

PREPARE before you ARRIVE: Guidelines for Planning Animal Research and Testing

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As part of ongoing efforts to **reduce waste** and **increase the reproducibility** of animal research and testing, we have produced a set of guidelines for planning animal experiments:

PREPARE (Planning Research and Experimental Procedures on Animals: Recommendations for Excellence)
norecopa.no/PREPARE

The PREPARE guidelines for **planning** animal studies complement the ARRIVE guidelines and other similar guidance for **reporting**.

A large number of factors, rarely reported in scientific papers, can dramatically influence the validity and outcome of animal studies, as well as the health and safety of all those concerned. The PREPARE guidelines cover these and address all stages of quality assurance, from the animal facility or population to the individual procedures which make up the study.

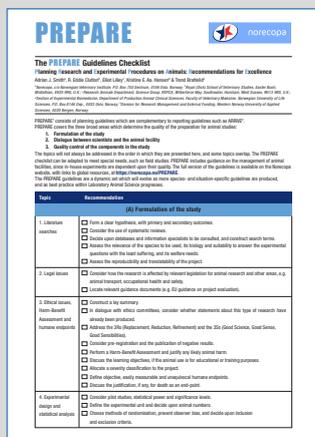
A manuscript describing the PREPARE guidelines is available free of charge under Open Access in *Laboratory Animals*, 2017. DOI: 10.1177/0023677217724823 and via norecopa.no/PREPARE

A two-page PREPARE checklist in 12 languages can be downloaded free of charge from: norecopa.no/PREPARE/prepare-checklist

The PREPARE website also includes suggestions for a contract between scientists and animal facilities, to help division of labour, costs and responsibilities.

The PREPARE guidelines cover 15 topics, grouped in three main sections:

- A. 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
- B. 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
- C. Quality control of the components in the study**
 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



The PREPARE Guidelines Checklist
Planning Research and Experimental Procedures on Animals: Recommendations for Excellence
Adrian J. Smith¹, R. Eddie Clutton², Elliot Lilley³, Kristine E.Aa. Hansen⁴ & Trond Brattelid⁵

PREPARE: Guideline for planning animal studies which complements the ARRIVE guidelines and other similar guidance for reporting.

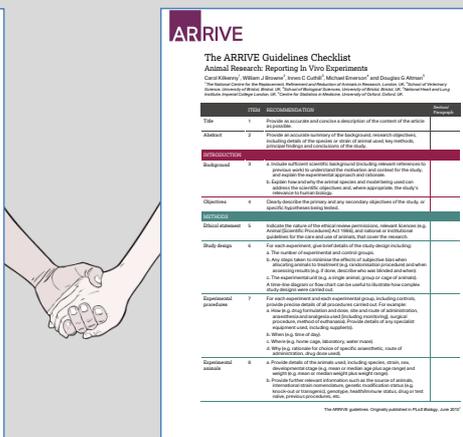
PREPARE covers the three main areas which determine the quality of the preparation for animal studies:

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

The topics are all described in detail in the PREPARE website. The PREPARE checklist can be used to plan animal studies, such as test studies. PREPARE includes advice on the management of animal facilities, such as housing, husbandry and husbandry care, and the quality of the animal facilities and the human resources, with a view to greater research in *Laboratory Animals* and *ARRIVE*.

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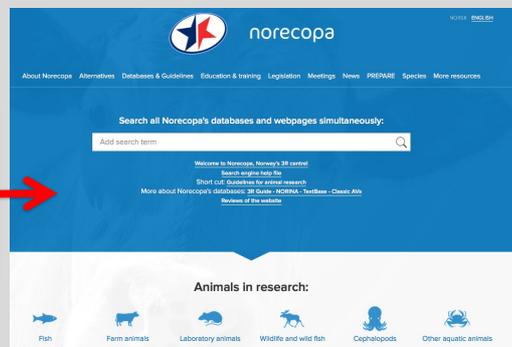
ARRIVE
The ARRIVE Guidelines Checklist
Animal Research: Reporting in Vivo Experiments
Curtis M. Barry¹, William J. Browne², Inves C. Cuff³, Michael Emerson⁴ and Douglas G. Altman⁵

ARRIVE: Guidelines for reporting animal research in vivo experiments.

Section	Item	Recommendation	Presented
Title	1	Provide a clear and concise statement of the content of the article	
	2	Provide the full name and institutional affiliation of the author(s) of the article	
Abstract	3	Provide a concise summary of the background, research objectives, including those of the species or strain of animal used, key methods, and main findings	
	4	Provide a brief summary of the results and conclusions	
Introduction	5	Provide sufficient scientific background including relevant references to justify the objectives of the study and the methods used	
	6	Provide a clear statement of the objectives of the study and the methods used	
Methods	7	Describe the methods used in the study, including those of the species or strain of animal used, key methods, and main findings	
	8	Describe the methods used in the study, including those of the species or strain of animal used, key methods, and main findings	
Results	9	Provide a clear statement of the results and conclusions	
	10	Provide a clear statement of the results and conclusions	
Discussion	11	Provide a clear statement of the results and conclusions	
	12	Provide a clear statement of the results and conclusions	
Conclusions	13	Provide a clear statement of the results and conclusions	
	14	Provide a clear statement of the results and conclusions	
References	15	Provide a clear statement of the results and conclusions	
	16	Provide a clear statement of the results and conclusions	

PREPARE contains numerous links to guidelines and other international resources, and uses the intelligent search engine of the Norecopa website (norecopa.no):

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The screenshot shows the Norecopa website interface. At the top, there is a search bar with the text "Search all Norecopa's databases and webpages simultaneously:". Below the search bar, there is a "Welcome to Norecopa, Norway's 3R centre" message and a "Search engine help" link. The main content area features a navigation menu with items like "About Norecopa", "Alternatives", "Databases & Guidelines", "Education & Training", "Legislation", "Meetings", "News", "PREPARE", "Species", and "More resources". Below the navigation menu, there are icons representing different animal groups: Fish, Farm animals, Laboratory animals, Wildlife and wild fish, Cephalopods, and Other aquatic animals.

The PREPARE guidelines are not a static checklist:
The PREPARE website contains a dynamic set of recommendations which will evolve as more species- and situation-specific guidelines are produced, and as best practice within Laboratory Animal Science progresses.