### Editorial

**Sonja von Aulock**

#### Food for Thought

Grace Patlewicz, Nicholas Ball, Richard A. Becker, Ewan D. Booth, Mark T. D. Cronin, Dinant Kroese, David Steup, Ben van Ravenzwaay and Thomas Hartung

Read-across approaches – misconceptions, promises and challenges ahead

387

#### Main Articles

Marilena P. Etna, Elena Giacomini, Martina Severa, Manuela Pardini, Nacho Aguilo, Carlos Martin and Eliana M. Coccia

A human dendritic cell-based *in vitro* model to assess *Mycobacterium tuberculosis* SO2 vaccine immunogenicity

397

Catherine Willett, Jessica Caverly Rae, Katy O. Goyak, Brigitte Landesmann, Gary Minsavage and Carl Westmoreland

Pathway-based toxicity: History, current approaches, and liver fibrosis and steatosis as prototypes

407

Domenico Gadaleta, Fabiola Pizzo, Anna Lombardo, Angelo Carotti, Sylvia E. Escher, Orazio Nicolotti and Emilio Benfenati

A *k*-NN algorithm for predicting oral sub-chronic toxicity in the rat

423

Veit-Simon Eckle, Berthold Drexler, Christian Grasshoff, Thomas Seeger, Horst Thiermann and Bernd Antkowiak

Spinal cord – skeletal muscle cocultures detect muscle-relaxant action of botulinum neurotoxin A

433

*t*4 workshop report

Natalie Alépée, Anthony Bahinski, Mardas Daneshian, Bart De Wever, Ellen Fritsche, Alan Goldberg, Jan Hansmann, Thomas Hartung, John Haycock, Helena T. Hogberg, Lisa Hoelting, Jens M. Kelm, Suzanne Kaderfeit, Emily McVey, Robert Landsiedel, Marcel Leist, Marc Lübberstedt, Fozia Noor, Christian Pellevoisin, Dirk Petersohn, Uwe Pfannenbecker, Kerstin Reisinger, Tzutzuy Ramirez, Barbara Rothen-Rutishauser, Monika Schäfer-Korting, Katrin Zeilinger and Marie-Gabriele Zurich

State-of-the-art of 3D cultures (organs-on-a-chip) in safety testing and pathophysiology

441

*t*4 workshop report

Erwin van Vliet, Mardas Daneshian, Mario Beilmann, Anthony Davies, Eugenio Fava, Roland Fleck, Yvon Julé, Manfred Kansy, Stefan Kustermann, Peter Macko, William R. Mundy, Adrian Roth, Christoph Sachse, Imran Shah, Marianne Uteng, Bob van de Water, Thomas Hartung and Marcel Leist

Current approaches and future role of high content imaging in safety sciences and drug discovery

479

#### Short Communication

Piero Amodio, Paul Andrews, Marinella Salemme, Giovanna Ponte and Graziano Fiorito

The use of artificial crabs for testing predatory behavior and health in the octopus

494

#### Workshop Reports

Catherine Willett, Jessica Caverly Rae, Katy O. Goyak, Gary Minsavage, Carl Westmoreland, Melvin Andersen, Mark Avigan, Daniel Duché, Georgina Harris, Thomas Hartung, Hartmut Jaeschke, Andre Kleensang, Brigitte Landesmann, Suzanne Martos, Marilyn Matevia, Colleen Toole, Andrew Rowan, Terry Schultz, Jennifer Seed, John Senior, Imran Shah, Kas Subramanian, Mathieu Vinken and Paul Watkins

Building shared experience to advance practical application of pathway-based toxicology: Liver toxicity mode-of-action

500
WORKSHOP REPORTS

Saskia M. Burm, Jan-Bas Prins, Jan Langermans and Jeffrey J. Bajramovic
Alternative methods for the use of non-human primates in biomedical research 520

MEETING REPORT

Stefanie Schindler and Sonja von Aulock
The 9th World Congress on Alternatives and Animal Use in the Life Sciences 530

ERRATUM

Erratum to Endpoint Matrix: a Conceptual Tool to Promote Consideration of the Multiple Dimensions of Humane Endpoints 422

ADDENDUM

Addendum to Evidence for the Detection of Non-Endotoxin Pyrogens by the Whole Blood Monocyte Activation Test 499

CORNERS

CAATfeed 531
e copa 533
ICCVAM/NICEATM 535
IIVS 536
IUF 539

NEWS

EU: DB-ALM update launched 540
EU: EC consults the public on criteria to identify endocrine disruptors 540
EU: EC takes the Netherlands to court over failure to protect animals used for scientific purposes 540
EU: ECHA introduces new compliance check strategy 541
EU: EURL-ECVAM review of available methods for assessing chemical safety 541
EU: JRC hepatotoxicity datasets available within ToxBank Data Warehouse 541
INDIA: Dissection of animals in zoology and life science university courses banned 542
INT: OECD launches knowledge base on adverse outcome pathways 542
INT: PETA and Chemical Watch present REACH webinars 543
JPN: Call for Mandom International Research Grants open 543
NL/GER: InnoSysTox call for tender open 543
UK: Applications invited for Chair in Animal Replacement Science 544
UK: CRACK IT Challenge winners announced 544
UK: GM and HM breeding account for more than half of animal use for scientific purposes 545
UK: NC3Rs announces panel vacancies, project grants and 3Rs Prize 545
USA: Fellowship grant for alternatives to animal research in women’s health and sex differences 546
USA: Refinement and environmental enrichment grants offered 546
USA: The Wizard of 3Rs – Alan M. Goldberg’s 75th birthday and retirement from CAAT 547

CALENDAR OF EVENTS 478
IMPRINT U3