR, Confocal Microscopy, NMR, Ultrafast Spectroscopy, Atomic Force Microscopy, Raman Microscopy, Nanotechnologies and Molecular Devices

Day 2 - Wednesday, Febr 7th

10:30

Kleitos Sokratous

Cyprus Institute of Neurology & Genetics Dean, The Cyprus School of Molecular Medicine.

TOPIC: mass spectrometry based proteomics to study protein-protein interactions

11:30

Alberto Boffi

Center for Life Nano Science, University La Sapienza, Istituto Italiano di Tecnologia, Roma

TOPIC: engineered proteins for drug delivery

12:30

TOPIC: Spectroscopic methods for protein-protein interaction

13:30

Lunch with teachers

15:00

Practical Session

Zebrafish Lab.

17:00-19:00

Practical Session (Students divided in small groups will perform experiments trials in the following labs)

Pulsed EPR, Confocal Microscopy, NMR, Ultrafast Spectroscopy, Atomic Force Microscopy, Raman Microscopy, Nanotechnologies and Molecular Devices

Day 3- Thursday, Febr 8th

10:30

Claudio M. Gomes

Department Chemistry and Biochemistry, FCUL Faculdade Ciências Universidade de Lisboa, Biosystems & Integrative Sciences Institute

TOPIC: Oxidation processes in amyloid formation and in neurodegenerative diseases.

11:30

Claudio Canale

Nanoscopy, Istituto italiano di Tecnologia, Genova

TOPIC: Cellular level nanomanipulation using atomic force microscope aided with superresolution imaging

12:30

Francesco Argenton

Department of Biology, University of Padua, Italy

TOPIC: Zebrafish and Disease

13:30

Lunch with teachers

15:00

Practical Session

Zebrafish Lab.

17:00-19:00

Practical Session (Students divided in small groups will perform experiments trials in the following labs)

Pulsed EPR, Confocal Microscopy, NMR, Ultrafast Spectroscopy, Atomic Force Microscopy, Raman Microscopy, Nanotechnologies and Molecular Devices

Day 4- Friday, Febr 9th

10:30

Giorgio Schirò

Institut de Biologie Structurale, IBS, Univ. Grenoble Alpes CNRS, Grenoble France

TOPIC: Ultrafast structural dynamics of proteins by X-FEL

11:30

Ludovico Silvestri

European Laboratory for Non-Linear Spectroscopy (LENS), Firenze - Italy

Advanced light sheet microscopy to investigate brain structure and function.

12:30

Bruno Pignataro*

University of Palermo, Dept. of Physics and Chemistry & ATeN Center/CHAB

TOPIC: Lab-on-a-chip: miniaturized systems for biotechnologies

13:00

Fabrizio Messina*

University of Palermo, Dept. of Physics and Chemistry & ATeN Center/CHAB

TOPIC: The interaction of photoexcited Carbon nanodots with metal ions disclosed down to the femtosecond scale

13:30

Lunch with teachers

15:00

Practical Session

Zebrafish Lab.

17:00-19:00

Practical Session (Students divided in small groups will perform experiments trials in the following labs)

Pulsed EPR, Confocal Microscopy, NMR, Ultrafast Spectroscopy, Atomic Force Microscopy, Raman Microscopy, Nanotechnologies and Molecular Devices