

REVIEW MEETING ON REACH-DRIVEN SCIENCE NEEDS HELD IN EARLY MARCH

For most member companies of ECETOC, a special focus in 2010 was to finalise the first registration dossiers for REACH. This is now behind us and energy has been renewed for more effort on REACH. Already during the compiling of Chemical Safety Dossiers, it has become apparent that there are aspects in the Technical Guidance Documents, and hence in the dossiers, which will likely lead to queries by ECHA. Reasons for this are areas where the guidance is deficient or contradictory, or where the underpinning science remains weak. To support an effective implementation of the legislation, the Scientific Committee had already started to look for areas where scientific opinions need to be further developed and which should be proposed for the on-going ECETOC science programme, short-term and longer-term. For a focused input from the wider ECETOC membership, a one-day meeting was held on 1st March 2011 in Brussels.

As part of the preparation for this review meeting, participants provided feedback on a first compilation of science needs. 35 participants represented 18 member companies, and 15 of them gave prior input. We discussed the many items on the list in breakout groups, i.e. one on human health and one on environment science topics. Both sessions identified science areas (addressing hazard, exposure and risk characterisation) that are of high priority, meaning work should start already in 2011, and those of moderate priority to be initiated in the following year. An initial reflection on key topics given by the Secretary General right at the end of the meeting highlighted the following topics:

- Grouping / Read-across (also for UVCB substances)
- Exposure-based Waiving
- TRA further development (including SPERC's, biodegradation half-life, default PNEC)
- Adverse vs. non-adverse effects and assessment factors (non-traditional endpoints)
- New approaches in toxicology (incl. adverse outcome pathways, TOX21)

The comprehensive output of the meeting is now being analysed and will be presented to the Scientific Committee at their end of March meeting for further prioritisation and with a view on how they fit into the ECETOC Strategy. A consolidated version with an indication of planned activities and partners where applicable will soon be communicated to all participants of the review meeting and also distributed more widely via the ECETOC members' website.

Christa Hennes

ECETOC Health Sciences Manager

Workshop webpage: http://bit.ly/ecetoc-ws-2011-reach_driven_science_needs



SG CORNER

As many of you will recall, the 2010 Annual General Meeting (AGM) was combined with the Annual Technical Meeting (ATM). This made for a long day, but allowed participants to arrive one evening and return the following day.

Furthermore, it was an opportunity for members to participate in both events where they might otherwise have only attended one. An online poll following the events confirmed that this was a popular format, so we will repeat it in 2011.

Coincidentally, the date of the 2011 AGM and ATM is the same as last year's: June the 8th. This year's ATM will be entitled: **ECETOC: REACHing maximum impact** and will be dedicated to the product of existing and recent Task Forces. As the title implies, the focus will be on the impact of ECETOC's activities. "Impact" for ECETOC is captured in the durability of the concepts and proposals that come out of our activities. Indicators of impact can be seen in reference to our publications in official guidance and regulations. Thus, our Targeted Risk Assessment (TRA) can be considered impactful as it is referenced in the REACH Technical Guidance Document (TGD) and incorporated into the Tool (CHESAR) which is proposed by ECHA for preparation of Chemical Safety Reports (CSR).

Many other ECETOC Task Forces and Workshops have also had significant impact. The ATM will serve as a review of this impact and will enable Task Force participants to share in understanding the need which led to the Task Force and the extent to which it accomplished its goals.

The emphasis on REACH in the title should not be construed to mean that all of our attention has been focused there. Other activities which will be presented have their target in other regulations such as the Pesticide and Groundwater Directives. Nevertheless, many of our recent activities have been related to the implementation of the REACH guidance. A recent meeting of member companies in Brussels has allowed us to identify REACH-related science issues for development and this will also be presented at the ATM.

The day will include presentations from Task Forces and a poster session to allow a maximum number of activities to be presented. Hopefully many Task Force members will come along with delegates, Scientific Committee members and other interested parties. If you do come, I can guarantee you will be impressed by the number of activities we have managed during this busy period.

Neil Carmichael

Dr. Neil Carmichael
Secretary General

ATM webpage: <http://www.ecetoc.org/2011-atm>

| Inside this issue |

> Review meeting on REACH-driven science needs	1
> SG Corner: June 2011 AGM and ATM	1
> New member: Afton Chemical Corp.	1
> Workshop report on guidance on AF to derive a DNEL	2
> CellSens open access meeting prior to SETAC Europe	2
> Publication of Technical Report 109	2
> Upcoming ECETOC ATM/AGM, Workshops and Symposia	3
> Integration of human and animal data in chemical risk assessment	4
> Latest Publications and Agenda	4



Afton Chemical Corporation joins ECETOC

ECETOC offers a very warm welcome to Afton Chemical Corporation which has become our latest member. Afton Chemical develops and manufactures petroleum additives that enhance the performance of lubricating oils and fuels in machinery, vehicles and other equipment. We look forward to meeting their representatives at our ATM/AGM in June. More information on Afton Chemical Corporation from their website:

<http://www.aftonchemical.com/>



Science area:
Risk, hazard
and precaution

PUBLICATION OF WORKSHOP REPORT ON GUIDANCE ON ASSESSMENT FACTORS TO DERIVE A DNEL

Following on from the publication of 'Guidance on Assessment Factors to derive a DNEL' (Technical Report No. 110), the related Workshop Report has been published.

Under REACH, chemicals produced in or imported into the EU, in amounts of ≥ 10 tons/year, require detailed registration dossiers including a chemical safety assessment. One key element for the chemical safety assessment is the derived no-effect level (DNEL) which in turn depends upon the point of departure of the hazard assessment and the assessment factor (AF) applied. The REACH 'Guidance on information requirements and chemical safety assessment' (REACH TGD) contains in Chapter R.8 a number of AF for extrapolation of animal data to man that are based on previous experience and convention, and are thus proposed as default values.

Previous ECETOC Task Forces have developed concepts for so-called 'informed' AF based on animal data (TR 86) and for the use of human data (TR 104) to develop AF. A recently convened ECETOC Task Force looked at further published literature to substantiate the proposed informed AF. It also worked examples, based on SCOEL data, in order to show differences in DNEL when applying default or informed AF. The draft report from the Task Force was presented to the Workshop participants that came from regulatory bodies, academia and industry. A parallel project carried out by the Fraunhofer Institute for Toxicology and Experimental Medicine for the detergent's industry initiative ERASM (Environmental Risk Assessment and Management) was also presented in the Workshop. The Workshop Report summarises the presentations given at the Workshop and the outcome of the discussions.

Report summary and download available at <http://bit.ly/ecetoc-wr20>.



CELLSens-Eco8: LESSONS LEARNT. OPEN ACCESS MEETING PRIOR TO SETAC EUROPE

15 May 2011, at SETAC Europe, Milan, Italy

The goal of the CELLSens-Eco8 project was to develop a strategy to predict acute fish lethality using fish cell lines and fish embryos. Specifically, this CEFIC-LRI/UK-DEFRA supported project addressed the replacement of the fish acute toxicity test (OECD 203) by improving assay conditions and exploring various toxicological endpoints in fish cells and zebrafish embryos. Furthermore, sub-lethal endpoints were explored as pilot explorations toward alternatives for fish chronic toxicity testing.

The CellSens team, with the support of ECETOC and Cefic-LRI, invites all interested parties from academia, industry and regulation to explore the project results and discuss their implications in the context of a strategy to refine, reduce or replace fish tests.

This Workshop takes place in the morning prior to the SETAC Europe Meeting on May 15/2011 from 8.30 to 12.00 in the Milano Convention Centre.

The CellSens team will lay out the project design based on the original working hypotheses and present the outcome of the research with particular focus on:

- the construction and utility of the CELLSens chemical list;
- pitfalls in testing chemicals of varying physico-chemical properties and strategies to overcome these pitfalls;
- results of the screening of the CELLSens top 30 chemicals with improved testing design and in light of available fish acute toxicity data;
- the established Quality Management Handbook and Standard Operating Procedures.

The programme and registration form can be found at <http://bit.ly/ecetoc-cellsens-eco8>



Science area:
Integrated
testing
strategies

PUBLICATION OF TECHNICAL REPORT ON HIGH INFORMATION CONTENT TECHNOLOGIES IN SUPPORT OF READ-ACROSS IN CHEMICAL RISK ASSESSMENT

ECETOC has published a report on 'High information content technologies in support of read-across in chemical risk assessment'. The report presents a synopsis of the approaches and recommends new research for the European Chemical Industry Council's (Cefic) Long-range Research Initiative (LRI).

Read-across exploits information on structurally related (similar) analogues to derive hypotheses about the activity of the new chemical and hence predict its toxicity without experimental testing. Large existing databases on traditional toxicological endpoints and mechanisms of action are available that can be searched by data mining and cheminformatics tools (a selection is presented in the report). In addition, high-information-content techniques such as 'omics (toxicogenomics and metabolomics in particular) can be utilised to generate and test these hypotheses, notably about the mechanism of action. Examples are given in the report for phthalates, oestrogens and skin sensitisers.

There is scope for improvement of the heuristics of analogue identification and hypothesis generation. Furthermore, real examples of using high-information-content data are needed to support read-across, e.g. to provide a biology-based rationale for chemical grouping.

Report summary and download available at <http://bit.ly/ecetoc-tr109>

UPCOMING ECETOC AGM / ATM, WORKSHOPS AND SYMPOSIA



Science area:
Reproductive
health

WORKSHOP ON RISK ASSESSMENT OF ENDOCRINE DISRUPTING CHEMICALS

9-10 May, 2011, Firenze, Italy

Recent European legislation has created a hazard based cut-off criterion that only supports the marketing and use of chemicals on the basis that they do not induce endocrine disruption in humans and/or wildlife species. In June 2009 ECETOC held a Workshop to discuss the Task Force report 'Guidance on Identifying Endocrine Disrupting Effects (TR106)'. This provided a stimulating discussion on the scientific basis for identifying endocrine disrupting chemicals. A considerable amount of work has also been done by individual member states, who have produced refined approaches that have significantly developed the thinking in this area. This Workshop therefore seeks to debate, combine and consolidate these rapidly evolving approaches.

Objectives of the Workshop

Specifically to:

- Evaluate emerging guidance produced by regulatory authorities, academic and industry scientists.
- Identify areas of concordance and difference.
- Consolidate the common scientific themes.
- Provide a platform for constructive debate on areas of difference.
- Invite a wider critique of the proposed approaches.

Workshop Structure

- Review of evolving schemes provided by the German BfR and UBA, UK CRD and ECETOC.
- A series of breakout groups to tackle areas for further development.
- A plenary session to clearly identify areas of consensus and future debate.

Intended outcome

Further progress towards scientifically based identification and regulation of potentially endocrine disrupting chemicals in Europe.

Participation is by invitation-only.

Workshop webpage: http://bit.ly/ecetoc-ws-2011-RA_of_endocrine_disrupting_chemicals

ECETOC 2011 ANNUAL GENERAL MEETING AND ANNUAL TECHNICAL MEETING

8 June 2011, at Hotel Crowne Plaza Brussels Airport, Brussels, Belgium

ATM topic - **ECETOC: REACHing maximum impact**

Further details will shortly be posted on the ATM webpage at <http://www.ecetoc.org/2011-atm>



Science area:
Reproductive
health

SYMPOSIUM: RISK ASSESSMENT OF ENDOCRINE DISRUPTING CHEMICALS

6 July 2011, at 41st EEMS meeting, Barcelona, Spain

A Symposium on Risk Assessment of endocrine disrupting chemicals will be held in Barcelona, Spain, on Thursday 6th July 2011, at the annual meeting of the European Environmental Mutagen Society (EEMS). The focus is on toxicology and practical risk assessment using case studies, including the outcome of the ECETOC Workshop of 9-10 May 2011, Firenze, Italy.

See EEMS Barcelona website for more details, draft programme and registration form: http://bit.ly/eems_barcelona_2011
ECETOC Workshop webpage: <http://bit.ly/ecetoc-ws-2011-eems>



Science area:
Mixtures

WORKSHOP ON COMBINED EXPOSURE TO CHEMICALS

11-12 July 2011, Berlin, Germany

The Workshop will review a number of key scientific areas which are important in the assessment of the health and environmental impact of combined exposures to chemicals. It will focus on the state of the science on technical aspects of co-exposure. Further, it will examine whether there are reliable and pragmatic approaches to risk assessment of combined exposures to chemicals. Participation is by invitation only.

Workshop webpage: http://bit.ly/ecetoc-ws-2011-combined_exposures



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Science areas:
Chemicals in human tissue,
Integrated testing strategies
Role of chemicals in causality of disease

INTEGRATION OF HUMAN AND ANIMAL DATA IN CHEMICAL RISK ASSESSMENT

ECETOC Technical Report 104 on a "Framework for the Integration of Human and Animal Data in Chemical Risk Assessment", published in 2009, proposes novel weight of evidence criteria for both human and animal data. This allows the highest quality database to be selected as the primary basis for standards. The Report has helped to inform the discussions on the recently revised ECHA Guidance on the 'Characterisation of dose response for human health' (http://bit.ly/echa-information_requirements_r8). At the same time, the Task Force has continued to develop further examples (case studies) that successfully apply the TR104 concept. A poster shown at the recent Society for Risk Analysis annual meeting in Salt Lake City (http://www.sra.org/docs/2010_SRA_Final_Program.pdf) garnered substantial interest amongst participants and from over 100 entries, it was selected "Best Poster".

Download poster in jpeg format: <http://bit.ly/ecetoc-posters-2010-ihaadica>

LATEST Publications

Reports:

- Technical Report No. 109 High information content technologies in support of read-across in chemical risk assessment (December 2010)
<http://bit.ly/ecetoc-tr109>
- Technical Report no. 110 Guidance on Assessment Factors to Derive a DNEL (October 2010) <http://bit.ly/ecetoc-tr110>
- Workshop Report No. 20 Workshop on Guidance on Assessment Factors to Derive a DNEL. 25 March 2010, Barza d'Ispra (December 2010)
<http://bit.ly/ecetoc-wr20>

Scientific articles:

Carmichael N, Bausen M, Boobis AR, Cohen SM, Embry M, Fruijtjer-Pölloth C, Greim H, Lewis R, Bette Meek ME, Mellor H, Vickers C, Doe J. 2011.

Using mode of action information to improve regulatory decision-making: An ECETOC/ILSI RF/HESI workshop overview.

Critical Reviews in Toxicology 41(3):175-86.

doi:10.3109/10408444.2010.541225

<http://dx.doi.org/10.3109/10408444.2010.541225>

Heinrich J. 2011

Influence of indoor factors in dwellings on the development of childhood asthma

Int. J. Hygiene and Environmental Health 214:1-25. [review commissioned by ECETOC]

doi: 10.1016/j.ijheh.2010.08.009

<http://dx.doi.org/10.1016/j.ijheh.2010.08.009>

Donner M, Tran L, Muller J, Vrijhof H. 2010

Editorial - Genotoxicity of Engineered Nanomaterials

Nanotoxicology 4:345-346 (December 2010)

doi:10.3109/17435390.2010.482750

<http://dx.doi.org/10.3109/17435390.2010.482750>

Donner M, Tran L, eds.

Genotoxicity of Engineered Nanomaterials

Nanotoxicology 4:345-424 (December 2010)

<http://informahealthcare.com/toc/nan/4/4>



AGENDA

2011

April

- 04 Board of Administration meeting, ECETOC, Brussels.
- 06 EuroEcoTox project meeting, ECETOC, Brussels.
- 07 Cyanides antidotes Task Force meeting, ECETOC, Brussels.

May

- 03-04 Low-dose interactions Task Force meeting, venue tbc.
- 09 Workshop on risk assessment of endocrine disrupting chemicals. Firenze (Florence), Italy.
- 10 3rd International conference on alternatives for developmental neurotoxicity testing (DNT3). Varese, Italy.
- 12 ERA of ionisable compounds. Task Force meeting. ECETOC, Brussels.
- 13 Guidance for classification of reproductive toxicants under GHS. Task Force meeting, ECETOC, Brussels.
- 15 CellSens-Eco 8 open access meeting prior to SETAC Europe. Milan, Italy.
- 15-19 SETAC Europe 21st Annual Meeting. Milan, Italy.
- 18 Use of 'omics in systems biology: editorial meeting. ECETOC, Brussels.

June

- 07 Board of Administration meeting. Venue tbc, Brussels.
- Low-dose interactions Task Force meeting. ECETOC, Brussels.
- 08 Annual General Meeting (AGM) & Annual Technical Meeting (ATM). Hotel Crowne Plaza Brussels Airport, Brussels.
- 09 192nd Scientific Committee meeting. ECETOC, Brussels.

July

- 4-7 41st EEMS annual conference. Barcelona, Spain.
- 06 Symposium at EEMS: Risk Assessment of endocrine disrupting chemicals. Barcelona, Spain.
- 11-12 Workshop: Combined exposure to chemicals. Berlin, Germany.

ECETOC In Brief

ECETOC (European Centre for Ecotoxicology and Toxicology of Chemicals) was established in 1978 as a scientific, non-profit making, non-commercial association and counts as its members the leading companies with interests in the manufacture and use of chemicals. An independent organisation, ECETOC provides a scientific forum through which the extensive specialist expertise of manufacturers and users can be harnessed to research, evaluate, assess, and publish reviews on the ecotoxicology and toxicology of chemicals, biomaterials and pharmaceuticals.

Website

Be sure to visit www.ecetoc.org to view our activities and to download our publications

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