CC/2017/26

COMMITTEE ON CARCINOGENICITY OF CHEMICALS IN FOOD, CONSUMER PRODUCTS AND THE ENVIRONMENT

Horizon scanning – including topics from July 2017 and joint COC, COM and COT meetings

Introduction

1. Members will recall that at the November 2017 meeting, the horizon scanning paper was discussed (CC/2016/12). It was agreed that there would be a standing slot at each COC meeting to discuss the topics of interest, and to be updated on topics being considered by IARC and the EU Scientific Committees.

Topics from horizon scanning 2016

2. Below are the topics agreed at the horizon scan in 2016, though in no specific order of priority:

- Applicability of Margins of Exposure for exposure of young children
- Mechanisms incorporating genomics and the Cancer Genome Atlas
- Epigenetics
- *In vitro* systems - to be undertaken when resource allows
- Immunological and stromal cell modulations relevant to cancer risk
- Nanomaterials
- E-cigarettes and novel tobacco products, and effect of early life exposure to cigarettes

July 2017 meeting suggestions

3. In addition to the presentation on adverse outcome pathways and consideration of the papers on cancer etiology and causal inference also covered under this item, the Secretariat has check whether the EU non-food scientific committees have evaluated e-cigarettes.

4. No specific opinions on e-cigarettes has been identified from Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) or its predecessors, the Scientific Committee on Health and Environmental Risks (SCHER) and the Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR). However, some work has been published on additives used in tobacco products. In 2010, SCENIHR considered the addictiveness and attractiveness of tobacco additives. This was followed by an opinion from the SCHEER on additives used in tobacco products in 2016.

Joint COC, COM and COT October 2017 meeting

5. A number of suggestions were made at the joint horizon scanning discussion session at the October 2017 joint meeting. The draft notes are attached at Annex A.

Upcoming IARC meetings

6. IARC have three upcoming meetings on their website with respect to the Monograph series (http://monographs.iarc.fr/ENG/Meetings/index.php, accessed 08/11/2017):

- Meeting 121 (20-27 March 2018) is on:
  - Styrene (CAS No. 100-42-5)
  - Styrene-7,8-oxide (CAS No. 96-09-3)
  - Quinoline (CAS No. 91-22-5)
- Meeting 122 (5-12 June 2018) is on:
  - Isobutyl nitrite (CAS No. 542-56-3)
  - β-Picoline (3-Methylpyridine) (CAS No. 108-99-6)
  - Methyl acrylate (CAS No. 96-33-3)
  - Ethyl acrylate (CAS No. 140-88-5)
  - 2-Ethylhexyl acrylate (CAS No. 103-11-7)
  - Trimethylolpropane triacrylate (CAS No. 15625-89-5)
- Meeting 123 (9-16 October 2018) is on:
  - 2-Chloronitrobenzene (CAS No. 88-73-3)
  - 4-Chloronitrobenzene (CAS No. 100-00-5)
  - 1,4-Dichloro-2-nitrobenzene (CAS No. 89-61-2)
  - 2,4-Dichloro-1-nitrobenzene (CAS No. 611-06-3)
  - 2-Amino-4-chlorophenol (CAS No. 95-85-2)
  - *ortho*-Phenylenediamine dihydrochloride (CAS No. 615-28-1)
  - *para*-Nitroanisole (CAS No. 100-17-4)
  - *N,N*-Dimethylacetamide (CAS No. 127-19-5)

Upcoming EU Scientific Committee topics

7. The agenda of the EU Scientific Committee on Consumer Safety (SCCS) Plenary meeting on 24-25 October 2017 is attached in Annex B. In addition the SCCS has working groups on:

- Cosmetic Ingredients
- Nanomaterials in Cosmetic Products, and
- Methodologies.

8. The agenda and minutes of the EU Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) Plenary meeting on 28 September 2017 is attached in Annex C. In addition the SCHEER has working groups on:

- Aluminium in toys
- Fuel Marker
- Guidance on the structure and contents of SCHEER opinions
- Potential risks to human health of light emitting diodes
- Non-human primates testing
- Onshore hydrocarbon exploration and production in the EU
- Safety of PIP silicone breast implants
- Rapid risk assessment
- Sunbeds
- Tobacco additives
- UVC lamps
- Weight of evidence and uncertainties
- Water Framework Directive, and
- Water reuse.

9. The European Food Safety Authority has a substantial body of work across its Scientific Committee and Panels. More detail is available here: https://www.efsa.europa.eu/en/science/scientific-committee-and-panels. EFSA currently has open consultations on a number of substances, and also on methodological questions. The full list of open consultations is here: https://www.efsa.europa.eu/en/calls/consultations.

Questions for the Committee

10. Members are asked to consider the list of topics from 2016, along with the suggestions made at the July COC and joint COC, COM and COT meeting in October:

a. Are there any additional topics of interest or importance which the COC should consider?

b. Could the Committee to prioritise the topic areas for consideration?

c. Does the Committee have any opinions on how the topic areas of joint Committee interest should be taken forward?

Secretariat
November 2017

COMMITTEE ON CARCINOGENICITY OF CHEMICALS IN FOOD, CONSUMER PRODUCTS AND THE ENVIRONMENT

Horizon scanning – including topics from July 2017 and joint COC, COM and COT meetings

Draft notes of the joint COC, COM and COT discussion of horizon scanning topics from 9th October 2017.

Secretariat
November 2017

ITEM 2: Joint COC, COM and COT Horizon Scanning (Paper 2)

1. Professor Alan Boobis declared an interest as a member of the Risk21 consortium, which was on the COT horizon scan. Dr Phil Botham declared an interest as he works for Syngenta and is aware of some of the issues raised due to the effect they have on products produced by the company.

2. The Code of Practice for Scientific Advisory Committees (Office of Science and Technology, December 2001), states that: “Committees should ensure that they have the mechanisms in place that allow them to consider on a regular basis whether new issues in their particular areas of responsibility are likely to emerge for which scientific advice or research might be needed”.

3. The Committees have undertaken regular Horizon Scanning exercises in which the Secretariat, Members and/or assessors have suggested areas/topics that may need consideration in the light of new and emerging evidence relating to chemical risk assessment.

4. Due to overlapping interests in horizon scanning items and a recommendation from the last COM triennial review for flexible and coordinated approaches to work of intersecting interest, it was considered timely for the Committees to have a joint horizon scanning session.

5. Paper 2 outlined current horizon scanning topics on the list for each of the three Committees and a number of suggested new topics for each Committee. Members were invited to comment on the topic areas mentioned in Paper 2, consider areas of overlap between the Committees and how these could be addressed, and suggest priorities.

6. The three Committees were introduced to the WRc and IEH Consultancy team who have been contracted to PHE to provide Secretariat support.

7. For the COT, the topics on the current horizon scan were as outlined in the discussion paper, and it was noted that in addition the Committee would be taking forward work on e-cigarettes.

8. For the COM in addition to the aspects highlighted in the discussion paper, it was noted that other topics of interest included genotoxicity associated with non-cancer endpoints, CRISPR technology and quantification of the dose response relationships for genotoxicity studies.

9. The COC items of interest were also outlined and it was noted that there were areas where the Committees had overlap in interest which it would be good to discuss.

10. Members of the Committees made a number of suggestions for horizon scanning topics in addition to those already described in the paper.

11. Members expressed concern over publication bias in that a positive finding was more likely to be published than a negative result and that some journals were very reluctant to publish negative results. There was also concern over the increase in number of ‘predatory’ journals, which was resulting in an increase in the

publication of poorer quality studies. One member noted that that some agencies appeared to give greater emphasis to positive results in non-validated test systems using non-standard protocols, compared to negative results from regulatory studies conducted in accordance to OECD test guidelines and good laboratory practice (GLP). It was suggested that the Committees needed to consider how to address this problem. There was a need to emphasise the importance of being cautious of studies using methods that are not validated and to promote the value of standard OECD/GLP studies. It was suggested that perhaps this could be addressed by the Committees writing to authoritative organisations, such as ECHA and EFSA, or to a high profile journal.

12. Other areas of potential common horizon scanning interest were outlined, such as, uncertainty in risk assessment (including modelling approaches and toxico-kinetics); extrapolation from lifetime animal studies to early human less than lifetime exposure; balance between environmental exposure and food exposure; by-products of various drinking water disinfection treatments.

13. Regarding epigenetics, it was noted that for the COM the relevant interests were in epigenetic changes in the germ line and epigenetic changes that were transmissible to the next generation. The COM would keep a watching brief on this. Regarding the suggestion of updating some aspect of the COM Guidance on mutagenicity testing and interpretation, members considered that other authoritative organisations needed to update similar Guidance documents before this should be undertaken. A lack of clarity over an appropriate *in vivo* follow up study for a positive gene mutation test result was highlighted, however, it was noted that an International Life Sciences Institute (ILSI)/Health and Environmental Sciences Institute (HESI) working group was already addressing this.

14. It was suggested that a case study of the RISK21 framework could be undertaken using the data presented during the recent COT consideration of heat not burn tobacco products. This could help illustrate how far the RISK21 approach could be used, and may provide a basis on which quantification of any effects could be better estimated.

15. Potential concern over natural products and ‘new’ natural foods was raised. The Committees were informed that this was a complex area with a lack of clarity in terms of regulation, which needed to be considered on a case by case basis. Some natural products or supplements were classified as novel foods. Natural products were treated differently in terms of regulation depending on whether there was a claim for a medicinal benefit or not. There appeared to be no overall framework or systematic approach to natural product in general. It was suggested that it would be worthwhile to determine whether there was a potential health risk from natural product before taking this further, and that a brief survey involving the National Poisons Information Service could be undertaken in the first instance.

16. The use of epidemiological information in a chemical health risk assessment was discussed. It was noted that a sub group of the COT and COC was finalising a document on synthesising epidemiological evidence and how this could be used by Committees. The question of how to deal with poor published studies was raised. Members noted that such studies could cause difficulties for various expert Committees, where poor studies were used to question Committee opinions in some

cases. It was noted that EFSA currently required scoring of individual papers and used a weight of evidence approach in its evaluations using its PROMETHEUS approach.

17. In terms of priorities for joint Committee consideration, it was suggested one important area was how to evaluate the biological or toxicological relevance of a reported response or perturbation, especially where this may be an atypical endpoint and how statistics can, and should, be used to help determine this. This should encompass how the Committees could judge whether the statistics used were appropriate. Consideration of sufficient levels of health protection and dealing with uncertainty could also be useful, for example, the degree of confidence over a non-significant result in relation to health protection. Another area of importance was how to deal with different sources of evidence considered by the Committees (e.g. predatory journals and poor quality non-standard tests), which could be a follow up to the SEES group work. In addition, a watching brief should be maintained on nanomaterials, especially as size distribution is of relevance for e-cigarettes and also heat-not-burn tobacco products.

18. It was agreed that a joint horizon scanning activity should be undertaken again in the future.

CC/2017/26 Annex B

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Agenda of Scientific Committee on Consumer Safety 5th plenary meeting 24-25 October 2017

Available:
https://ec.europa.eu/health/scientific_committees/consumer_safety/minutes_plenary_en

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