Animal welfare, animal models and their alternatives

Organization: Université de Tours (UT), INRAE and Oniris

Teaching unit coordinator: Stéphanie GERMON
Position: Assistant Professor **(PharmD, PhD)**

Teaching unit outline
This module will focus on animal models and their use in infectious or non infectious diseases with a strong emphasis on animal welfare and the ethical issues. Moreover, students will learn about bioengineering and *in vitro* models for limiting the use of live animals in compliance with the 3Rs (Reduce, Replace, Refine) principles.

Topics addressed:
Animal Welfare
Comparative anatomy (mice, fish, sheep, rabbit)
Animal models for vectorized diseases
Fish and zebrafish models : imaging
Animal models for such as cancer, atopy, heart disease and neurodegeneration.
Alternatives (explants, organoids, embryonated eggs, xenopus eggs, blood pockets for insect feedings, ex vivo experiments)

ECTS	Lectures	Tutorials	Practical work	Digital learning	Personal work
3	14 hours	5 hours	16 hours		40 hours

Assessment method (to be confirmed)

Laboratory notebook - reports (50%)

Written exam (50%)