

BIOSAFETY MANUAL

LABDOG

**ANIMAL PHYSIOLOGY AND BEHAVIOR
RESEARCH UNIT**

Research Unit Director: **Prof. Angelo Quaranta**

This manual contains biosafety procedures to be applied to the LABDOG and to the external fenced area.

MAIN SAFETY STANDARDS

All work activities commonly carried out expose the operator to specific risks which it is necessary to know for prevention. Each operator is required to comply with the safety measures indicated in the manual.

General rules

- The laboratory is everyone's property, so it must be respected as own property.
- The access to teaching and research laboratories is allowed to the staff, and only to students, PhD students, research fellows, contractors, or equivalent figures, expressly authorized, after appropriate training and signing, for acknowledgment, of the safety procedures adopted in the laboratories of the Department.
- Anyone should work alone in the laboratory.
- The laboratory must be kept clean, tidy and free from any object that is not relevant to the work.
- Smoking, eating, drinking and keeping food or tobacco is prohibited in all laboratories.
- Respect the rules of hygiene, wash the hands frequently and whenever in contact with animals.
- Collect, separate and properly dispose waste produced in laboratories; it is forbidden to throw them down the drains or in the undifferentiated waste container.
- Do not obstruct fire and rescue equipment. Do not obstruct or block emergency exits.
- Do not obstruct electrical panels.
- Access to unauthorized personnel is prohibited.
- The use of coats inside the rooms pertaining to the LabDog and its external area is not necessary since, according to recent literature, its presence influences the physiological and behavioral parameters of dogs and cats (white coat effect [1-3]). This is due to the association with previous unpleasant events (veterinary visits and related stressful handling procedures).
- Clothing in the LabDog must be appropriate. Footwear must always be closed (sandals cannot be worn) due to the risk of cuts or leakage of liquids.
- Clothing for accessing the external area must be adequate, including long trousers and closed shoes to avoid insect bites or harms by plants. Moreover, it is necessary to evaluate the risk of damage from heat, especially when the external temperature and humidity are particularly high since it may cause even serious damages such as heatstroke. For this reason, students must wear appropriate clothing in case of high temperatures (sun hat, light clothing) and bring water.

The "heat stroke" can evolve rapidly and the first warning signs can be subtle and insidious: recognizing them and making an early diagnosis can save life. Early warning signs of heat stroke may include: irritability, confusion, aggression, emotional instability, irrationality, and loss of

clarity. Dizziness, excessive fatigue and vomiting may be additional symptoms. Tremors and goosebumps indicate a reduction in skin circulation, predisposing to a rapid increase in temperature. Often the person begins to hyperventilate to reduce the heat. Incoordination and balance are later signs, followed by collapse with loss of consciousness and/or coma. In the collapse phase, body temperature can reach or exceed 42.2°C.

WHAT TO DO: Call the First Aid Officer immediately and call 118. Assist the worker/student until help arrives: in the meantime, move the person to a shade and cool place, lying down in case of dizziness, on his side in case of nausea, keep the person in absolute rest; not remove clothes; cool the skin with fresh water sponges, especially on the forehead, neck and extremities or apply ice, ventilate and spray water.

- For the activities to measure physiological parameters of the animals kept in the stables, which takes place during the practical activities of Physiology 2 course, students must follow the dress code required for the entrance and staying in the stables.
- Dogs taken for behavioural consultation or involved in research activities are healthy, as certified by the pets' health card provided by the owners.
- Before entering the LabDog rooms, the laboratory director, Prof. Quaranta, as a veterinary behaviourist, will carry out an assessment of the dog in the fenced external area. Students who attend the behavioral assessments as a practical activity of Behavioral problems of cats and dogs course, stand safely outside the enclosure. If the animal shows aggressive behavior that may constitute a risk for operators and students, the use of a muzzle to access inside the rooms of the LabDog will be required. The dogs will therefore be led on a leash to the rooms used for research and specialist consultation, where they will remain with the owner. Depending on the activities to be carried out, they can be led on a leash or left free in the rooms.
- Only calm dogs showing any behavioral problems will be involved in practical activities with students for the courses of Physiology 1, Physiology 2 and Ethology, which will take place in the external area of the LabDog. Students will be able to access the fenced area in small groups (maximum 5 people) where they will be the dog and owner together with the staff.
- Cats taken for behavioural consultations are kept in cat carriers to access to the LabDog. Once in the Behavioural Consultation room, they are let free to exit and explore the environment and eventually interact with owner or staff members. Consultations can be recorded and later used in the classroom for evaluation in the Behavioural problems of cats and dogs course.
- It is mandatory to observe the strictest silence during the execution of the behavioral tests and evaluations.

Crowding in the laboratories

1. Avoid crowding of operators or other people in the laboratories.
2. Students access to the Lab in small groups (5 person each).
2. In exceptional cases, coordinate the movements with those of the other performers.

Information and training

1. The laboratory director of staff members has the obligation to instruct the personnel belonging to the laboratory of competence including students, thesis students, trainees, scholarship holders and other unstructured personnel. The instruction carried out must be in relation to the activity to be carried out.
2. The biosafety manual must be consulted by anyone who has to work and enter in the laboratory.
3. All structured and unstructured personnel belonging to the laboratory must constantly refer to the Lab Director.
4. Observe all the operating safety standards in force and use all means of collective and individual protection.
5. Immediately inform the director of any electrical problems of the electronic devices kept in the Lab.
6. The unstructured personnel belonging to the laboratory must actively collaborate with the structured personnel in order to keep the established safety system efficient.
7. Anyone who access to the lab must read these biosafety manual before entering the laboratories.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

By personal protective equipment we mean any equipment intended to be worn and held by workers and students in order to protect them from risks that may threaten their safety or health during work, as well as any complement or accessory intended for this purpose.

The use of PPE is regulated according to the aforementioned principles.

WASHING OF HANDS

Proper hand washing is essential to minimize the risk of contamination before and after work procedures.

Hands should be washed:

- Before and after work procedures
- After handling crops or biological materials
- Before and after the break (e.g. meals)

Proper hand washing procedure:

- Wet your hands and forearm with warm water
- Deposit soap in the palm of your hand
- Lather and scrub hands beyond the wrist for 10-30 seconds, cleaning thoroughly between fingers and nails
- Rinse well until the soap disappears

- Dry with absorbent paper.

If it is not possible to wash your hands immediately, use alcohol or other sanitizers and wash them as soon as possible.

Use of a sanitizer (alcohol based):

- Fill the palm of your hand with a small amount of disinfectant and rub it into the other hand, including the space between the fingers and nails, until the disinfectant dries
- Repeat the operation with the other hand

In general, laboratory personnel (including students, trainees, doctoral students, etc.) must be invited to have short, tidy nails and not to wear rings or bracelets when interacting with animals (to minimize contamination and promote hand hygiene),

BEHAVIOR TO BE FOLLOWED IN THE EVENT OF AN ACCIDENT

In the event of an accident, immediately follow the rules contained in the emergency plan which all laboratory personnel must have read. If the accident is minor and in any case as a first aid action, act according to these instructions:

1. Remove contaminated clothing and any PPE using the necessary precautions
2. If necessary, use the medication box (placed in the Behavioural Consultations room)
3. Follow the Emergency Plan.

REFERENCE FIGURES AND USEFUL NUMBERS:

STRUCTURE MANAGER: Direttore del Dipartimento Prof. Nicola Decaro
080 4679832

nicola.decaro@uniba.it

VIGILI DEL FUOCO: 115

EMERGENCY SERVICE (pronto intervento) 112

Fire managers: Sig. Rosa Leone; Sig. Stefano Sportelli; Dott. Carlo Armenise; Sig. Arturo Gentile, Sig. Vitoantonio Procino, Prof. Giulio Aiudi, Prof. Giuseppe Passantino, Prof. Nicola Zizzo.

First aid workers: Dott.ssa Giovanna Calzaretti, Sig. Rosa Leone, Dott.ssa Costantina Desario, Dott. Francesco Caprio.

U.O. Laboratori di Sicurezza degli Alimenti, di Patologia Aviare, di Anatomia Patologica/Oncologia e di Anatomia Normale. Responsabile: Sig.ra Rosa Leone 080 467 9934
rosa.leone@uniba.it

U.O. Laboratori di Malattie Infettive, Parassitologia/Micologia. Responsabile: Dott.ssa Costantina Desario. 080 467 9840 costantina.desario@uniba.it

U.O. Laboratori di Farmacologia/Tossicologia Veterinaria, di Zootecnia e di Fisiologia e Comportamento Animale. Responsabile: Dott.ssa Giovanna Calzaretti 080 467 9831
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