Dear readers,

2018 has already brought some changes to ALTEX. I am very pleased that Martin L. Stephens, Senior Research Associate at CAAT, has agreed to take over the post of North American Editor of ALTEX from Joanne Zurlo, who retired at the end of 2017. Thank you, Joanne, for your support of ALTEX over the past five years!

Our new website at www.altex.org is online! Its new manuscript and issue management system allows authors to follow the progress of their manuscripts throughout the review and production process and the website offers an updated selection of functions for readers. The production of the journal remains in the hands of the dedicated ALTEX team, who will also still be in personal contact with authors and reviewers to ensure that their manuscripts are prepared with care to the high standard you are accustomed to. The printed issues of ALTEX now no longer contain the News or Calendar of Events – instead these are updated on the website continuously.

We are all personally concerned with the safety of our food. In the United States, substances may be added to processed foods if they are “generally recognized as safe” (GRAS). However, this does not mean that reliable safety data is available for all such GRAS substances. The FDA and the US Grocery Manufacturer Association are under pressure to update the system. Thomas Hartung’s Food for Thought … explains their ongoing efforts.

The ToxCast™ program is an ongoing effort to screen thousands of chemicals in hundreds of assays to assess their potential risk. These data are collated with other data on the chemicals by the Tox21 collaboration. Chiu et al. describe three case studies on chemicals in which they investigate whether and how ToxCast/Tox21 data can contribute information about how these chemicals cause cancer. Such information can contribute to the risk evaluation of these chemicals in their respective International Agency for Research on Cancer (IARC) Monographs. The group finds that the ToxCast/Tox21 data can fill some information gaps but calls for further high throughput screening methods to address other hallmarks of cancer causing agents not yet covered by the tests.

Filling up cartilage defects with chondrocytes arranged in a suitable three-dimensional matrix is a promising approach to improving cartilage repair. Mouser and colleagues study what concentration of chondrocytes is best and how they should be distributed throughout a hydrogel used to plug defects made in sections of cartilage from equine joints obtained from the slaughterhouse. Samples were cultured over two months. Such ex vivo studies can help to reduce the number of animal experiments performed to optimize the methodology.

Experiments on organs obtained from the slaughterhouse under conditions that sustain their function do not provide results at the same speed as in vitro experiments; however, they can be the key to obtaining biological information that depends on the different cell types of the organ being in their natural 3-dimensional arrangement and able to communicate with each other without performing experiments on live animals. This field of research has directly benefited transplantation surgery and organ perfusion methodology, the status of the field and opportunities for the future.

Recent developments in non-animal methods are discussed in three case studies on chemicals in which they investigate whether and how ToxCast/Tox21 data can contribute information about how these chemicals cause cancer. Such information can contribute to the risk evaluation of these chemicals in their respective International Agency for Research on Cancer (IARC) Monographs. The group finds that the ToxCast/Tox21 data can fill some information gaps but calls for further high throughput screening methods to address other hallmarks of cancer causing agents not yet covered by the tests.

Looking forward with you to what further developments 2018 has in store for the 3Rs,

Sonja von Aulock
Editor in chief, ALTEX