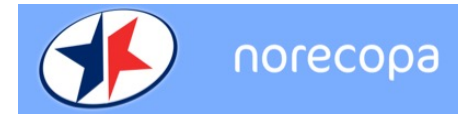


Culture of Care – and status on Norwegian 3Rs initiatives

Adrian Smith

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[linkedin.com/in/adrian-smith-bb567b5a](https://www.linkedin.com/in/adrian-smith-bb567b5a)
[@adrian_3r](#)

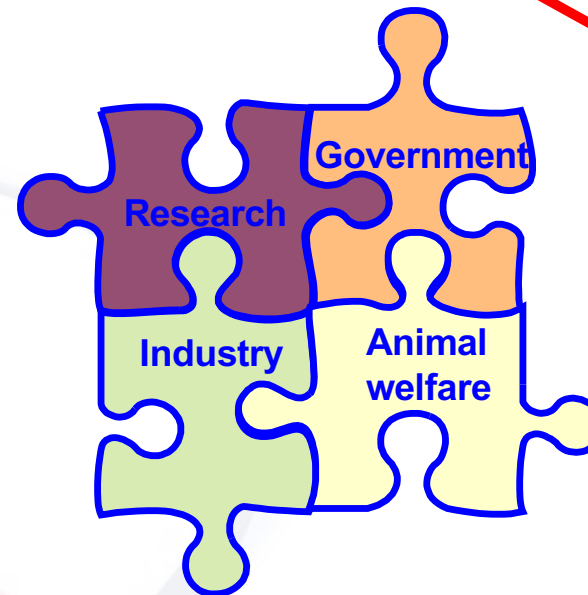
norecopa.no/CR-Bergen



Norecopa is a National **Consensus** Platform for the 3Rs:
Replacement, Reduction and Refinement of animal experiments

A member of **ecopa**:

European Consensus-Platform for Alternatives
which recognises National Consensus Platforms with
4 stakeholders equally represented:



increases the
chances of a
culture of
care

Norecopa: PREPARE for better Science



norecopa

PREPARE for better Science

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[About](#) [Alternatives](#) [Databases & Guidelines](#) [Education & training](#) [Legislation](#) [Meetings](#) [More resources](#) [News](#) [PREPARE](#) [Species](#) [Wiki](#) [Support](#)

Current number of pages: 10179

Type a search term (or type * to retrieve all pages and then use the search 

Welcome to Norecopa,
Norway's 3R platform!

Creating a Culture of
Care

The PREPARE
Guidelines for Planning
Animal Research and
Testing

International Webinars
and Meetings Calendar

A global Map of 3R
Centres and Networks

Alternatives to
dissection

norecopa.no/CoC



norecopa.no/global3r

Centres

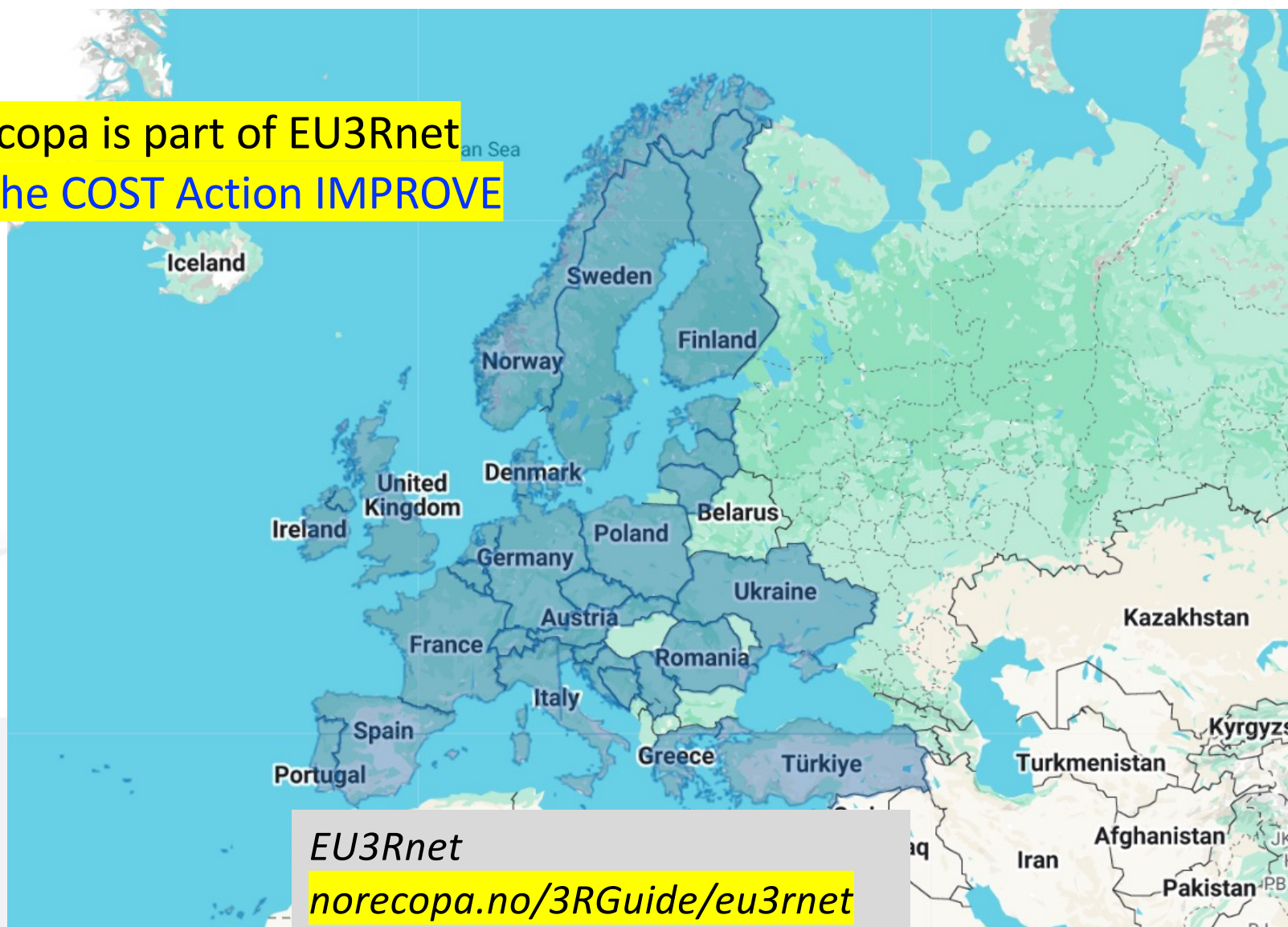
- ☒ [Replacement](#) i
- ☒ [Reduction](#) i
- ☒ [Refinement](#) i
- ☒ [ecopa](#) i

Associations

- ☒ [ACURET](#) i
- ☒ [AFLAS \(includes South Korea\)](#) i
- ☒ [Concordat on Openness](#) i
- ☒ [Culture of Care Network](#) i
- ☒ [ecopa](#) i
- ☒ [ENAWB](#) i
- ☒ [EU-NETVAL](#) i
- ☒ [EU3Rnet](#) i
- ☒ [FELASA](#) i
- ☒ [FESSACAL](#) i
- ☒ [ICLAS \(includes South Korea\)](#) i
- ☒ [Scand-LAS](#) i



Norecopa is part of EU3Rnet
and the COST Action IMPROVE



EU3Rnet

norecopa.no/3RGuide/eu3rnet

Norecopa: PREPARE for better Science

norecopa.no/global3r



approx 60 members, one per organisation, in 14 countries

meetings sponsored by Norecopa at FELASA, in Prague (2019) & Athens (2025)



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Culture of Care

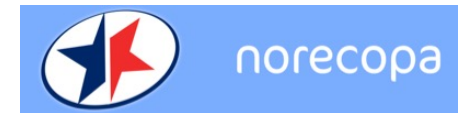
The International Culture of Care Network
norecopa.no/coc

A demonstrable commitment, throughout the establishment, to improving:

- animal welfare
- scientific quality
- care of staff
- transparency for all stakeholders, including the public

It goes beyond simply complying with the law!

Norecopa: PREPARE for better Science



Communication and the Culture of Care

Penny Hawkins, RSPCA Research Animals Department
on behalf of the International Culture of Care Network*

Effective two-way communication between scientists and animal technologists is essential for a good Culture of Care
The European Commission suggests the 'development of formal and informal communication channels, for mutual benefit with respect to science and animal welfare'
Here are some examples from International Culture of Care network members

Regular meetings

Scheduled meetings for scientists, animal technologists, vets, unit managers and AWERB members



Regular refresher/updates

Special events

Duo-talks: researcher talks about their science, and animal technologists talk about techniques and animal care within the project



+ Quick Start Guide

Communication into existing processes

Each study has a pre-start and wash-up meeting involving everybody



Three Rs improvements reported to AWERB & shared at external user meetings

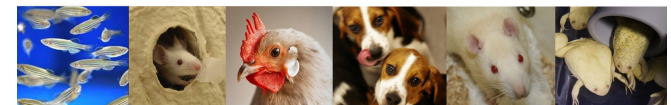


Other ideas

A 'boxless' event: anyone can submit 'out of the box' ideas to improve practice



A staff survey for all e.g. how much do you agree with statements such as 'in our group we listen to each others' ideas about animal welfare'



*norecopa.no/culture-of-care

The CoC Network's Quick Start Guide



Advice on

- Key steps
 - managerial commitment
 - encouraging dialogue
 - rewarding individuals
- Writing a vision statement
- Establishing indicators of a culture of care
- Using a checklist to assess the current situation
- Looking for evidence of a lack of care

<https://norecopa.no/coc/quick-start-guide>

➤ **Recital 31 of the [EU Directive 2010/EU](#) states:**

*Animal-welfare considerations should be given the highest priority in the context of animal keeping, breeding and use. Breeders, suppliers and users should therefore have an **animal-welfare body** in place with the primary task of focusing on giving advice on animal-welfare issues.*

*The body should also follow the development and outcome of projects at establishment level, **foster a climate of care and provide tools for the** practical application and timely implementation of recent technical and scientific developments in relation to the principles of replacement, reduction and refinement, in order to enhance the life-time experience of the animals. The advice given by the animal-welfare body should be properly documented and open to scrutiny during inspections.*



- In [A working document on Animal Welfare Bodies and National Committees to fulfil the requirements under the Directive](#), there is a section entitled **Fostering a Culture of Care** on 'establishing and maintaining an appropriate climate of care, often called in practice, and subsequently referred to in this document as, a "culture of care", among the animal user community.' It is listed as one of the benefits of an effective Animal Welfare Body. The section states:

"Ensuring an appropriate culture of care is in everyone's interests, as it will promote improved animal welfare and therefore enhanced scientific outcomes, and give all those involved in the establishment confidence that delivering high quality animal care and use practices is an important priority."

4. What is *the International Culture of Care Network*?

The primary role of the network is to share and publish examples of activities fostering a Culture of Care which make a difference in terms of improved animal welfare and human wellbeing. Network members include representatives of many professions:

- › *In vivo* technicians
- › Lab animal veterinarians
- › Members of animal welfare bodies
- › Representatives of competent authorities
- › Communications experts
- › Members of animal welfare organisations



The International Culture of Care Network

norecopa.no/coc

Norecopa: PREPARE for better Science

The International Culture of Care Network

Thomas Bertelsen, Novo Nordisk A/S, Denmark; Adrian Smith, Norecopa, Norway and members of the The International Culture of Care Network

Background

The EU working document on Animal Welfare Bodies and National Committees states:

- Ensuring an appropriate culture of care is in everyone's interests, as it will promote improved animal welfare.
- Simply having animal facilities and resources which meet the requirements of the legislation will not ensure that appropriate animal welfare, care and use practices will automatically follow.

The aims of the Culture of Care Network

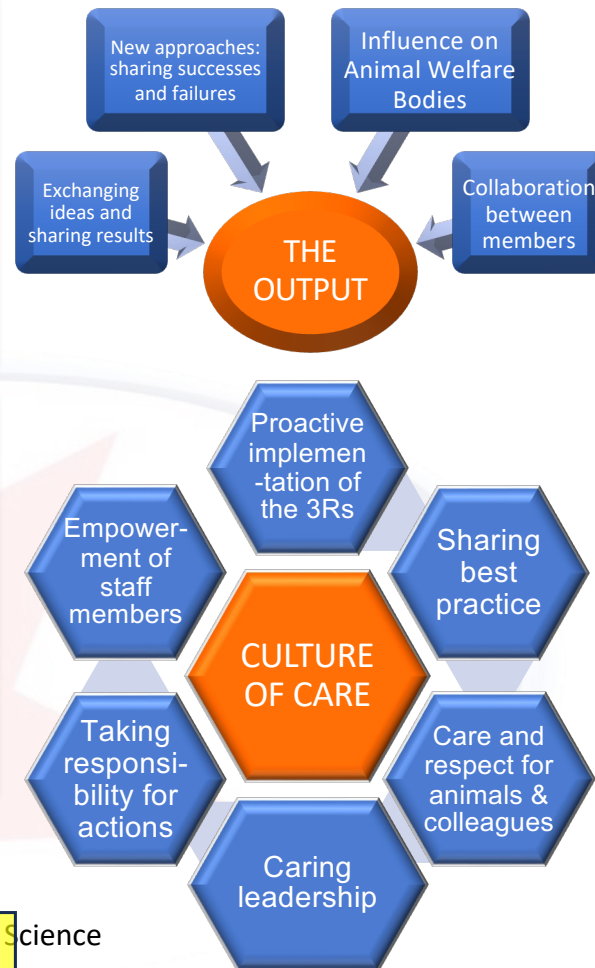
To provide a forum for the quick and efficient dissemination of ideas and efforts to create a culture of care

- To promote a mindset and behaviour that continuously and proactively works to advance laboratory animal welfare and the 3Rs.
- To aim for more than a culture of compliance.
- To encourage a culture of challenge, rather than accepting established practice.

Interested in joining?

As a member, you are expected to work actively with culture of care.

Please write to: CultureOfCareNetwork@gmail.com



Our members

The Network consists of people with a large range of backgrounds:

- Laboratory animal scientists & technicians
- Laboratory animal veterinarians
- Members of Animal Welfare Bodies
- Representatives of National competent authorities
- Communications experts
- Members of animal welfare organisations

This diversity of competency and perspectives ensures that the network encourages a culture of care both for the animals used in research and for those working with them.

We are currently 36 members in 14 countries.



norecopa.no/CoC

References:

- The legal framework for a culture of care: https://ec.europa.eu/environment/chemicals/lab_animals/pdf/endorsed_awb-nc.pdf
- A Quick Start Guide: <https://norecopa.no/CoC/quick-start-guide>
- An overview of culture of care resources: <https://norecopa.no/CoC/resources>

<https://swiss3rcc.org/culture-of-care>

Culture of Care Working Group

About Culture of Care

Culture of care is an important principle that indicates a commitment to improve animal welfare, scientific quality, care of the staff and transparency for the stakeholders.

The Swiss 3RCC's Culture of Care working group aims to promote and facilitate the **culture of care** at institutions in Switzerland. We also host the larger Swiss Culture of Care Group in their regular meetings.

An international culture of care network was established to share examples of activities that improve animal welfare. The network aims to promote a mind-set and behaviour that continuously and proactively works to promote laboratory animal welfare and the 3Rs; to go beyond a culture of compliance, and to include a culture of challenge, i.e., go beyond the accepted. You can find more information on the **International Culture of Care Network** [here](#).

The Swiss Culture of Care Charter

The **Charter** is meant to give practical suggestions on steps and actions to implement the CoC actively in the daily research activities. It is an engagement to bind to a philosophy, which in the present case is rooted in the 3Rs principle. Joining the CoC Charter is an official recognition that a given Institution will do its best to apply 3Rs principles beyond the legal requirements.

The degree with which the Institutions will apply the concepts of the Charter depends on how much resources are allocated to this endeavor and is voluntary.

If each of the key players – animal caretakers, veterinarians, facility managers, scientists, animal welfare officers, leaders - implement one of these actions daily, research institutions would positively impact the welfare of the animals, their research but also the satisfaction of their employees and the trust of the public.



CULTURE OF

"CARING, ACCOUNTABILITY, RESPECT, EXCELLENCE" CHARTER



CARING

- We care about the health, physical and emotional wellbeing of animals and staff.
- We handle animals with care.
- We actively seek to refine the way we house, handle and care for animals.
- We practice and promote safety at the workplace.
- We take care of the equipment and value the resources we work with.
- We acknowledge good work and commitment.



ACCOUNTABILITY

- We are responsible for the welfare of our animals and our team.
- We are accountable for our actions.
- We have agreed ethical values and demonstrate integrity.
- We are committed to open communication within our organisation.
- We contribute to an open dialogue about animal welfare and animal research.



RESPECT

- We act and communicate in a respectful, clear and transparent manner.
- We treat animals and people within and beyond our institution with respect.
- We listen to team members, ask team members how they are and show our appreciation.
- We show and promote respect for the dignity of the animals we work with.
- We treat errors as learning opportunities at their first occurrence.



EXCELLENCE

- We provide high-quality care to the animals and implement animal welfare concepts.
- We strive to promote the application of 3Rs.
- We proactively seek ways to go beyond regulatory requirements.
- We strive for excellence in science.
- We endorse planning and reporting guidelines (PREPARE & ARRIVE 2.0).
- We help to promote a culture of learning.

INTRODUCTORY DEFINITIONS

While an institution's strategy defines some of its values and principles, its mission statement defines its purpose and capacity to thrive. Culture of Care (CoC) is a concept that is accepted, or rejected within a community, in response to changing opportunities.

Culture of Care (CoC) in a laboratory organisation to improve animal welfare and quality by implementing a care bred or used for scientific provision. It signifies the organisation's commitment to the legal requirements, AAALAC accreditation, if they are doing their job in the institution.

The CoC program complements regulations (TschG and TschV) 3Rs principles, as well as the principles of animal care as a human care as a human care.

The European Union's 2010/609/EU Directive emphasizes the importance of a culture of care to ensure the highest standards of scientific and animal welfare, care and use.

<https://www.fedex.admin.ch/infoc/200>
<https://eur-lex.europa.eu/eli/dir/2010/609/oj>

CULTURE OF CARE

"CARING, ACCOUNTABILITY, RESPECT, EXCELLENCE" CHARTER



CARING

- We care about the health, physical and emotional wellbeing of animals and staff.
- We handle animals with care.
- We actively seek to refine the way we house, handle and care for animals.
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- We take care of the equipment and value the resources we work with.
- We acknowledge good work and commitment.



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- We endorse planning and reporting guidelines (PREPARE & ARRIVE 2.0).
- We help to promote a culture of learning.

SWISS CULTURE OF CARE CHARTER

Decisions on steps and actions to implement the Charter are an engagement to bind to a principle. It is an engagement to bind to a principle. Joining the CoC Institution will do its best to apply 3Rs.

Only the concepts of the Charter depends on the effort and is voluntary.

veterinarians, facility managers, scientists, and one of these actions daily research of the animals, their research but also of the public.

Culture of Care Award



The Culture of Care (CoC) Award recognizes an individual or a group of people for their accomplishment to promote and implement a good Culture of Care within a research institution that uses animals for research.

Background

The Culture of Care Network of the **Swiss 3RCC** will grant this prize for the third time in 2024.

The award promotes the proactive implementation of a good Culture of Care within Swiss institutions that are conducting or supporting exemplary animal research.

As any other *culture* that defines an organization's beliefs and behavior, the Culture of Care in laboratory animal science gathers all the values, ideas and actions that allows an institution to go beyond the legal requirements and obligations, and thrive into a positive research environment, for their staff, the animals, and society.

Implementing CoC within the organization aims to provide all stakeholders a sense of pride that they are doing their job the right way and doing the right things.

Nominees for this award can be any individual or collaborative initiatives that proactively and successfully drive forward the implementation of a good Culture of Care within animal research institutions.

Eligibility

Any person at a Swiss research institute or Swiss organization, eg. researchers, animal caretakers, communication or management staff can apply or be nominated by their peers.

Criteria

The successful project/action should have a positive impact on humans & animals in the context of driving forward a good Culture of Care that goes beyond legal requirements, such as:

- a) animal welfare (progressively working on implementation of a good CoC, beyond the 3Rs)
- b) scientific quality (e.g. enhance reproducibility)
- c) transparency and communication (improving internal communication between stakeholders, excluding public outreach projects)
- d) care of staff (improved management, empowering e.g. animal care staff, promoting respectful working environment, preventing compassion fatigue, creating a safe environment to talk about doubts or concerns and to make suggestions for improvements)
- e) Innovation (thinking out of the box), e.g. developing new or improved techniques or training programs.

Award Details

Online application: funding.swiss3rcc.org

Challenge cup and a 3.000 CHF honorarium

Deadline: October 31st, 2024

<https://swiss3rcc.org/award-call-culture-of-care>



Culture of Care Award

The Culture of Care (CoC) Award recognizes an individual or a group of people for their accomplishment to promote and implement a good Culture of Care within a research institution that uses animals for research.

The award for contribution to the CoC in 2022 was presented live at the [SGV meeting](#) to [Dr. Julie Parchet-Piccand](#) from EPFL for her project on improving the knowledge of experimental licenses and research projects for animal caretakers.

For all relevant information on eligibility and how to apply [click here](#).

Animal Technician Week

This annual celebration recognises animal technicians for their essential contribution as members of the research team. They are responsible for providing compassionate attention to the animals in their care. More information: [Animal Technician Week](#)

Current Members

Paulin Jirkof - *University of Zurich*

Anne Planche - *Swiss Animal Facility Network*

Andrina Zbinden - *University of Fribourg*

Birgit Ledermann - *Swiss Laboratory Animal Science Association*

Armand Mensen - *Swiss 3RCC*

If you are interested in becoming a member of the Culture of Care working group, please send an email to paulin.jirkof@swiss3rcc.org with your profile / cv and a short motivation text about your reasons for wanting to join the working group.

2025 International Laboratory Animal Technician Week

January 26 - February 1, 2025



This annual celebration recognizes laboratory animal technicians for their essential contributions as members of the research team.

<https://www.aalas.org/certification/technicians/tech-week>

Resources produced by the International Culture of Care Network:

- › [Emotional labour: support for animal technologists](#) (Penny Hawkins, 2024)
- › [Culture of Care](#) (Penny Hawkins, 2024), a presentation covering:
 - ▶ *Reflections on the full meaning of Culture of Care*
 - ▶ *How to actively develop and promote this*
 - ▶ *Focus on caring for staff*
 - ▶ *Identifying actions*
- › [The Concept of Culture of Care: Internal Program Communication](#) (Bertelsen, Sørensen, Paradell & Van Loo, 2024)
- › [Improving Culture of Care through maximising learning from observations and events: Addressing what is at fault](#) (Robinson *et al.*, 2022)
- › [The Culture of Care - a working concept](#). A one-page summary of the concept and essential factors, by Penny Hawkins and Maggy Jennings, endorsed by the Network.
- › [Communication and a Culture of Care](#): A two-page published by the Network in October 2018, based upon the results of a survey of communication between scientists and animal technologists and care staff. The document gives examples of such activities. It is designed to be inspirational rather than prescriptive.

norecoba.no/coc/resources

Other publications by Network members:

- › [Creating an effective, inclusive and open Animal Welfare and Ethical Review Body: learning and legacy](#) (Crudgington *et al.*, 2024)
- › [Achieving a good Culture of Care](#) (Barney Reed, RSPCA UK, 2024)
- › [Culture of Care at Novo Nordisk](#) (a poster with examples of their work), 2023
- › [The Capability Maturity Model as a Measure of Culture of Care in Laboratory Animal Science](#) (Amarasekara *et al.*, 2022)
- › [Maintaining a Culture of Care during a research animal facility closure](#) (Robinson & Wilkinson, 2022)
- › [Achieving a good Culture of Care](#) (Barney Reed, RSPCA UK, 2021)
- › [Contributing to Your Culture of Care](#) (practical advice for animal care staff) (Robinson & Kerton, 2021)
- › [What does a Culture of Care look like? Lessons learnt from a workshop survey](#) (Robinson & Kerton, 2021)
- › [A summary sheet for AWERBs \(Animal Welfare and Ethical Review Bodies\)](#) with advice on how to promote a culture of care, with [a comprehensive reference list of resources](#). Produced by the [Animals in Science Department](#) at the RSPCA.
- › Bertelsen & Øvlisen (2021): [Assessment of the Culture of Care working with laboratory animals by using a comprehensive survey tool](#).
- › Bertelsen T & Hawkins P (2020): A Culture of Care. In: [Animal-Centric Care and Management](#). Eds. DB Sørensen, S Cloutier & B Gaskill.
- › Hawkins P & Bertelsen T (2019): [3Rs-Related and Objective Indicators to Help Assess the Culture of Care](#). *Animals*, November 2019.
- › [How effectively are Animal Welfare Bodies \(AWBs\) driving the Culture of Care, as set out in the EC working document on AWBs and national committees?](#) A summary of the discussions of a Network meeting in Prague, June 2019
- › [Ethics, Animal Welfare and the 3Rs: An Effective Culture of Care](#). A presentation by Adrian Smith at the ESLAV Summer School, Stockholm, June 2018
- › [The Importance of a Culture of Care](#) - a poster by Alan White, chair of the Animal Welfare and Ethical Review Body, GlaxoSmithKline UK (2018)
- › [Measuring Culture of Care](#). A presentation by Thomas Bertelsen at the [10th World Congress on Alternatives and Animal Use in the Life Sciences](#), Seattle, August 2017
- › Boden T & Hawkins P (2016): [Communicating the Culture of Care - how to win friends and influence people](#). *Animal Technology and Welfare* 15(3):151-156.

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Promoting a Culture of Care

Aim of this resource

To help AWERB members ensure the concept of a Culture of Care is understood and supported within the establishment.

Relevant AWERB task



Help to promote a Culture of Care within the establishment and, as appropriate, in the wider community.

Recommendation

Use this resource to check the effectiveness of your AWERB's Culture of Care initiatives.



Culture of care

- [Promoting a Culture of Care](#)  (2020)
- [Communication and the Culture of Care poster](#)  (2019) on behalf of [The International Culture of Care Network](#) 
- [3Rs-related and objective indicators to help assess the Culture of Care](#)  (2019)
- [Assessing the Culture of Care: A survey of Culture of Care Network members](#)  (2017)
- [Communicating the Culture of Care - how to win friends and influence people](#)  (2016)
- [Good Science, Good Sense and Good Sensibilities: The Three Ss of Carol Newton](#)  (2016)
- [Raising concerns about laboratory animal welfare: report of a workshop at IAT Congress](#)  (2014)



Culture of care: Creating the right environment for animal care

Recordings from a webinar series exploring the topic of culture of care.

June 2023

<https://nc3rs.org.uk/3rs-resources/culture-care-creating-right-environment-animal-care>

Culture of care case studies (ENGLISH)

A series of case studies developed by a group of 3Rs centres (logos above) to accompany a [webinar series focusing on culture of care](https://nc3rs.org.uk/3rs-resources/culture-care-creating-right-environment-animal-care) (June 2023).

Case study 1: Caring for my dogs

Case study 2: Too late to feed my pigs

Case study 3: My first experiment

Case study 4: My dream job

Case study 5: Late night working

<https://nc3rs.org.uk/3rs-resources/culture-care-creating-right-environment-animal-care>



Case studies ENGLISH.pdf

PDF 208.52 KB



Case studies FRENCH.pdf

PDF 209.25 KB



Case studies GERMAN.pdf

PDF 213.6 KB



Case studies DUTCH.pdf

PDF 207.24 KB

June 2023

<https://nc3rs.org.uk/3rs-resources/culture-care-creating-right-environment-animal-care>

Written by [Adrian Smith](#) - may be used freely.

Commitment to continually improve standards of animal welfare, ethics, health and safety

Undertake training regularly and keep informed of the latest 3R developments

Lip service banned: a positive and optimistic mind-set is needed

Transparency, including to the general public and all other stakeholders

Understand the need for individual responsibility to nurture the culture

Right to challenge and question the use of animals, the choice of husbandry methods and the procedures

Educate staff about alternatives at an early stage of employment

On the ball: a pro-active approach, rather than just reacting to problems when they arise

Find the time needed

Concerns can be aired without consequences for the whistleblower

Award good initiatives and promote individual thinking

Researchers and staff interact well, ensuring research integrity and quality

Everyone, from leadership downwards, is willing to implement a Culture of Care

Donate



Compassion Fatigue Resiliency

Caring for our People. Caring for our Animals.

Working with research animals can be challenging, leading to workplace stress, burnout, and compassion fatigue. But together we can support resiliency. We have a range of resources designed to promote resiliency for both individuals & institutions.

<https://3rc.org/compassion-fatigue>

What factors are linked to higher compassion fatigue?

- 💬 Less social support
- ⊗ Higher animal stress/pain
- ♥ Less enrichment frequency/diversity & stronger desire to provide more enrichment
- 💉 Physical euthanasia methods & less control over performing euthanasia
- 💻 Working as a trainer or at universities
- 👤 Longer working hours & understaffing
- 🤝 Lower emotional stability, openness, & extraversion
- 🐾 Close relationships with animals
- 🏢 Lack of resources/training for compassion fatigue
- 🗑️ Poor relationships with superiors
- 🧠 Poor mental or physical health

<https://3rc.org/compassion-fatigue>

Culture of Care facilitates honest discussion along the path

"Replacement?"



"we've always done it that way!»

"there are no alternatives!»

»we only do it as often as necessary"

Closely related to a culture of care is

a **Culture of Challenge** (Louhimies, 2015).

Look for the acceptable, rather than choosing the accepted.

More than 3Rs

The 3 Rs to minimise the harm:

- *Replace the unnecessary experiments*
- *Reduce the number of animals used*
- *Refine the conditions for the animals*

The 3 Vs to increase the validity of the experiment:

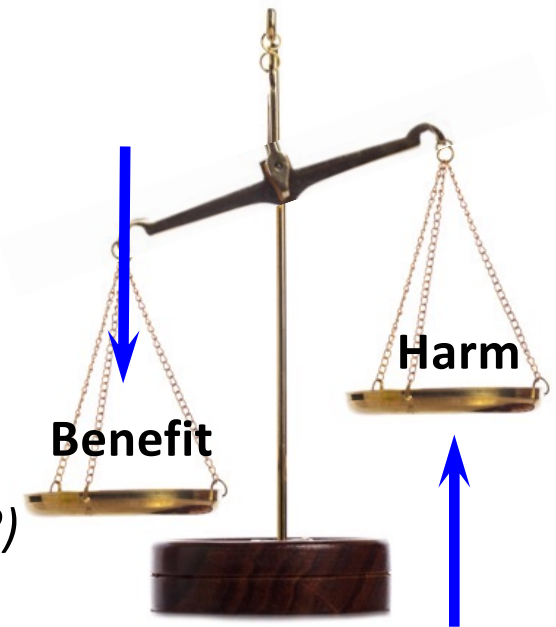
- *Construct Validity (can the model answer the question?)*
- *Internal Validity (has the experiment been correctly designed?)*
- *External Validity (are the results translatable to the target group?)*

The 3 Ss - use your commonsense and your heart

- *Good Science*
- *Good Sense*
- *Good Sensibilities*



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norecopa.no/3R
norecopa.no/3V
norecopa.no/3S

Retro-orbital puncture

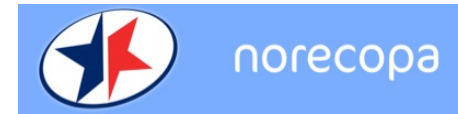
'critical anthropomorphism' (Smith & Hawkins, 2016)



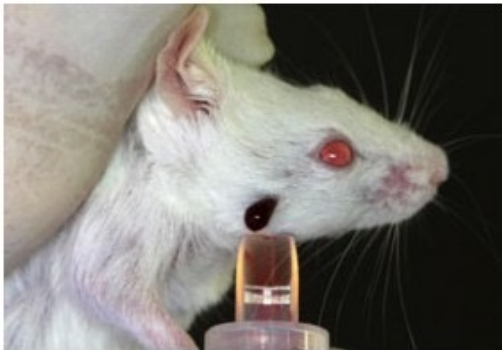
The Three Ss in practice

At the doctor's surgery:

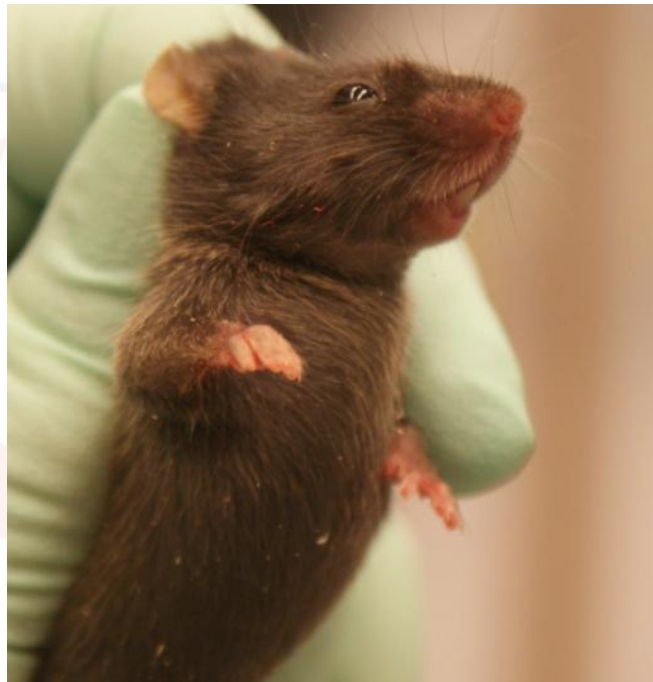
- I think I'll take a blood sample from you today, just to rule out the possibility that you have an infection.
- By the way, I take my blood samples by sticking a knife into your neck without anaesthesia –
- - but don't worry, I'll inject 2 litres of fluid into your stomach first, so you don't die from loss of blood.



Goldenrod
ANIMAL LANCET*



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Annual Report for 2024


Norecoba

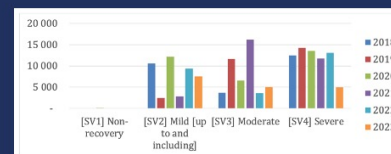



norecoba

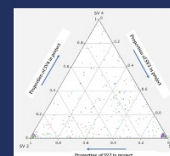


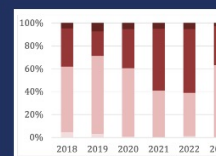












Research animal use in Norway from 2018 to 2023:
*A presentation of the official statistics,
 with emphasis on large studies*

Antoine Champetier, Adrian Smith & Stéphanie Vuille

“the most comprehensive, up-to-date, website for global 3R resources”



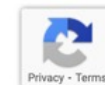
The screenshot shows the norecopa website homepage. The header is blue with the norecopa logo and name. A search bar is in the top right. A navigation menu lists various topics like 'About Norecopa', 'Alternatives', 'Databases & Guidelines', etc. Below the menu, there are links to specific resources like 'Anaesthesia and analgesia', 'Animal facilities', etc. An orange box highlights statistics: 'over 10,500 webpages', 'approx. 1,000 hits per day', and '7-8 detailed newsletters per year'. The footer shows the URL 'norecopa.no' and a link to 'More resources'.

over 10,500 webpages
approx. 1,000 hits per day
7-8 detailed newsletters per year

Design and reporting of animal experiments

norecopa.no

This page supplements advice given in [Section 4 of the PREPARE guidelines](#). PREPARE covers all aspects of design (including animal and facility related issues).



Norecopa: PREPARE for better Science

April 2025

- > [Ex vivo, de novo & in silico models in biomedical research](#) , Stuttgart, 1-2 April 2025
- > [EBVS Congress](#) , Belgrade, 2-4 April 2025
- > [The Transparent Transition - The future of animal and animal-free research](#) , Amsterdam, 3 April 2025
- > [From crisis to opportunity - systematic heterogenization as a tool to improve reproducibility and reduce animal use](#) , webinar (Helene Richter), 8 April 2025
- > [1st Finnish Culture of Care Symposium](#) , Helsinki, 9 April 2025
- > [Antibodies and Beyond: The Power of Animal-Free, Recombinant Antibodies](#) , webinar (Esther Wenzel), 9 April 2025
- > [Meeting the Requirements of the US Animal Welfare Act](#) , workshop, 9-10 April 2025
- > [17th Minipig Research Forum](#) , Amsterdam, 9-11 April 2025
- > **+ webpages for recorded meetings, including a page sorted by the PREPARE topics**
- > [How to convince your colleagues to work under aseptic conditions](#) , EFAT/ESLAV webinar (Bertrand Lussier), 10 April 2025
- > [Stress-reduced handling of rats and mice](#) , webinar (Therése Ahlström), 11 April 2025
- > [41st LAMA/ATA Annual Conference](#) , Fort Walton Beach, 14-17 April 2025
- > [Environmental Monitoring & Database Management](#) , webinar (Zoltan Varga & TBC), 18 April 2025
- > [Course in Fish Diseases part 1](#) , Copenhagen, 21-25 April 2025
- > [3Rs Sharing Conference](#) , Seattle, 23 April 2025
- > [46th Annual BCLAS Symposium: Stress and emotions in animals](#) , Namur, 23-24 April 2025
- > [Replication of null results: Absence of evidence or evidence of absence?](#) , webinar (Samuel Pawel), 29 April 2025
- > [All you ever wanted to know about registered reports](#) , webinar (Nonia Pariente), 30 April 2025



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Clicker training

Clicker training is an operant conditioning based on positive reinforcement. When the animal offers the desired behavior, a *click* or another distinctive sound (secondary reinforcer) is delivered and within the following few seconds the reward is presented (primary reinforcer)^[1]. The *click* bridges the time between the desired behavior and the presentation of the reward^[1]. A target stick providing a visual guide for the animal can be used for the training.

Animals are usually trained individually, though it is also possible to perform clicker training in a groups, e.g. in mice, rats, and rabbits. For rats, it was demonstrated that they learned tasks by observing the clicker training of their cage mates^[2].

Clicker training can be used to train animals in a stress-free way. The following behaviours are examples for what this technique can be used for:

Mice: entering a tunnel, following a target stick, climbing on the palm of the hand^[3]

Rats: following a target stick, voluntarily change to a cage, observational learning^[2]

Rabbits: following a target stick, rearing/standing up to inspect the abdomen, approaching a human, being touched and lifted by a human, trimming nails, coming on command

Pigs: Pigs can be easily trained to cooperate if they are treated empathetically and desired behavior is reinforced by providing food stuff in form of treats and apple juice^[4].



Clicker training with mice using a target stick. *Left:* The mouse is following the target stick and is climbing on the experimenter's hand. If the hand is lifted, the mouse will remain on the palm of the hand. *Right:* The mice are trained in a group. Two mice are following the target stick on the palm of the experimenter's hand.

- ¹ ^{1.0} ^{1.1} Feng, Lynna C.; Howell, Tiffani J.; Bennett, Pauleen C. (1 August 2016). "How clicker training works: Comparing Reinforcing, Marking, and Bridging Hypotheses" [↗](#). *Applied Animal Behaviour Science*. **181**: 34–40. doi:10.1016/j.applanim.2016.05.012 [↗](#). ISSN 0168-1591 [↗](#).
- ² ^{2.0} ^{2.1} Leidinger, Charlotte Sophie; Kaiser, Nadine; Baumgart, Nadine; Baumgart, Jan (25 October 2018). "Using Clicker Training and Social Observation to Teach Rats to Voluntarily Change Cages" [↗](#). *JoVE (Journal of Visualized Experiments)* (140): e58511. doi:10.3791/58511 [↗](#). ISSN 1940-087X [↗](#). PMC 6235608 [↗](#). PMID 30417890 [↗](#).
- ³ Leidinger, Charlotte; Hermann, Felix; Thöne-Reineke, Christa; Baumgart, Nadine; Baumgart, Jan (6 March 2017). "Introducing Clicker Training as a Cognitive Enrichment for Laboratory Mice" [↗](#). *JoVE (Journal of Visualized Experiments)* (121): e55415. doi:10.3791/55415 [↗](#). ISSN 1940-087X [↗](#). PMC 5408971 [↗](#). PMID 28287586 [↗](#).
- ⁴ "Positive Reinforcement Training in Large Experimental Animals" [↗](#) (PDF).

Experts for clicker training in mice and rats: [TARC](#) [↗](#), Mainz, Germany

This page was created and edited by [KH191219](#) ([talk](#)).

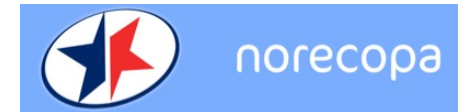
This page was last edited on 27 May 2020, at 11:23.

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Norecopa: PREPARE for better Science

PREPARE:

Planning Research and Experimental Procedures on Animals: Recommendations for Excellence

PREPARE covers 15 topics:

Formulation of the study

1. Literature searches
2. Legal issues
3. Ethical issues, **harm-benefit assessment** and humane endpoints
4. Experimental design and statistical analysis

Dialogue between scientists and the animal facility

5. Objectives and timescale, funding and division of labour
6. Facility evaluation
7. Education and training
8. Health risks, waste disposal and decontamination

Methods

9. Test substances and procedures
10. Experimental animals
11. Quarantine and health monitoring
12. Housing and husbandry
13. Experimental procedures
14. Humane killing, release, reuse or rehoming
15. Necropsy

Items in pink are
not typically
highlighted in
reporting guidelines

PREPARE:

Planning **R**esearch and **E**xperimental **P**rocedures on **A**nimals: **R**ecommendations for **E**xcellence

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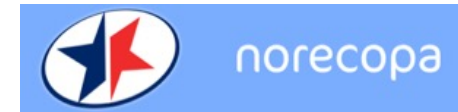
5. Objectives and timescale, funding and division of labour
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9. Test substances and procedures
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12. Housing and husbandry
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15. Necropsy

**Replacement should be
considered here**

Stating the obvious: Replacement must be considered from day 1 of planning



Norecopa: PREPARE for better Science

norecopa.no/PREPARE and
ivd-utrecht.nl/en/news/better-animal-research-through-open-science-1

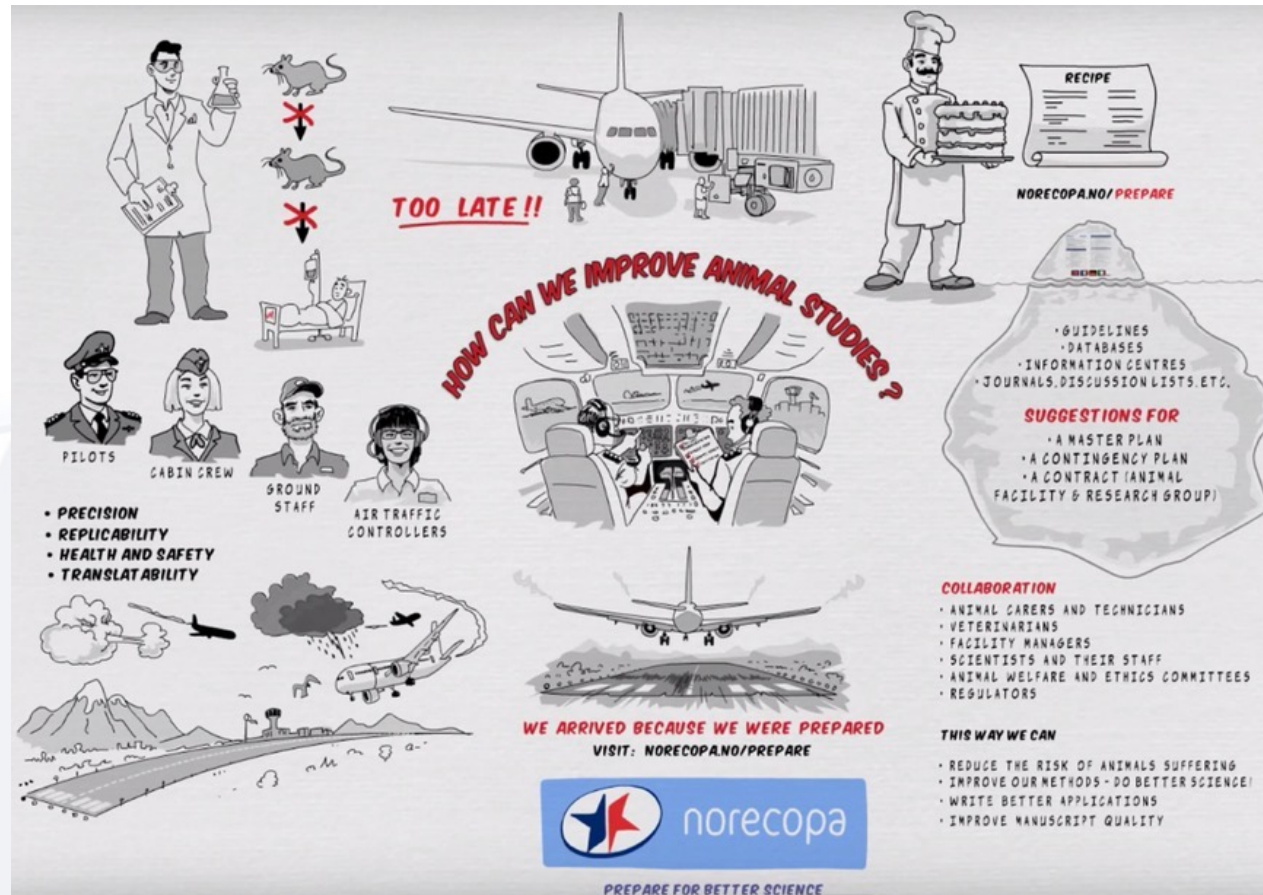


[reddit.com](https://www.reddit.com)

We cannot improve our research by better reporting alone...

Norecopa: PREPARE for better Science

norecopa.no/PREPARE/film
3-minute whiteboard film



Norecopa: PREPARE for better Science

ARRIVE study plan

Study details

Experimental animals 

Experimental procedures 

What is done and how is it done, when and how often.

Animal care and monitoring 

Risks

Personnel involved in the experiment

Study design  and sample size 

Inclusion and exclusion criteria 

Randomisation  and blinding/masking 

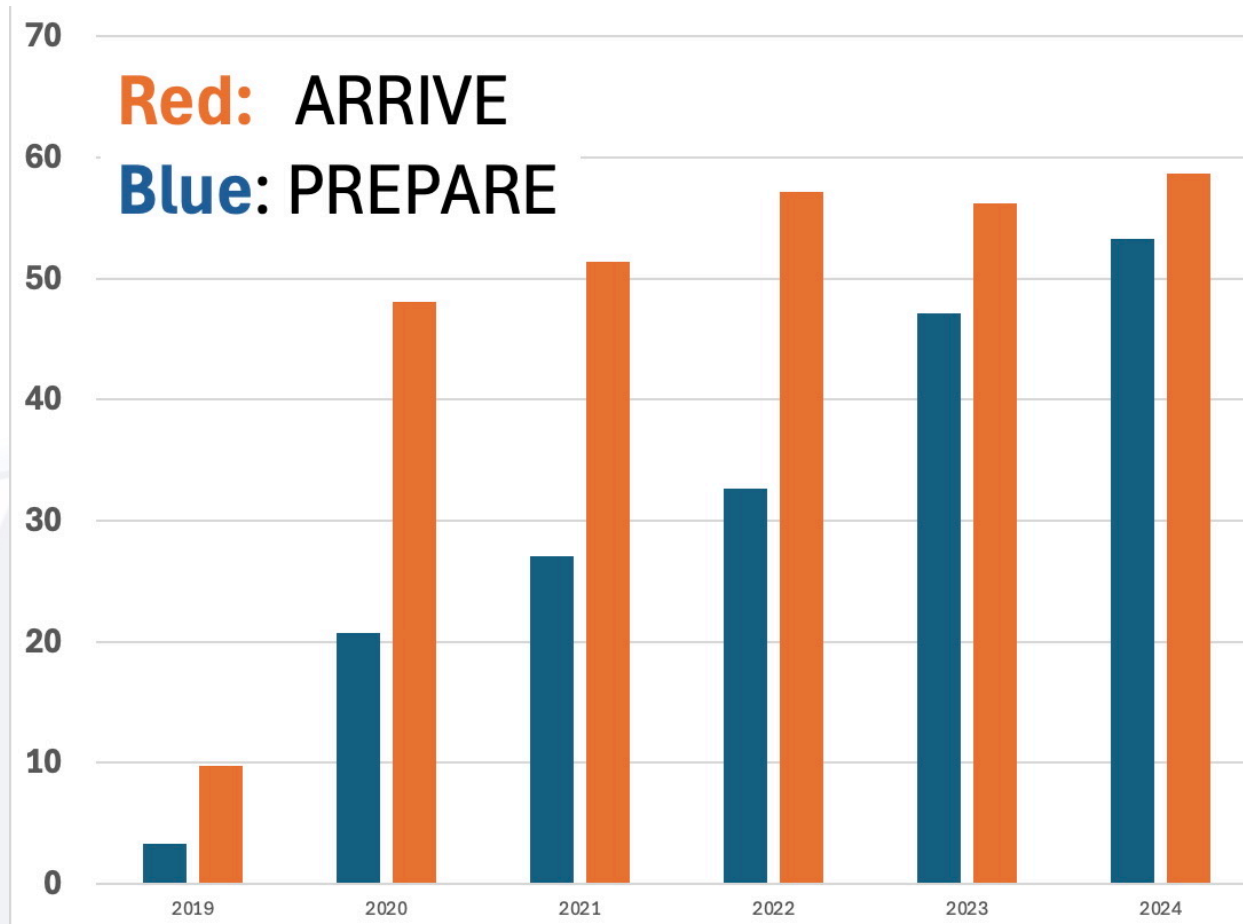
Outcome measures  and statistical methods 

<https://arriveguidelines.org/news/arrive-study-plan>

Before embarking on research involving the use of animals it is also critical to form a clear hypothesis, **identify possible non-animal alternatives to all or part of the proposed study** and assess the relevance of the chosen model to answer the experimental question. We therefore encourage researchers to **consult the PREPARE guidelines before considering the use** of animals in research. PREPARE provides researchers with an extensive overview to formulating an experiment and the requirements of using animals before carrying out the research.

<https://arriveguidelines.org/news/arrive-study-plan>

Percentage of UK Non-Technical Summaries citing ARRIVE & PREPARE



PREPARE

The PREPARE Guidelines Checklist Planning Research and Experimental Procedures on Animals: Recommendations for Excellence

Adrian J. Smith*, R. Eddie Clutton*, Elliot Lilley*, Kristine E. Aa, Hansert* & Trond Bratteli*

*Norecopa, c/o Norwegian Veterinary Institute, P.O. Box 750 Sentrum, 0106 Oslo, Norway; *Royal (Dick) School of Veterinary Studies, Easter Bush, Midlothian, EH25 9RG, U.K.; *Research Animals Department, Science Group, RSPCA, Wilberforce Way, Southwater, Horsham, West Sussex, RH13 9RS, U.K.; *Division of Experimental Biomedicine, Department of Production Animal Clinical Sciences, Faculty of Veterinary Medicine, Norwegian University of Life Sciences, P.O. Box 8148 Dep., 0033 Oslo, Norway; *Division for Research Management and External Funding, Western Norway University of Applied Sciences, 5020 Bergen, Norway.

PREPARE består av retningslinjer for planlegging av dyreforsøk. Disse komplementerer retningslinjer for rapportering av dyreforsøk, som f.eks. ARRIVE. PREPARE dekker de tre store områdene som bestemmer kvaliteten av arbeidet med å forberede dyreforsøk:

1. Designet av studiet
2. Dialogen mellom forskerne og dyreavdelingen
3. Kvalitetskontroll av de ulike komponentene i studiet

I praksis vil ikke temaene alltid behandles i den rekkefølgen som er presentert her, og enkelte temaer overlapper. PREPARE-sjekklisten kan endres for å ivareta spesielle behov, f.eks. ved feltforsøk. PREPARE inkluderer råd om drift av dyreavdelinger, fordi laboratorieforsøk er helt avhengige av deres kvalitet. Den fulle versjonen av PREPARE er tilgjengelig på Norecopas nettsider, med lenker til globale ressurser, på <https://norecopa.no/PREPARE>.

Fillable Word file that can be used
to write a Study Plan

	<input type="checkbox"/> Evaluere prosjektets reproduksjonsbarhet og overførbarhet.
2. Juridiske spørsmål	<input type="checkbox"/> Vurdere hvordan forsøket er påvirket av relevant lovgivning for dyreforsøk og andre aktuelle områder som f.eks. dyretransport og helse, miljø og sikkerhet. <input type="checkbox"/> Finne relevante veiledningsdokumenter (f.eks. EUs retningslinjer for prosjektevaluering).
3. Etske spørsmål, kostnad-nytteanalyse og humane endepunkter	<input type="checkbox"/> Skrive et sammendrag av prosjektet på legmannsspråk. <input type="checkbox"/> I dialog med etiske komiteer, vurdere om uttalelser om denne typen forsøk er allerede blitt produsert. <input type="checkbox"/> Adressere "de 3 R-ene" (Replacement, Reduction, Refinement) og "de 3 S-ene" (Good Science, Good Sense, Good Sensibilities). <input type="checkbox"/> Vurdere forhåndsregistrering av forsøk og publisering av negative resultater. <input type="checkbox"/> Foreta en kostnad-nytteanalyse ("Harm-Benefit Assessment") og diskutere eventuelle lidelser som kan oppstå under forsøket. <input type="checkbox"/> Diskutere læringsmålene dersom dyrene skal brukes i undervisnings- eller treningsøyemed. <input type="checkbox"/> Klassifisere prosjektet etter belastningsgraden. <input type="checkbox"/> Definere objektive, lett målbare og utvetydige humane endepunkter. <input type="checkbox"/> Diskutere behovet (hvis det er noe) for å bruke død som endepunkt for forsøket.
4. Eksperimentelt design og statistisk analyse	<input type="checkbox"/> Vurdere pilotforsøk og diskutere statistisk styrke og signifikansnivåer. <input type="checkbox"/> Definere den eksperimentelle enheten og bestemme antallet forsøksdyr. <input type="checkbox"/> Bestemme metodene for randomisering, fortløpende observasjonsskjemaer, og bestemme inklusjons- og eksklusjonskriterier.

Tema	Anbefaling
(B) Dialogen mellom forskerne og dyreavdelingen	
5. Mål og tidshorisont, finansiering og arbeidsfordeling	<input type="checkbox"/> Arrangere møter med alle relevante personell når tidlige planer for prosjektet foreligger. <input type="checkbox"/> Lag en omtrentlig tidsramme for prosjektet, som viser behovene for assistanse med forberedelser, dyrestell, prosedyrer og avfallshåndtering/dekontaminasjon. <input type="checkbox"/> Diskutere og legge frem alle forventede og potensielle kostnader. <input type="checkbox"/> Lage en detaljert plan for fordelingen av både arbeidsoppgavene og utgiftene, på alle stadiene i forsøket.
6. Evaluering av dyreavdelingen	<input type="checkbox"/> Foreta en fysisk inspeksjon av fasilitetene, for å evaluere bygningsmassen, standarden på utstyret og spesielle behov. <input type="checkbox"/> Diskutere bemanningsbehovet ved perioder med ekstra risiko.
7. Utddanning og trening	<input type="checkbox"/> Vurdere den nåværende kompetansen hos personalet og evaluere behovet for videreutdanning og trening før forsøket.
8. Helsefærd, avfallshåndtering og dekontaminasjon	<input type="checkbox"/> I samarbeid med dyreavdelingen, foreta en risikoevaluering som omfatter alle personene og dyrene som er påvirket, direkte eller indirekte, av studiet. <input type="checkbox"/> Evaluere, og om nødvendig produsere, spesifikke retningslinjer for alle stadiene av prosjektet. <input type="checkbox"/> Diskutere metoder for å ivareta, dekontaminere og avhende alt utstyr som skal brukes i studiet.
12. Oppstilling og stell	<input type="checkbox"/> Ta hensyn til dyrenes spesifikke instruksjoner og behov, i samråd med eksperter. <input type="checkbox"/> Diskutere akklimatisering, optimale oppstillingsforhold og prosedyrer, miljøfaktorer og eventuelle begrensninger på disse (f.eks. fasting eller oppstilling i enebur).
13. Eksperimentelle prosedyrer	<input type="checkbox"/> Utvikle optimale metoder for fangst, immobilisering, merking og frisetting eller omplussing. <input type="checkbox"/> Utvikle optimale metoder for å gi dyrene behandling, samt for prøvetaking, sedasjon og anestesi, kirurgi og andre inngrep.
14. Human avlivning, frisetting eller omplussing	<input type="checkbox"/> Konsultere relevant lovgivning og retningslinjer i god tid før studiet. <input type="checkbox"/> Definere de primære metodene for avlivning, samt metoder som kan brukes i en nødsituasjon. <input type="checkbox"/> Evaluere kompetansen til personene som må foreta disse handlingene.
15. Obduksjon	<input type="checkbox"/> Lage en systematisk plan for alle stadiene i obduksjonen, inkl. hvor den skal foregå, og identifikasjon av alle dyrene og prøvene som tas.

Referanser

1. Smith AJ, Clutton RE, Lilley E, Hansen KEA & Bratteli T. PREPARE: Guidelines for Planning Animal Research and Testing. *Laboratory Animals*, 2017. DOI: 10.1177/0023677217724823.
2. Kilenny C, Browne WJ, Cuthill IC et al. Improving Bioscience Research Reporting: The ARRIVE Guidelines for Reporting Animal Research. *PLoS Biology*, 2010. DOI: 10.1371/journal.pbio.1000412.

Mer informasjon

<https://norecopa.no/PREPARE> | post@norecopa.no | [@norecopa](https://www.facebook.com/norecopa)

Norecopa: PREPARE for better Science

3-Ethical issues, harm-benefit assessment and humane endpoints	
3a	Construct a lay summary.
3b	In dialogue with ethics committees, consider whether statements about this type of research have already been produced.
3c	Address the 3Rs (Replacement, Reduction, Refinement) and the 3Ss (Good Science, Good Sense, Good Sensibilities).
Assessment and justify any likely animal harm.	
3f	Discuss the learning objectives, if the animal use is for educational or training purposes.
3g	Allocate a severity classification to the project.
3h	Define objective, easily measurable and unequivocal humane endpoints.
3i	Discuss the justification, if any, for death as an end-point.
4-Experimental design and statistical analysis	

5. Have the experiments been carried out before, and is any repetition justifiable?
6. What [approaches to reduce distress](#) have been considered?

3a Construct a lay summary.

General principles

For fish researchers

1. Have national or local research ethics committees already produced statements relevant to the research being planned? Consideration should also be paid to the broader context of the research. For example, research directed at increasing the productivity of farming at the expense of (or without improving) individual animal welfare, or wildlife research whose primary aim is population management.

Links to quality guidelines and scientific papers worldwide on e.g. blood sampling, injection volumes, housing and husbandry, analgesia, humane endpoints, experimental design

2. Will any advances in this research only index the title and abstract be rejected?
 3. Have the Three S's ([Good Science, Good Sense and Good Sensibilities](#)) been addressed? Sufficient time should be allocated to this point, since two of the three S's are highly subjective, but equally important. The use of commonsense and critical anthropomorphism are justifiably part of the work to assess the impact of research on animals, not least when a scientific evidence base does not exist.
 4. Does the proposed study have a clear rationale and scientific relevance, and what will be the next step if the hypothesis is supported or rejected?
 5. Have the experiments been carried out before and is any repetition justifiable?
 6. What [approaches to reduce distress](#) have been considered?
 7. Will the project undergo [pre-registration](#) and will negative results be published, to avoid publication bias?
- Many more [links to resources on ethics are available here](#).
- Details about pre-registration of animal studies and reporting of critical incidents are to be found in the section on [Experimental Design and Statistical Analysis](#).

Harm-Benefit Assessment

PREPARE encourages scientists to collaborate with animal carers and technicians from Day 1

- they have a right to know and will be more motivated
- they know the possibilities (and limitations) in the animal facility
- they often possess a large range of practical skills and are good at lateral thinking
- they know the animals best
- the animals know them best
- lack of involvement creates anxiety, depression and opposition to animal research, as well as limiting creativity which might improve the experiments



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"We ARRIVED, because we were PREPARED"

- ✓ *Better Science*
- ✓ *Improved animal welfare*
- ✓ *Advancement of the 3Rs*
- ✓ *Safer working environment*

Norecopa: PREPARE for better Science





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SCID-Hu mice immunized with a pneumococcal vaccine produce specific human antibodies and show increased resistance to infection.

Aaberge I.S. *et al.*, Infection & Immunity, 1992, 60 (10): 4146-4153

<https://journals.asm.org/doi/epdf/10.1128/iai.60.10.4146-4153.1992>



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Research animal use in Norway from 2018 to 2023:

*A presentation of the official statistics,
with emphasis on large studies*

Antoine Champetier, Adrian Smith & Stéphanie Vuille

<https://norecopa.no/statistics>

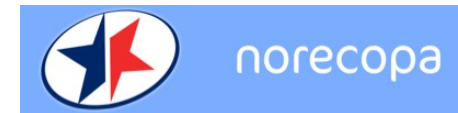
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Summer School on Systematic Reviews and Literature Searching, August 2024

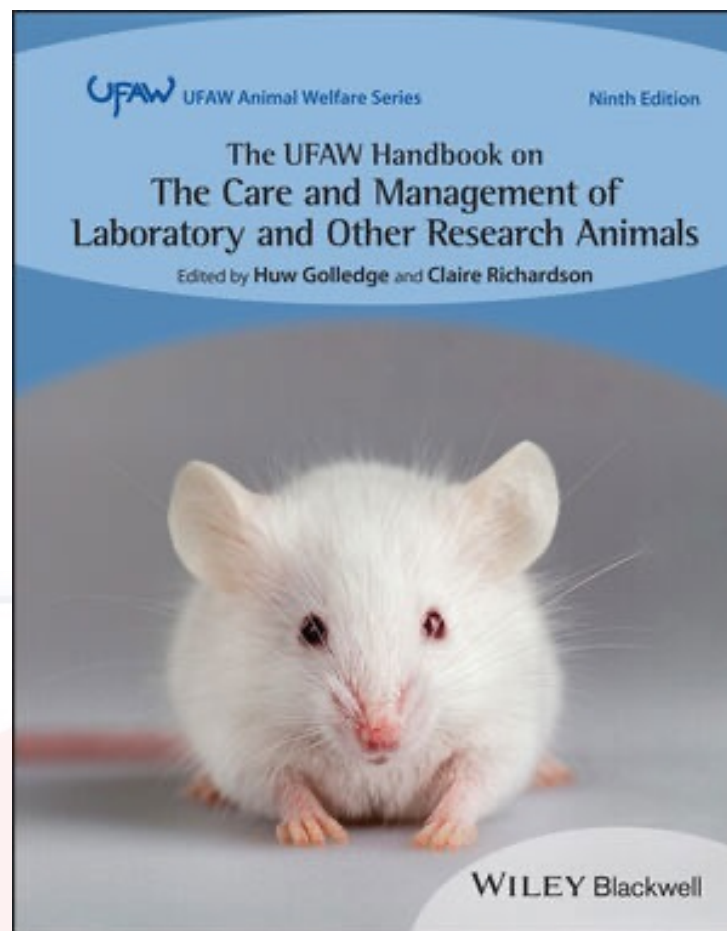
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21 presentations in 11 countries in 2024
*Albania, Argentina, Austria, Denmark, Finland, Germany,
Norway, Sweden, Switzerland, United Kingdom & USA*

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AJ Smith & J Richmond:
The Three Rs



The UFAW Handbook on the Care and Management of Laboratory and Other Research Animals, 9th Edition

Norecopa: PREPARE for better Science

Norecopa's 3R Prize – NOK 30,000 + diploma



57 unique nominations since the prize was established in 2010

...but only 1 nomination in 2025



Terje Aasland (Ap), 2013
Norecopa: PREPARE for better Science



Jan-Henrik Fredriksen (FrP), 2014
Morten Ørsal Johansen (FrP), 2016 & 2019



norecopa

Norwegian consensus platform for replacement, reduction and refinement of animal experiments

Norecopas pris til fremme av de 3 R-ene
(Replacement, Reduction, Refinement)

for 2024 på kr 30 000,-

tildeles

**Aurora Brønstad
Universitetet i Bergen**

for sitt fremragende arbeid i mange år for
å videreutvikle forsøksdyrfaget, øke dyrevelferden
og fremme forståelsen for 3R

på vegne av Norecopa

norecopa.no

Norecopa tilstreber konsensus mellom
de 4 interessepartene rundt dyreforsøk:



Norecopa: PREPARE for better Science

Awarded NOK 390,000 so far



2023



2024

3R activities that have not been nominated...



<https://www.sintef.no/siste-nytt/2023/vi-utvikler-teknologier-som-kan-reducere-dyreforsok-i-medisinsk-forskning>

Norecopa: PREPARE for better Science

Dialogue with the Standing Committee for Business & Industry (Næringskomitéen)



2000-2001	Stoltenberg I	<u>A</u>
2001-2005	Bondevik II	H, KrF, <u>V</u>
2005-2013	Stoltenberg II	A, <u>Sp</u> , SV
2013-2021	Solberg	H, <u>FrP</u> , V, <u>KrF</u>
2021-	Støre	<u>A</u> , <u>Sp</u>



Sitat fra statsministeren den 4. februar 2025

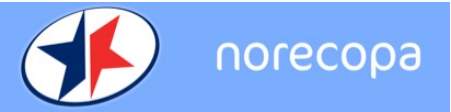
‘Og sammen har vi gjennomført det aller meste av Hurdalsplattformen...’

Under *Dyrevelferd* står det:

‘Støtte opp under prosjekt for å utvikle alternativ til dyreforsøk’

Norecopa: PREPARE for better Science

norecopa.no/CR-Bergen



English-language newsletters



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post@norecopa.no

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1433 Ås

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Org.no. 992 199 199
Bank account: 7694 05 12030
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