Norecopa: *what's in it for me?*

marksandspencer.com

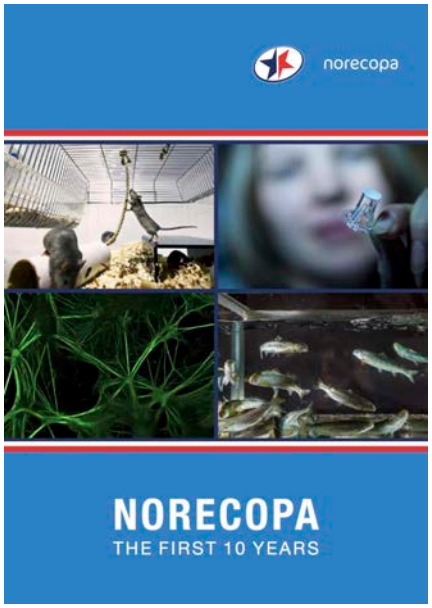
adrian.smith@norecopa.no

Norecopa

Norges konsensus-plattform for erstatning, reduksjon og forbedring av dyreforsøk

Tilstreber å være en kilde til globale 3R-ressurser

https://norecopa.no



Stiftet i 2007

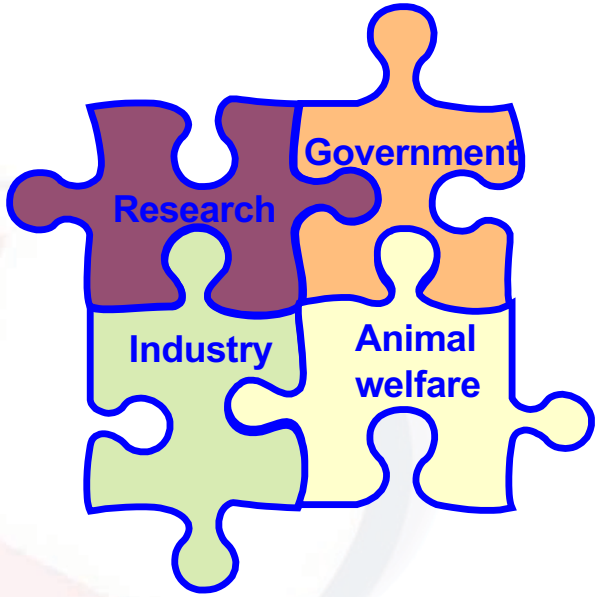
Norecopa: PREPARE for better Science

European Consensus-Platform for Alternatives

ecopa.eu

ecopa støtter nasjonal plattformer som har representanter for alle de 4 store interessepartene i sitt styre:

Opprettet i 2003:
Danmark
Finland
Frankrike
Italia
Norge
Spania
Sverige
Tyskland



Styret:

- ***Bente Bergersen**, Mattilsynet, styreleder*
  vara: Gunvor Knudsen, Mattilsynet

- ***Chris Noble**, Nofima Tromsø*
  vara: Siri Kristine Gåsnes, Veterinærinstituttet

- ***Kristian Straume-Lie**, Biomark*
  vara: Ingebjørg Sævareid, Salmon Group

- ***Susanna Lybæk**, Dyrevernalliansen*
  vara: Birgitte Fineid, Dyrebeskyttelsen Norge

Norecopa er ikke

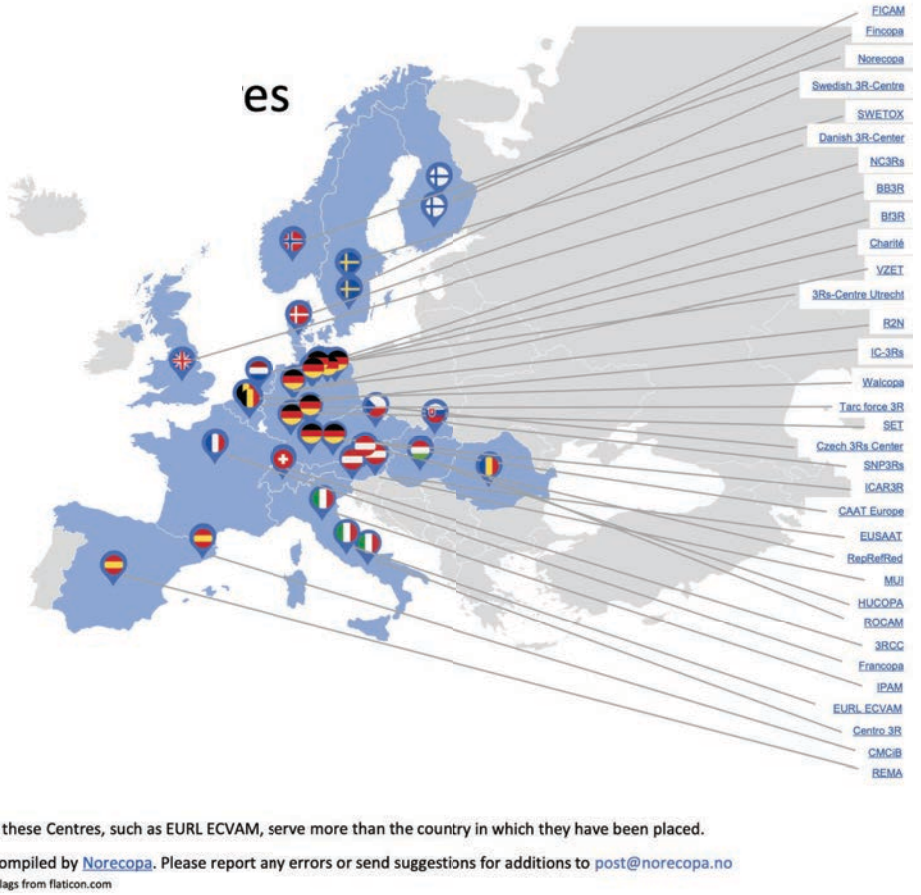
- **en dyrevernorganisasjon**
- **et forvaltningsorgan**
- **en forskerforening**

Norecopa er en selvstendig medlemsorganisasjon med egne meninger som tilstreber konsensus mellom partene

European network of 3R Centres (EU3Rnet)

Interaktivt kart:

norecopa.no/3REuropeOverview



Årsrapporten fra 2019: Grovfordeling av Norecopas inntekter

Omtrentlig fordeling av Norecopas inntekter i 2019 på de ulike kostnadspostene

LMD, NFD | Underforbruk fra 2018 | NSMSD | Rahns legat | Kontingent | Moms-kompensasjon | Dyrevern-fondet

Én stilling (sekretær i 100%, bestemmes årlig)
Driftsmidler (kr. 500 000 i 2020), bestemmes årlig
Medlemskap: 40 institusjoner/avdelinger à kr. 2.000
20 personer à kr. 200
Momskompensasjon
Tilfeldig støtte fra andre kilder

Lønn og overhead stipulert av Veterinærinstituttet – sekretær, 100% stilling

Administrasjon
Vedlikehold og utvidelse av Norecopas nettsider, og innlemmelse av EUs 3R-database

PREPARE-film

3R-Pris
Faglige møter

Refinement 'Wiki

LMD: Landbruks- og matdepartementet
NFD: Nærings- og fiskeridepartementet

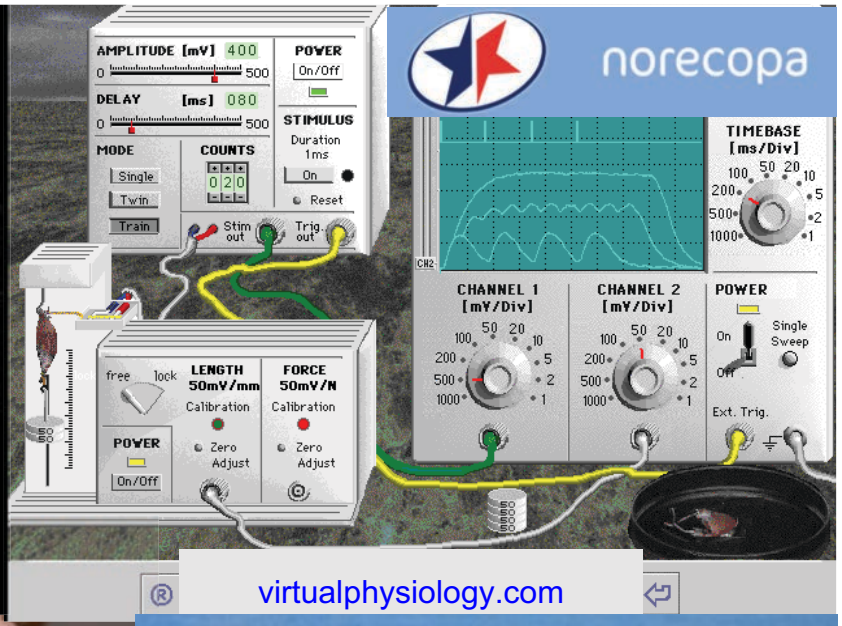
NSMSD: Nordisk Samfunn Mot Smertevoldende Dyreforsøk

Er du eller din arbeidsplass medlem?

norecopa.no

over 9 000 nettsider
over 300 000 treff i 2020


norecopa.no/NORINA
3dglasshorse.com


norecopa
AMPLITUDE [mV] 400
POWER
On/Off
DELAY [ms] 080
STIMULUS
Duration 1ms
On
Reset
MODE
Single
Twin
Train
COUNTS
Stim out
Trig. out
TIMEBASE [ms/Div]
CHANNEL 1 [mV/Div]
CHANNEL 2 [mV/Div]
POWER
Single Sweep
Ext. Trig.
free
lock
LENGTH 50mV/mm
FORCE 50mV/N
Calibration
Zero Adjust
virtualphysiology.com


rescuecritters.com


SutureTutor Plus
limbsandthings.com

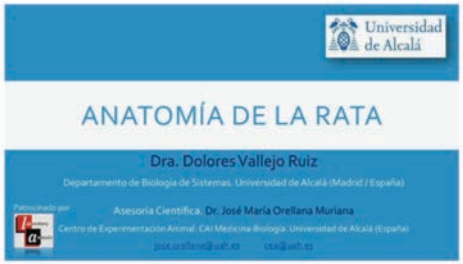
norecopa.no/education-training/films-and-slide-shows

Rat s.c. injection
Norecopa | 1,380 views

Rat i.p. injection (method 1)
Norecopa | 1,415 views

Rat i.p. injection (method 2)
Norecopa | 1,280 views

Anatomy of the rat
Norecopa | 1,310 views



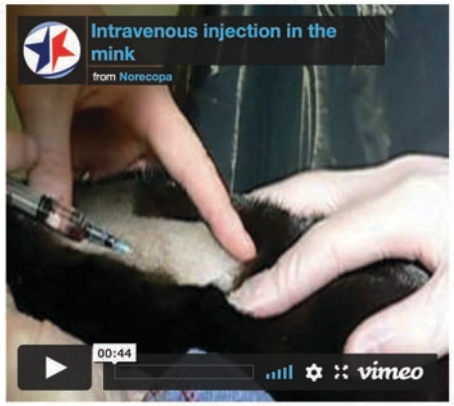
Anatomia de la rata
Norecopa | 977 views

Blood sampling of the rat from the saphenous vein
Norecopa | 5,299 views

norecopa.no / Films and slide shows / Mink

Mink

I.v. injection



Norecopa: PREPARE for better Science

3R-Guide (390 guidelines for animal research and testing): norecopa.no/3r-guide

norecopa

Guidelines for proper care and use of wildlife in field research

3R Guide database/10812

Prepared by a committee of The Wildlife Society.

Refinements in telemetry procedures

3R Guide database/10693

Seventh report of BVAAWF/FRAME/RSPCA/UFAW Joint Working Group on Refinement, Part A.

Blood sampling microsite

3R Guide database/10659

This microsite provides information on blood sampling f
the most appropriate technique for removal of blood in

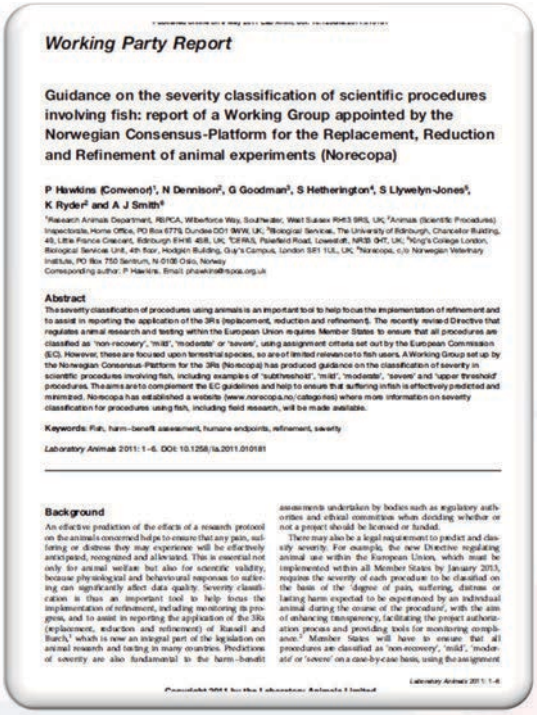
Supplier: National Centre for the Replacement, Refiner
(NC3Rs)

Guidelines for field research: what do we have and what is missing?

Penny Hawkins, Research Animals Department, Science Group, RSPCA

norecopa.no/media/6152/37hawkins.pdf

3R-Guide (390 guidelines for animal research and testing): norecopa.no/3r-guide



Working Party Report

Guidance on the severity classification of scientific procedures involving fish: report of a Working Group appointed by the Norwegian Consensus-Platform for the Replacement, Reduction and Refinement of animal experiments (Norecopa)

P Hawkins (Convenor)[1], N Dennison[2], G Goodman[3], S Hetherington[4], S Llywelyn-Jones[5], K Ryder[2] and A J Smith[6]

Abstract

Keywords: Fish, harm–benefit assessment, humane endpoints, refinement, severity

Laboratory Animals 2011; 1–6. DOI: 10.1258/la.2011.010181

Background

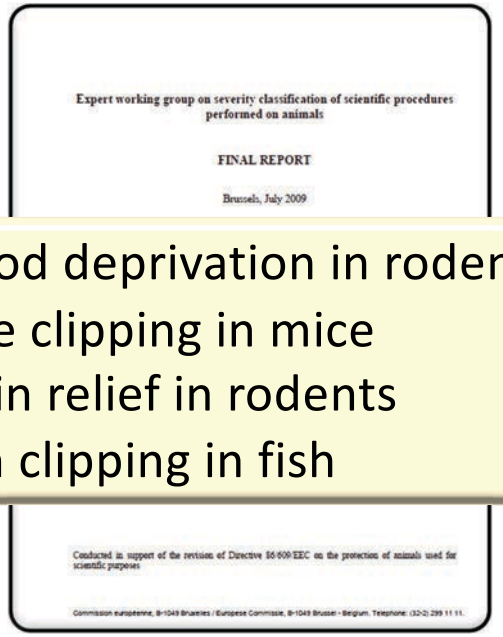
Guidance on the severity classification of procedures involving fish

Report from a Working Group convened by Norecopa

P Hawkins, N Dennison, G Goodman, S Hetherington, S Llywelyn-Jones, K Ryder and AJ Smith

Laboratory Animals, 45: 219-224, 2011

norecopa.no/categories



Expert working group on severity classification of scientific procedures performed on animals

FINAL REPORT

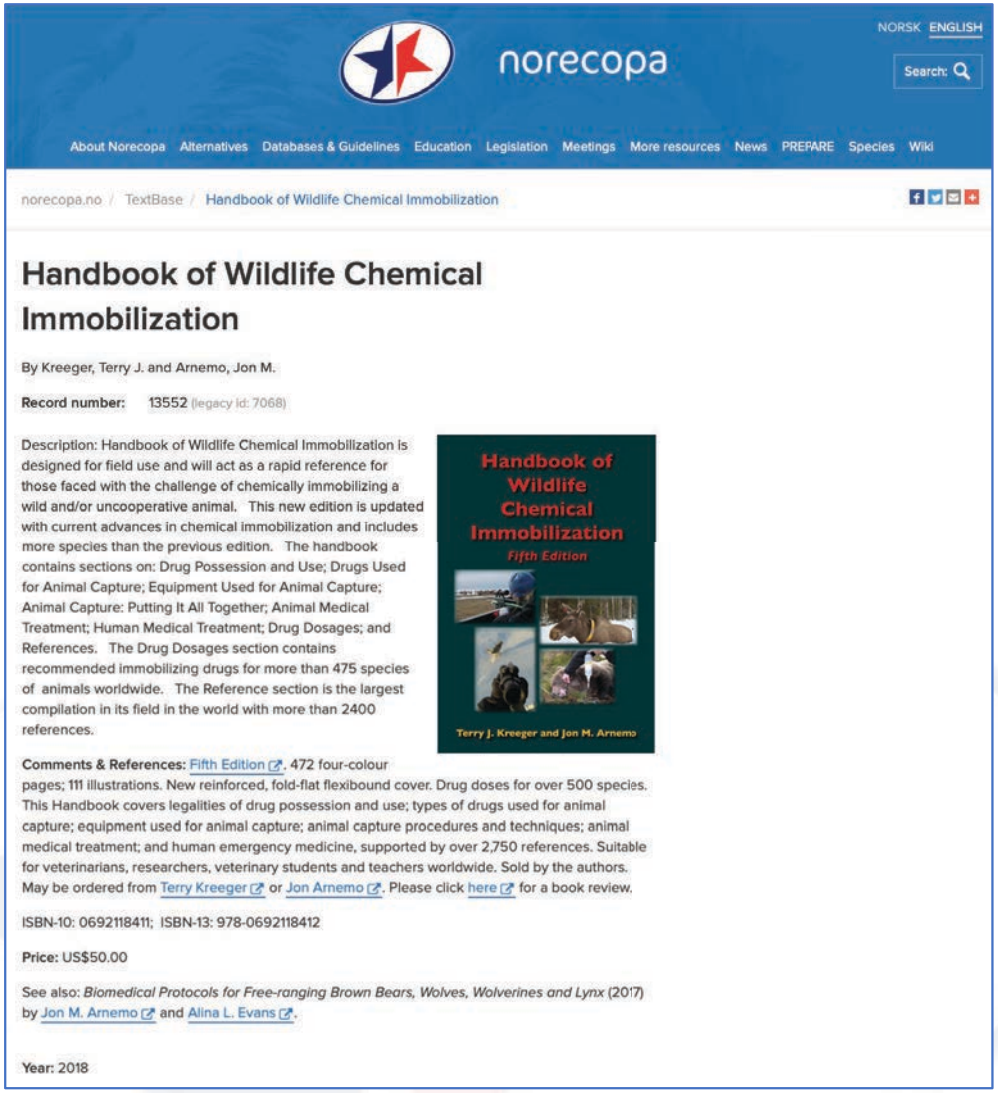
Brussels, July 2009

Conducted in support of the revision of Directive 86/609/EEC on the protection of animals used for scientific purposes

Food deprivation in rodents
Toe clipping in mice
Pain relief in rodents
Fin clipping in fish

ec.europa.eu/environment/chemicals/lab_animals/pdf/report_ewg.pdf

Norecopa: PREPARE for better Science



Norecopa: PREPARE for better Science

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norecopa.no/textbase

norecopa.no/species

norecopa.no/meetings/meetings-calendar

Webinar and Meetings calendar

November 2020

- Aquatic Animal Welfare Conference 2020, 2-6 November 2020 (virtual event)
- Improving the reproducibility of cell line research, webinar, 3 November 2020
- FSVO/UFAW/HSA Online Symposium: Humanely Ending the Life of Animals, 3-4 November 2020
- Symposium and Workshop: Replacing Fetal Bovine Serum (FBS) in Research and Testing, Munich, 3-4 November 2020
- EARA Media Training Workshop (for Spain), online workshop, 4 November 2020
- ABSA 63rd Annual Biosafety and Biosecurity Conference, 4 - 6 November 2020 (virtual event)
- EARA Media Training Workshop (for Switzerland), online workshop, 5 November 2020
- Minipigs in translational immunosafety assessment, webinar, 5 November 2020
- Responsible Research 101 Course: 9-19 November 2020
- Anaesthesia, analgesia and surgery in mice and rats, online/Stockholm, 9-13 November 2020
- Do's and don'ts in rodent surgery aseptic technique, webinar, 10 November 2020
- EPAA Annual Conference, 10 November 2020 (virtual event)
- Fondamenti di Gestione di un Moderno Stabulario per Roditori, webinar in Italian, 10-11 November 2020

Pdf-filer av 80+ presentasjoner ved Norecopas møter

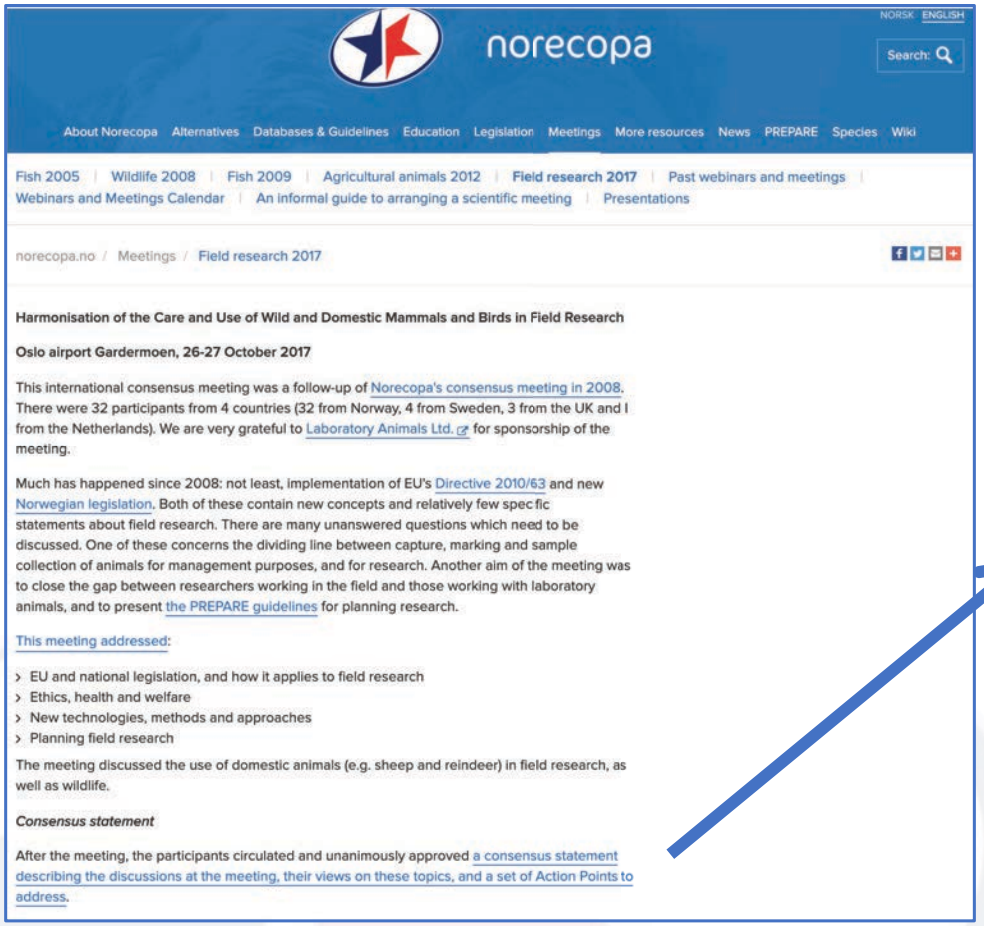
norecopa.no/meetings/presentations

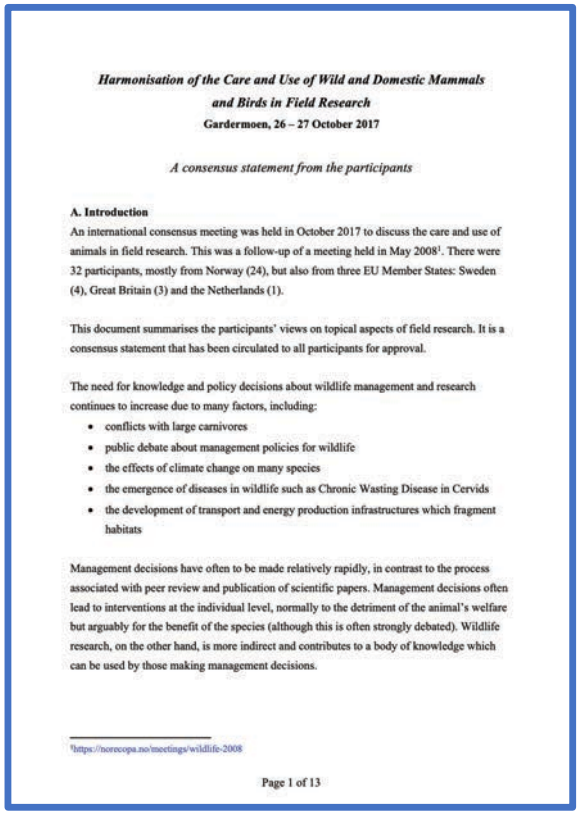
Most of the presentations on this page are from events arranged by Norecopa. A few of them are from external events where Norecopa's staff have lectured.
They are grouped into

Koenig 101017.pdf

- General presentations
- Care and use of animals in field research
- Care and use of farm animals in research
- Care and use of fish in research

Title	Speaker	Affiliation	Year
General presentations			
Design of animal studies: Increasing reproducibility and animal welfare	Adrian Smith	Norecopa	2020
PREPARE before you ARRIVE: Good reporting relies on good planning	Adrian Smith	Norecopa	2019
Animal-free testing and humans-on-a-chip: How far have we come?	Leopold Koenig	TissUse GMBH, Berlin, Germany	2017
Nordic 3R-Centres: What can we offer?	Tom Bengtsen	Denmark's 3R-Center	2017
Prize-winning 3R activity in Norway	Gøril Eide	University of Tromsø, Norway	2017
Have the 3Rs made any difference?	Elliot Lilley	RSPCA, UK	2017





Harmonisation of the Care and Use of Wild and Domestic Mammals and Birds in Field Research

Gardermoen, 26 – 27 October 2017

A consensus statement from the participants

A. Introduction

An international consensus meeting was held in October 2017 to discuss the care and use of animals in field research. This was a follow-up of a meeting held in May 2008[1]. There were 32 participants, mostly from Norway (24), but also from three EU Member States: Sweden (4), Great Britain (3) and the Netherlands (1).

This document summarises the participants' views on topical aspects of field research. It is a consensus statement that has been circulated to all participants for approval.

The need for knowledge and policy decisions about wildlife management and research continues to increase due to many factors, including:

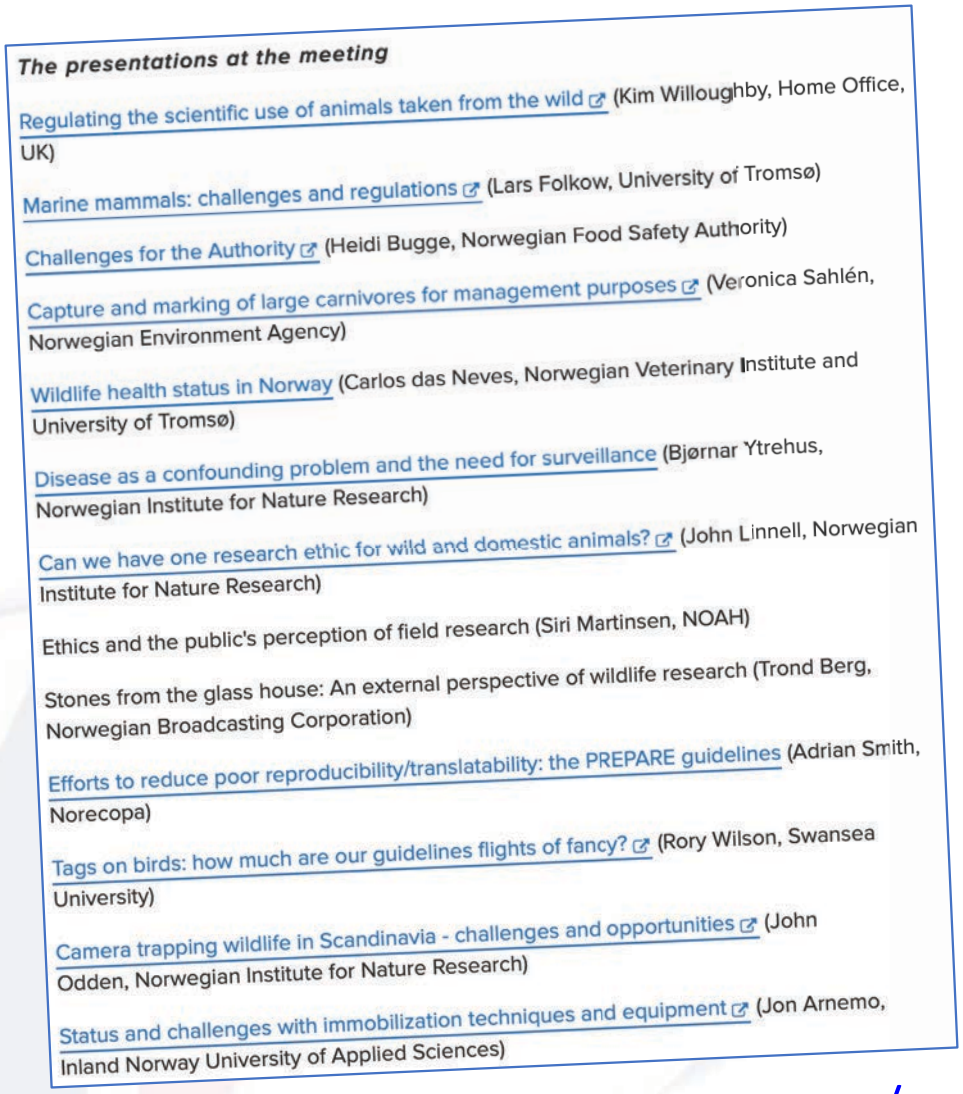
- conflicts with large carnivores
- public debate about management policies for wildlife
- the effects of climate change on many species
- the emergence of diseases in wildlife such as Chronic Wasting Disease in Cervids
- the development of transport and energy production infrastructures which fragment habitats

Management decisions have often to be made relatively rapidly, in contrast to the process associated with peer review and publication of scientific papers. Management decisions often lead to interventions at the individual level, normally to the detriment of the animal's welfare but arguably for the benefit of the species (although this is often strongly debated). Wildlife research, on the other hand, is more indirect and contributes to a body of knowledge which can be used by those making management decisions.

[1] https://norecopa.no/meetings/wildlife-2008

Page 1 of 13

norecopa.no/meetings/field-research-2017



The presentations at the meeting

Regulating the scientific use of animals taken from the wild (Kim Willoughby, Home Office, UK)

Marine mammals: challenges and regulations (Lars Folkow, University of Tromsø)

Challenges for the Authority (Heidi Bugge, Norwegian Food Safety Authority)

Capture and marking of large carnivores for management purposes (Veronica Sahlén, Norwegian Environment Agency)

Wildlife health status in Norway (Carlos das Neves, Norwegian Veterinary Institute and University of Tromsø)

Disease as a confounding problem and the need for surveillance (Bjørnar Ytrehus, Norwegian Institute for Nature Research)

Can we have one research ethic for wild and domestic animals? (John Linnell, Norwegian Institute for Nature Research)

Ethics and the public's perception of field research (Siri Martinsen, NOAH)

Stones from the glass house: An external perspective of wildlife research (Trond Berg, Norwegian Broadcasting Corporation)

Efforts to reduce poor reproducibility/translatability: the PREPARE guidelines (Adrian Smith, Norecopa)

Tags on birds: how much are our guidelines flights of fancy? (Rory Wilson, Swansea University)

Camera trapping wildlife in Scandinavia - challenges and opportunities (John Odden, Norwegian Institute for Nature Research)

Status and challenges with immobilization techniques and equipment (Jon Arnemo, Inland Norway University of Applied Sciences)

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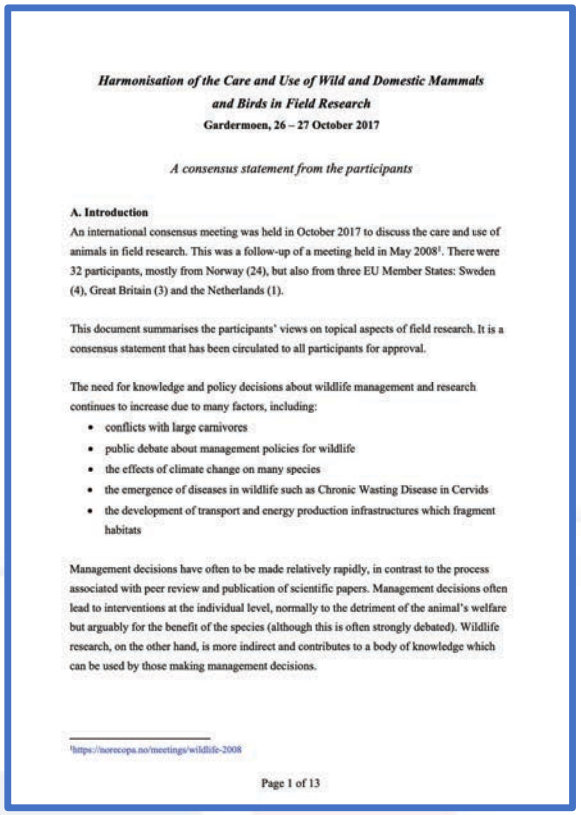
norecopa.no/meetings/field-research-2017



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[1]https://norecopa.no/meetings/wildlife-2008

Page 1 of 13

Inneholder oversikter over 13 konkrete tiltak som bør utføres av

- forvaltningen
- forskerne
- Norecopa

pluss 10 "Action Points"

norecopa.no/media/8171/consensus-statement.pdf

JOURNAL OF
WILDLIFE DISEASES

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Volume 52, Issue 2s
1 April 2016

RESEARCH ARTICLE | APRIL 01 2016

ANIMAL WELFARE FROM MOUSE TO MOOSE—IMPLEMENTING THE PRINCIPLES OF THE 3RS IN WILDLIFE RESEARCH

Johan Lindsjö ; Åsa Fahlman; Elin Törnqvist

J Wildl Dis (2016) 52 (2s): S65–S77.
https://doi.org/10.7589/52.2S.S65

Split-Screen PDF Share Tools

norecopa.no/species/wildlife-and-wild-fish

Djurskyddskonferensen 2020

En djurskyddsstrategi för ett gott djurskydd

Den 17 november 2020 anordnar Jordbruksverket och Sveriges lantbruksuniversitets (SLU:s) vetenskapliga råd för djurskydd en djurskyddskonferens. Årets konferens är helt digital och kommer att livesändas via Jordbruksverkets webbplats.

Konferensens innehåll

Djurskyddskonferensen kommer ta upp aktuella djurskyddsfrågor och djurskyddsforskning och ramas in av den djurskyddsstrategi som Jordbruksverket beslutade om under våren 2020. Eftermiddagen är valbar med två olika spår; ett spår om djurskyddsforskning gris, nötkreatur och fisk samt ett spår om 3R och försöksdjur. Avslutningen är gemensam för hela programmet.

15.00-15.20	3R vid forskning på vilda djur	Åsa Fahlman, Sveriges lantbruksuniversitet och Johan Lindsjö, Nationellt centrum för djurvälfärd

djur.jordbruksverket.se/amnesomraden/djur/djurskydd/djurskyddskonferensen2020

Deltar gjerne i forsknings- og utviklingsprosjekter, bl.a. med søknader til Forskningsrådet og legater

f.eks.

ENRICH Fish 3R-KART EU-datasett Fiskevaksiner NORINA Wiki Konferansestøtte

se f.eks. norecopa.no/species/fish/projects

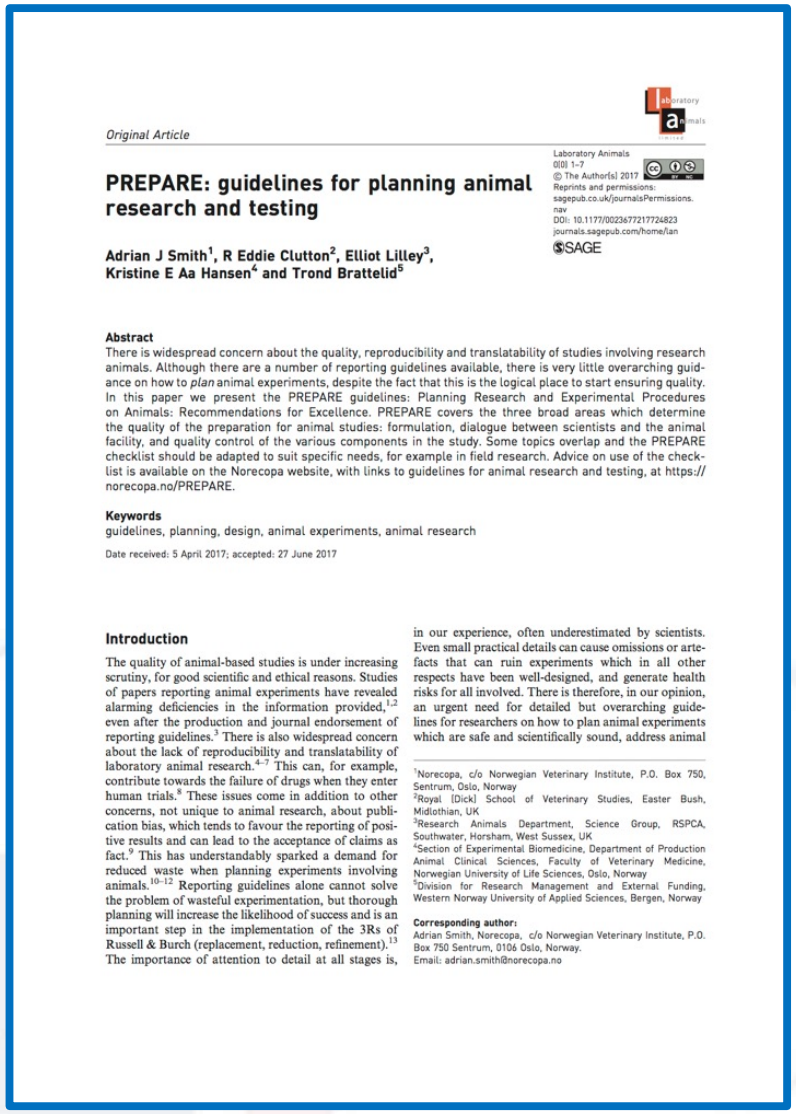
Norecopas 3R-pris

(30.000 kroner + diplom)

Interesse??

Norecopa's 3R-prize was awarded for the seventh time in 2016 to NINA's Senior Researcher, Øystein Flagstad.

norecopa.no/about-norecopa/3r-prize



Original Article

PREPARE: guidelines for planning animal research and testing

Adrian J Smith[1], R Eddie Clutton[2], Elliot Lilley[3], Kristine E Aa Hansen[4] and Trond Brattelid[5]

Laboratory Animals
0(0) 1–7

DOI: 10.1177/0023677217724823
journals.sagepub.com/home/lan
SAGE

Abstract

There is widespread concern about the quality, reproducibility and translatability of studies involving research animals. Although there are a number of reporting guidelines available, there is very little overarching guidance on how to *plan* animal experiments, despite the fact that this is the logical place to start ensuring quality. In this paper we present the PREPARE guidelines: Planning Research and Experimental Procedures on Animals: Recommendations for Excellence. PREPARE covers the three broad areas which determine the quality of the preparation for animal studies: formulation, dialogue between scientists and the animal facility, and quality control of the various components in the study. Some topics overlap and the PREPARE checklist should be adapted to suit specific needs, for example in field research. Advice on use of the checklist is available on the Norecopa website, with links to guidelines for animal research and testing, at https://norecopa.no/PREPARE.

Keywords

guidelines, planning, design, animal experiments, animal research

Date received: 5 April 2017; accepted: 27 June 2017

Introduction

The quality of animal-based studies is under increasing scrutiny, for good scientific and ethical reasons. Studies of papers reporting animal experiments have revealed alarming deficiencies in the information provided,[1,2] even after the production and journal endorsement of reporting guidelines.[3] There is also widespread concern about the lack of reproducibility and translatability of laboratory animal research.[4–7] This can, for example, contribute towards the failure of drugs when they enter human trials.[8] These issues come in addition to other concerns, not unique to animal research, about publication bias, which tends to favour the reporting of positive results and can lead to the acceptance of claims as fact.[9] This has understandably sparked a demand for reduced waste when planning experiments involving animals.[10–12] Reporting guidelines alone cannot solve the problem of wasteful experimentation, but thorough planning will increase the likelihood of success and is an important step in the implementation of the 3Rs of Russell & Burch (replacement, reduction, refinement).[13] The importance of attention to detail at all stages is, in our experience, often underestimated by scientists. Even small practical details can cause omissions or artefacts that can ruin experiments which in all other respects have been well-designed, and generate health risks for all involved. There is therefore, in our opinion, an urgent need for detailed but overarching guidelines for researchers on how to plan animal experiments which are safe and scientifically sound, address animal

[1]Norecopa, c/o Norwegian Veterinary Institute, P.O. Box 750, Sentrum, Oslo, Norway
[2]Royal [Dick] School of Veterinary Studies, Easter Bush, Midlothian, UK
[3]Research Animals Department, Science Group, RSPCA, Southwater, Horsham, West Sussex, UK
[4]Section of Experimental Biomedicine, Department of Production Animal Clinical Sciences, Faculty of Veterinary Medicine, Norwegian University of Life Sciences, Oslo, Norway
[5]Division for Research Management and External Funding, Western Norway University of Applied Sciences, Bergen, Norway

Corresponding author:
Adrian Smith, Norecopa, c/o Norwegian Veterinary Institute, P.O. Box 750 Sentrum, 0106 Oslo, Norway.
Email: adrian.smith@norecopa.no

Norecopa: PREPARE for better Science

Pre-published under Open Access on 3 August 2017 in *Laboratory Animals*, sponsored by the Universities Federation for Animal Welfare (UFAW), UK

https://doi.org/10.1177/0023677217724823

Lest eller nedlastet over 15 000 ganger

Smith, AJ, Clutton, RE, Lilley, E, Hansen KEAa, Brattelid, T. (2018): PREPARE: Guidelines for planning animal research and testing. Laboratory Animals, 52(2): 135-141.
DOI: 10.1177/0023677217724823

PREPARE:

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

PREPARE dekker 15 temaer:

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

norecopa.no/PREPARE/prepare-checklist

PREPARE

The PREPARE Guidelines Checklist

Planning Research and Experimental Procedures on Animals: Recommendations for Excellence

Adrian J. Smith[a], R. Eddie Clutton[b], Elliot Lilley[c], Kristine E. Aa. Hansen[d] & Trond Brattelid[e]

[a]Norecopa, c/o Norwegian Veterinary Institute, P.O. Box 750 Sentrum, 0106 Oslo, Norway; [b]Royal (Dick) School of Veterinary Studies, Easter Bush, Midlothian, EH25 9RG, U.K.; [c]Research Animals Department, Science Group, RSPCA, Wilberforce Way, Southwater, Horsham, West Sussex, RH13 9RS, U.K.; [d]Section of Experimental Biomedicine, Department of Production Animal Clinical Sciences, Faculty of Veterinary Medicine, Norwegian University of Life Sciences, P.O. Box 8146 Dep., 0033 Oslo, Norway; [e]Division for Research Management and External Funding, Western Norway University of Applied Sciences, 5020 Bergen, Norway.

PREPARE[1] consists of planning guidelines which are complementary to reporting guidelines such as ARRIVE[2].
PREPARE covers the three broad areas which determine the quality of the preparation for animal studies:

1. **Formulation of the study**
2. **Dialogue between scientists and the animal facility**
3. **Quality control of the components in the study**

The topics will not always be addressed in the order in which they are presented here, and some topics overlap. The PREPARE checklist can be adapted to meet special needs, such as field studies. PREPARE includes guidance on the management of animal facilities, since in-house experiments are dependent upon their quality. The full version of the guidelines is available on the Norecopa website, with links to global resources, at **https://norecopa.no/PREPARE**.
The PREPARE guidelines are a dynamic set which will evolve as more species- and situation-specific guidelines are produced, and as best practice within Laboratory Animal Science progresses.

Topic	Recommendation
(A) Formulation of the study	
1. Literature searches	☐ Form a clear hypothesis, with primary and secondary outcomes. ☐ Consider the use of systematic reviews. ☐ Decide upon databases and information specialists to be consulted, and construct search terms. ☐ Assess the relevance of the species to be used, its biology and suitability to answer the experimental questions with the least suffering, and its welfare needs. ☐ Assess the reproducibility and translatability of the project.
2. Legal issues	☐ Consider how the research is affected by relevant legislation for animal research and other areas, e.g. animal transport, occupational health and safety. ☐ Locate relevant guidance documents (e.g. EU guidance on project evaluation).
3. Ethical issues, harm-benefit assessment and humane endpoints	☐ Construct a lay summary. ☐ In dialogue with ethics committees, consider whether statements about this type of research have already been produced. ☐ Address the 3Rs (replacement, reduction, refinement) and the 3Ss (good science, good sense, good sensibilities). ☐ Consider pre-registration and the publication of negative results. ☐ Perform a harm-benefit assessment and justify any likely animal harm. ☐ Discuss the learning objectives, if the animal use is for educational or training purposes. ☐ Allocate a severity classification to the project. ☐ Define objective, easily measurable and unequivocal humane endpoints. ☐ Discuss the justification, if any, for death as an end-point.
4. Experimental design and statistical analysis	☐ Consider pilot studies, statistical power and significance levels. ☐ Define the experimental unit and decide upon animal numbers. ☐ Choose methods of randomisation, prevent observer bias, and decide upon inclusion and exclusion criteria.
(B) Dialogue between scientists and the animal facility	
5. Objectives and timescale, funding and division of labour	☐ Arrange meetings with all relevant staff when early plans for the project exist. ☐ Construct an approximate timescale for the project, indicating the need for assistance with preparation, animal care, procedures and waste disposal/decontamination. ☐ Discuss and disclose all expected and potential costs. ☐ Construct a detailed plan for division of labour and expenses at all stages of the study.
6. Facility evaluation	☐ Conduct a physical inspection of the facilities, to evaluate building and equipment standards and needs. ☐ Discuss staffing levels at times of extra risk.
7. Education and training	☐ Assess the current competence of staff members and the need for further education or training prior to the study.
8. Health risks, waste disposal and decontamination	☐ Perform a risk assessment, in collaboration with the animal facility, for all persons and animals affected directly or indirectly by the study. ☐ Assess, and if necessary produce, specific guidance for all stages of the project. ☐ Discuss means for containment, decontamination, and disposal of all items in the study.
(C) Quality control of the components in the study	
9. Test substances and procedures	☐ Provide as much information as possible about test substances. ☐ Consider the feasibility and validity of test procedures and the skills needed to perform them.
10. Experimental animals	☐ Decide upon the characteristics of the animals that are essential for the study and for reporting. ☐ Avoid generation of surplus animals.
11. Quarantine and health monitoring	☐ Discuss the animals' likely health status, any needs for transport, quarantine and isolation, health monitoring and consequences for the personnel.
12. Housing and husbandry	☐ Attend to the animals' specific instincts and needs, in collaboration with expert staff. ☐ Discuss acclimatization, optimal housing conditions and procedures, environmental factors and any experimental limitations on these (e.g. food deprivation, solitary housing).
13. Experimental procedures	☐ Develop refined procedures for capture, immobilisation, marking, and release or rehoming. ☐ Develop refined procedures for substance administration, sampling, sedation and anaesthesia, surgery and other techniques.
14. Humane killing, release, reuse or rehoming	☐ Consult relevant legislation and guidelines well in advance of the study. ☐ Define primary and emergency methods for humane killing. ☐ Assess the competence of those who may have to perform these tasks.
15. Necropsy	☐ Construct a systematic plan for all stages of necropsy, including location, and identification of all animals and samples.

References

1. Smith AJ, Clutton RE, Lilley E, Hansen KEA & Brattelid T. PREPARE: Guidelines for Planning Animal Research and Testing. *Laboratory Animals*, 2017, DOI: 10.1177/0023677217724823.
2. Kilkenny 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.

Further information
https://norecopa.no/PREPARE / *post@norecopa.no* / @norecopa

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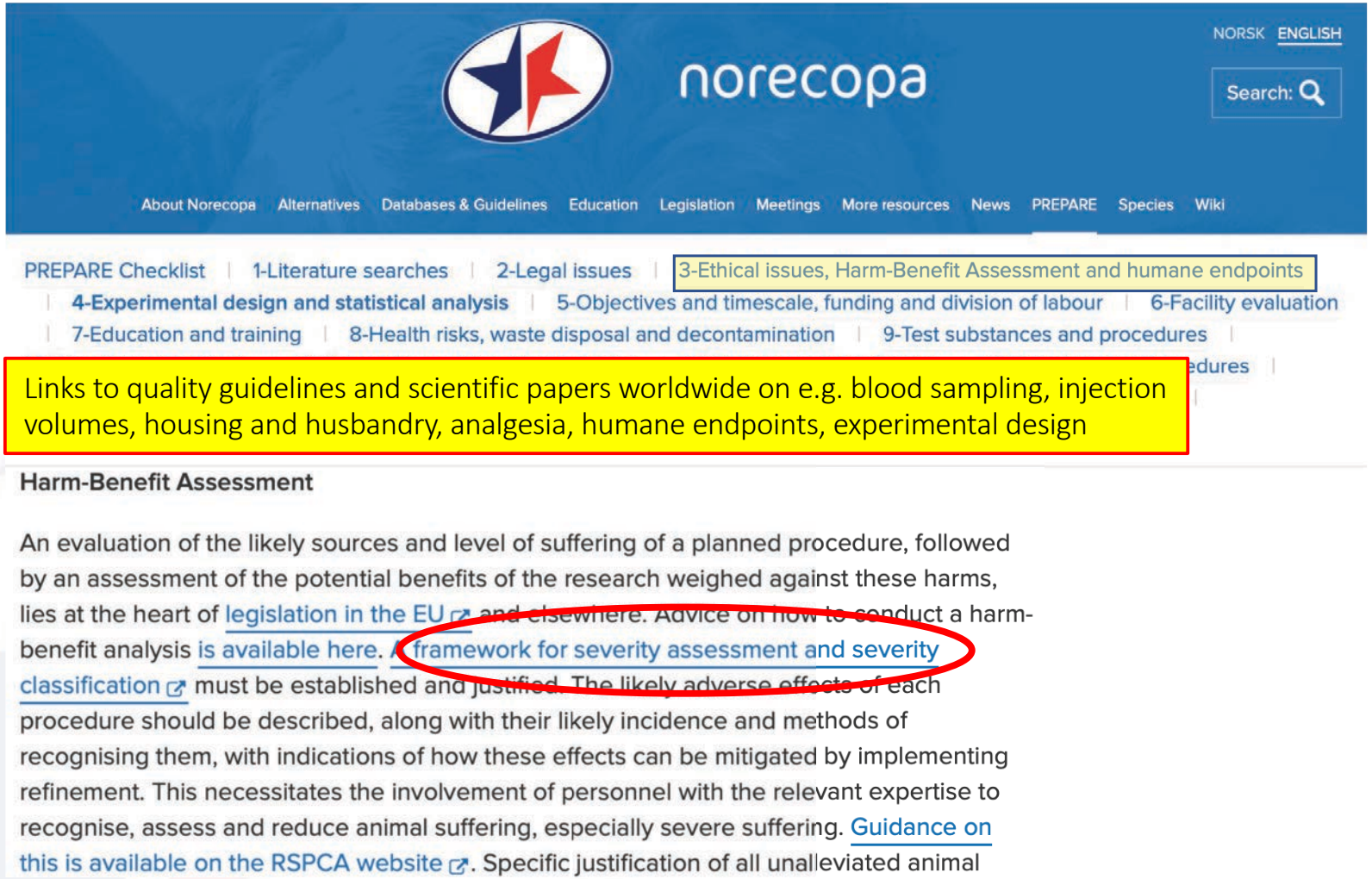

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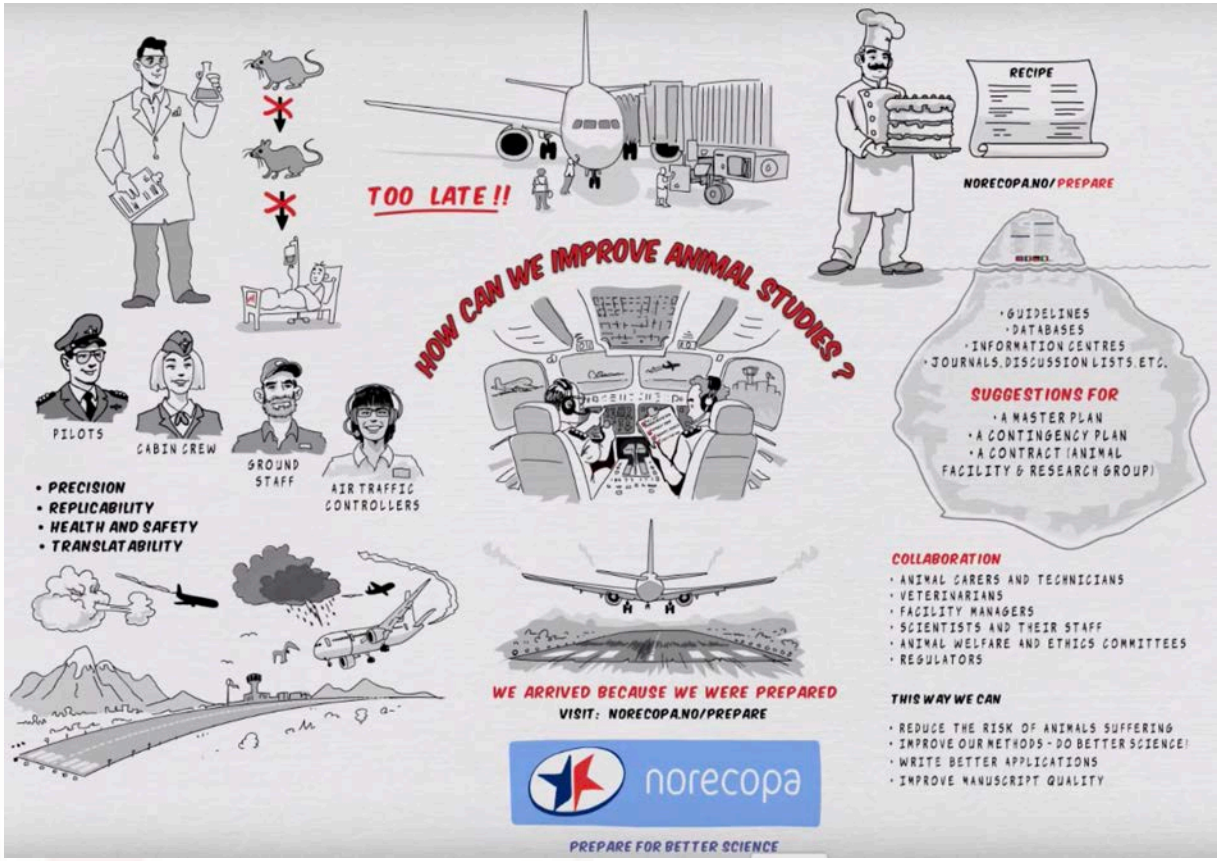

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"The Reproducibility Crisis"

NATURE | NEWS

Swiss survey highlights potential flaws in animal studies

Poor experimental design and statistical analysis could contribute to widespread problems in reproducing preclinical animal experiments.

Why Most Published Research Findings Are False

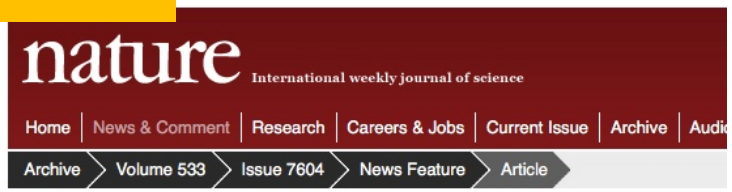
John P. A. Ioannidis

Published: August 30, 2005 • https://doi.org/10.1371/journal.pmed.0020124

Avoidable waste in the production and reporting of research evidence

Iain Chalmers, DSc • Prof Paul Glasziou, RACGP

Published: June 15, 2009 • DOI: https://doi.org/10.1016/S0140-6736(09)60329-9



NATURE | NEWS FEATURE

1,500 scientists lift the lid on reproducibility

Survey sheds light on the 'crisis' rocking research.

Monya Baker

25 May 2016 | Corrected: 28 July 2016

More than 70% of researchers have tried and failed to reproduce another scientist's experiments, and more than half have failed to reproduce their own experiments. Those are some of the telling figures that emerged from *Nature*'s survey of 1,576 researchers who took a brief online questionnaire on reproducibility in research.

Norecopa: PREPARE for better Science

Foredrag om planlegging av dyreforsøk, f.eks. norecopa.no/CBMR

Summary

1. ***PLAN***, in collaboration with animal care staff from day one and consult the guidelines: *be PREPARED*

2. ***WRITE*** a good manuscript, showing that you have been aware of the potential causes of irreproducibility, and with enough detail that scientists can evaluate the model

3. ***FLAG*** any advances you have made within the 3Rs, preferably in the title or abstract (or write a separate method paper)

Lukket diskusjonsforum for nøkkelpersonell ved DVE

Nyhetsbrev

SHARE THE NEWSLETTER ON

Newsletter no. 6-2020 from Norecopa

Welcome to Norecopa's sixth newsletter in 2020. ***Please share this with your colleagues and friends!***

Norecopa maintains an international Webinars and Meetings Calendar, which is updated several times a week. You will find shortcuts to several other key resources on our front page.

We continue to update a list of resources related to the Covid-19 pandemic and about preparedness in general: Be PREPAREd

You can tip a friend, subscribe or unsubscribe, and share the newsletter on social media using the links above. We are on Facebook and Twitter.

All Norecopa's newsletters can be read here and their content is indexed by the search engine on Norecopa's website.

This newsletter contains the following items (if some links do not work, check that your mail program has opened the whole of the newsletter):

- Update on Norecopa
- Update on PREPARE
- National Committee statement
- News from other 3R Centres
- New book on refinement
- EU datasets on non-animal models for disease
- The use of horseshoe crabs in research and testing
- Glimpses from research
- Food for thought
- From the media
- Webinars and Meetings Calendar
- Have your colleagues re-subscribed?

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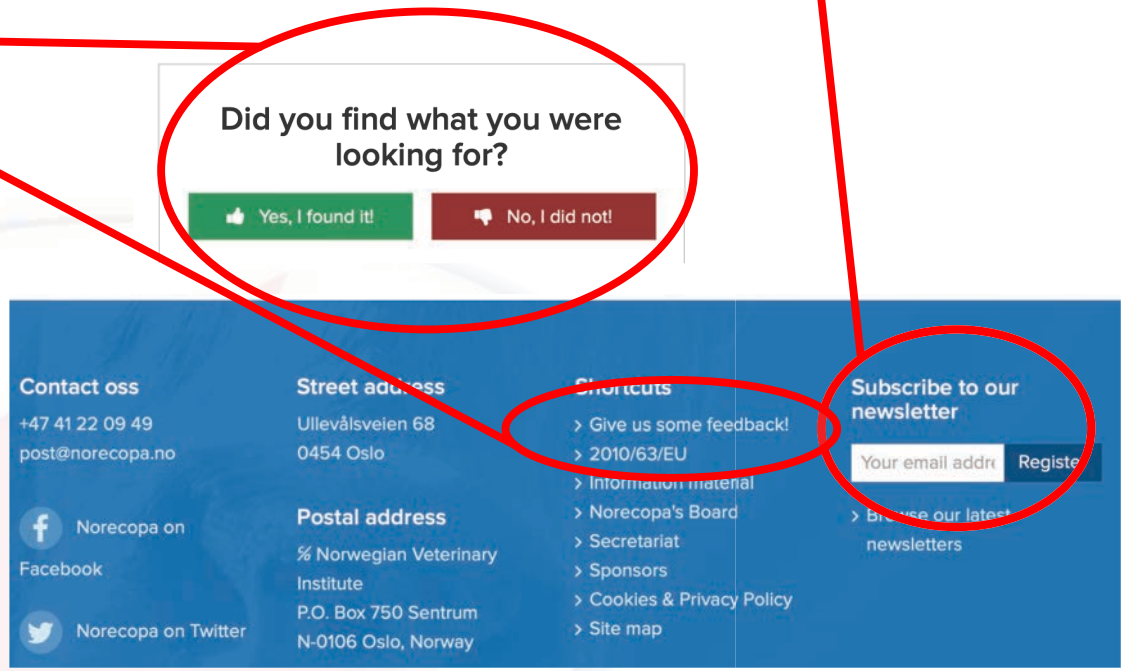
Nyhetsbrev

Tilbakemeldinger



Hva ønsker dere fra Norecopa?

Det har vært lite å hente fra

- Årsmøtene
- Diskusjonsforumet
- Tilbakemeldinger på nettsidene
- Uoppfordret kontakt fra medlemmene

Uten dette må Norecopa sette sin egen dagsorden

Takk til Norecopas sponsorer:

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- Universities Federation for Animal Welfare (UFAW)
- US Department of Agriculture (USDA)

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