

# Department of Comparative medicine (KPM) facility description

KPM consists of 3 animal facilities located at 3 different geographical sites; Radiumhospitalet, Rikshospitalet and Ullevål.

## 1. Infrastructure and hygienic routines

### 1.1 KPM-Radiumhospitalet

All personnel enter the facility via the personnel sluice, where all personal clothing (except underwear) is changed into green scrubs and barrier shoes. When working in animal rooms, a gown, cap, gloves and protective masks must be used in addition. No jewelry, clocks or other personal belongings are allowed inside the barriers. Users and staff who have visited experimental animals (rodents) outside of OUS or other sections at KPM must perform a full body and hair wash/showering, full change of clothes and a 48 hours quarantine before visiting rooms within the barriers at the section.

All goods enter via the material airlock, and the goods is treated with surface disinfection, H<sub>2</sub>O<sub>2</sub> disinfection or autoclaved depending on the goods. Animals are imported through a specially designed airlock. One person outside the airlock handles the surface of the transport box and opens the box for a person on the opposite side of the airlock. The second person touches only the inside of the box and picks up the animals to place them in cages. Disinfectant used is Desidos.

The facility houses mice and rats, in separate animal rooms. KPMs own breeding stock is located in a separate barrier containing 4 rooms. Most of the animals are housed in open type III cages, located in racks and ventilated cabinets (Scantainers), where the incoming air is HEPA-filtrated.

All cage material, bedding and enrichment is autoclaved prior to use in the breeding unit.

The diet is irradiated.

### 1.2 KPM-Rikshospitalet

All personnel enters the facility via personnel sluices, where all personal clothing (except underwear) is changed into green scrubs, cap and barrier shoes. When working in animal rooms gloves and protective masks must be used in addition. No objects below the elbow are allowed inside the barriers. Users and staff who have visited experimental animals (rodents) outside of OUS or other sections at KPM must perform a full body and hair

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wash/showering, full change of clothes and a 24 hours quarantine before visiting rooms within the barriers at the section.

Animals to the rodent unit are imported through an animal airlock consisting of a tunnel with UV light and local ventilation. Desidos is used as surface disinfectant of the transport cages, which are taken to the transfer tunnel with the UV off and the ventilation closed. When all transport cages are treated with Desidos and placed in the tunnel, the outside door is closed leaving the tunnel closed from both sides for at least 30 minutes.

Animals to the large animal unit and infection unit are imported through their dedicated airlocks.

All goods enter via the material airlock, where a disinfection treatment with hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) is performed. Other material not tolerating H<sub>2</sub>O<sub>2</sub> treatment is surface disinfected by using Desidos.

The facility houses mice, rats, rabbits and swine and consist of three different subunits; rodent, large animal and infection unit, with separate personnel and equipment sluices for each subunit.

Mice and rats in the rodent unit are housed in separate animal rooms. The majority of the rodents are housed in individually ventilated cages (Tecniplast GM500), the remaining animals are housed in open type III cages.

The rabbits and swine are housed in separate housing rooms in the large animal holding unit. The personnel need to perform a full body and hair wash/showering and change into new scrubs if they enter the rodent unit after visiting the large animal unit. When exiting the infection unit all personnel must perform a full body and hair wash/showering. All cage equipment and garbage exiting the infection unit are autoclaved or disinfected by fogging with a Desidos nebulizer in the dedicated material airlock.

### 1.3 KPM-Ullevål

All personnel change their personal clothing (except underwear) into white scrubs in KPMs wardrobe, and enter the unit via the personnel sluice where they change into barrier shoes, disposable gown, cap and protective mask.

When working in animal rooms, gloves must be used in addition. No hand jewelry, clocks or headphones are allowed inside the barriers. Users and staff who have visited experimental animals (rodents) outside of OUS or other sections at KPM must perform a full body and hair wash/showering, full change of clothes and 24 hours quarantine before visiting rooms within the barriers at the section.

Animals and goods are imported through a common airlock, and Desidos is used as surface disinfectant.

The facility houses mice and rats, in separate animal rooms. The animals are housed in open cages in ventilated cabinets (Scantainers) where the incoming air is HEPA-filtrated.

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## 2. Import routines

### 2.1 Animals

All animal import is handled by KPM and all animal ordering is done via and approved by KPM. Animals are mainly imported from approved commercial vendors (e.g. Envigo, Janvier, Charles River and Jax). For imports into the KPM-Rad facility SOPF-status is required. For imports into the KPM-Rikshospitalet and KPM-Ullevål facilities SPF-status is required. KPM definition of SPF and SOPF quality is defined in the [KPM SOP for Health monitoring](#), table 1 and 2. Ordering of animals from approved commercial vendors require that the exporting barrier fulfill health status requirements at time of ordering and import. Animals from these sources are not quarantined before entry into the facility.

Decisions regarding imports from other sources than approved commercial vendors will be based on evaluation of the health monitoring program, husbandry and operating routines and health reports (current and historical) supplied by the exporting animal facility. When the health reports and additional facility information support import, the animals will be housed and tested in a KPM quarantine facility prior to possible import into the KPM housing units. Quarantine testing is performed according to Idexx quarantine profile. For imports where the health reports cannot be approved for import, KPM will require rederivation.

### 2.2 Biologicals

Biological material imported from external sources must be screened by PCR analysis for a panel of murine agents before being introduced to the KPM. Provided the user in writing confirms that the conditions and storage of the biological material precludes direct or indirect contact with culture media of murine origin after PCR screening, the same batch of biological material or clone of cells used at KPM is allowed.

The assay requirements are:

Cell lines for use in mouse: IMPACT Mouse I + C.bovis (Idexx) or Mouse Essential CLEAR Panel w/ C.bovis (CrI)

Cell lines for use in rat: IMPACT Rat V + C. bovis (Idexx) or Rat Essential CLEAR Panel w/ C.bovis (CrI)

Cell lines for use in both mouse and rat: IMPACT Comprehensive Murine Profile + C.bovis (Idexx) or Mouse/Rat Comprehensive CLEAR Panel (CrI)

For human tissue that has been harvested and frozen in a finite quantity, that has not cultivated in vivo or in vitro and has had no direct or indirect contact with murine tissue or culture media of murine origin, the above analytical requirement for biological material may be waived. This is decided by KPM on the basis of the documentation presented.

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Fresh cells and tissues harvested from patients or healthy volunteers by the user or direct collaborators can be transferred to rodents under the following conditions: Cells / tissues that have not been in direct or indirect contact with the media of murine origin from harvest to implantation (including any initial use of "feeder cells» or primary fibroblast cell cultures of murine origin).

### 3. Health monitoring program

Rodents at Comparative Medicine are regularly monitored for any presence of unwanted pathogenic agents in accordance with our [Health monitoring SOP](#). At all scheduled cage changes, sentinels are exposed to dirty bedding from all cages in the rack / cabinet / compartment which the sentinel animals represent. Non-terminal sampling; blood samples (dry blood spot), faecal samples and fur swabs from sentinel animals and selected colony animals (index animals) is done 3 times per year. The samples are taken by the KPM staff and sent for analysis at an external laboratory (currently Idexx Bioanalytics, Germany). The samples are analyzed using MFI / IFA (blood samples) and Real-time PCR (feces and swabs) and KPM receives a standard health report (FELASA). The KPM veterinarians will consider the health report based on the given units health status and requirements for health status for import (SPF or SOPF) and take the necessary actions if the health reports indicate presence of unwanted agents. ([KPMs SOP describing measures for different agents, details found in table 1](#)). Intermediate tests are done twice a year and annual tests are done once a year. Health reports from the past 18 months are published on KPMs website.

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