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DEPARTMENT
OF PHARMACEUTICAL SCIENCES

DOCTORATE IN PHARMACEUTICAL SCIENCES

DELPHI STAR-LABS TRAINING PROGRAM

[...ut civitas Perusii sapientia valeat elucere...]

DOCTORATE IN PHARMACEUTICAL SCIENCES
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Partner of the European Pharmacoinformatic Initiative 
Partner of the Paul Ehrlich Euro-PhD Network

To be defined, 2023

Prof. Claudio Santi

DELPHI NMR-Lab Training

Based on the new NMR technological facilities implemented within DEPHI StarLabs project at the Department of Pharmaceutical Sciences a series of experimental sessions will be organized in order to illustrate the practical use of most useful techniques applicable at the early phase drug discovery and “omic” sciences. In particular the interest will be focused on the 1D- and 2D- experimental setup for structural elucidation, data processing and storing, techniques for metabonomic, quantitative analysis (qNMR) and Potency determination; insightMR Reaction monitoring and kinetic investigations.

To be defined, 2023

Prof. Roccoaldo Sardella

DELPHI LC-MS-Lab Training

The Course is intended to provide basic information about the execution of LC-MS and LC-MS/MS analyses both with the ESI and APCI sources. HRMS analyses of both low- and high-molecular weight compounds are intended to be carried out, with and without the inclusion of the device for ion-mobility investigations. A few selected examples of method optimization of the LC conditions, allowing improved MS detections, are intended to be treated in the practice. Moreover, some purification techniques/methods usually applied for the pre-treatment of the sample before the LC-MS analysis (using, for example, SPE cartridges) are intended to be exemplarily applied.

To be defined, 2023

Prof. Stefano GIOVAGNOLI

DELPHI Raman-Lab Training

The WITec alpha300 RA Raman/AFM confocal microscope is a tool that allows the chemical, structural and morphological analysis of a wide range of materials and systems with nanometric resolution. The technology is applied for imaging complex systems such as composite materials, both inorganic and organic, and biological systems. As part of the PhD in Pharmaceutical Sciences, DEPHI StarLabs project, it is proposed the presentation for educational purposes of two case studies concerning a commercial pharmaceutical product and a cell sample that will be analyzed from a structural and morphological point of view using Raman imaging and microscopy atomic force (AFM). The analytical problems and the information obtainable through this analysis will be illustrated. Furthermore, the type of information that can be obtained and the adequacy of the sample for the type of analysis will be discussed. Aspects on sample preparation methods and the requirements for a correct analysis will also be investigated.

Room and timetable, as well as any change, will be communicated to PhD students by e-mail and published on the website.