1. Program overview

1.1. Monitoring and surveillances are conducted against the infectious agent lists, which is generally based on FELASA’s recommendations and including opportunistic pathogens. The programs use both concepts of Risk-based disease surveillance in the field of veterinary medicine and veterinary public health and International harmonization of health monitoring.

1.2. All animals present in APCF and satellite animal rooms are subject to health monitoring and disease surveillance.

1.3. Health monitoring is a routine sample collection performed in four rounds of screening (one annual and three quarterly) each year.

1.4. Disease surveillance is an ad hoc sample collection and may be performed throughout the year as instructed by the director of APCF.

1.5. The program covers all animal colonies controlled by APCF.

2. Health monitoring on mice/rats in open cages

2.1. Dirty bedding sentinel system is employed on mice and rats housed in open cages. One sentinel cage (with two sentinels starting with the age between 4 and 6 weeks old) is used to monitor up to 71 index cages (please refer to SOP C-006).

2.2. Oral and skin swabs, fecal, and blood spot samples are collected by technicians and are sent to external diagnostic laboratory for microbiological (oral), molecular (fecal and skin) and serological (blood) detection of infectious agents (please refer to SOP A-001).

2.3. Sampling strategies for each room is prepared by the scientific officer of APCF (SO/APCF), based on the optimal pooling of each sample type and the number of sentinel cages in each animal room. The aim is to keep the test results in a room-level resolution, reducing the number of tests but at a reasonable sensitivity recommended by the employed diagnostic laboratory.

3. Health monitoring on mice in IVC
3.1. Exhaust air dust sampling system is employed for mice housed in IVCs. One dust-collection medium placed in the IVC blower exhaust system can monitor up to 320 cages.

3.2. The use of the dust-collecting medium (i.e. Interceptor, Tecniplast) follows the manufacturer manual when positioning and removing from the pre-filter of the IVC blower.

3.3. The dust-collecting media are then sent to an external diagnostic laboratory for molecular detection of infectious agents.

4. Health monitoring on mice in room 7221 (mouse return room)

4.1. Health monitoring is conducted at least once per month because it has a higher risk of disease occurrence due to the nature of animal movements in the room.

5. Disease surveillance

5.1. The director of APCF will instruct technicians to conduct an *ad hoc* program on a risk-based practice.

5.2. Activities may involve:

5.2.1. live sampling from any animal colonies assigned by the director of APCF

5.2.2. necropsy and sampling of tissues from sacrificed or dead animals by technicians with pathology training

5.2.3. preliminary postmortem analysis by technicians with pathology training

5.3. Live sampling may be done without consultation with the corresponding PIs.

5.4. Samples are sent to external diagnostic laboratories for detection of infectious agents and conducting pathological analysis.
6. Reference


