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Prof. **Maria Chiara Monti**

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**CV**

Prof. Monti awarded the degree in Chemistry by the University of Naples "Federico II" with final marks of 110/110 cum laude. In 2002, she was enrolled in the Ph.D. in Pharmaceutical Sciences at the University of Salerno. In 2005, she held two fellowships from the *European Commission Research Marie Curiè* and from *the Federation of European Biochemical Societies* to carry out her research at the Biomolecular Mass Spectrometry Department of Utrecht University under the supervision of Prof. A. Heck. From 2006 to 2023 she worked as researcher and as associate prof. of Organic Chemistry at the Department of Pharmacy (University of Salerno). Actually, she is full Prof. of Organic Chemistry at the Department of Pharmacy of the University of Naples, Federico II. Prof. Monti has been trained both in classical protein biochemistry and in bio-molecular mass spectrometry. Her research is focalized on the investigation of different aspects of protein-ligand interaction and chemical proteomics. A multi-disciplinary approach has been optimized by Prof. Monti combining mass spectrometry with limited proteolysis, alpha screen, surface plasmon resonance, fluorescence analyses and molecular dynamics. Her research activity is confirmed by around 130 publications on international magazines.

**DIFAR, Viale Cembrano 4, AULA C**
**Thursday May 16th 2024, 03-06 pm**
**Friday May17th 2024, 8.30-9.30 am**
**A type Course**

## *Proteomics-based approach in drug discovery*

**Abstract**

Proteomics is a large scale analysis of proteins and their post translational modifications during different stages of cell life.

It is based on mass spectrometry and it can be successfully applied in many fields of science.

During this couse, I will be focalized on the applications of top/middle down and botton up approaches in the drug discovery process, both exploring the global and functional proteomic approaches. Gel free and gel based examples will be shown together with the use of labeled and label-free strategies to quantify the proteome.

Regarding functional proteomics, a focus will be put on Activity Based Proteome Profiling (ABPP) and, more, on Compound Centric Chemical Proteomics (CCCP), going in the deep of several approaches to deconvolute the interactome of bioactive compounds. The Affinity Purification Mass Spectrometry (APMS), Drug Affinity Responsive Target Stability ones (DARTS and CETSA,) and LImited Proteolysis (LIP)-based strategies will be discussed among the others.

Information on the specific Team to be used will be provided in due time. Contact person: Angela Bisio (angela.bisio@unige.it)