

Karolinska Institutets Animal welfare body Annual report 2024

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**Karolinska
Institutet**

Karolinska Institutets Animal welfare body

Annual report 2024

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Introduction

Karolinska Institutet (KI) has, as one of the leading medical universities, the mission to improve human health and to find new strategies to fight human diseases. The use of research animals is pivotal for many research projects in basic and translational science at Karolinska Institutet.

Research involving research animals are regulated by the Animal welfare act 2018:1192, the Animal welfare ordinance 2019:66 and the Swedish board of agriculture's regulations and general advice on laboratory animals, SJVFS 2019:9 Saknr L150 (called L150 from hereon). According to the Swedish legislation described above, all animals used for scientific purposes are protected by law and must be treated in the best possible way, both regarding their housing as well as regarding experimental conditions. The Swedish legislation, namely L150 chapter 5, also defines that each organization carrying out research animal research must establish an Animal Welfare Body (AWB).

The AWB at KI was established on the 1st of January 2013 and is an independent authority which reports directly to the Committee for research and the establishment license holder. The AWB consists of eight members: the chairmen, the named animal care and welfare officer (NACWO), a veterinarian and its deputy, a researcher, and its deputy, as well as an animal technician and its deputy. Additionally, for matters concerning aquatic species or non-human primates, an expert in the field or an ethologist will take part in the discussion and decisions, respectively. Other specialists may be co-opted if deemed necessary.

All members of the AWB are appointed by the Committee for research for a 3-year period. The current mandate runs from 2023-01-01 to 2025-12-31. Since July 2018, principal investigators from KI can apply to the AWB for addendums to their ethics license if the addendum meets the requirements defined in L150 (please see the AWB webpage for details). The AWB takes all decisions by majority vote.

Current members of the AWB

Lars Bräutigam (Chair)

Elisabet Andersson (NACWO, NIO)

Bengt Eriksson (vet.)

Maria Averstad (vet., substitute member)

Camilla Svensson (researcher)

Velmurugesan Arulampalam (researcher, substitute member)

Caroline Lindqvist (animal caretaker)

Sara Ferm (animal caretaker, substitute member)

Mikaela Sandbacka (ethologist)

Activities 2024

Amendments

The animal welfare body handled a total of 35 amendments during 2024. Twelve of those amendments were of administrative character such as change or addition of animal facilities, or exchange of the principal investigator on an ethics license.

The remaining applications pertained to modifications of experimental parameters that had previously been approved in the underlying ethics license. The AWB performs a detailed investigation for these applications to assess whether the proposed adjustments meet the prerequisites stipulated in L150 utilizing the specific competences represented within the organization. None of the decisions of the AWB has been appealed against by the Swedish county administrative board ("Länsstyrelsen").

As stipulated in the annual report of 2023, the number of amendments for modification of experimental parameters has been increased by approximately 40% compared to the previous year, most likely due to the new pricing model for ethics applications which turned into effect by January 1st 2024.

Recommendations and projects.

The AWB has revised three recommendations: Dnr 1-649/2024 PREPARE and ARRIVE guidelines and EDA tool; Dnr 1-1192/2024 assessing the severity of animal experiments; Dnr 2-4550/2024 on the health assessment of neonatal mice.

Comparative Medicine has collected all standard operation procedures used in all Comparative Medicine's animal facilities and organised those into so-called processes. All processes involving research animals have been evaluated by the AWB concerning the potential effect on the welfare of the individual research animals.

Following the recommendation of the Swedish 3R center published in late 2023 and as stipulated in the annual report for 2023, the AWB has established and coordinates a project to implement stress-free handling of mice in all KI's animal facilities. Before and after summer 2024, all animal caretaker staff have been educated in stress-free handling of mice and the handling method has stepwise been implemented in all animal rooms. The status of the implementation and the effect on personnel and animals has been evaluated with a questionnaire send out to all animal caretakers in December 2024. During Q1 and Q2 2025, the method will be Implemented for all researchers handling mice as well.

The AWB has established guidelines for KIs scientists who perform animal-based research abroad. Those guidelines have been published (Dnr 1-576/2024) and give researchers working or affiliated to KI valuable tools to address and assess ethical questions concerning the use of research animals in other countries.

The AWB is currently establishing guidelines for rehoming retired research animals. Additionally, the AWB is starting a discussion with different animal rights groups to facilitate rehoming of retired research animals. The AWB strongly believes that rehoming can be beneficial both for ethical reasons and for increasing the awareness of the public that KI has a strong focus on the welfare of research animals.

One of Comparative Medicine's 3R groups (via the AWB) has during 2023 and 2024 performed a 3R project to investigate whether mice have a preference

for aspen bedding (ABEDD) of a smaller size (2x3 mm) in comparison with aspen bedding of larger size (3x5 mm). The study was performed as a preference study where a custom-built metal divider was installed in the middle of a GR900 cage. Each side of the divider was prepared as a standard (according to Comparative Medicine, KI) GR500 cage including enrichment, food and water bottle, with the only difference that one side of the cage was filled with the smaller sized aspen bedding and the other side was filled with the larger sized aspen bedding. Various parameters were evaluated, but the main focus was put on which side of the cage the nest was positioned. The conclusion from the experiments was that no clear preference for larger or smaller aspen bedding could be seen.

Courses, conferences, and workshops

On 25th of March, the AWB has together with KI's ethical board arranged the seminar entitled "Animal research at KI. Current and future ethics in relation to animal welfare". The seminar highlighted the importance of stress-free handling of experimental animals and the value and benefit of experimental animal research for today's and future patients.

On October 17th, members of the AWB joined the national animal welfare body meeting in Stockholm organized by the Swedish 3R center. This year's meeting focused on the possibilities and challenges for rehoming retired research animals and how the animal welfare bodies can help to replace research animals where scientifically possible.

In late 2023, the AWB has established a collaboration with a researcher that runs a study on aggression in male mice in several different animal facilities in Sweden. The AWB coordinates the project at KI's animal facilities, and the project has been ongoing through 2024.

The chair of the AWB is ordinary member of the Swedish national committee for the protection of animals used for scientific purposes and in this role, he established a meeting series for the chairs of all Swedish animal welfare bodies to exchange knowledge and discuss current problems. The AWB of Karolinska Institutet is regularly joining the meeting series.

Other activities

Representatives (NACWO and Veterinarian) from the AWB have been involved in audits, required for collaborations with KI researchers, performed by AAALAC and companies.

Planned activities 2025

The AWB will continue the Implementation of stress-free handling at all KMs rodent animal facilities and during Q1 and Q2 2025, the handling method will be taught and Implemented for all scientists using KMs rodent facilities.

The AWB aims to arrange two workshop/seminar during 2025. One seminar will focus on animal research and communication and the other on standardisation of behaviour tests.

The AWB will be involved in the referral response to the upcoming revision of SJVFS 2019:9 saknr L150.

The AWB will continuously review and analyse retrospective reports from CDFN, guidelines and strategy documents involving animal welfare. The information will be used to improve animal welfare in current research at all KI institutions in communication with the researchers and in recommendations from AWB.

The AWB will continue to network with other animal welfare bodies in the Stockholm/Uppsala region to facilitate research projects and to meet the demand of research groups which are active at different sites.