The high standards achieved by the CNIO regarding the use and care of animals for experimentation are recognised by the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) International, a private non-profit organisation that promotes the humane treatment of animals in science through voluntary accreditation and assessment programmes. AAALAC accreditation, considered one of the top international recognitions in this field, was first obtained in October 2016. Since 2022, the Animal Facility’s Head has served as an AAALAC AdHoc Consultant, providing assistance to members of the Council on Accreditation in evaluating animal care and use programmes.

In accordance with our commitment to maintain the highest possible standards in relation to animal research, the CNIO joined the Agreement on Openness on Animal Research, promoted by the Federation of Scientific Societies in Spain (CSICs) in collaboration with the European Animal Research Association (IARA) and the Spanish Society for Laboratory Animal Sciences (SECA), launched in September 2016. An institutional statement on the use of animals for research can be consulted on the CNIO website.

In 2023, the Head of the Animal Facility was elected Coordinator of the Spanish Animal Welfare Body Network (ROEBA) and appointed as the Spanish contact person for the European Network of Animal Welfare Bodies (ENAWB). This European network, endorsed by ELASA and receiving practical support from the European Commission, is dedicated to promoting a culture of care with the overarching goal of fostering ethical and humane treatment of animals. Also, the Assistant Veterinarian was recently elected Treasurer of SECAL, the most prominent scientific society in the field of laboratory animals in Spain.

Our Animal Facility has the capacity to house 19,000 type IIL cages. Our mouse lines are maintained and bred in the Facility’s barrier area, which assures Specific Pathogen Free (SPF) health status. Microbiological and environmental parameters in the animal areas are constantly monitored. We also have an additional area with a capacity for 1,800 type II cages for the use of non-replicative strains of adenovirus, lentivirus, and retrovirus, as well as for xenograft models. In this area, mice are housed in ventilated racks with integration of Individually Ventilated Caging (IVC) units in the building ventilation systems. Mice are always manipulated in Type II biosafety cabinets.

Daily operations and husbandry procedures are highly automated to safeguard our personnel from any associated risks. Robotic devices perform the potentially hazardous tasks such as the processing of dirty bedding, the washing and filling of cages and bottles, etc. These automated systems maximise productivity and ensure the quality standards. All records concerning breeding protocols and animal inventory are computerised and stored in a customised web-based application accessible via the CNIO intranet.

The Animal Facility currently harbours nearly 40,000 mice representing about 3,800 genetically modified mouse lines, either as live animals or as cryopreserved embryos or sperm, carrying close to 500 gene targeted alleles and more than 300 transgenic integrations. The Facility also provides access to more than 90 tool strains, including constitutive and inducible Cre strains, Flp strains, reporter strains, and others.

The Animal Facility offers the possibility of running a broad spectrum of experimental procedures in the premises, including the use of gamma irradiation, UV light and volatile carcinogenic agents, as well as surgical procedures, behavioural studies, non-invasive blood pressure measurement, a laboratory animal monitoring system (Oxylet) that enables tracking a number of physiological parameters for phenotyping mouse models, and a climate chamber (HPPlife) that allows mice to be kept under controlled environmental conditions of temperature, humidity, and light, beyond the standard conditions established at the SPF barrier area.

Additionally, the monitoring of the mouse models through non-invasive imaging technologies is provided by the Molecular Imaging Unit. Likewise, the work of the Mouse Genome Editing Unit is performed in a laboratory inside the SPF barrier. Finally, the necropsy laboratory is equipped with instruments for the haematological and biochemical analysis of blood and urine, which complement the pathology and clinical diagnostics.

The Animal Facility’s primary responsibility is the supply, husbandry and quality control of laboratory animals used by the Research Programmes in their experimental protocols. The strict compliance to national, EU, and international recommendations regarding the use and care of animals in research is of paramount importance to the CNIO.

The Animal Facility provides CNIO researchers with all the support required to work with mouse models, in compliance with the highest standards of animal care and welfare. The Animal Facility was established to assist researchers in the development and analysis of in vivo models as tools in cancer research. We are currently collaborating with as many as 30 CNIO Research Groups, Sections, and Units.

All the work carried out by the Animal Facility complies with both national and EU legislation – RD55/2013 and EU Directive 2010/63/UE – for the protection of animals used for research experimentation and other scientific purposes. Experimental procedures and projects are reviewed by the Research Ethics and Animal Welfare Committee of the Instituto de Salud Carlos III, as well as by the Institutional Animal Care and Use Committee (IACUC). The Animal Facility offers CNIO’s new staff a course focused on work with laboratory animals, complementary to the online courses that are a legal requisite (Orden ECC/566/2015) to gain access to the facility. In 2023, a course was established in collaboration with the SECAL, aimed to provide sustained training for users, ensuring improved management of animals and compliance with the regulation.

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