

Standard operasjonsprosedyre: Tour of the MDU

SOP nr: 1-02

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## TOUR OF THE MDU

### 1.0 PURPOSE

- 1.1 To familiarise the user with the facility.
- 1.2 To give new users access to KPM.
- 1.3 To familiarise users with the routines and rules implemented at KPM.
- 1.4 To improve communications between users and staff at KPM.
- 1.5 To promote a safe work environment.
- 1.6 To ensure good hygiene practices.
- 1.7 To ensure good routines in the case of fire or other emergencies.

### 2.0 DISTRIBUTION OF RESPONSIBILITY

- 2.1 The head of the research group or the new user contacts KPM to schedule an appointment for a tour of the facility.
- 2.2 The head of KPM verifies that the new user has taken an approved course in laboratory animal science.
- 2.3 The person at KPM responsible for the room where the animals are housed gives the new user a tour of the facility.
- 2.4 Relevant SOPs are available on the KPM home page. The user is responsible for keeping up-to-date with any relevant SOPs.
- 2.5 The person giving the tour informs the person in charge of access to KPM that the new user has completed the tour.
- 2.6 The person giving the tour ensures that the user is informed of the "Basic package of SOPs for users" prior to the tour ([Basic package of SOP's for users - Institute of Basic Medical Sciences \(uio.no\)](https://www.kpm.uio.no/basic-package-of-sops-for-users)).
- 2.7 The person giving the tour ensures that a declaration is signed by the new user.
- 2.8 The user must contact the staff at KPM if he or she has any additional questions or needs additional training. Repeat reviews on handling and restraining procedures and the use of equipment belonging to KPM are provided free of charge.
- 2.9 KPM is responsible for making sure that all the emergency exits are clearly marked and accessible.

### 3.0 PROCEDURE



**Prior to tour**

- 3.1 The person giving the tour schedules a time for the tour with the user. Information must be provided to the user about the SOPs under “Basic package of SOPs for users”. The user must read the SOPs prior to the tour.
- 3.2 Everyone who works with animals must be tested for allergies and asthma every other year and be vaccinated (e.g. Tetanus minimum every 10 years).
- 3.3 The Barrier has the highest health security level. The MDU, including the dirty side of DU-007, has the second highest health security level. The Conventional Unit, along with KPME and any other external laboratories, has the lowest health security level.
- 3.4 It is prohibited to move from an area with a lower health security level to an area with a higher health security level on the same day. You must have taken a shower and changed clothes if you have been in a unit with a lower health security level or another animal facility the day(s) before.
- 3.5 You are not allowed to enter the department if you keep rodents or rabbits as pets at home.
- 3.6 Due to potential multi resistant bacteria, you cannot enter the facility if you have recently been hospitalized abroad. Further, access to KPM is not allowed if you have a severe cough/throat infection, diarrhoea known to be contagious or with unknown cause, or symptoms of COVID-19 or other highly contagious diseases. The necessary quarantine time will be set by the head of KPM, depending on your symptoms. Contact your immediate superior and the head of KPM if you have any questions regarding this. Please contact KPM to verify when new access can be granted.
- 3.7 Isoflurane and other hazardous drugs and chemicals are in use in the facility. You need to inform your immediate superior as soon as you know you are pregnant or suspect pregnancy, or if you are planning pregnancy (men and women). Due to exposure to allergens and hazardous drugs and chemicals, pregnant women are recommended not to enter KPM without first undergoing an extensive risk assessment regarding personal protective equipment (PPE).
- 3.8 Training in Science Linker (SL) and how to order animals is given by KPM and can be booked by e-mail. All actions must be updated in SL. SL, the cage card and the content of the cage must match at all times.
- 3.9 All equipment, chemicals etc. that the user wishes to bring into the facility must be cleared with KPM well in advance. Proper training is required before users are allowed to bring in any equipment of their own. If bulky equipment or a large amount of equipment is to be brought in, sufficient time is required to ensure its disinfection. Liquid nitrogen (not provided by KPM) must be handled in DU-007 and proper PPE must be worn.
- 3.10 Animals are dispatched 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 must be made in Science Linker by 13:30 at the latest on the previous day and the “do date” must be specified.
- 3.11 The user must communicate to KPM all information relevant to the experiments to be conducted. KPM must inform the user group of relevant information about the animals the group will be using.

**Attire and movement**

- 3.12 Perfume is not allowed in the facility. Mobile phones, key cards etc. must be placed in a zip-lock bag which you must spray with ethanol. Other valuables can be locked in the lockers outside the entrance to the MDU. The user provides his/her own padlock for the lockers.

- 3.13 You must change all your clothes, except your underwear. Place your clothes in the cabinet and place your shoes on the shelf. Put on new socks while stepping over the “restrictive threshold”. Glasses must be rinsed with soap and water, as ethanol will damage the glasses.
- 3.14 You must wash your hands with soap and water and wear proper PPE before entering the MDU. Minimum PPE consists of socks, shirt, trousers, hair net, surgical mask, long gloves (inner gloves) covering sleeves and crocs. Blue scrubs are reserved for KPM staff. Personal items must be cleared with KPM.
- 3.15 You enter the MDU through the clean corridor (minimum amount of allergens) and move to the right. Users cannot access the clean corridor from the animal room. You exit the facility, or re-enter the clean corridor, through the dirty corridor (with allergens) and the air shower. Everyone must disinfect his or her gloves/hands before entering the clean corridor.

#### **Evacuation in case of fire/emergency**

- 3.16 Consult the “Evacuation plan” diagram for an overview of the room plan, emergency exits, fire alarms and fire hose/CO<sub>2</sub> extinguisher.
- 3.17 The facility is divided into fire cells and is protected with a sprinkler system. The user must be familiar with the three emergency exits: one in the clean corridor (DU-010), one in the dirty corridor (DU-025) and one beyond the air shower (DU-001c), see Appendix 1. The user must also know where to find the fire alarms, door-lock buttons and fire hoses.
- 3.18 Everyone is responsible for his/her own evacuation in the case of fire/emergency. If an experiment is in progress, the user must consider whether the animals should be terminated if their welfare is in risk or if there is any chance of the animal escaping. However, taking the time to terminate animals must not put the users’ own health and safety at risk. Close all cages with animals inside and turn off oxygen/air/propane/ CO<sub>2</sub>.
- 3.19 The meeting point in case of an evacuation is located by the garage/containers outside the “Enhet for drift” (Operations Unit). The user must study the “Evacuation Plan for MDU” in case of a fire/fire alarm, see Appendix 2. The evacuation plan can be found on the KPM homepage.
- 3.20 There are two first-aid kits in each corridor and one in DU-028. These contain cooling gel, eye and wound wash, disinfection napkins, dressing for wounds, Band-Aid and a CPR mask. There is additional eyewash in each lab. There are intercoms in the labs, animal rooms and corridors.

#### **Animal room and handling of cages and other equipment**

- 3.21 Autoclaved equipment stored in the clean corridor is marked with an autoclave tape that has black stripes. NB! Some clean, but not autoclaved, equipment might be temporarily stored by the autoclave, marked “Not autoclaved - do not use”!
- 3.22 The innermost gloves must be disinfected when entering the animal room or the gloves must be discarded and new gloves put on. Outer gloves (usually shorter blue ones) must be put on before handling any cages and animals. Dirty gloves must be thrown away and new put on before handling clean equipment. The innermost pair is used to handle door handles, computers etc.
- 3.23 Keep doors closed if you open any cages so that if animals escape from the cage, they cannot get out of the room.

- 3.24 The user must be informed about the different types of cages, the limits regarding the number of animals per cage, according to the size and species of animal, and about the different sizes of water bottle to fit the different sizes of cage.
- 3.25 The user must know how to move the cage in and out of the rack in the proper way, so that the cage is properly connected to the ventilation, how to open and close the cage, how to properly position the food basket, how to close the filter cover, what side of the filter has to face downwards, and how to properly close the hatch on 1800- cages.
- 3.26 The animals must be given a sufficient amount of food and water to last for at least the next day, bedding, a sufficient amount of paper and an igloo/tunnel. Any deviation from this must be supported by the FOTS and be clearly stated on the cage card. Animals must be conscious and in good condition before leaving the room. Animals being used in an experiment must be given a green cage card with the relevant information.
- 3.27 One rack is one separate unit. Users must not move cages between racks without first alerting KPM, as the various racks may vary in health status. However, users are permitted to take animals from different racks for experiments.
- 3.28 The function of the sentinels is to monitor the health status of the rack. Health monitoring results are posted on the KPM homepage. The status of the room (SOPF, SPF, MDU) is posted on the entrance to the animal room.
- 3.29 The LAF bench and computer in the animal room are for the use of KPM staff only. There are computers in the dirty corridor for the users. The user must book a workbench in a lab via SL or use a mobile changing station when working with animals.
- 3.30 The user may use the LAF bench inside the animal room for a short length of time, for example when transferring animals to a new cage, when the LAF bench is not in use by KPM staff. The bench must be cleaned with soapy water and disinfected with 70% ethanol after use (use safety glasses and keep air flow on max).
- 3.31 In order to prevent personnel and the environment being exposed to allergens and potential pathogens, users and staff must not open cages inside the animal room without using a LAF bench or a mobile changing station.

#### **The transport of animals and exiting/re-entering the animal room**

- 3.32 There is a trolley outside the room in the dirty corridor for the transport of animals. Animals must be transported using a trolley. Users must clean and disinfect the trolley before returning it. Trollies can also be found in the clean corridor. These have to be disinfected with 70% ethanol before being used to transport animals or clean equipment.
- 3.33 You must remove your outer gloves before exiting the room. Disinfect the innermost gloves with 70% ethanol if you transport animals out of the room. Put on new outermost gloves inside the laboratory and discard these before exiting the laboratory.
- 3.34 Put on new gloves upon re-entering the animal room.
- 3.35 Dirty cages should be placed on the shelf outside the dirty side of the washery. Cadavers are placed in the deep freezer in the dirty corridor.

**Laboratories and equipment for users**



- 3.36 Cabinets with a lock can be reserved by sending an email to KPM. There are cabinets in the laboratories and more cabinets and shelves in the corridor. No equipment is to be stored on any workbenches unless this is cleared with KPM in advance. Mark equipment with the name of the group.
- 3.37 The fume hood (picture 1) prevents the release of hazardous substances and fumes onto the operator and into the room (exhaust connected to ventilation). The air supply is unfiltered air coming from the room.
- 3.38 The extractor arm fume hood (picture 2) protects the operator and the room (exhaust connected to ventilation) while working on the bench.
- 3.39 The safety cabinet class 2 (picture 3) provides protection for the operator, product and the room with a high efficiency particulate air filter (HEPA). The air supply to the cabinet and the air coming back into the room is HEPA filtered.
- 3.40 Extra protection, such as an apron/laboratory coat, protective glasses and gloves and a mask recommended for the specific chemical, is recommended when working with hazardous drugs and chemicals. Kimtech Purple Nitrile Xtra gloves provide protection from certain chemicals.
- 3.41 After work is completed, all equipment must be put away and all surfaces cleaned and disinfected according to instructions. Sweep the floor.
- 3.42 Gas used in the labs (propane, CO<sub>2</sub>, O<sub>2</sub>, compressed air) must be properly turned off after use.
- 3.43 Room DU-008A is reserved for working with toxic substances and where the quarantining of animals is necessary. Working with toxic substances, where toxins are excreted by the animals, is not allowed outside of this area.
- 3.44 All handling of hazardous drugs or chemicals that do not require animals to be in quarantine, is subject to strict routines regarding HSE and hygiene in order to prevent exposure to personnel. NB! Prevent contamination on the outside of animal cages!
- 3.45 Isotopes are to be handled in the PET/CT area: DU-034, DU-035, DU-031 and DU-028B. Such experiments are subject to an extensive risk assessment. Commencement of experiments must be coordinated with KPM well ahead of time.

**End of tour**

- 3.46 The user is encouraged to ask any additional questions at the end of the tour. Users sign a declaration to confirm that they have received training in the department's routines and that they undertake to follow these routines, see Appendix 3. The declaration is scanned and filed under "Ny avdeling-> Brukere-> Egenerklæring ved omvisning for nye brukere».
- 3.47 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.
- 3.48 Used socks must be placed in the laundry basket in the locker room.
- 3.49 Used clothes are placed in the laundry baskets outside the locker room.
- 3.50 In case of an emergency after hours, you can call KPM's security telephone ("Vakttelefonen") on 90056382. This number is also in use during working hours.
- 3.51 In the case of problems related to access after hours, you can call UiO's Security Operation Centre on 22855007.

KPM: E-mail: <a href="mailto:komparativ@medisin.uio.no">komparativ@medisin.uio.no</a> Tel: 90056382 (24/7) <a href="https://www.med.uio.no/imb/tjenester/komparativ-medisin/">https://www.med.uio.no/imb/tjenester/komparativ-medisin/</a>
UiO Security Operation Centre: Tel: 22855007 (24/7)

#### 4.0 HEALTH, SAFETY AND ENVIRONMENT (HSE)

Kemetyl technical ethanol 96%	CAS no	Pictogram	Hazard statements	Precautionary statements
Ethanol	64-17-5	 	H225 Highly flammable liquid and vapour H319 Causes serious eye irritation	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P370 + P378 In the case of fire: Extinguish with carbon dioxide (CO <sub>2</sub> ), foam, powder or water.

- 4.1 Everyone who works with animals must be tested for allergies and asthma every other year and be vaccinated (e.g. Tetanus), if necessary, at UiO's Occupational Health Service Unit ("Bedriftshelsetjenesten"/BHT).
- 4.2 All procedures regarding the handling of hazardous drugs and chemicals must be evaluated by means of a proper risk assessment.
- 4.3 All new users must have completed the tour conducted by KPM staff before being granted access to KPM.
- 4.4 Everyone using the facility must have adequate training to ensure the use of proper clothing and protective gear.
- 4.5 Everyone who handles animals must have adequate training and practice to ensure the proper handling of animals.
- 4.6 KPM can provide additional training on the handling of animals and the use of equipment belonging to KPM.

- 4.7 Everyone must be familiar with the Eco Online and Safety Data Sheets for the chemicals they may be exposed to. KPM can provide Safety Data Sheets for the chemicals provided by KPM.
- 4.8 Everyone must be familiar with the evacuation plan in case of a fire/fire alarm.

## 5.0 EQUIPMENT AND MAINTENANCE

- 5.1 Socks, trousers, shirts/overalls
- 5.2 Crocs or other footwear
- 5.3 Gloves, hair net and mask
- 5.4 Zip-lock bags
- 5.5 Science Linker
- 5.6 Trolleys: must be sent to the washery to be cleaned on a regular basis and the wheel fixtures should be sprayed with silicone spray as and when needed.
- 5.7 Fume hood
- 5.8 Extractor arm fume hood
- 5.9 Safety bench class 2

## 6.0 HISTORY OF EDITING

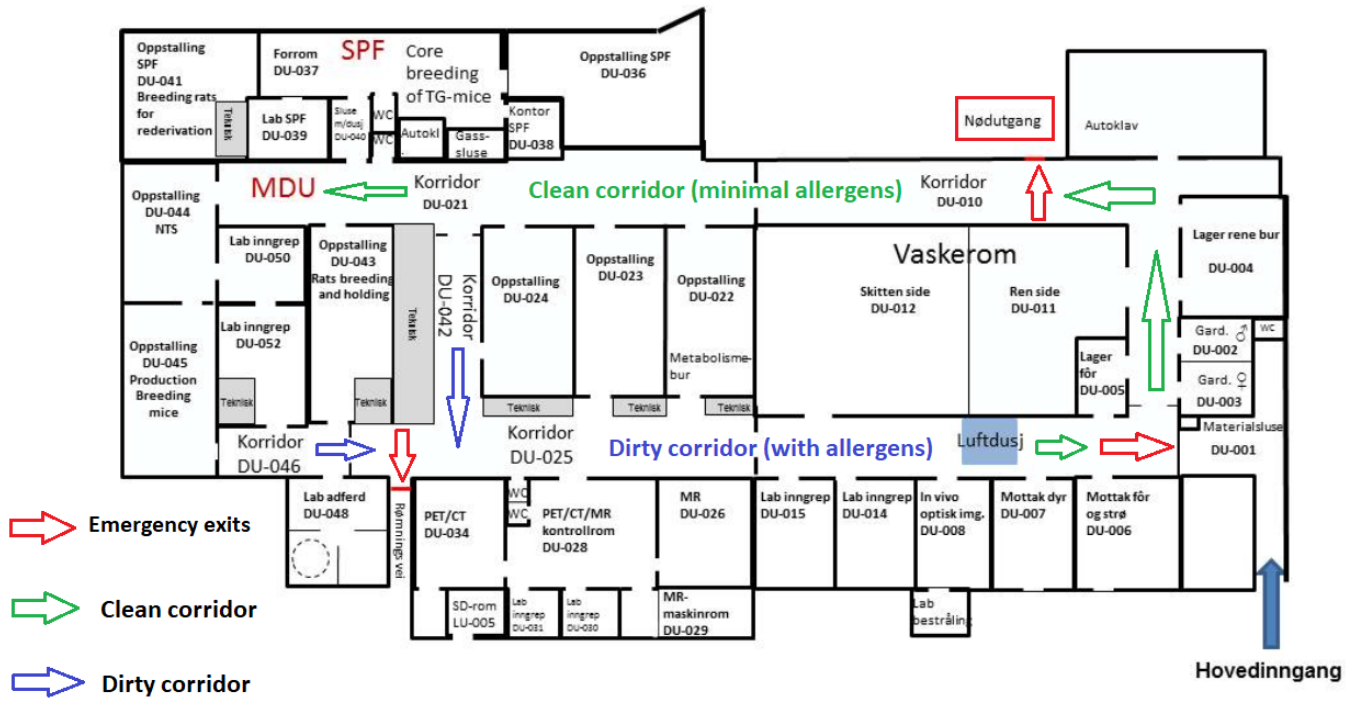
- 6.1 14.01.2021 (Frøydis Kilmer)

## 7.0 REFERENCES

- 7.1

Appendix 1

Romplan ny dyreavdeling





## Appendix 2

<b>UiO : Avdeling for komparativ medisin</b> <b>Forsøksdyravdeling</b>		
<b>Evacuation plan MDU at KPM</b>		Side: 1 av 1
Utarbeidet av: Frøydis Kilmer, Tone Fadum, Thanh Tham Pham og Nicoline Kongsten.	Godkjent av:	Godkjenningsdato: Utgave: V1

This procedure describes the evacuation plan in case of fire/fire alarm for all personnel in the MDU at KPM. The purpose of the procedure is to ensure the safety of people and to prevent GMO from escaping into the wild.

The head of KPM is responsible for the training of all personnel at KPM and for documenting that training has been carried out. The group leaders are responsible for the training of their respective employees. All visitors are responsible for familiarizing themselves with the emergency exits. Note that in the animal rooms and laboratories there will only be a visual warning, not a sound warning.

### **In case of fire / fire alarm**

The following instructions are to be followed as long as long as doing so does not pose a threat to life and health:

1. Personnel may attempt to extinguish a fire with a water hose or CO<sub>2</sub> appliance.
2. If the fire cannot be extinguished, the nearest manual fire detector must be triggered.
3. Call the fire department at 110.
4. Close any open doors and evacuate immediately!
5. Everyone must evacuate in case of a fire alarm and everyone is responsible for his/her own evacuation.
6. Any open cages containing animals must be closed before evacuation.
7. Any experiments must cease immediately. The termination of animals must be considered. NB! Animals in anesthesia must not be able to wake up and escape from the facility.
8. If any gases, like propane or oxygen is in use, close the outlet.
9. Employees evacuate or go to the fire panel in DU-001c to see where the alarm is triggered.
10. The emergency switch for the air shower must be activated during evacuation.
11. The "floor contact person" goes to the fire panel and reads off the affected room number. The alarm site must be investigated if the alarm has been triggered in the MDU.
12. Employees at KPM encourage anyone in the immediate vicinity to evacuate.
13. The meeting point outside is behind the wall by the containers at the loading dock.
14. Personnel are not allowed to re-enter the building until instructed to do so over the loudspeaker.
15. The "floor contact person" stays behind to clarify the situation with the Estate department.

#### **Evacuation**

**Option 1:** Evacuation via locker rooms

**Option 2:** Evacuation via marked emergency exit in the dirty corridor, DU-025 (by PET/CT )

**Option 3:** Evacuation via marked emergency exit in the dirty corridor, DU-001c (reception)

**Option 4:** Evacuation via marked emergency exit in the clean corridor, DU- 010. NB! Only in case of visual fire and / or smoke development



Picture 1: Fume hood

<https://kilab.no/produkter/kategori/avtrekkskap/>



Picture 2: Extractor arm fume hood

<https://makitech.no/met-1000-50-avtrekksarm-tak>



Picture 3: Safety cabinet class 2

<https://kilab.no/produkter/kategori/laf/>

## Appendix 3

### 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:

**KPM:**

Date and place:

Signature: