

SCIENTIFIC RESEARCH AND THE 3R'S PRINCIPLE

The interdisciplinary course has been designed with the objective of providing students with a comprehensive understanding of the ethical principles that underpin the use of animals in scientific experimentation, as set out in the 3Rs framework. The 3Rs are an acronym representing three fundamental principles of ethical animal research: reduction, refinement and replacement. The first principle, reduction, involves the minimisation of animal usage in a given study. The three words encapsulate the ethical principles that researchers must adhere to when conducting animal experiments. The course's objective is to present the principal innovative applications of research within the 3Rs, with the aim of promoting responsible experimentation. (5 CFU)

PROGRAM

Monday 15 June 2026 - proff. M.L Amadio, C. Lanni, and L. Visai, University of Pavia

10.00-12.00 AM: “3R: Reduction, Refinement and Replacement and their applications”

Tuesday 16 June 2026 - Prof. Daniela Ovadia, University of Pavia

10.00-12.00 AM: Part 1 “Basic principles of ethics in animal research “

14.00-16.00 PM: Part 2 “Basic principles of ethics in animal research “

Wednesday 17 June 2026 - Prof. Andrea Ferrigno, University of Pavia

10.00-12.00 AM: Part 1 “Animal Experimentation: Legislation, 3Rs Principles, and Statistical Reduction”

14.00-16.00 PM: Part 2 “Animal Experimentation: Legislation, 3Rs Principles, and Statistical Reduction”

Thursday 18 June 2026

10.00-12.00 AM: Prof. Virginie Sottile, University of Pavia “3D models of tissue development ex vivo”

14.00-16.00 AM: Prof. Gabriele Ceccarelli, University of Pavia “Current tissue engineering approaches for mesodermal tissue regeneration: an overview”

Monday 22 June 2026

10.00-12.00 AM: Prof. Nora Bloise, University of Pavia “3D models in nanomedicine research”

14.00- 16.00 AM: Prof. Alessandro Caimi, University of Pavia “3D modeling, In-silico trials, and digital twins for 3R”

Tuesday 23 June 2026 – 3 international speakers

Annalisa Gastaldello (European Commission - Joint Research Centre – System Toxicology Unit, Ispra, Varese)

9.15-10.15 AM: “Innovative models in biomedical research”

Tania De Miranda Capelo ((European Commission - Joint Research Centre – Ispra, Varese)

10.15-11.15 AM: “3D models in cancer research”

Jeffrey Brown (Ethical Treatment of Animals (PETA) Foundation. London, UK)

11.15-12.15 AM: “What to know about EMA, EFSA, and replacing animals in drug and food testing”