

Report of ICLAS Visiting Grant for Professional Development in LAS in Europe from Anastasia Tsingotjidou, DVM, PhD.

**Hosting Institution:** Laboratory of Physiology, Department of Veterinary Medical Sciences, University of Bologna, Italy

Date of grant approval: 22 March 2023

Date of visit: 09-20 September 2023

The Laboratory of Physiology, Department of Veterinary Medical Sciences, University of Bologna in Italy holds a pig facility and its members perform research for years on different pig strains. My acquaintance with all issues involved in this facility was one of the reasons to visit this specific facility.

Hence, I was introduced to the handling, environment enrichment, and behavior of minipigs and other commercial pig strains. We also performed the daily training of the pigs (both male and female) to accomplish tasks, such as walking to the balance by themselves and/or go to the step for milking.

We performed pig anesthesia including pre-anesthesia with i.m. injection of Tiletamine/zolazepam into the splenius muscle of the head, immediately behind the animal's ear with a syringe connected to an extension. Following pre medication, induction of general anesthesia was performed with inhalation induction of Sevoflurane (8%), delivered in a 1:1 mixture of O<sub>2</sub> and medical air using a pediatric anesthetic machine. Intubation was performed using a laryngoscope and the suitable tracheal tube. Catheterization of the auricular vein with conventional and over-wire catheter was also performed. The rest of the procedures till the animal is able to stay in quadrupedal position were also discussed.

A short visit to the anesthesiology department of companion animals with a member of the clinics has verified new methods of teaching surgery to the students of Veterinary Medicine, with the use of a screen into the operation room.

We have also visited the avian research facility with isolation cages and HEPA filters. We had a fruitful discussion regarding environment enrichment for chickens and other birds, including zebra finches.

On another note, a visit to the existing mouse facility was informative especially regarding a progeric model. We performed phenotyping of the experimental mice and checked different characteristics such as gait disorders, alopecia, kyphosis, and other eye related symptoms (such as microphthalmia, cataracts, cornea deficits).

We also tried rabbit anesthesia using a restrainer and iv injections into the auricular vein. We used different anesthetics including aflaxan and zoletil 100 with and without medetomidine and we performed techniques for cardiac puncture.

The knowledge gained from all above will be used to refinement of the protocols used in our facility and to teach the students of our School with techniques for handling, training, and anesthesia of laboratory animals.

Last but not least, I attended three presentations of PhD candidates: two for the milking of the sow, the epithelial barrier, and the amoxicillin passage in the milk and its effect on the neonate gut microbiota, and one on mitochondria of cardiac cells; with a special technique that could prevent a heart infarct and the death of the cells (the cell membrane comes inside-out, and  $Ca^{++}$  pump is preserved). Some information on the structure of the central nervous system in octopuses was also discussed with another PhD student.

I would like to express my deepest thanks to the personnel of the Lab, along with the PhD students that made my stay to the Lab unforgettable.

I remain at your disposal should you need any additional information.

Sincerely yours,

Anastasia Tsingotjidou, DVM, PhD.

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