Institutional statement on the use of research animals

The Instituto de Neurociencias (IN-CSIC-UMH) has joined the agreement on Openness on Animal Research, promoted from the Federation of Scientific Societies in Spain (COSCE), with the collaboration of the European Association of Research Animals (EARA), and launched on 20 September 2016.

We are certain that animal experimentation plays a fundamental role in the discover of the underlying biological mechanisms of disease, and in the developing of medical treatments. Without research in animals, we would not have most of the medicines, antibiotics, vaccines and surgical techniques that are applied nowadays in human and veterinary medicine.

An important part of the research undertaken at IN aims at contributing to the improvement of human health and wellbeing and is carried out thanks to the use of animals, for example our research projects are dealing with significant social problems: to understand the key factor involved in normal brain function to improve mental capacities and understand functional alterations underlying mental and neurodegenerative diseases, describe cellular and molecular mechanisms of cellular interactions and movements during brain development and cancer, as well as looking for new therapeutic approaches.

The welfare of animals used for research purposes is of paramount relevance for the IN, and also the strict compliance and respect to the current legislation on the protection of animals used in research and for other scientific purposes, including education. Our aim is to achieve the highest standards in animal welfare, not only from the point of view of our moral responsibility on them, but also because we are convinced we could not achieve research excellence without proper animal welfare. Our experiments with animals follow the legal standard and are assessed by an Ethics Committee on Animal Experimentation that promotes the use of alternative methods, the reduction in the number of animals used and the refinement in the experimental protocols applied. Not a single research project requiring the use of animals could start without the appropriate and required Ethics assessment and the eventual authorization from the competent authorities.

The IN also ensures that the personnel involved in animal care and researchers do have the adequate instruction and required professional skills, and that all resources are provided to properly keep research animals in terms of facilities, husbandry, wellbeing and veterinary care.

The IN has promoted/been involved in the following initiatives towards the Openness on Animal Research: diffusion articles in newspapers included our compromise with EARA, in the Brain Week open-doors way we show basic animal models to study the brain with some explanations about Ethics and animal management to ensure animal welfare.

Statement supporting European Directive 2010/63/EU ("Directive") on the protection of animals used for scientific purposes

The use of animals in research has facilitated major breakthroughs in medicine which have transformed human and animal health. We support research using animals where alternative methods are not available, where the potential benefits to health are compelling, and where acceptable ethical and welfare standards can be met.

The European Directive 2010/63/EU has enhanced animal welfare standards and introduced the concepts of refinement, replacement and reduction ('3Rs') across the EU, while ensuring Europe remains a world leader in biomedical research. Under this Directive, animals may be used in research where the potential medical, veterinary and scientific benefits are compelling and there is no viable alternative method.

For research using animals to be both ethical and scientifically rigorous and authorised according to the Directive, it must meet high welfare standards and embed the 3Rs. The 3Rs are:

- Replacement methods which avoid or replace the use of animals;
- Reduction methods which minimise the number of animals used per experiment;
- **Refinement** methods which minimise any suffering and improve animal welfare.

Developments for alternative methods to the use of animals in research, such as the use of human cell models and computer modelling, continue to progress and scientists must continue to drive these forward. However, alternative methods are not able to fully replace the use of animals at this time. For many diseases, including complex conditions such as cancer, heart disease and diabetes, which affect multiple organs, we must understand how the whole organism interacts, which means that research using whole animals continues to be essential.

Research using animals has enabled major advances in the understanding of biology and has contributed to the development of nearly every type of treatment used in medical and veterinary practice today. Currently, research on animals continues to be necessary to understand human and animal health and disease, and to develop and improve treatments for patient benefit across the world.







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