

ALTEx

ALTERNATIVES TO ANIMAL EXPERIMENTATION

Food for thought ...

Igor Linkov, Olivia Massey,
Jeff Keisler, Ivan Rusyn
and Thomas Hartung

**From "weight of evidence"
to quantitative data
integration using
multicriteria decision
analysis and Bayesian
methods**

Concept article

Tilman Gocht, Elisabet Berggren,
Hans Jürgen Ahr et al.

**The SEURAT-1 approach
towards animal free
human safety assessment**

t4 workshop report

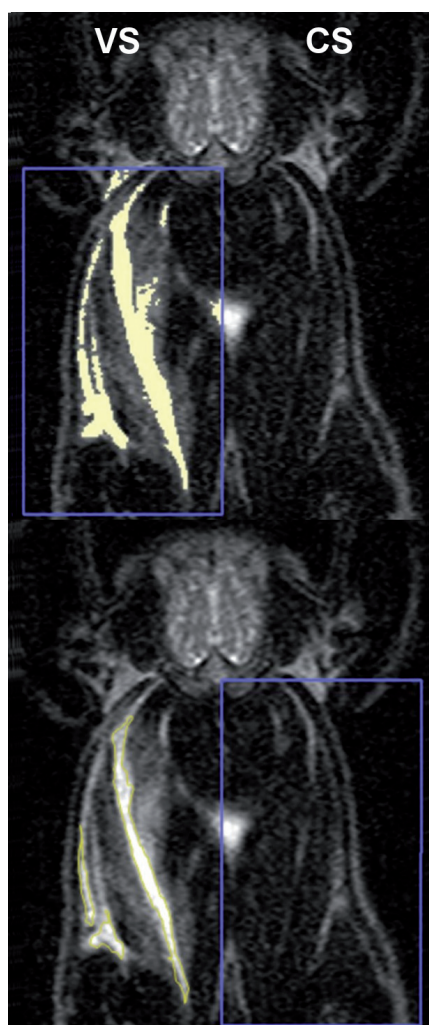
Costanza Rovida, Nathalie
Alépée, Anne M. Api et al.

**Integrated testing
strategies (ITS) for safety
assessment**

Review article

Pete Otovic and Eric Hutchinson

**Limits to using HPA axis
activity as an indication of
animal welfare**



Research article

Maren Bernau, Prisca V. Kremer,
Elke Pappenberger,
Lena S. Kreuzer, Klaus Cussler,
Andreas Hoffmann
and Armin M. Scholz

**Safety testing of
veterinary vaccines
using magnetic
resonance imaging
in pigs**

Short Communication

Maria C. C. M. Inglez de Souza
and Julia M. Matera

**Bleeding simulation
in embalmed cadavers:
bridging the gap
between simulation
and live surgery**

Calendar
Corners
News

**Dear readers,**

After our big birthday issue last October, we at ALTEX are now looking ahead to the journal's next decade. We have taken this opportunity to freshen up our layout – we hope you like it. The introduction of the active hyperlinks in the online pdfs last year has made it easier for you to follow up on interesting references and websites and we are glad that the publishing fee for authors was accepted and most have been able to find a way to cover this. Please remember that the Society ALTEX Edition is an independent non-profit organization that is always open to new ideas, new contributors and new supporters.

In this year's first issue, three papers deal with the concept of quantitative data integration, i.e., how information from different non-animal tests for specific molecular reactions can be combined to predict a toxicological reaction in humans:

Igor Linkov and collaborators give us Food for Thought ... on how we can move on from “weight of evidence,” a term that has garnered criticism for being ill-defined and qualitative, to quantitative data integration and explain which methods are at hand to put this into practice.

Tilman Gocht et al. explain the concept behind SEURAT-1 and how it aims to reach the goal of safety testing without the use of animals. The approach is based on the definition of adverse outcome pathways, i.e., the molecular reaction pathways that lead to toxicological effects in the organism and, based on these, developing integrated testing strategies to predict toxicological effects of chemicals.

The concept of integrated testing strategies is also the subject of the t⁴ workshop report by Costanza Rovida et al. The report illustrates the current state of the art as well as the new concepts that must be developed to overcome challenges, including “Good ITS Practice,” which will keep the assessment transparent and give regulators confidence in dealing with these new tools.

A review by Pete Otovic and Eric Hutchinson compiles the evidence that measuring cortisol levels of animals is insuffi-

cient to determine stress levels and so assess wellbeing. This lies both in methodological problems of measuring cortisol levels and in the observation that there is no robust correlation between all forms of stress and increased corticoid release. Other approaches to determining stress levels are described.

Veterinary vaccines must be tested for possible local reactions. Maren Bernau and colleagues demonstrate how this can be achieved non-invasively by MRI scans instead of pathological evaluations. This approach also reduces the number of animals needed for the assessment.

Maria Inglez de Souza and Julia Matera show how surgical training on animal cadavers can be more realistic and train further skills by recreating the blood circulation and simulating bleeding with a blood substitute. Their approach allows practicing multiple surgical interventions per cadaver before operating on live animal patients.

In the news we report on current legal developments in Europe regarding the Cosmetics Regulation and REACH, a variety of prestigious prizes recently awarded in the 3Rs field and also the establishment of a 3Rs graduate school and a center for alternatives. Experimental animal counts have declined, both in Germany and in the US, and new 3R relevant online resources are available.

In short, this issue shows how many different aspects play into the 3Rs.

Best wishes for your work in the 3Rs field in 2015.

Sonja von Aulock
Editor in chief, ALTEX



ALTEX

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Doerenkamp-Zbinden Chairs in Germany, India and USA

ecopa – European consensus-platform for alternatives, Brussels, Belgium

EUSAAT – European Society for Alternatives to Animal Testing, Vienna, Austria

IUF – Leibniz Research Institute for Environmental Medicine (IUF – Leibniz-Institut für umweltmedizinische Forschung), Düsseldorf, Germany

t4 – transatlantic think tank for toxicology, Baltimore, USA, Konstanz, Germany, Utrecht, The Netherlands

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Address

Society ALTEX Edition, Weinmangasse 86
8700 Kuesnacht ZH, Switzerland
Phone: +41 44 380 0830, Fax: +41 44 380 0832
e-mail: editor@altex.ch

ALTEX Edition Editorial Office USA

Joanne Zurlo (North American Editor)
Thomas Hartung
Michael M. Hughes

Address

Johns Hopkins University Baltimore
615 N Wolfe Street
W7032 Baltimore, MD 21020, USA
Phone: +1 443 287 2515, Fax: +1 410 614 2871
e-mail: jjzurlo@jhsph.edu

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Layout

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Phone: +41 44 380 0830
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Cover Picture

Magnetic resonance imaging in pigs to assess and follow inflammatory reactions after vaccination in the left side of the neck. Excerpt of Fig. 3 from Bernau et al., 51-58.

Aims and Scope

ALTEX is devoted to the open access publication of scholarly articles on alternatives to the use of animals for scientific purposes according to the 3R concept of Russell and Burch: Replace, Reduce and Refine. Articles describing experiments involving the use of animals for scientific purposes must attest that experiments were performed according to the ethical standards set in the instructions to authors and must be described in detail in accordance with the ARRIVE or GSPC guidelines.

ALTEX publishes research articles, short communications, reviews, as well as comments, corners, news and meeting reports.

Manuscripts submitted to ALTEX are evaluated by two expert reviewers. The evaluation takes into account the scientific merit of a manuscript and its contribution to animal welfare and the 3R principle.

ALTEX Proceedings publishes Abstract Books and Proceedings of scientific conferences. TIERethik is a German-language journal devoted to the bioethics of the relationship between animals and humans.

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