



## LABORATORY ANIMAL SCIENCE

February 14<sup>th</sup> to 25<sup>th</sup>, 2022 ::: 17<sup>th</sup> Edition

### Week 1

Day	Start	End	Theme	Faculty	Room
14-02-2022	09:00	09:30	LAS Course Opening	A. Miranda, M. Castelhana-Carlos, M. Correia-Neves	G2.02
	09:30	10:30	History of animal use, ethics and the 3Rs - Nuno Franco	N. Franco	G2.02
	11:00	12:00	A case of unethical treatment of laboratory animals (video and discussion) - Nuno Franco	M. Castelhana-Carlos	G2.02
	12:00	13:00	History of animal use, ethics and the 3Rs - Nuno Franco	N. Franco	G2.02
	14:30	16:00	Harm-benefit analysis, severity classification and culture of care	N. Franco	G2.02
	16:00	17:15	Basic biology of rodents	A. Miranda	G2.02
	17:30	18:30	Group tasks (introduction)	A. Miranda, M. Castelhana-Carlos, M. Correia-Neves	G2.02
15-02-2022	09:00	10:15	Good welfare - Good Science: the influence of husbandry and care on experimental outcome	V. Baumans	G2.02
	10:45	12:00	Refinement of experimental procedures	V. Baumans	G2.02
	12:00	13:00	Husbandry routines and animal welfare	M. Castelhana-Carlos	G2.02
	14:30	15:30	Health status and animal facility barriers	A. Miranda	G2.02
	15:30	16:30	Health monitoring and diseases of lab animals	A. Miranda	G2.02
	17:00	18:00	Human health hazards and safe practices in the animal facilities	S. Pereira	G2.02
	18:00	19:00	Handling restraint and identification	M. Castelhana-Carlos	G2.02
16-02-2022	09:00	10:15	National Legislation	A. P. Martins	G2.02
	10:45	11:45	National and international legal issues	A. P. Martins	G2.02
	11:45	12:15	Introduction to QuizzOne (preparation for exam)	M. Correia-Neves	A2.08
	13:30	14:30	Minimally invasive procedures - administration of substances (theory)	M. Castelhana-Carlos	G2.02
	14:30	16:45	Human methods of killing - class B	M. Correia-Neves	G2.02
	14:30	16:45	Handling and restraint (practical 1) - class A	A. Miranda, M. Castelhana-Carlos	Lab I2.04
	17:00	19:15	Human methods of killing - class A	M. Correia-Neves	G2.02
	17:00	19:15	Handling and restraint (practical 1) - class B	A. Miranda, M. Castelhana-Carlos	Lab I2.04
17-02-2022	09:00	11:30	Project preparation - exercises - class A	M. Correia-Neves	A2.06
	09:00	09:30	Demonstration (practical 2) - class B	A. Miranda, M. Castelhana-Carlos	Lab I2.04
	09:30	11:30	Minimally invasive procedures: administration of substances (practical 2) - class B	A. Miranda, C. Cunha, M. Castelhana-Carlos	Lab I2.04
	11:45	13:15	Breeding and management of genetically altered animals	P. Maciel	G2.02
	14:30	15:30	Minimally invasive procedures - sampling of biological fluids and tissues (theory)	M. Castelhana-Carlos	G2.02
	15:30	18:00	Project preparation - exercises - class B	M. Correia-Neves	A2.06
	15:30	16:00	Demonstration (practical 2) - class A	A. Miranda, M. Castelhana-Carlos	Lab I2.04
	16:00	18:00	Minimally invasive procedures: administration of substances (practical 2) - class A	A. Miranda, C. Cunha, M. Castelhana-Carlos	Lab I2.04
18-02-2022	09:00	11:00	Design of procedures and projects (level 1)	H. Almeida, P. Costa	A2.08
	11:15	13:00	Design of procedures and projects (level 1)	H. Almeida, P. Costa	A2.08
	14:00	15:00	Recognition of pain, suffering and distress	A. Miranda	G2.02
	15:00	17:00	Project preparation - self-study - class B	M. Correia-Neves	G2.02
	15:00	17:00	Minimally invasive procedures: sampling (practical 3) - class A	A. Miranda, C. Cunha, M. Castelhana-Carlos	Lab I2.04
	17:15	19:15	Project preparation - self-study - class A	M. Correia-Neves	G2.02
	17:15	19:15	Minimally invasive procedures: sampling (practical 3) - class B	A. Miranda, C. Cunha, M. Castelhana-Carlos	Lab I2.04

### Week 2

Day	Start	End	Theme	Faculty	Room
21-02-2022	09:00	10:45	GLP and the ARRIVE guidelines	M. Correia-Neves	G2.02
	11:00	12:30	Principles and techniques of Surgery and Microsurgery	M. Castelhana-Carlos	G2.02
	14:00	16:00	EXAM - week 1 and legislation	M. Correia-Neves	A2.08
	14:00	16:00	Ethics, animal welfare and the 3Rs (level 2)	N. Franco	G2.02
	16:00	18:00	Project preparation / self-study	M. Correia-Neves	G2.02
22-02-2022	09:00	10:30	Implementing the 3Rs and using alternatives	M. Castelhana-Carlos	G2.02
	11:00	12:30	Anaesthesia for minor procedures in rodents	A. Miranda	G2.02
	14:00	15:00	Colony management and genetic drifting	M. Castelhana-Carlos	A0.03
	15:15	16:15	Welfare assessment	A. Miranda	G2.02
	16:15	18:00	Project preparation / self-study	M. Correia-Neves	G2.02
23-02-2022	09:00	10:00	Animal facilities Manual	M. Castelhana-Carlos	G2.02
	10:30	12:30	Visit to the Central Animal Facility	A. Miranda, M. Castelhana-Carlos	
	14:00	16:30	Study design and Statistics	H. Almeida, P. Costa	A2.08
	16:30	18:00	Project preparation / self-study	M. Correia-Neves	G2.02
24-02-2022	09:00	12:00	Project preparation / self-study	M. Correia-Neves	G2.02
	14:00	16:00	Examination	A. Miranda, M. Castelhana-Carlos, M. Correia-Neves	A2.08
	16:00	18:00	Project preparation / self-study	M. Correia-Neves	G2.02
25-02-2022	13:30	17:00	Project presentation and discussion	A. Miranda, C. Nóbrega, H. Almeida, M. Castelhana-Carlos, M. Correia-Neves	G2.02
	17:00	17:30	Course evaluation	A. Miranda, M. Castelhana-Carlos, M. Correia-Neves	G2.02

**For the students enrolled in the MSc and PhD programs of the School of Medicine the course includes 4 additional weeks for practical training under supervision.**