



Ethical questions in the use of animals for scientific or educational purposes

30.1.2025

Hanna-Marja Voipio

Director, Prof., Dipl.ECLAM

Oulu Laboratory Animal Centre

University of Oulu

Hanna-Marja.Voipio@oulu.fi

<http://www.oulu.fi/keks>

Our ethical concerns

- Animals in experiments is an animal group whom we are legally allowed to cause pain, stress and distress
- We keep animals in unnatural circumstances in small cages and dull environment
- We may keep social animals alone if necessary due to experimental reasons
- We create and breed animals which may have gene variations causing sickness
- What is allowed and how can we make better?



Laboratory animal legislation is strict

- European legislation (EU Directive 2010/63/ EU) harmonises the use of laboratory animals
 - Ultimate goal is to stop using animals in experiments
- National legislation in all EU-countries
- Animals under legislation
 - Vertebrates or cephalopods (octopuses) used for scientific and educational purposes or breeding for organs or tissues
 - Foetal forms of mammals, birds and reptiles as from the last third of their normal development
- Leaves a lot of species outside this legislation

Lower limit

A needle puncture or equivalent distress

Upper limit

You are not allowed to do a procedure causing long-lasting severe pain, suffering, or distress if it is not possible to alleviate pain



Every experiment must have a project license

- Licenses are applied from the Project authorisation board, ELLA
 - Ethical harm-benefit evaluation by the board
- An animal experiment can be done only if there is no other scientifically reliable method to achieve the results without using animals
- The experiment must be carefully designed
 - What are the goals and benefits of the study?
 - How many animals needs to be used?
 - How much pain and distress are caused to animals?
- A non-technical summary for the public, increases transparency
- Research with wild animals needs also project licenses
 - Fish, birds, other wild animals

No need for project a license?

- Veterinarian is usually evaluating the need
- Animal use is controlled with internal licenses



Severity classes

- Non-recovery
- Mild
- Moderate
- Severe

Severity classification and humane end points

- In the license application, pain, stress and distress caused to the animal are assessed and classified into four classes
- Classification encourages to search for **less harmful methods**, and increases **transparency**
- After the experiment there will be the **actual severity classification** – to each **individual animal**
- Especial attention on severe projects
- For severe projects also the retrospective assessment
- **Humane end points** are set beforehand
 - When pain or suffering must immediately be reduced by euthanizing the animal, ending the painful procedure or alleviating pain or distress
 - Aim is to decrease harm caused to the animal

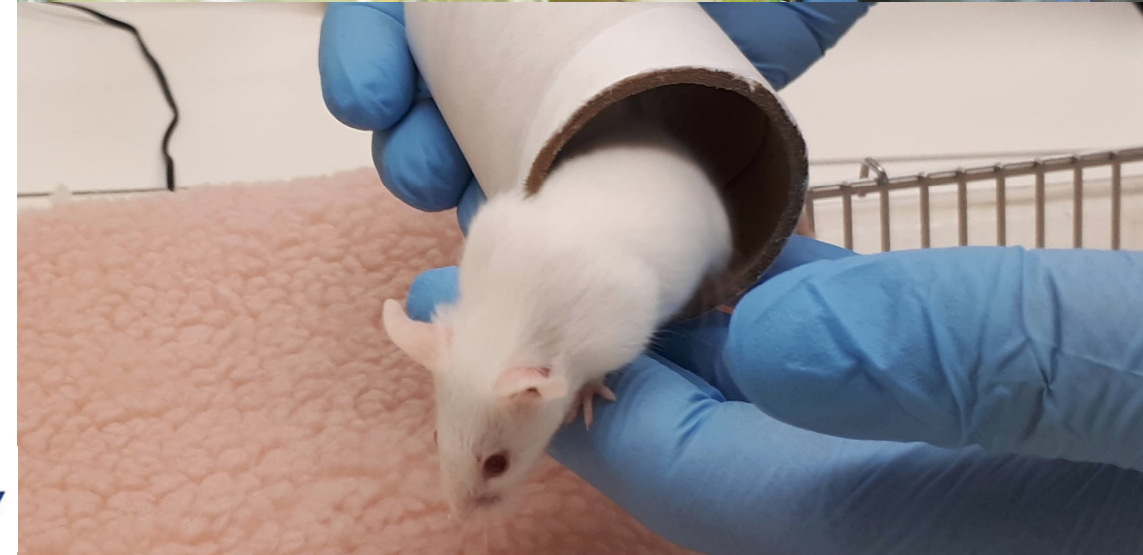


SEVERITY CLASSIFICATION
IS MANDATORY

Main ethical principle: the 3Rs principle

- The 3 Rs principle was published in 1959 by Russel and Burch
- Replacement: The use of animals is replaced in cases where animals have earlier used
- Reduction: A method or action leading to the use of lower number of animals in the way that the answer to the scientific question is still adequate
- Refinement: Improvement in animal care and experimental procedures in the way that pain and distress is minimized, and overall well-being increased
- Is implemented in the directive and legislation

How to pick up a mouse correctly



Culture of care as a way to work – Code of conduct in animal facilities

- Culture of care includes all aspects that enhance animal wellbeing, like
 - Good management of animal facilities
 - Husbandry and care of animals
 - Adaptation of animals, treats
 - Pain relief
 - Veterinary care
 - Active animal welfare body (mandatory)
 - Education and competences
 - Human wellbeing, all those working with laboratory animals
 - Good communication and transparency



- Only persons who are competent are allowed to work with laboratory animals
- Procedures can be done only after proper training
- Mandatory to maintain the competence

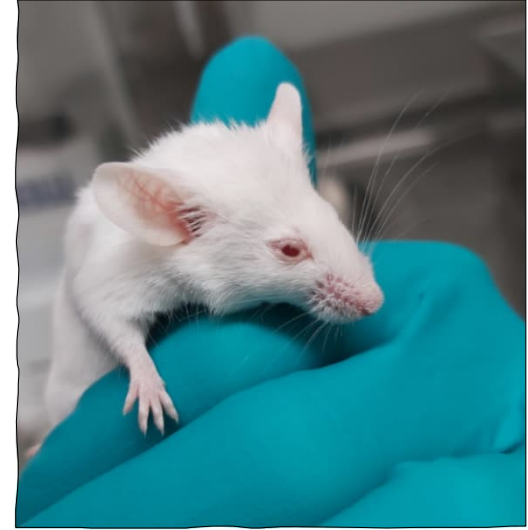


LAS Spring 2025

Using animals in research - Carrying out procedures ...

Pain and suffering

- Pain and suffering is our highest concern – we must be able to recognise pain signs in animal
- In some experiments, pain medication is not possible (neurological disorders and treatment) – however attitudes are changing as a painful animal is neither a good animal model
- Adaptation, treats, appropriate environment help
- Pain medication for rodent earmarking is the newest example
 - Legislation 2024: pain relief is mandatory – best choices are tested especially for small mice and rat pups
- Capture of wild animals is clearly underestimated: not a procedure



National committee for the protection of animals used for scientific purposes TOKES

- Hanna-Marja is the chair of the committee in 2023-2028
- National perspectives in the use of laboratory animals, guidance, recommendations
- Working groups organize seminars
- The 3R follow-up group monitors use and development of the 3R methods in Finland
- Cooperation the FIN3 Centre



1. Pain relief during and after rodent ear notching
2. Where to get financial support for small 3R projects
3. Culture of care – seminar in 2025 (with FIN3R)
4. Replacement education (with FIN3R)
5. Information about TOKES and 3Rs
6. Surplus animals





Strengths in Finland

- Committed people working with laboratory animals
- Active animal welfare bodies
 - Animal welfare body has an advisory role especially with the use of the 3Rs
 - National AWB network
- Close cooperation between animal facilities



Thank you for your interest!

Questions regarding laboratory animals? You can always contact me: Hanna-Marja.Voipio@oulu.fi