

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

Horizon scanning 2021

Introduction

1. The Committee's Terms of Reference indicate that the primary role of the Committee is to advise on the carcinogenic risk of substances to humans at the request of Government departments and agencies.
2. Since 2001, the Committee has undertaken a regular Horizon Scanning exercise, in line with the Code of Practice for Scientific Advisory Committees, in which the Secretariat and/or Members have suggested areas/topics that may need consideration in the light of new and emerging evidence relating to cancer risk assessment.
3. This paper presents a brief update on work from the last full horizon scanning held in November 2020 and an update on topics being considered by IARC and the EU Scientific Committees.

Topics from COC horizon scanning 2020

4. Below are the priority topics agreed at the horizon scan in November 2020:
 - Maintain a watching brief on factors affecting cancer susceptibility including shift work, stress and other lifestyle factors and how that might affect assessment of chemicals and carcinogenicity
 - Consider an update to guidance on assessment of nanomaterials, possibly as a joint activity across COC, COM and COT
 - Gain awareness of the potential effects of antibiotics and antivirals on the microbiome
 - Consider a joint discussion with COM on thresholds for in vivo mutagens and whether there is new information subsequent to the 2010 COM opinion

Joint horizon scanning topics

5. On 24th -25th November 2020, the COC and COM held a joint meeting to which COT members were also invited, and one of the discussion items was joint

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horizon scanning. From this discussion, the following topics were agreed and the Secretariats will consider how to progress these either as joint topics or which Committee might lead on these:

- Use of toxicogenomics/omics technologies in toxicity testing
- PBPK modelling – a COT workshop was held in December 2020.
- Next generation sequencing
- Further exploration of microplastics/microparticles and their composition – also linking with COMEAP
- Development of a dynamic cancer risk model, including consideration that pre-cancer effects are assessed as ‘general’ toxicity pathways, and other influencers on cancer/toxicity risk (e.g. shift work)
- Knowledge sharing across the three Committees, including impacts of EU Exit
- Consideration of uncertainty, use of uncertainty factors and margins of exposure – noting this also links with other activities.

New topics

6. The Secretariat does not have any specific suggestions for new topic areas to add to the horizon scan list – do Members?

COM and COT horizon scanning topics

7. The Committee has previously requested sight of the COM and COT horizon scanning activities. No further horizon scanning activities have occurred since the July 2021 COC meeting.

Work on NAMs

8. The COC has expressed interest in New Approach Methodologies (NAMs), which links in with a number of the horizon scanning topics. The Food Standards Agency and the COT held a workshop on this topic in October 2021, and there is an IGHRC/BTS workshop on NAMs on 22nd and 23rd November 2021.

Work following EU Exit and Transition

9. The Committee has asked to be kept up to date on relevant activities following EU Exit and the end of the transition period. There are no updates to report since July 2021

Further work on the OECD IATA for Non-genotoxic carcinogens

10. The COC has had a number of updates on the work under the OECD on an integrated approach to testing and assessment for non-genotoxic carcinogens. This work is ongoing, and there will be presentations on this at the IGHRC/BTS workshop on NAMs described in paragraph 8. In addition, papers are being published in a Special Issue of the International Journal of Molecular Sciences: https://www.mdpi.com/journal/ijms/special_issues/NGTxC. Two papers published so far are attached for Members at Annex A.

Upcoming IARC meetings

11. IARC have three upcoming meetings on their website with respect to the Monograph series (<https://monographs.iarc.who.int/iarc-monographs-meetings/>):

- Meeting 131 (8-15 March 2022) is on:
 - Cobalt Metal (CAS No. 7440-48-4) (without Tungsten Carbide or other metal alloys) and Cobalt (II) Salts
 - Trivalent and Pentavalent Antimony
 - Weapons-Grade Tungsten (with Nickel and Cobalt) Alloy (CAS No. None)
- Meeting 132 (7-14 June 2022) is on:
 - Occupational Exposure as a Firefighter

Upcoming EU Scientific Committee topics

12. The agenda and minutes of recent EU Scientific Committee on Consumer Safety (SCCS) Plenary meetings are attached in Annex B. SCCS has working groups on:

- Cosmetic Ingredients (last meeting 05-06/10/2021)
- Nanomaterials in Cosmetic Products (last meeting 16/09/2021), and
- Methodologies (last meeting 28/05/2021).

13. The agenda and minutes of recent EU Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) Plenary meetings are attached in Annex C. SCHEER has working groups on:

- Aluminium in toys (last meeting 27/09/2017)
- Anaerobic biodegradation of linear alkylbenzene sulphonates (last meeting 03/02/2020)
- Safety of breast implants in relation to anaplastic large cell lymphoma (last meeting 10/03/2021)
- E-cigarettes (last meeting 28/04/2021)
- Certain organic chemicals emitted from squishy toys (last meeting 08/04/2021)
- Safety of Cobalt in toys (last meeting 14/09/2021)

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- Draft Environmental Quality Standards for the Water Framework Directive Priority Substances & groundwater quality standards (last meeting 13/10/2021)
- Electromagnetic fields (EMF) (last meeting 07/10/2021)
- Emerging environmental risks (last meeting 11/09/2018)
- Emerging issues at the environment-social interface (last meeting 04/07/2019)
- Fuel marker (last meeting 09/01/2019)
- Nuclear taxonomy (last meeting 28/06/2021)
- Guidelines on the benefit-risk assessment of the presence of phthalates in certain medical devices (last meeting 05-06/06/2019)
- Guidance on the structure and contents of SCHEER opinions (last meeting 17/06/2016)
- Potential risks to human health of light emitting diodes (last meeting 02/03/2018)
- Non-human primates testing (last meeting 02/05/2017)
- Onshore hydrocarbon exploration and production in the EU (last meeting 24/09/2018)
- Safety of PIP silicone breast implants (last meeting 10/10/2017)
- Rapid risk assessment (last meeting 26-27/11/2019)
- Sunbeds (last meeting 24-25/10/2016)
- Titanium dioxide in toys (last meeting 28-29/09/2021)
- Tobacco additives (last meeting 24/06/2016)
- UVC lamps (last meeting 18/01/2017)
- Weight of evidence and uncertainties (last meeting 08/02/2018)
- Water Framework Directive (last meeting 01/06/2017), and
- Water reuse (last meeting 12/05/2017).

14. 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://connect.efsa.europa.eu/RM/s/publicconsultation>. Expected upcoming consultations are here:

https://connect.efsa.europa.eu/RM/s/publicconsultation?PublicConsultation2_c-filterId=00B1v000009eNnNEAU.

Balance of expertise on the Committee

15. The balance of expertise required by the Committee, as confirmed at the last horizon scan in 2019, is provided in Annex C. It is not anticipated that individual members are required for each aspect of expertise as some people would have a combination of the required skills. Additional key experts can also be invited to attend meetings for specific topics to supplement missing knowledge within the Committee.

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Questions for the Committee

16. Members are asked to consider the list of topics from 2020 and other aspects summarised and in particular:

- a. Are there any additional topics of interest or importance which the COC should consider?
- b. Whether the balance of expertise template is still appropriate and if there are any important gaps amongst the current membership or in light of possible future developments

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Two published papers from the Special Issue of the International Journal of Molecular Sciences:

Desaulniers D, Vasseur P, Jacobs A, Aguila MC, Ertych N, Jacobs MN. Integration of Epigenetic Mechanisms into Non-Genotoxic Carcinogenicity Hazard Assessment: Focus on DNA Methylation and Histone Modifications. International Journal of Molecular Sciences. 2021; 22(20):10969. <https://doi.org/10.3390/ijms222010969>

Sovadinová I, Upham BL, Trosko JE, Babica P. Applicability of Scrape Loading-Dye Transfer Assay for Non-Genotoxic Carcinogen Testing. International Journal of Molecular Sciences. 2021; 22(16):8977. <https://doi.org/10.3390/ijms22168977>

Available: https://www.mdpi.com/journal/ijms/special_issues/NGTxC

These papers are attached. They are not being made publicly available for copyright reasons but can be accessed via the link provided.

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CC/2021/16 Annex B

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Agenda and minutes of the Scientific Committee on Consumer Safety Plenary
meetings 2016-2021 17th meeting.

Available:

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

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CC/2021/16 Annex C

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Agenda and minutes of the Scientific Committee on Health, Environmental and
Emerging Risks Plenary meetings 2016-2021 19th meeting.

Available:

https://ec.europa.eu/health/scientific_committees/scheer/minutes_plenary_en

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CC/2021/16 Annex D

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Balance of Expertise for COC

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TEMPLATE FOR COC 2012

The template is designed to show the skills and expertise required to deliver the business of the committee. The complement of the COC is 11 members (9 specialists and 2 lay members), a chairman and the COM chairman (ex-officio capacity). The committee aims to follow the guiding principles underpinning the humane use of animals in scientific research i.e. replacement, reduction and refinement ('the 3Rs').

