UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

The principle of 3R in Biomedical studies

2122-90R-MOD8

Title

THE PRINCIPLES OF 3RS IN BIOMEDICAL STUDIES

Teacher(s)

GABRIELLA NICOLINI

PARIDE MANTECCA

LUCA CRIPPA

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SILVIA KIRSTEN NICOLIS

Language

English

Short description

The course is aimed at introducing the student to the 3R principles (Replacement, Reduction & Refinement) in the biomedical studies and to provide basic and applied knowledge on the experimental models and instruments to be applied in the experimental research. The course will consist of 6 seminars:

-The 3R principles in the legislation regarding the animal experimentation: the European directive 2010/63 and the Italian DL 26/14. (Dott. Crippa)

-Statistical methods applied to the determination of the study dimension in lab experiments: theoretical and practical aspects (free software G-power). (Prof.ssa Antolini)

-Development of QSAR in silico models for the studies on the relationship between structure and molecular properties. (Prof. Ballabio)

-In vitro modeling of complex diseases: 2D and 3D cell systems to dissect cancer biology and to improve translational research (Prof. Ferdinando Chiaradonna)

- Genetic manipulation of in vitro cultured glioma stem cells identifies genes interfering with cell proliferation, that have effective tumor suppressor activity in vivo (Prof.ssa Silvia Kirtsen Nicolis)

-Vertebrate experimental models alternative to mammals: the use of zebrafish and Xenopus laevis in developmental biology and toxicology (Prof. Mantecca)

CFU / Hours

12

Teaching period

May-June