

# Committee on Mutagenicity of Chemicals in Food, Consumer Products and the Environment- Preface 2021

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Head and shoulders image of Professor Gareth Jenkins in front of a light-coloured background wearing a dark coloured shirt.

I am pleased to present this report on the work of the Committee on Mutagenicity (COM) during 2021. I was honoured to be asked to take over the role of Chair of COM in May 2021 and I would like to begin by paying tribute to my predecessor (Dr David Lovell) for his stewardship of COM during the preceding years and Chairing the February 2021 meeting.

The Committee on Mutagenicity (COM) provides advice on potential mutagenic activity of specific chemicals at the request of UK Government Departments and Agencies. Such requests generally relate to chemicals for which there are incomplete, non-standard or controversial data sets for which independent authoritative advice on potential mutagenic hazards and risks is required. Recommendations for further studies are, on occasions, made.

The Committee also advises on important general principles and on new scientific work related to the assessment of mutagenic risk and makes recommendations on wider aspects of mutagenicity testing. The membership of the Committee,

declarations of their interests, agendas and minutes of meetings, and statements are all published on the internet. [Latest from the Committee on Mutagenicity of Chemicals in Food, Consumer Products and the Environment](#)

In 2021, the updated COM guidance on genotoxicity testing strategy was published (MUT/2021/01). This update, begun in 2020, sets out the suggested strategy for genotoxicity testing of chemicals and updates our position to consider advances in the field of safety testing. COM also updated guidance on testing of germ cell mutagens (MUT/2021/02) and the use of 3D tissue models as alternative approaches to animals in testing (MUT/2021/03). The documents will be published on the COM website. The 3D tissue strategy responds to the growing focus on animal alternatives driven by the production of novel sophisticated tissue models which can recapitulate aspects of human biology.

In 2021, COM discussed the safety testing of impurities (MUT/2021/04) and the use of QSAR and toxicogenomics in testing (MUT/2021/05 and MUT/2021/06).

In 2021, COM started a discussion of the genotoxicity of titanium dioxide (MUT/2021/07 and MUT/2021/12), following the updated opinion published by EFSA in 2021. This review of titanium dioxide will be continued in 2022.

In 2021, COM further discussed the use of toxicogenomics in safety testing (MUT/2021/08), separating out the transcriptomics aspect from the next generation sequencing (NGS) approaches. Given the advances in NGS in general, it is likely that over the coming years, NGS approaches may replace some traditional mutation testing platforms. COM also published guidance on a testing approach for nanomaterials, with a focus on considerations of the fact that key physico-chemical aspects of nanomaterials render some traditional genotoxicity tests not suitable (MUT/2021/09).

COM also discussed the potential genotoxicity of specific compounds as requested by Government departments and agencies. For example, COM reviewed the genotoxicity of Hydroxyanthracene Derivatives (MUT/2021/12) and associated human health risks.

The Committee carried out its annual Horizon scanning exercise, identifying potential topics for future work. The COM continues to be interested in hearing from Government Departments and Agencies on how its advice is acted upon.

The COM maintained its awareness of the implications of EU EXIT on its work and remained alert to the continuing uncertainty as to how the UK's regulatory environment and its relationships with international organisations will develop in

2022 and onwards.

I would specifically like to thank the COM secretariat for their exceptional support to the COM and to the WRc/IEH team for the excellent work they delivered in 2021. As always, I am grateful for the support of the individual members of the committee for their expert advice, the effort and time they put in and their support throughout the year.

**Professor Gareth Jenkins**