

Standard operation procedure: Tour of the KPMe

SOP nbr: 1-03

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TOUR OF THE KPME OG KONVENSJONEL UNIT

1.0 PURPOSE

- 1.1 To familiarise the user with the KPMe and conventional facility.
- 1.2 To grant new users access to KPMe and conventional unit.
- 1.3 To train users in the routines and rules in force at KPMe og konvensjonell.
- 1.4 To improve communications between users of KPMe/konvensjonell and staff at the Section for Comparative Medicine (KPM).
- 1.5 To ensure a safe working environment.
- 1.6 To make sure that good routines for hygiene are followed.
- 1.7 To ensure that proper routines are in place in case of fire or other emergencies.

2.0 DIVISION OF RESPONSIBILITY

- 2.1 Comparative Medicine contains four units; the Barrier, MDU, KPMe and Conventional unit. This SOP contains information regarding Convectional unit and KPMe.
- 2.2 Conventional unit has its own entrance in the end of the hallways by Comparativ Medicine (KPM) offices. KPM is responsible for the operation of the Conventional unit.
- 2.3 KPMe is an external unit of Comparative Medicine where Koen Vervaeke is responsible for the physical area of the unit and is the contact person for questions.
- 2.4 KPM is responsible for all aspects of animal welfare concerning the animals housed in KPMe and conventional unit.
- 2.5 Users of KPMe and staff at KPM must conduct their work in compliance with the three R's ([NC3Rs](#)).
- 2.6 The Vervaeke group is responsible for ensuring that KPM staff have received training on how to evacuate in case of an emergency inside KPMe.
- 2.7 KPM-staff is responsible of giving adequate training in emergency exits in conventional unit.
- 2.8 The Vervaeke group is responsible for ensuring that first aid kits and eye wash are available inside KPMe while KPM is responsible at conventional unit.
- 2.9 KPM is responsible for the daily inspection and cage change of the animals.
- 2.10 The different groups working at KPMe (Vervaeke, Enger, Aronsen, Stensløyken, Hafting, Glover etc.) share the costs of equipment and protective gear.
- 2.11 The head of department at KPM and the Vervaeke group collaborate on the housing of animals in KPMe. All importation of animals must be approved by the personnel with special screening responsibility (PMSK) at KPM and at the Vervaeke group inside KPMe.



- 2.12 All new users must submit evidence of a completed theoretical and practical course in laboratory animal science to the head of department at KPM before access to KPMe can be granted.
- 2.13 Every new user seeking to work at KPMe must contact the Vervaeke group and KPM.
- 2.14 Before being granted access, all new users must familiarize themselves with the routines and rules in force at KPMe and conventional unit.
- 2.15 The room manager at KPM gives every new user a tour of the facility, with focus on animal welfare. A document showing that this training has taken place must be signed (attachment 1).
- 2.16 A number of relevant SOPs, provided by KPM, are available on the [KPM home page](#). The user is responsible for keeping up-to-date with any relevant SOPs.
- 2.17 Everyone who handles animals must have undergone adequate training and practice to ensure the proper handling of animals. KPM can provide additional training on the handling of animals and the use of equipment belonging to KPM.
- 2.18 The PMSK at KPM must follow up experiments being conducted at KPMe.
- 2.19 Veterinary-related questions must be addressed to KPM. The head veterinary surgeon will assist the user with such matters.
- 2.20 Everyone must follow the routines described in this SOP at all times.

3.0 PROCEDURE

General information

- 3.1 You must not enter the department if you keep rodents or rabbits as pets at home.
- 3.2 Due to potential multi resistant bacteria, you cannot enter the facility if you recently have been hospitalised abroad. Access to KPM is not allowed if you have a severe cough or throat inflammation, diarrhea known to be contagious or with unknown cause, or if you have symptoms of COVID-19 or other highly contagious diseases. Please contact the Vervaeke group to verify when new access can be granted.
- 3.3 Pregnant women need to contact their supervisors to ensure that protective measures will be taken.
- 3.4 Any hazardous procedures or procedures involving the handling of hazardous drugs/chemicals inside KPMe must have undergone a risk assessment which has been submitted to KPM and the Vervaeke group prior to their use at the facility.
- 3.5 Hazardous experiments ranged to BSL 2 (biosafety level 2) need to be performed inside MDU. Some BSL 2 experiments is required to be inside the DU-008a "Tox Room" (Eg. Tamoxifen, viral vectors BSL 2 and more).
- 3.6 MDU and conventional unit is divided into "green zone" (MDU) and "red zone" (Conventional). You can move from green zone to red zone, but **never from red zone to green zone**. The zones are marked on the floor entrance to the wardrobes.
- 3.7 You are not allowed to enter the MDU or the dirty side of DU-007 if you have been inside KPMe, conventional unit or another external animal facility on the same day. You must have taken a shower and changed clothes before access to these areas can be granted for the following day.
- 3.8 Animals are dispatched from MDU every morning, through DU-007, free of charge. The default time for delivery is 09:00. The cages must be picked up by 09:30. A request for animals must be made in

Science Linker by 13:30 at the latest on the previous day. The “do date” must be specified. **NB! You cannot enter the dirty side of DU-007 after entry to KPMe the same day.**

- 3.9 Delivering of animals from MDU to conventional unit will be available at a later date, and information regarding this will be given. To pick-up animals yourself, proper training must be given by KPM-employee.
- 3.10 Training in Science Linker (SL) and in how to order animals is given by KPM and can be booked by email. All actions must be updated in SL. SL, the information on the cage card and the cage content must match at all times.
- 3.11 It is mandatory for the user to alert KPM before starting a new experiment. The user is required to read SOP 14-02 “Requirements for starting an experiment at KPM and KPMe” before commencing any experiments.
- 3.12 Notify your group leader if you want to import a lot of cages - the amount of free space may be limited.
- 3.13 There are two animal rooms at KPMe. Room KPMe-1 has a reversed day-night cycle, with lights switched off at 10:00 and on at 22:00. Room KPMe-2 has its lights switched on at 07:30 and off at 19:30.
- 3.14 Primary there is two animal rooms inside Conventional Unit, one for mice and one for rats. It is also possible to use aquatic animals and a dedicated quarantine room, contact head of the department and PMSK to gain access to this.
- 3.15 Inside the animal rooms you are not allowed to make a noise, e.g. by playing music (use headphones).
- 3.16 If you experience problems with the laptop connected to the animal room, contact IT.
- 3.17 Contact KPM by email or phone if needed (see information below).
- 3.18 All equipment that will come into contact with animals must be properly sterilised/disinfected.
- 3.19 Everything inside the facility must be washable. Do not therefore bring in chairs with fabric surfaces. Keep the number of folders/paper documents to a minimum. Remove cardboard boxes and other refuse.
- 3.20 At KPMe the cleaning staff clean the dressing room and the hallway. KPM vacuum the animal rooms and hallway inside KPMe, and disinfect door handles once a week. All other rooms must be cleaned by the individual groups using the facility.

Attire and evacuation

- 3.21 Perfume is not allowed in the animal facility as it causes stress for the animals. Mobile phones, key cards etc. must be placed in a zip-lock bag which must be sprayed with ethanol. This bag cannot be opened inside the facility. Valuables can be stored in the lockers inside the dressing room. The user provides his/her own padlock.
- 3.22 **The dressing room inside KPMe:** is physically divided into a “dirty” and a “clean” side with a bench. Before entering the room, you must place your shoes on the shelf outside the room. Once inside the dressing room, you must disinfect your hands and put on a hair net, surgical mask and gloves, these are provided from Vervaeke group. After you have stepped over the bench, you put on a laboratory coat and clean crocs. Regular users have their own locker, where they should store their lab coats. Occasional users can take a clean lab coat from the shelf outside the dressing room. The sharing of lab coats is not permitted and visibly dirty coats should go to the laundry.

- 3.23 **The dressing room in Conventional unit:** The room is divided into “clean” and “dirty side both physically with the bench and visually with the red floor. The red floor indicate “dirty” side. Place shoes, clothes (not underwear) and other belongings inside the boxes on the wall. You will exit through another door so make sure to not leave anything behind. Phone, card etc you put into zip-lock bags and disinfect with etanol to bring inside. Wear clean socks before entering the clean side, wash hands, put on clean clothes, facemask and a hair net. Put on suitable crocs from the basket.
- 3.24 The KPM staff provides gloves inside the animal rooms and clean clothes.
- 3.25 You are recommended to use two layers of gloves inside the facility. Use the outermost pair to handle cages and animals and the innermost pair to handle door handles, computers etc. Gloves can also be found inside the animal room. It is better to change gloves once too often than to risk contamination of surfaces.
- 3.26 Everyone must evacuate in case of an emergency. If an experiment is taking place, termination of the animals must be considered if their welfare is in risk or if there is any chance of the animals escaping. Close all cages containing animals before evacuating and close the O2 valve.

Equipment and the housing of animals

- 3.27 Close the door and use the rodent stopper (the barrier that is in place in the door frame) if it is not already there. Rodent stopper should only be removed when transporting bigger equipment (eg. A rack or trolley).
- 3.28 Inside KPMe you will find things belonging to KPM; clean cages, cage racks, water bottles, nesting materials, environmental enrichment, a laptop and ventilation unit. Alert KPM if any equipment is missing or you are in need of larger quantities. Any questions about this equipment should be directed to KPM.
- 3.29 The user must know how to open and close the cage, how to close the filter top and how to move cages in and out of the rack, so that the cage is properly connected to the ventilation. The user need to be shown where to put the dirty cages and to empty the water bottles in the sink.
- 3.30 The animals must have a sufficient amount of food and water to last for at least until the next day, as well as bedding, a sufficient amount of paper and an igloo/tunnel, if stressed animals a wooden stick should also be added. Make sure that the food basket is properly fitted so that animals cannot get trapped: the user is responsible for ensuring that the basket is properly fitted when taking animals out of the room for experiments since the KPM staff may then not be able to inspect the animals that day. The animals must be left in a good condition. Any deviation from the required food, water and enrichment must be underpinned by the FOTS and be clearly stated on the cage card (eg. Water restriction, need of runningwheel etc).
- 3.31 All cages with the animals that are to be used in experiment must be designated as “Experimental” by the user in SL (Science Linker). Information regarding the experiment must be added by the user to the “Notes” on the cage card in SL. This information must include start date of the experiment, a short description of the experiment, expected complications or phenotypes, special dietary needs, specific enrichment (if required), contact person and phone number. Different groups of animals (e.g. control/non-control) can be marked using the “Cage purpose”. Print out the cage card and attach it to a green card this color is reserved for animals used in experiments.

- 3.32 The user must keep a score sheet of any surgery or other experiments that will reduce animal welfare. A post-surgery analgesia administration form (figure 1) must be attached to the cage.
- 3.33 One rack constitutes one separate unit. Due to the different health status of the racks, cages cannot be moved between racks without first alerting KPM. The function of the sentinels is to monitor the health status of their rack.
- 3.34 Users and staff are not allowed to open cages without the proper use of the mobile changing station/fume hood due to exposure to and spread of allergens and potential pathogens.
- 3.35 The floor is dirty. Do not place any clean equipment or cages containing animals on the floor.
- 3.36 Make sure you clean lab bench/the mobile changing station and all other surfaces used with soapy water after handling animals. Disinfect the surfaces, pens etc. with 70% ethanol. All other equipment used must also be cleaned and disinfected. The lab bench/mobile changing station must be left empty after use. Sweep the floor.
- 3.37 **KPMe:** Dirty cages and other equipment that belong to KPM must be placed on a trolley in the sluice next to KPMe-1. Cage lids must be left closed to avoid the spread of odours to the surrounding area. Cadavers must be placed in the freezer at the end of the hallway.

End of tour

- 3.38 Gloves, hair nets, zip-lock bags and surgical masks are for single use only and must be discarded after use. P2/P3 masks can be labelled with the user's name and used for up to eight hours.
- 3.39 **KPMe:** Used lab coats can be re-used if they do not have any animal odour or stains. Dirty lab coats should be placed in a black plastic bag in the locker closest to the entry to the facility.
- 3.40 **Convectional Unit:** place the dirty clothes in the marked basket. Pick up your clothes from the box. Remember all your belongings before you leave.
- 3.41 Users sign a declaration to confirm that they have received training in the department's routines and that they undertake to follow these routines.
- 3.42 In case of an emergency, you can call KPM's security telephone ("Vakttelefonen") between 15:45 and 08:00 and during the weekend on **90056382**. If you experience problems with access after normal working hours, you can call UiO's Security Operation Centre on **22855007**.

The following are email addresses and phone numbers that users might need for different enquiries:

KPM:

Email: komparativ@medisin.uio.no

Phone: 90056382 (24/7)

<https://www.med.uio.no/imb/tjenester/komparativ-medisin/>

Vervaeke group:

Email: k.g.a.vervaeke@medisin.uio.no / [95184931](tel:95184931)

UiO Security Operation Centre:

Telephone: 22855007 (24/7)

4.0 HEALTH, SAFETY AND ENVIRONMENT (HSE)

- 4.1 All procedures regarding the handling of hazardous drugs and chemicals that might affect KPM staff must be evaluated with a proper risk assessment, which must be made available to KPM.
- 4.2 Everyone who handles animals must wear the required attire to ensure the protection of the animals.
- 4.3 Everyone who handles animals must have undergone adequate training and practice to ensure the proper handling of animals.
- 4.4 Everyone must be familiar with the UiO fire drill in case of a fire/fire alarm ([HSE - Fire safety - University of Oslo \(uio.no\)](#)).
- 4.5 Flammables should be stored in the cabinet inside KPMe-1 mouse holding room.

Ethanol	CAS no.	Pictogram	Hazard statements	Precautionary statements
Ethanol	64-17-5	 	<p>H225: Highly flammable liquid and vapour.</p> <p>H319: Causes severe eye irritation.</p>	<p>P210: Keep away from heat sources, hot surfaces, sparks, open flames and other sources of ignition. Smoking forbidden.</p> <p>P280: Use protective gloves/clothing/eye protection/face shield.</p> <p>P305+P351+P338: IF IN CONTACT WITH THE EYES: Rinse carefully with water for several minutes. Remove contact lenses if used and easy to do. Continue rinsing.</p> <p>P370+P378: In case of fire, extinguish using foam, carbon dioxide, dry powder or water spray.</p> <p>P403+P235: Store in a cool, well-ventilated place.</p> <p>P501: Dispose of contents/container in accordance with national regulations.</p>

5.0 EQUIPMENT AND MAINTENANCE

- 5.1 Laboratory coat/clothes, hair net, surgical mask, gloves, crocs, zip-lock bags

5.2 GM-500 (small cages), GM-900 (large cages), 250 and 300 ml water bottles, bedding, food, paper for nest building, igloos, tunnels, running wheels.

5.3 Paper towels

5.4 Soapy water

5.5 70% ethanol

6.0 HISTORY OF EDITING

6.1 Created 27.08.2020 by Frøydis Kilmer

6.2 Edited 22.04.2021 by Frøydis Kilmer, Koen Vervaeke and Lena Roth

6.3 Revised 6.12.2022 by Helene Tandberg, Than Thai Pham and Koen Vervaeke

6.4 Added conventional unit as a part of this SOP. (10.07.23 Helene Tandberg)

7.0 REFERENCES

Attachment 1

Training of users of the Department for Comparative Medicine, IMB, UiO

Declaration:

I, (name in capital letters) _____

with this confirm that I have received training about the rules and regulations at the Department for Comparative Medicine. I commit to follow these rules as well as keep myself updated on any changes. (Standard operating procedures (SOP's) have a date of validity reflected in the SOP on the KPM homepage).

I agree to inform the responsible veterinarian and the room manager about the start of new experiments and provide all relevant information on the welfare of animals affected by the experiment.

User:

Date and place:

Signature:

Training conducted by:

Date and place:

Signature:

Figure 1.

Registration of Analgesics			
Cage ID:			
Ear tag:			
Date of surgery:			
Analgesic/Dose	Date	Time	Initials