

# Course for Ph.D. students 40<sup>th</sup> cycle (Nov 2024 – Oct 2027)

## Alternative methods in preclinical drug testing (1 ECTS)

**Prof. Bertoni Simona**  
*University of Parma*

*Course language: English*

*Approximative scheduling: March – April 2025*

*The exact date and time will be announced by e-mail and on the website in the page “Active courses” for each session.*

*To attend the course please contact:*

**Prof. Simona Bertoni ([simona.bertoni@unipr.it](mailto:simona.bertoni@unipr.it))**

### Course description

The course focuses on the current *in vitro* cell-based methods and their most recent advances as alternative approaches to animal testing in drug discovery/development and toxicology. In particular, 3D cell cultures, comprising spheroids, organoids and organ-on-chip technology, will be described and critically discussed, highlighting challenges and limitations.

Examples of applications will be presented as preclinical models to evaluate drugs safety/efficacy in various target organs and in different patho-physiological conditions (e.g. monogenic disorders, cancer, IBD).