Scientific Committee

Minutes of the 105th Plenary meeting

Held on 22-23 September 2021, web meeting,

(Agreed on 14 Oct. 2021)

Participants

- Panel Members

  Simon More (chair), Diane Benford (vice-chair), Susanne Hougaard Bennekou (vice-chair), Vasileios Bampidis, Claude Bragard, Thorhallur Halldorsson, Antonio Hernandez-Jerez, Kostas Koutsoumanis, Claude Lambré, Kyriaki Machera, Ewen Mullins, Josef Schlatter, Dieter Schrenk, Dominique Turck, Maged Younes.

- Hearing Experts[1]:

  Pier Sandro Cocconcelli (for item 4.2)

  Jean-Charles Leblanc (for agenda item 4.3)

- European Commission and/or Member States representatives:

  Luis Vivas Alegre (DG SANTE Unit D1, Farm to Fork Strategy), p.m.

  Athanasios Raikos (DG SANTE Unit D1, Farm to Fork Strategy), a.m.

- EFSA:

  Bernard Url, EFSA Executive Director

  Executive Directorate: Marta Hugas

  Risk Assessment and Scientific Assistance Department (RASA):

  Juliane Kleiner

  Scientific Evaluation of Regulated Products Department (REPRO): Guilhem De Seze

  Scientific Committee and Emerging Risks Unit (SCER): Tobin Robinson, Daniela Maurici, Maria Chiara Astuto, Maria Bastaki, Bernard Bottex, Yann Devos, Jean-Lou Dorne, Raquel Garcia Matas, Milen Georgiev, Georges Kass, Djien Liem, Angelo Maggiore, Caroline Merten, Agnes

[1] As defined in Article 15 of the Decision of the Executive Director Fconcerning the selection of members of the Scientific Committee, the Scientific Panels, and the selection of external experts to assist EFSA with its scientific work: http://www.efsa.europa.eu/sites/default/files/corporate_publications/files/expertselection.pdf

Rortais, Reinhilde Schoonjans, Irene Cattaneo, Justyna Slodek-Wahlström, José Tarazona.

Pesticide Peer Review (PREV) Unit: Andrea Terron (for item 5.2.6)

Assessment and Methodological Support Unit (AMU): Olaf Mosbach-Schulz, (for item 5.2.4) Laura Martino (for item 5.2.6)

Genetically Modified Organisms (GMO) Unit: Antonio Fernandez Dumont (for agenda item 5.2.5)

Communication Unit (COM): Arthur Healy (for item 6.1)

Science Studies and Project Identification and Development (SPIDO): Claudia Heppner (for item 7.1)

1 Welcome and apologies for absence

The Chair welcomed Ewen Mullins, new chair of GMO Panel, and all participants. Apologies were received from Søren Saxmose Nielsen, the chair of the AHAW Panel.

2 Adoption of agenda

The agenda was adopted without changes

3 Declarations of Interest of Scientific Committee/Scientific Panel/ Members

In accordance with EFSA's Policy on Independence[2] and the Decision of the Executive Director on Competing Interest Management[3], EFSA screened the Annual Declarations of Interest filled out by the Panel members invited to the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process, and no interests were declared orally by the members at the beginning of this meeting.

4 Scientific outputs submitted for discussion and/or possible adoption:

4.1 Draft opinion on non-monotonic dose response (EFSA-Q-2019-00530)

The Scientific Committee adopted the opinion on the impact of non-monotonic dose responses (NMDR) on EFSA´s human health risk assessments with unanimity. This Opinion assesses the biological relevance

[2] http://www.efsa.europa.eu/sites/default/files/corporate_publications/files/policy_independence.pdf

[3] http://www.efsa.europa.eu/sites/default/files/corporate_publications/files/competing_interest_management_17.pdf

of the non-monotonic dose responses identified in Beausoleil et al., 2016 (EFSA External Report) and the follow up probabilistic assessment developed in Chevillotte et al. 2017a,b. It focuses on the *in vivo* datasets fulfilling most of the checkpoints of the visual/statistical-based analysis described in the above-mentioned works. The evaluation includes studies discussed in past EFSA assessments and a search for recent scientific literature on the topic. The Opinion proposes an approach to be applied during the risk assessment process when apparent non-monotonicity is observed, providing advice on specific elements to be considered to facilitate the assessment of NMDR. The proposed approach was applied to two case studies, bisphenol A and the phthalate DEHP (di(2-ethylhexyl) phthalate).

Considering the potential impact of NMDRs in regulatory risk assessment, the Scientific Committee recommends a coordinated international effort in developing internationally agreed guidance and harmonised frameworks for identifying and addressing NMDRs in the risk assessment process.

The adopted opinion will be published probably in October.

4.2 Draft opinion on evaluation of existing guidelines for their adequacy for the food and feed risk assessment of microorganisms obtained through synthetic biology (EFSA-Q-2020-00768)

Synthetic biology (SynBio) is an interdisciplinary field at the interface between engineering and biology aiming to develop new biological systems and impart new functions to viable cells. It uses modern engineering principles supported by mathematical modelling and analytical/biochemical approaches for the design, assembly and deployment of genetic parts.

The European Commission (EC) requested EFSA for an opinion on Genetically Modified Organisms developed using synthetic biology approaches and the adequacy of existing guidelines for risk assessment.

EFSA planned to develop six Opinions, according to organism group and risk assessment aspects to address the EC mandate. Two opinions have been already published. The current draft opinion addresses food and feed risk assessment of synthetic biology microorganisms.

Specific issues discussed with the SC were the use of applications covered in the opinion, the stepwise *modus operandi* in the evaluation process and selected case studies which include different microorganisms, different uses and different genetic modifications.

Feedback was sought on the sections of the draft opinion regarding strain-based versus a technique-based risk assessment, further insights on the gut environment (in particular microbiome structure and gut functions), completeness of types of organisms and their use applications, as well as level of detail in nutritional assessment.

The WG will consider the feedback from the SC in further developing the draft, with possible endorsement for public consultation foreseen towards the end of 2021 or early 2022.

4.3 Draft review of the existing health-based guidance values for copper and its exposure assessment from all sources (EFSA-Q-2020-00399)

The European Commission requested EFSA to review the existing scientific evidence, including all new relevant studies, with the following aims:

- to provide a scientific opinion on an Acceptable Daily Intake (ADI) for copper that can be used by the Commission as a reference value in managing copper-containing regulated products.

- to perform a new estimation of copper intake, taking into account all sources of exposure and by integrating different approaches and scenarios and all new data available to EFSA for the estimation of exposure, and to assess the contribution from all major sources of exposure (including natural occurrence, pesticide residues, feed additive, food additives and nutrients) to the overall copper intake.

Since copper is an essential trace element in nutrition, the Health-Based Guidance Value (HBGV) for copper is re-evaluated according to the EFSA proposed harmonised approach for establishing HBGVs for substances that are regulated products and also nutrients (EFSA Scientific Committee et al., 2021). The current re-evaluation is based on existing assessments and additional relevant literature.

A refined exposure assessment is still in progress. Preliminary results of the estimated overall dietary exposure and main dietary contributors were presented. Work is ongoing for the assessment of the contribution of different dietary sources of copper, including the contribution of background (natural) copper levels and regulated uses of copper, and the contribution of non-dietary sources to the overall exposure. Additional work on hazard characterisation and weight of evidence assessment is also ongoing.

The discussion focused on the approach of using homeostasis data and information on the relationship between hepatic copper accumulation and future copper toxicity to derive a HBGV.

A revised version will be presented at the next plenary meeting and if possible, proposed for endorsed for public consultation.

5 Feedback from the Scientific Committee/Scientific Panels, EFSA, the European Commission.

5.1 Scientific Panel(s) including their Working Groups

5.1.1 Overview of the work programme of PLH and NDA panels. Last minute issues relevant for the Scientific Committee

The Chair of the PLH Panel provided an overview on the work programme of the Panel for the years 2021-2026, which cover the following areas:

- Risk assessment - pest categorization for new and emerging plant pests, for example new pests identified from MS, EC, EPPO (European and Mediterranean Plant Protection Organization), European Research Projects, new pests identified from EFSA Horizon scanning activities and new "actionable" pests identified from EFSA High Risk Plants commodity risk assessment.
- Risk assessment - quantitative pest risk assessment. It allows the comparison of scenarios with different intensity of applied risk reduction options. The expected focus is on new Pests identified from MS, EC, EPPO, European Research Projects and future scenarios.
- Risk assessment - commodity risk assessment for high-risk plants. Currently, the Panel is working on more than 30 application dossiers from China, Israel, Moldova, Peru, Serbia, Turkey, Ukraine concerning plant species like *Acer, Berberis, Corylus, Ficus, Juglans, Lonicera, Nerium, Prunus, Populus, Robinia, Tilia, Ullucus*.
- Preparedness - horizon scanning and pest surveillance: a close collaboration with the JRC has allowed to monitor around 27850 feeds from 10423 sources, 201 countries, in 66 languages. Regarding pest surveillance, more than 200 pest survey cards and story maps are foreseen in the coming years for all EU quarantine plant pests. EFSA Journal Virtual issues, webinars and EFSA Channel YouTube videos will be produced.

The challenges posed by climate change and globalization of trades was stressed and discussed, also in view of the possible inclusion of these drivers in scenarios for the new pest risk assessments.

The Chair of the NDA Panel provided an overview on the work programme of the Panel which cover the following areas:

- Upper Levels for dietary sugars: the public consultation on the Draft scientific opinion on the Tolerable Upper Intake Level for Dietary Sugars is ongoing, till 30th September 2021. The adoption is foreseen at the end of 2021.
- Upper Levels for vitamins & minerals: The Commission has requested EFSA to review the guidelines for the development of tolerable upper intake levels for vitamins and minerals and to (re-)assess the Tolerable Upper Intake Levels for: vitamin A, folic acid/folate, vitamin D, vitamin E, iron, manganese, β-carotene, vitamin B6. Preparatory work for the scientific assessment will be covered by outsourcing. The deadline is in the first half of 2023.
- Dietary folate equivalent (DFE): in August 2020 the Commission has requested EFSA to assess the extent to which folate is bioavailable from calcium-L-methylfolate (CaLMF) and 5-methyltetrahydrofolate (5MTHF)-glucosamine and to set a conversion factor of amounts of these 2 forms into µg dietary folate equivalents (DFE). A call for data has been launched in July 2021, till October 2021. The adoption by the NDA panel is foreseen in July 2022.
- Nutrient profiles: in January 2021, the Commission has requested EFSA to provide scientific advice for the development of harmonised mandatory front-of-pack nutrition labelling and the setting of nutrient profiles for restricting nutrition and health claims on foods, in particular for nutrients of public health importance for European populations, including non-nutrient components of food (e.g. energy, dietary fibers), food groups which have important roles in diets of European populations and subgroups thereof and choice of nutrients and other non-nutrient components of food for nutrient profiling. The adoption is foreseen in March 2022.
- Novel foods & nutrient sources: to date almost 100 novel food application dossiers are actively under risk assessment. Trending topics include alternative proteins and their sources (plants, insects, microbial biomass, fungi), bioactive substances of vegetable origin, novel carbohydrates and nutritionally enhanced products.

5.2 Feedback from EFSA

5.2.1 Update on the EFSA organisational development

The EFSA Executive Director informed the SC about the organisational developments that EFSA is undergoing in order to effectively and efficiently implement the requirements of the Regulation (EU) 1381/2019, the 'Transparency Regulation', and address the challenges outlined in the EFSA strategy 2027.

5.2.2 Confirmation/re-election of SC chair and vice chairs

Election of the Scientific Committee Chair and two Vice-chairs were carried out according to the Decision of the EFSA Management Board concerning the establishment and operations of the Scientific Committee, Scientific Panels and of their Working Groups[4]. Simon More was re-elected as Chair of the Scientific Committee. Diane Benford and Susanne Hougaard Bennekou were re-elected as Scientific Committee vice-chairs.

5.2.3 Confirmation SC WGs activities:

The SC was provided with an overview of the various existing WGs (WG Fluoride, Cross-cutting WG Mixtox 2, Cross-cutting WG on Benchmark Dose, Cross-cutting WG on Genotoxicity, WG Emerging Chemical Risks, WG Botanicals, WG Copper, WG Read Across, WG MUST B, WG SynBio, WG NMDR, Cross-cutting WG Nano, Cross-cutting WG on Uncertainty) and networks (Nanomaterials, Emerging Risks, Stakeholders Consultative Platform on Emerging Risks). Coordinators, terms of reference, timelines, chairs and members were indicated for each WG. All WGs were confirmed with no revision. The only exceptions were the Cross-cutting WGs on Nanotechnologies and Uncertainty:

- For the cross-cutting WG on Nanotechnologies, the opportunity was discussed of downsizing the current composition in line with new tasks of developing guidance for environmental risk assessment of substances containing nanoparticles. Experts will be also invited according to the expertise needed to reply to the support requested by the various units for the implementation of the guidance documents. *Ad-hoc* invitations of experts in toxicology of nano

[4] https://www.efsa.europa.eu/sites/default/files/2021-02/expertselection.pdf

particles and epidemiology could be necessary. This proposal will be further discussed at the next SC plenary meeting in November.

- In relation to the cross-cutting WG on Uncertainty, additional experts may be included in line with the revision of the Expert Knowledge Elicitation (EKE) Guidance.

The SC was also informed and provided feedback on the Terms of Reference of three Networks:

- Network on Risk assessment of nanotechnologies in food and feed
- Emerging Risks Exchange Network (EREN)
- Stakeholders Discussion Group on emerging risks (StaCG-ER)

5.2.4 Guidance on Expert Knowledge Elicitation (EKE)

The activities relating to the revision of the EFSA's Guidance on Expert Knowledge Elicitation were presented to the SC. A survey was launched to EFSA management, Panel Chairs and SC from 30th May to 23rd June with the aim of collecting feedback on how to improve the Guidance.

The feedback received has allowed the shaping of general principles for the revised EFSA Guidance on EKE, including the need for it to be framed as a "living Guidance document", consisting of a database which includes contribution from all areas and manuals, examples, tools, trainings, references/justifications etc, located in the virtual space, accessible via a user-friendly interface, connecting the EKE users of EFSA and supporting the implementation of EKE.

These principles have been embedded in a project scoping document, subdivided in five work packages: WP1 – Concept; WP2 – Programming of the "Living Guidance", through a procurement procedure to a software developer company; WP3 – Implementation of the initial guidance, consisting in search/collection and upload of existing content; WP4 – Update of the "Living Guidance", through a needs analysis; WP5 – Maintenance of the "Living Guidance".

The SC discussed this proposal, supported it and provided further recommendations to assist with implementation.

5.2.5 Follow up on the GMO workshop on allergenicity assessment

A GMO workshop on allergenicity assessment was held during 15-16 June 2021. The aim of the workshop was to set the scene on the current state-of-the-art in the science of allergenicity assessment and to define what specific elements of such assessment need to be developed to move forward in this field.

The programme of the Workshop included discussions on clinical relevance and risk assessment, *in silico* approaches, *in vitro/in vivo* approaches and outstanding questions like for example methods to predict allergenicity, how to integrate them, how best to validate *in silico* and *in vitro* methods.

More than 150 experts participated. The event report was published in August 2021 (https://www.efsa.europa.eu/en/efsajournal/pub/en-6826; https://www.efsa.europa.eu/en/events/gmo-workshop-allergenicity-assessment).

The next steps foresee the production of a GMO Scientific Opinion on development needs, that will be produced by the end of the year. It will be focused on the improvement of the allergenicity risk assessment for products derived from biotechnology, defining knowledge gaps on allergenicity prediction, determining how new research findings and technological developments can improve current risk assessment methodology and prioritising basic research funding.

An EFSA procurement call has been launched (OC/EFSA/GMO/2021/04 - Novel Strategies for Predicting Allergenicity: Development of a Ranking Method and Screening Tools to Assess the Allergy Risk of innovative Proteins) with deadline 23rd September 2021. The aim is to improve the current allergenicity assessment, modernise current *in silico* methods and tools, propose a ranking strategy better targeted to risk assessment and develop novel strategies better integrating in silico analysis and follow up actions (*in vitro/in vivo*) in the Risk Assessment process.

Future challenges were presented and discussed with the SC, like how to improve and modernise the allergenicity assessment and prediction and develop a common allergenicity assessment umbrella fit for all involved panels.

5.2.6 Update on the EFSA project on developmental neurotoxicity (DNT)

The characterisation of potential chemical-induced developmental neurotoxicity (DNT) is considered for risk assessment purposes in many regulatory contexts. However, due to test complexity and difficulty in interpreting the results, the use of *in-vivo* DNT test guidelines is limited and animal data are scarce.

The limited DNT *in vivo* testing, coupled with the recent shift in the toxicity testing toward avoiding traditional animal–based methods, triggered the development of new approach methodologies (NAMs) for DNT.

The development of *in-vitro*, *in-silico* and alternative species test methods, and the integration of data derived from these methods in Integrated Approaches for Testing and Assessment (IATA), could facilitate the evaluation of chemicals, especially in regard to their potential to disrupt brain development.

For this reason, the EFSA DNT project started several initiatives, including testing of several chemicals in the *In-Vitro* testing Battery (IVB - full report available at https://www.efsa.europa.eu/en/supporting/pub/en-1938), and participation in an OECD project, aiming at designing a framework to facilitate the regulatory use of DNT *in vitro* data through an IATA approach.

The SC was provided with an overview of the concept of designing phenotypic testing approaches for key neurodevelopment processes and the use of NAMs (https://www.efsa.europa.eu/en/supporting/pub/en-1938) in two Adverse Outcome Pathway (AOP)-informed IATA approach.

IATA case studies were developed by the PPR Panel in a Scientific Opinion (https://www.efsa.europa.eu/en/efsajournal/pub/6599) in the context of the regulatory risk assessment of pesticide active substances.

These IATA case studies will be included, together with additional case studies provided by different organizations, in the OECD DNT guidance document under development.

The DNT project and the DNT IATA case studies represent examples on how NAMs can inform regulatory risk assessment of chemicals in EFSA.

6 Other scientific topics for information and/or discussion

6.1 Update on the EFSA Journal

The SC was presented with an overview of publishing facts and figures (Productivity, Timeliness, Usage, impact, number of citations and alternative metrics measuring online attention) and development projects (Journal procurement call, plain language summaries, Member State publications proposal). The EFSA Journal is now included in PubMed as relevant source of downloads.

In particular, a journal procurement call has been finalised, emphasising the need of support for open science, reliable production systems and digitised workflows that integrate with EFSA IT and robust business continuity.

A pilot outsourced project for plain language summaries is ongoing. The following subjects are currently at testing phase: nanomaterials, pesticides and biocontaminants. The first one is scheduled to be published in October.

Finally, EFSA has received a request from national agencies to use its publishing platform. The Advisory Forum has requested EFSA in October 2020 to explore the feasibility. A Taskforce with national representatives has been formed for that purpose. The resulting feasibility report will be discussed at the Advisory Forum meeting in November 2021.

7 Any other business

7.1 Update on Science Studies and Project Identification and Development (SPIDO)

The SC was informed of the latest progress made under the Science Studies and Project Identification & Development Office (SPIDO). An overview of the EFSA's SPIDO themes and roadmaps pipeline 2020-2024 was provided. The SC was thanked for the comments provided to two theme papers:

- Application of omics and bioinformatic approaches in Risk Assessment;
- Advancing Environmental Risk Assessment of chemicals for insect pollinators.

The following step is the development of their roadmaps for action. This will be done through a procurement open call, that will be launched at the end of September.

7.2 Feedback from the last OPEN Plenary

The SC was provided with a report on the feedback from observers at the last 104th SC Open Plenary: number of registered observers, number of observers that connected in the two days, countries, category (national authorities, private sectors, universities etc.).

The observers have provided an overall very positive feedback on the content of the SC plenary. Their comments and suggestions were carefully considered.

7.3 EFSA international workshop on chemical mixtures, 18-20 October 2021

An EFSA International Workshop on Risk Assessment of Combined Exposure to Multiple Chemicals is scheduled for 18-20 October 2021. It will be a virtual event, with the plenary in web streaming.

The announcement and draft programme were published in July 2021 on EFSA website. The workshop provides opportunities to further amend the draft EFSA Guidance on grouping chemicals into assessment groups under development, identify future key activities as part of future challenges (e.g. Environmental Risk Assessment) and support scientific cooperation with Member States and International Agencies towards harmonisation of methodologies.

7.4 Highlights of the draft agenda November SC Plenary and thematic workshop on 19 November.

The SC was provided with a highlight of the topics to be presented to the next Plenary (106th meeting) scheduled on 17-18 November which comprises the draft opinion on chemical mixtures, the draft opinion on copper and the draft opinion on synthetic biology. The workshop schedule on the 19 November will be focused on the Chemical Strategy for Sustainability and the One Substance One Assessment (OSOA) approach.

7.5 General matters arising

The Scientific Committee was provided with a document summarising relevant activities that took place since the last plenary meeting with focus on the activities of the EFSA Management Board, interagency and international scientific cooperation and EFSA Stakeholders Meetings.

End of the meeting

List of acronyms

AF: Advisory Forum
AHAW: Panel on Animal Health and Welfare
AI: Adequate Intake
AMU: Assessment and Methodological Support Unit
APDESK: Applications Desk Unit
BIOCONTAM: Biological Hazards and Contaminants Unit
ccWG: cross-cutting Working Group
COM: Communication Unit
COMCO: Communication, Engagement and Cooperation Department
CONTAM: Panel on Contaminants in the Food Chain
DATA: Evidence Management Unit
DG SANTE: Directorate General for Health and Food Safety
EC: European Commission
ECDC: European Centre for Disease Prevention and Control
ENCO: Engagement and Cooperation Unit
FAF: Panel on Food Additives and Flavourings
FIP: Food Ingredients and Packaging Unit
GMO: Panel on Genetically Modified Organisms
HBGV: health-based guidance values
JRC: Joint Research Centre
MS: Member States
NDA: Panel on Nutrition, Novel Foods and Food Allergens
NMDR: Non-Monotonic Dose Response
NUTRI: Nutrition Unit
OECD: Organisation for Economic Co-operation and Development
PPR: Panel on Plant Protection Products and their Residues
PRES: Pesticide Residues Unit
PREV: Pesticide Peer Review Unit
RASA: Risk Assessment & Scientific Assistance Department
REPRO: Scientific Evaluation of Regulated Products Department
SC: Scientific Committee

SCER: Scientific Committee and Emerging Risks Unit

SPIDO: Science Studies and Project Identification and Development

WG: Working Group