ANIMAL FACILITY SERVICE (SA-BTC)

The Biomedical Technology Centre (BTC) animal facility is a centre that is authorised by the Community of Madrid to breed and house various species of rodents, including Type I genetically modified organisms

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Technological Offers type

Technological scientific services

Research and innovation areas

- Health and Wellbeing

ODS

Available from: 2012

Where?

Advanced Structural Materials and Nanomaterials Center for Biomedical Technology

Keywords: | animal experimentation | animal models | mice | pathology models | rodents | stabling | transgenic

ANIMAL FACILITY SERVICE

The animal facility at the Biomedical Technology Centre (BTC) is a centre authorised by the Community of Madrid General Directorate for Agriculture and Livestock as a user and breeding centre for various species of rodents, under number ES280790002070. It is also authorised by the same directorate general, under number A/ES/17/I-04 dated 23/03/2017, to carry out confined use activities with no, or insignificant, risk genetically modified organisms (type I).

The use of the installations and their facilities is carried out under Directive 2010/63/EU of the European Parliament and of the Council, and regulated in Spain by Royal Decree 53/2013, of 1 February, which established the basic rules applicable to the protection of animals used in experiments and for other scientific purposes, including teaching, Act 32/2007, of 7 November, and, at regional level, by Decree 176/1997 regulating the registration of Economic Livestock Activities in the Community of Madrid.

Description of the services offered

The services offered are as follows:

– Colony accommodation and management

– Supply of animals

– Experiment equipment and services rental

The Animal Facility can make Working Procedures for the different equipment and techniques available at the Animal Facility available to interested parties.
Handling animals at the laboratory will take the basic principles into account:
– Prevent unnecessary suffering for the animals.
– Preventing risks for the handler.
Handling laboratory animals will be done in accordance with the specific technology for each species, and always within the current legal regulations, by skilled, legally authorised staff.

Catalogue of species housed:
1. 5xFAD genetically modified mice, to emulate Alzheimer’s disease.
2. Genetically modified mice that express green fluorescent protein (EGFP).
3. CD-1 gene pool wild mice
4. C57B16 gene pool wild mice
Other species that can be housed:
Currently, given the size and available space at the animal facility, and that the facilities have also been approved to carry out confined use activities with no risk genetically modified organisms, it is only planned to breed, house and use wild and/or genetically modified mice.

Needs requested and applications

The aim of the BTC Animal Facility is to provide the facilities, material and equipment to the university community and other research centres or external users needed to carry out research projects and/or teaching work that require the use of experimental animals, with prior authorisation from the Universidad Politécnica de Madrid¿s Ethics Committee and the relevant competent body in the Community of Madrid.

Sector or area of application

Research

Differential skills

The facilities offered at the animal facility are housing/accommodating animals, supply of animals, and rental of equipment and services for experiments.

1. **Colony accommodation and management**

The animal facility provides researchers with animal housing in cages with free access to food and water, under a system of conventional care, with frequent changes of feed and wood shavings, and frequent health checks and monitoring, in atmospheres of

environmental enrichment, and including the animals¿ euthanasia, having notified the researcher beforehand, when necessary (endpoint criteria).

In the case of genetically modified organisms, the animal facility does not offer animal genotyping services.

2. **Supply of animals**

The animal facility can regularly supply researchers with wild animals (mice) from two different strains which are widely used in animal testing, strain C57BI6 and strain CD-1, depending on needs and the colonies¿ status. The animals will be supplied to researchers for specific studies, and the animal facility will provide their housing and care in cages during the study period. These supplies may be extended to genetically modified animals (GMOs) that are currently declared and housed at the animal facility, with authorisation from the Ministry of Agriculture, Fisheries, Food and the Environment dated 15 February 2017. The GMOs may be supplied to other researchers with prior authorisation from the head researcher responsible for each type of GMO declared. The inclusion of new GMOs by BTC or external researchers must be studied by BTC¿s management. In the event of authorisation, at any event, and as provided for in article 17.1 of Royal Decree 178/2004, a human health and environmental risk assessment must be carried out, which will be held on an internal register which must be provided to the competent body if requested.

3. **Experiment equipment and services rental**

To facilitate researchers¿ work with the animals housed at the animal facility, the animal facility offers the following services:

a) Equipment rental (anaesthesia, euthanasia and tissue fixation pump)

B) Surgical services: administering anaesthetic; tissue and organ fixation; intravenous and intraperitoneal inoculations; blood, tissue and organ extraction; embryo extraction; and tissue and organ dissection.

Previous references for provision of services

The SA-BTC provides its services to many research groups at the centre. Its facilities have also been used in research projects requiring animal testing in collaboration with various universities, hospitals and the CSIC

Equipment description

The SA-BTC has all the materials needed to maintain and house the animal colonies (CD1 and C57BI6) and the various colonies of transgenic animals. To do so, it has numerous racks, cages and all the equipment needed to clean and sterilise them.

The BTC animal facility has an area of 55 m²; the total usable area indoors is 30 m², laid out as follows:
– Two separate areas for rodent housing.
– Quarantine area.
– Hall.
– Small store cupboard with the capacity for one week¿s consumables.
– Laboratory experiments area for surgery and behaviour studies.
– Facilities area.

The facility provides a controlled atmosphere for the animals, with regular controls of diet, water, temperature, air, natural light/dark cycle, housing and handling conditions, as well as control of the microbiological
and genetic quality of the animals used in routine experiments and regular health checks.

Request for service

In order to use the BTC animal facility it is necessary to meet the following three conditions:

Condition 1. To be duly accredited by the competent body, according to Order ECC/566/2015, and have training in the know-how and skills needed to carry out some of the following functions in relation to experiment animals alone (without supervision):

– Animal care

– Animal euthanasia

– Carrying out procedures

– Designing procedures

– Taking on the responsibility of in-situ supervision of the well-being and care of the animals. Recognition of the training is an essential requirement for carrying out the aforementioned tasks independently, and must be granted by the competent body taking into account the First transitory provision of Order ECC/566/2015, which sets out recognition of the categories and the duties to be assumed by each category. People who have passed a recognised theory course on the modules for each duty/skill may also use the animal facility. In this case, such people may commence work prior to obtaining the qualification, but under the supervision of a person at the work centre. The qualification will be obtained when the applicant has acquired the skills to work on their own, that is to say, has passed the supervision period and is certified as having done so by the centre, as provided for in Order ECC/566/2015.

Condition 2. It will be necessary to provide documentary proof that the activities the user is going to carry out will be done within the framework of a project that has the relevant Community of Madrid authorisation (PROEX authorisation) to carry out the project in the BTC animal facility, in accordance with current legislation (Royal Decree 1201/2005).

Condition 3. In all cases, in order to be an animal facility user, authorisation from the centre¿s management must be held. This authorisation is subject to the centre's Master Plan and its strategic, scientific and technological interests. Researchers from the BTC, or other public or private entities, who wish to be users and access to the animal facility¿s services must apply to do so by e-mail to the BTC HEAD OF SERVICES (direccion.ctb@ctb.upm.es)

Every application must be accompanied by the following documentation:

– A research memorandum consisting of the following sections:

Title and summary (300 words)

Aims and assumptions (one page)

Experiment design (one page)

Timetable (one page) including suggested start and end dates.

Resources to do the project (one page)

– Community of Madrid authorisation (PROEX number) to carry out the research at the BTC animal facility

– Documentary proof of the user¿s qualifications to carry out any of the functions included in Order ECC/566/2015

– Documentary proof of having applied for, or obtained, funds to carry out the research

The feasibility of the solutions and their organisational timing will be assessed by a commission chaired by the SERVICE'S SCIENCE OFFICER (daniel.gonzalez@ctb.upm.es) and also consisting of the ANIMAL WELL-BEING AND BIOSAFETY OFFICER AT THE FACILITY and a BTC researcher who is a member of the BIOSAFETY COMMITTEE. The timetables and dates allotted to each experiment will be public and may be consulted by any researcher on the BTC web site.

Users must respect, and be aware of, the established procedures and make proper use of the facilities.

More information at: http://www.ctb.upm.es/core-facilities/