More than 100 delegates gathered in Brussels on 16 November for the eighth annual conference of the European Partnership for Alternative Approaches to Animal Testing (EPAA). With globalised industries testing and marketing products around the world, the conference’s theme of international cooperation attracted the involvement of key stakeholders from the US, China, India as well as from Europe.

International cooperation on 3Rs as the way forward

One main takeaway message from the conference was that there are no easy solutions. “This work can be truly successful only if it is carried on an international basis,” said Antti Peltömaki, Deputy Director-General at DG Enterprise and Industry, European Commission. As several representatives of industry (both companies and European federations) put it, there is no alternative other than to continue investing into the research and validation of alternative approaches. Certainly, the deep commitment to international cooperation was impressive, as were its achievements.

The global R&D landscape is changing with the strengthening of emerging economies and increasing awareness of regional and cultural differences. The EPAA annual conference panelists called for global harmonisation to help develop newer tools and technologies for regulatory testing, improve communication and contribute to capacity building.

International activity is both a challenge and an opportunity, and according to the vast majority of speakers, there are tremendous opportunities in international cooperation. Among the opportunities, said Florian Vernay, European External Affairs Director for Unilever and next year’s Co-Chair of the EPAA, is the OECD’s new strategy on adverse outcome pathways—an approach to risk assessment that could align research and decision-making globally. The challenges include how to reach the aim of a single global pathway for the regulatory acceptance of 3Rs methods. Even if things are moving on, the process is slow, pointed out Dr Sonja Beken, Chair of the EMA’s Joint Expert Group on the Application of 3Rs.

Fittingly, the conference added one more practical step in international cooperation: the signing of a Memorandum of Understanding between the EPAA and the Institute for In Vitro Sciences (IIVS), a US-based non-profit organisation dedicated to the advancement of alternative testing methods. EPAA will fund IIVS activities over the next two years, up to a total of €100,000 to promote alternative methods throughout the world (IIVS has an extensive network in Brazil, China, Vietnam, etc.).
borates with the US IQ* Consortium, which links phar-
aceutical and biotech companies to advance science-
based standards and regulations worldwide. “We try to liaise and outreach to organisations in Europe, to learn our place and to contribute,” said IQ representative Joa-
chim Coenen, from Merck Serono.

Besides, the US FDA* also wants more partnerships, in-
cluding with “our European colleagues”, said Donald Prater, Deputy Director of the FDA’s Europe Office. His list of key international issues for the FDA included animal testing and the development of alternatives. EPAA and the American agency have already started to explore opportunities for further collaboration in areas of mutual interest.

E. Commission speakers said the interna-
tional acceptance of alternative methods is crucial for a level playing field. They called for integration of results and joint working, which should make it easier to gain international accept-
tance. The International Collaboration on Alternative Test Methods (ICATM) is one of the existing platforms for cooperation between validation centres. Furthermore, ECVAM’s strategy for full replacement of animal testing for hazard identification in skin sensitisation has been dis-
cussed with the OECD.

He Zhengming, Director of China’s Institute for Labora-
tory Animal Resources, part of the country’s National Insti-
tutes for Food and Drug Control, said that the Chinese regulator has developed a five-year plan for the regula-
tion of cosmetic products and their safety assessment. It is also speeding up the construction of research and validation systems for alternative toxicology in cosme-
tics, with a draft guideline under consideration. “We think it is necessary to set up a Chinese Centre for Validation of Alternative Methods – CHCVAM,” he said adding, “We need to promote the transformation of OECD testing gui-
delines into Chinese standards.”

One conference session looked in detail at skin sensitisa-
tion as an example of cross-sector dialogue on a global scale. David Basketter, who chaired the session as Scientific Adviser to the EPAA Skin Sensitisation Project, was pleased with the progress made in this area in the last ten years thanks to international cooperation. Now, ECVAM is progressing with the validation of three alternative assays and the OECD is primed to receive inputs.

A remaining challenge is how to gain insights into skin sensitisation potency so we can get results from alter-
native methods as good as with animals. Another area where there is much work to be done is in testing for REACH. Kimmo Louekari, Senior Scientific Officer at the European Chemicals Agency, noted that in many cases REACH annexes explicitly re-
quire in vivo testing. Much hope is pinned on QSARs – quantitative structure-activity relationships – as a replacement strategy, but there is a long way to go, said Louekari. “The results must be adequate to meet the regulatory requirements” he said.

Laurence Musset, Principal Administrator of the Test Guidelines Programme at the OECD, underlined the keywords for her organisation: mutual concern, shared burden, and coordination and harmonisation of policies and tools. Among other developments, Musset expects two draft test guidelines for skin sensitisation to be circulated to the OECD’s working group of national coordinators next year.

Susanne Kolle from BASF, Germany, gave a vivid example of how adverse outcome pathways can work in skin sensitisation. Her company has analysed more than 50 substances with a combination of assays addressing key events in skin sensitisation, rather than individual assays. The approach seems to yield better results than in vivo testing. BASF has now submitted this strategy for qualitative hazard assessment to ECVAM.

Round table: EPAA, a catalyst for enhanced harmoni-
sation on testing requirements

A round table with the regulators, chaired by Julia Scheel and Gwenole Cozigou, Co-Chairs of the EPAA’s Steering Committee, addressed whether the current mechanisms for international cooperation are working well. For Don-
ald Prater from the FDA, the answer was yes – but we need to do more. “The EPAA is in a good position to cata-
lyse discussion between interested parties,” he said.
Like Prater, Sonja Beken thought that international col-
laboration in the pharmaceutical sector is already quite
advanced. But more is needed in relation to marketing batch-tested products. “We need a mechanism to put tests on the agenda of the ICH,” she said. “That’s where the EPAA can help.” Likewise, the OECD representative agreed about testing. “Countries are still not willing to harmonise testing requirements,” she said. “This is where the EPAA could have an influence [so that countries take similar decisions].”

Giving the views of the Chinese SFDA, He Zhengming recognised the need for improvements in China’s legal and regulatory system if work on alternatives is to move forward. “We hope in the future to get help from the EPAA to organise a training course for alternatives to animal tests. We would also like to send staff to labs in Europe doing alternative methods.”

EPAA 3Rs Awards

The EPAA 3Rs Science Award 2012 was won by Nils Klüver from the Helmholtz Centre for Environmental Research in Leipzig, Germany. The prize, which comes with €100,000 to support research into the 3Rs, will fund Dr Klüver’s project on improving the Zebra Fish Embryo Test as an alternative to the fish acute toxicity test – which currently uses 200,000 fish per year in the European Union. His industrial partner in the project is EPAA member company L’Oréal.

The Poster Award and its prize of €1,500 went to the COSMOS Project represented by Andrea-Nicole Richarz of Liverpool John Moores University, UK. The project works on in silico models to predict human repeated dose toxicity in cosmetics. The Recognition Award, restricted to industry applicants, was given to Rolf Fautz from Kao GmbH, representing a collaboration of eight companies working on alternatives for genotoxicity testing in the cosmetics industry.

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All the presentations at the conference, a picture gallery, PDF versions of the EPAA-IIVS MoU, the conference press release, a poster book and the replay of the video streaming can be seen online on the EPAA website.