

ALTEX

ALTERNATIVES TO ANIMAL EXPERIMENTATION

Food for thought ...

Paul A. Locke and
D. Bruce Myers, Jr:

**A replacement-first
approach to toxicity
testing is necessary
to successfully
reauthorize TSCA**

t4 report:

Costanza Rovida,
Fabiola Longo and
Richard R. Rabbit:

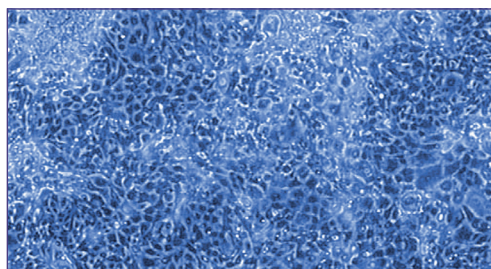
**How are reproductive
toxicity and developmental
toxicity addressed in
REACH dossiers?**

María Moreno-Villanueva,
Tobias Eltze, Dirk Dressler, et al.:

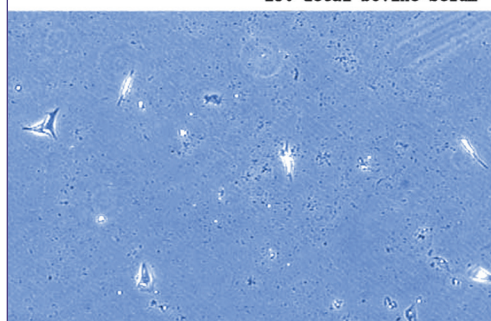
**The automated
FADU-assay, a potential
high throughput
in vitro method for early
screening of clastogenicity**

Caroline Rauch, Elisabeth Feifel,
Eva-Maria Amann, et al.:

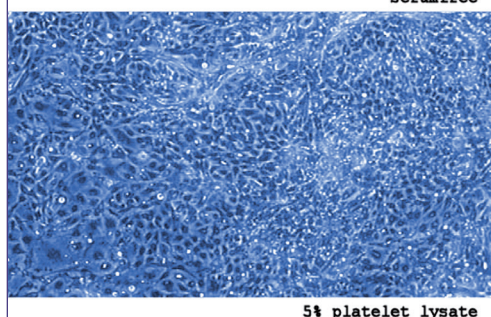
**Alternatives to the use
of fetal bovine serum:
Human platelet lysates
as a serum substitute
in cell culture medium**



10% fetal bovine serum



serumfree



5% platelet lysate

Jenny Stracke, Bettina Bert,
Heidrun Fink, and Jörg Böhner:

**Assessment of stress
in laboratory
Beagle dogs constrained
by a Pavlov sling**

t4 workshop report:

Nina Hasiwa, Jarrod Bailey,
Peter Clausing, et al.:

**Critical evaluation of
the use of dogs in
biomedical research
and testing in Europe**

t4 workshop report:

Mardas Daneshian,
Mohammad A. Akbarsha,
Bas Blaauboer, et al.:

**A framework program for
the teaching of alternative
methods (replacement,
reduction, refinement) to
animal experimentation**

Comment:

Franz P. Gruber:

**The Basel Declaration:
a critical appraisal**

Workshop reports
Congress report
Corners
News
Calendar of events



Dear readers,

The last issue of ALTEX for 2011 is literally filled to bursting. The increase in submissions in the second half of 2011 is evidence that the alternatives community has taken notice of our increased impact factor. Similarly, the Proceedings of WC8 are filling up: they will be published in March 2012 with more than 80 manuscripts as well as summaries of all sessions held in Montréal.

Like the EU, the US has tens of thousands of chemicals on the market for which no safety information exists. The “Toxic Substances Control Act” (TSCA) does not require testing of pre-1976 chemicals unless a hazard is suspected and leaves it up to manufacturers to provide safety assessment data for newer chemicals without specifically requiring toxicity testing. Paul Locke and Bruce Myers Jr give us Food for Thought ... on how the current TSCA reauthorization efforts should be channeled to implement an efficient system for gaining this valuable information.

The European Regulation REACH on the “Registration, Evaluation, Authorization and restriction of Chemicals” began in 2006 with exactly that purpose. The European Chemicals Agency (ECHA) has now published a database with non-confidential information from the registration dossiers of more than 4,000 chemicals that are particularly hazardous or are produced or imported in very high quantities. Costanza Rovida and colleagues assessed the information content on reproductive and developmental toxicity, the most animal-intensive hazard assessments, in about 10% of the dossiers. They raise a number of concerns, especially that *in vitro* tests are not used, companies are exploiting waiving options, and that performing only the currently proposed studies will already exceed European test capacities.

Both the US and the EU are at a cross-road where political decisions are required to put good intentions into good practice to elicit safety information on chemicals by harnessing 3Rs methods and minimizing *in vivo* testing.

María Moreno-Villanueva et al. challenge their automated version of the FADU assay, a genotoxicity assay detecting DNA strand breaks, with toxicants that have different known modes of action to demonstrate the broad applicability of this easy and cost-efficient screening assay. Caroline Rauch and

colleagues from Austria report on using platelet lysate as a replacement for fetal bovine serum to support cell growth in a number of cell lines. The lysate is easily and cheaply produced by freeze-thawing of expired, washed platelet concentrates and first functional assays on the cells show the expected responses. Jenny Stracke et al. introduce a refinement method for experiments on trained beagles: the Pavlov sling can replace narcosis or other forms of restraint for various applications without imposing signs of stress on the dogs.

In this spirit, a t⁴ workshop report by Nina Hasiwa et al. provides information on the societal concerns about using dogs in research, about the current use of dogs and about 3Rs opportunities for biomedical research on dogs in Europe. This is complemented by a report on a similar workshop in the US. A further t⁴ workshop report authored by Mardas Daneshian et al. outlines a modular course package for teaching 3Rs methodology to a range of target audiences.

In his critical comment on the Basel Declaration, Franz Gruber illustrates the short-comings of this document by comparing it to the Swiss Academy of Medical Sciences document “Ethical Principles and Guidelines for Experiments on Animals.”

Our WC8 Congress Report, Corners and News items describe new developments in the 3Rs field. We are especially pleased to report on the approval of OECD TG443 – Extended 1-Generation Reproductive Toxicity Study – a Reduction achievement in which 1,400 instead of 2,600 rats are used to test a chemical for reproductive toxicity issues; information on neurological and immune system parameters can be gathered from the same animals in addition, thus obviating further animal use.

Those of you who previously subscribed to the German ALTEX-ethik issue will instead find the first issue of TIERethik – a journal on the human-animal relationship – in your hands. This issue focusses on the concept of “animal dignity” and we hope you enjoy reading it and consider increasing your subscription to include both issues that will be published from next year on.

We thank you for your loyalty to ALTEX and wish you a peaceful and harmonious festive season and all the best for 2012.

The ALTEX team

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in biomedical science**

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Growth of LLC-PK₁-F⁺ cells is comparable in the presence of 10% FBS or 5% human platelet lysate, but not in the absence of serum. See Rauch et al., p. 305-316.

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Aims and Scope – Protecting More Than Animals

ALTEX publishes original articles, short communications, reviews, as well as news and comments, meeting reports and book reviews.

ALTEX is devoted to the publication of research on the development and promotion of alternatives to animal experiments according to the 3R concept of Russell and Burch: Replace, Reduce, and Refine. Animal experiments are defined by the editors as all experimental procedures involving the use of animals in testing, research and education or to obtain tissues, organs, and other animal-derived products which may cause pain or distress to animals.

Besides covering the biomedical aspects of animal experimentation, ALTEX is also devoted to the bioethics of the complex relationship between humans and animals. Articles published in ALTEX must express a basic concern for the dignity of living creatures and the recognition of animals as our partners. All articles will be judged according to stringent scientific standards.

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

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