

The Austrian 3R Center



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About Us

The RepRefRed Society, the association "Gesellschaft zur Förderung von Alternativen Biomodellen", was founded on the 18th of January 2016 by Birgit Reininger-Gutmann and Beate Rinner, with the support of Doris Wilflingseder and Roberto Plasenzotti it aims to promote the implementation of the 3Rs (Replacement, Reduction and Refinement of animal experiments according to Russell and Burch 1959). In order to achieve this, the association focuses on the active exchange of information among researchers through topical meetings and events. The increased transparency of protocols should lead to a "refinement" (improvement of animal welfare) as well as a "reduction" (reduction of the number of animals used in experiments). The network should also help to strengthen the "replacement" of animal experiments in scientific research.

Antrag auf Genehmigung von Tierversuchen gemäß Tierversuchsgesetz 2012, BGBl. I Nr. 114/2012 idgF.

F) Wie sieht der Beitrag des Projekts zur Vermeidung („**Replacement**“) **zukünftiger** Tierversuche aus?

- ☐ Kriterium nicht anwendbar
- ☐ Ein solcher Beitrag ist gering
- ☐ Ein solcher Beitrag ist mittel
- ☐ Ein solcher Beitrag ist groß

Begründung der Angabe zu Kriterium F) durch Beschreibung der getätigten Angabe oder durch Verweis auf den Projektvorschlag (gegebenenfalls Gutachten)

Seite bzw. Punkt:

G) Wie sieht der Beitrag des Projekts zur Verminderung („**Reduction**“) der Tierzahl in **zukünftigen** Tierversuchen aus?

- ☐ Kriterium nicht anwendbar
- ☐ Ein solcher Beitrag ist gering
- ☐ Ein solcher Beitrag ist mittel
- ☐ Ein solcher Beitrag ist groß

Begründung der Angabe zu Kriterium G) durch Beschreibung der getätigten Angabe oder durch Verweis auf den Projektvorschlag (gegebenenfalls Gutachten)

Seite bzw. Punkt:

H) Wie sieht der Beitrag des Projekts zur Verbesserung („**Refinement**“) der Bedingungen für die Zucht, Unterbringung, Pflege und Verwendung von Tieren in **zukünftigen** Tierversuchen aus?

- ☐ Kriterium nicht anwendbar
- ☐ Ein solcher Beitrag ist gering
- ☐ Ein solcher Beitrag ist mittel
- ☐ Ein solcher Beitrag ist groß

Begründung der Angabe zu Kriterium H) durch Beschreibung der getätigten Angabe oder durch Verweis auf den Projektvorschlag (ggf. Gutachten) Seite bzw. Punkt:

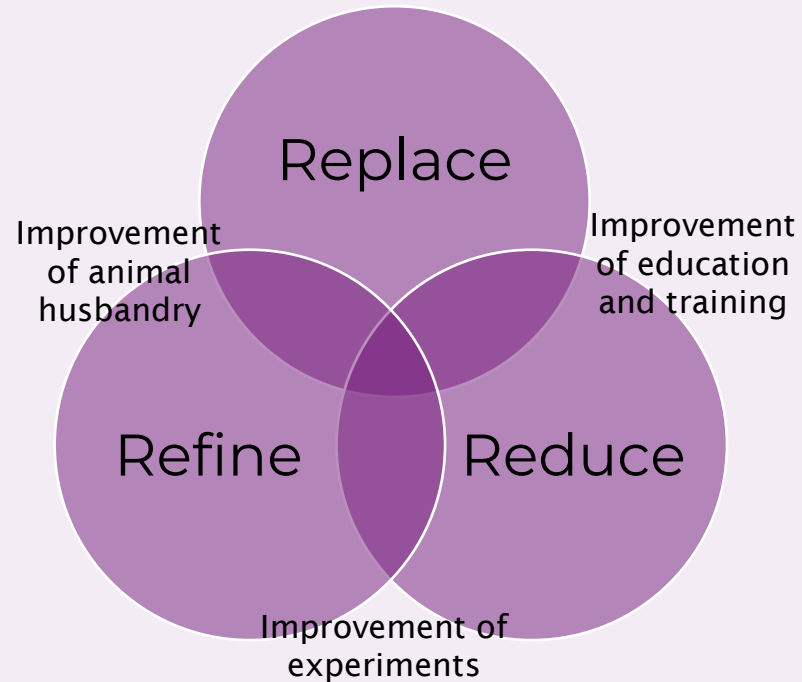
Directive 2010/63/EU OF THE EUROPEAN PARLIAMENT

on the protection of animals used for scientific purposes

- (11) The care and use of live animals for scientific purposes is governed by internationally established principles of replacement, reduction and refinement. To ensure that the way in which animals are bred, cared for and used in procedures within the Union is in line with that of the other international and national standards applicable outside the Union, the principles of replacement, reduction and refinement should be considered systematically when implementing this Directive. When choosing methods, the principles of replacement, reduction and refinement should be implemented through a strict hierarchy of the requirement to use alternative methods. Where no alternative method is recognised by the legislation of the Union, the numbers of animals used may be reduced by resorting to other methods and by implementing testing strategies, such as the use of *in vitro* and other methods that would reduce and refine the use of animals.
- (10) While it is desirable to replace the use of live animals in procedures by other methods not entailing the use of live animals, the use of live animals continues to be necessary to protect human and animal health and the environment. However, this Directive represents an important step towards achieving the final goal of full replacement of procedures on live animals for scientific and educational purposes as soon as it is scientifically possible to do so. To that end, it seeks to facilitate and promote the advancement of alternative approaches. It also seeks to ensure a high level of protection for animals that still need to be used in procedures. This Directive should be reviewed regularly in light of evolving science and animal-protection measures.

Key Performance Indicators KPI

Improvement Methods



Husbandry

Education

- Implementing of EU working document of a common education and training framework

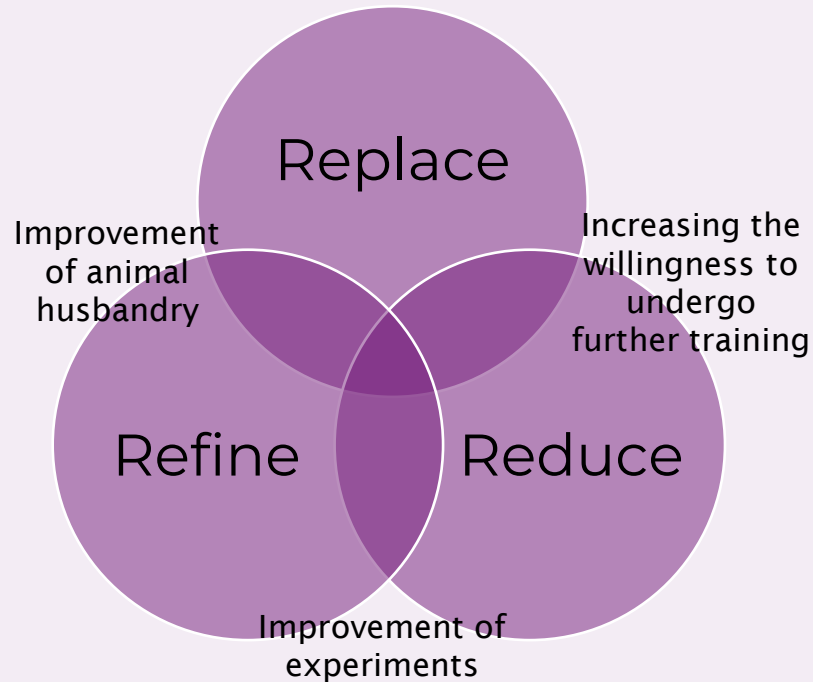
Experiments

- Directive 2010/63/EU

Refinement methods

Husbandry KPI

Improvement Methods

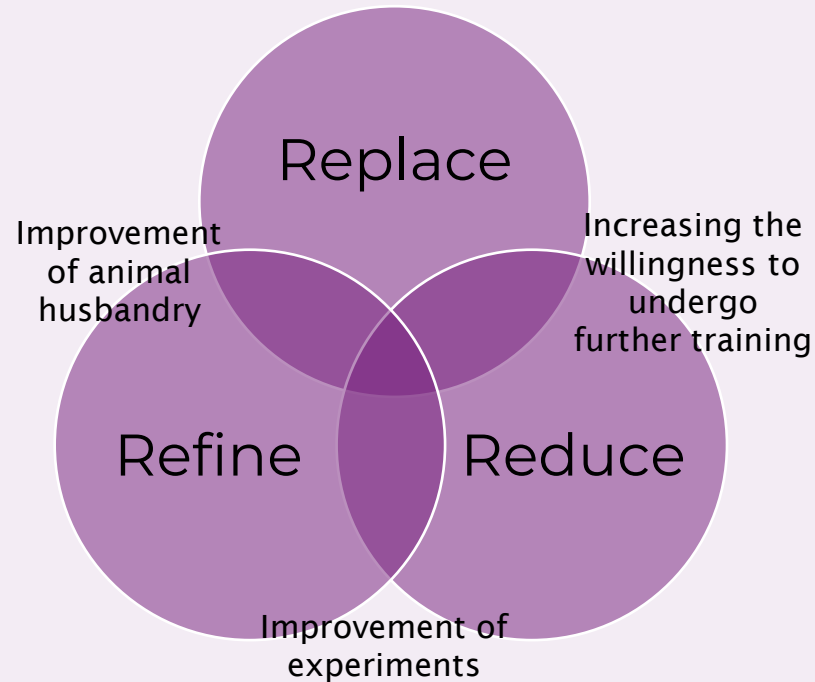


- Animal Husbandry
 - Management
 - Building
 - Cages
 - Number of cages / animal caretakers
 - Technical equipment (Light, Airflow, Sound etc.)
 - Hygiene
- Animal Husbandry
 - Enrichment
 - Hygiene Monitoring
 - Vet. personnel
 - Animal training
 - LAS

Refinement methods

Education KPI

Improvement Methods



Working document of a common education and training framework

- Lifelong learning of **ALL** persons in the field of animal testing

Continuous occupational improvement

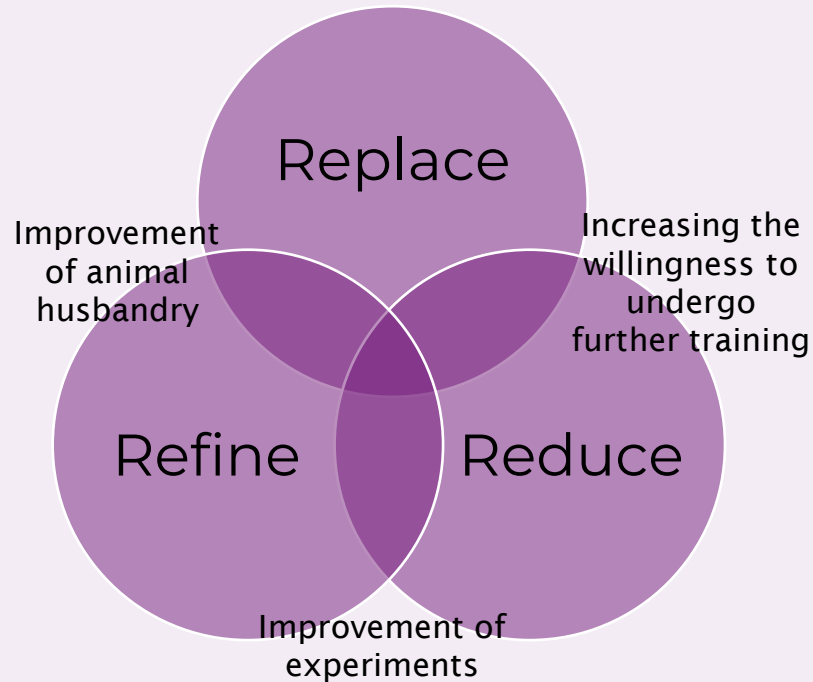
- Modular Training
- Competence – Skills record
- Labsafety
- Biosafety
- Killing of animals

European Commission, Directorate-General for Environment, *Caring for animals aiming for better science – Directive 2010/63/EU on protection of animals used for scientific purposes – Education and training framework*, Publications Office, 2018, <https://data.europa.eu/doi/10.2779/311480>

Refinement methods

Experimental KPI

Improvement Methods



- Regulations
- PREPARE ARRIVE Guidelines
- Animal Models
- adequate Termination criteria
- Classification of severity procedures
- Animal welfare body/ethics committee
- Re-homing of lab animals
- Anesthesia
- Re-use of animals
- sharing organs and tissues

[EUR-Lex - 02010L0063-20190626 - EN - EUR-Lex \(europa.eu\)](https://eur-lex.europa.eu/lex/LexUri.do?uri=OJ:L:2010:L0063-20190626-EN)

Refinement Husbandry





- extensive livestock farming of the right species during experimental procedures

Refinement

During the experiment

tunneling



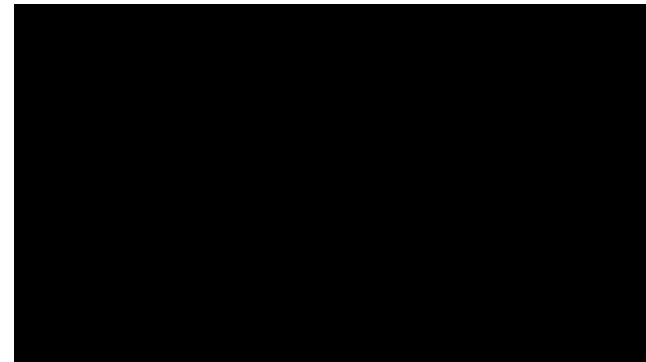
restraining



biosafety



cupping



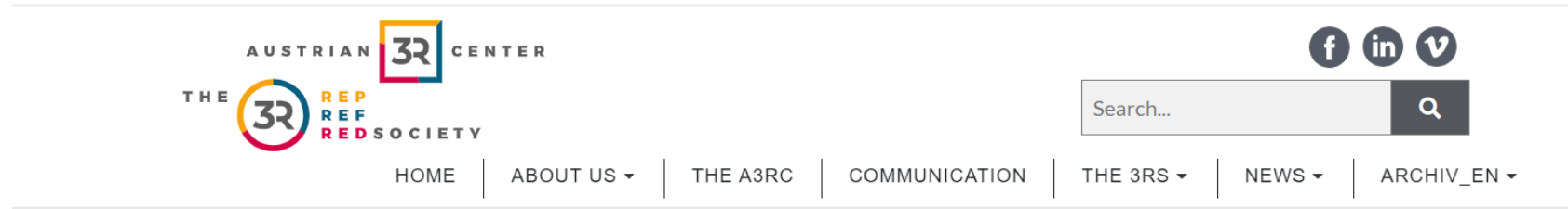
Rat tickling

https://www.newscientist.com/article/2112319-giggling-rats-reveal-the-most-ticklish-part-of-our-brains/?cmpid=SOC%7CNSNS%7C2016-FBvideo-TICKLERATS&utm_medium=SOC&utm_source=NSNS&utm_campaign=FBvideo&utm_content=TICKLERATS

Lafollette, M.R., O'Haire, M.E., Cloutier, S., Blankenberger, W.B., Gaskill, B.N., 2017. Rat tickling: A systematic review of applications, outcomes, and moderators. PLOS ONE 12, e0175320.. doi:10.1371/journal.pone.0175320



What are the 3Rs



The 3Rs

"If we are to use a criterion for choosing experiments to perform, the criterion of humanity is the best we could possibly invent.
The greatest scientific experiments have always be the most humane."

- W. Russell and R. Burch: The Principles of Humane Experimental Technique, 1959



3 Rs and biosafety

"Replacement means the substitution for conscious living higher animals of insentient material.

Reduction means reduction in the numbers of animals used to obtain information of a given amount and precision.

Refinement means any decrease in the incidence or severity of inhumane procedures applied to those animals which still have to be used."

-Russell and Burch: The Principles of Humane Experimental Technique, 1959



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[Animals in science - European Commission \(europa.eu\)](http://europa.eu)

[EUR-Lex - 02010L0063-20190626 - EN - EUR-Lex \(europa.eu\)](http://eur-lex.europa.eu)

[Tierversuche \(bmbwf.gv.at\)](http://bmbwf.gv.at)

REPLACE
REFINE
REDUCE

AUSTRIAN  CENTER

www.reprefred.eu