Minutes

Advisory Committee on Novel Foods and Process. Minutes of the 172nd Meeting held on the 24th of June 2025

These minutes are subject to confirmation by the Committee.

Members are required to declare any personal interest in matters under discussion. Where Members have a particularly close association with any item, the Chairman will limit their involvement in the discussion. In cases where an item is to be discussed in their absence, a member may make a statement before leaving.

Minutes of the 172nd meeting of the Advisory Committee on Novel Foods and Processes, held on the 24th of June as a virtual Teams meeting**.**

Attendance

Committee Chair

Professor Huw D. Jones

Committee Members

Dr Anton Alldrick

Ms Alison Austin

Professor George Bassel

Dr Mark Berry

Professor Dimitris Charalampopoulos

Dr Meera Cush

Dr Cathrina Edwards

Professor Susan Fairweather-Tait

Dr Sophie Foley

Professor Paul Fraser

Dr Andy Greenfield

Professor Wendy Harwood

Professor Paul Haggarty

Dr Ray Kemp

Dr Elizabeth Lund

Dr Lynn McIntyre

Prof Hans Verhagen

Dr Maureen Wakefield

Professor Bruce Whitelaw

Apologies

Dr Camilla Alexander-White

Professor Gunter Kuhnle

Professor Clare Mills

Dr Isabel Skypala

Professor Simon Pearson - Representative Science Council Member

Professor Peter Gregory - Representative Science Council Member

Assessor

Ms Arvind Thandi - Head of Novel Foods, Policy.

Ms Jessica Dewhurst - Policy Adviser, Genetic Technology, Food Policy.

Observers FSA

Dr Andy Axon - Team Leader Risk Assessment (Toxicological)

Dr Lindsay Holden - Team Leader, Regulated Products Risk Assessment

Observers Devolved administration

Mr Jeremy Mills - Policy, FSA Wales

Miss Katy Williams - Policy, FSA Wales

Ms Kaila Lee - Policy, FSA Wales

Mr Xosé Álvarez - Policy, FSA Wales

Dr Karen Pearson - Food Standards Scotland

Dr Aileen Livingstone - Food Standards Scotland

Secretariat

Mrs Ruth Willis - Technical Secretary ACNFP

Ms Priscilla Wanjiru - Lead Secretariat

Mr Ben Haynes - CBD Lead Science Secretariat

Dr Karin Heurlier - PGT Lead Secretariat

Dr Andrew Hartley - Science Secretariat

Mr Matt Hall - Science Secretariat

Mrs Afielia Choudhry - Science Secretariat

Ms Lucy Thursfield - Science Secretariat

Miss Jenny Rees - Science Secretariat

Dr Daniel Lloyd - Technical Secretary of the CCP subgroup

Dr Erin Cullen - Science Secretariat

Mrs Jodie Towns - Science Secretariat

Dr Swati Arya - Science Secretariat

Miss Victoria Balch - Administrative Secretariat

1. Apologies and Announcements

Apologies were received from Dr Camilla Alexander-White, Professor Gunter Kuhnle, Professor Clare Mills and Dr Isabel Skypala. Apologies were also received from Simon Pearson and Peter Gregory as Representative Science Council Members. The Chair for this meeting was Huw Jones and he welcomed new Members to the ACNFP, Dr Alastair Macrae and Professor Paul Haggarty. This was Professor Haggarty's first full meeting.

Rev. Professor Lesley Stanley, as co-opted Member for the Joint Subgroup of the Advisory Committee on Novel Foods and Processes (ACNFP) and Committee on Toxicity (COT) on CBD and Hemp Derived Products, advised that she would not be present for the meeting as there were no CBD items on the agenda.

The Chair noted that it was Dr Maureen Wakefield's final meeting as a member of the ACNFP. Her support of the Secretariat in preparing the insect applications that are coming through the process was recognised. She was thanked for her contribution to the Committee's work.

The Chair reminded Members of the need to announce any potential conflicts of interests prior to the discussions of each item.

Professor Hans Verhagen declared a conflict of interest in relation to Fermotein and Allulose. The Chair and FSA Secretariat advised that this Member would not be present for the discussion of these items

Professor Dimitris Charalampopoulos declared a potential interest in relation to β-lactoglobulin. It was noted that Professor Charalampopoulos is working on research in a similar area and that this could be perceived as a conflict. It was decided he would not be involved in the discussions on this application.

Dr Maureen Wakefield declared a potential interest in relation to *Fusarium str. Flavolapis* as her organisation had worked with the company. However, Dr Wakefield has no knowledge of the historical work and whether this related to this product. The potential interest was noted but this was not considered a conflict and she was able to continue to participate in the discussions.

Professor Paul Fraser identified a potential conflict resulting from his role in the creation of the technology used in the development of the GMO described in application RP1745. This is a historic conflict and not a financial benefit to Professor Fraser but given that he has an ongoing role in the group that originally developed the technology, it was decided he would not participate in the discussions of this application.

2. Welcome

The Chair welcomed the Members, representatives from the FSA, the observers from the devolved administrations and the Secretariat team. The Chair and FSA Secretariat advised that policy leads had been identified to act as FSA assessors for the GM and Novel Foods items that were on the agenda. They are replacing Paul Tossell (Team leader, Radiological Protection) who previously was the FSA assessor and has recently moved roles. Paul Tossell was thanked for his work in supporting the Committee.

3. Meeting Minutes for the 171st Meeting

ACNFP/171/MINS

The Committee agreed the 171st meeting draft minutes for publication on the ACNFP website subject to minor amendments.

4. Matters Arising from the last meeting

ACNFP/171/MA

The Secretariat reported on actions from the 171st meeting:

- CBD RP343 (reserved business) - The Committee Advice Document for this application was updated following Member's review and subsequently finalised by Chair's action. The document will be published in due course.
- CBD RP345 (reserved business) – The Committee Advice Document for this application was updated following Member’s review and subsequently finalised by Chair’s action. The document will be published in due course.
- CBD RP346 (reserved business) – The Committee Advice Document for this application was updated following Member’s review and subsequently finalised by Chair’s action. The document will be published in due course.

- Esterified Propoxylated Glycerol (EPG) RP1363 - Following Member's review of the applicant response, the Secretariat sought further information from the applicant to address questions on human tolerance. The response will be reviewed at the next available meeting
- Bambara Groundnut RP2272 – The Committee had reviewed this traditional food notification for the first time. The draft summary advice document was cleared by Members by correspondence. A 10-day public consultation is planned. The final summary will be cleared by Chair's action for a final publication thereafter.
- Solid Lipid Curcumin Particle (SLCP) RP1776 - The Committee had reviewed this application for the first time. Following Member's advice, further information from the applicant will be sought to support the ongoing assessment in relation to identity, production process, ADME and toxicology. The response will be shared at the next available meeting.
- Annual Report – The Committee reviewed the annual report via correspondence. The final version was cleared by Chair's action and published on 11th June 2025.
- Allergenicity Workshop Report - Members reviewed the output of the allergenicity workshop held in March 2024 via correspondence. The final text is being cleared by Chair's action.
- February 2025 Cell Cultivated Products (CCP) Open Session Report – A report summarising the discussion of the open session held in the 170th meeting was reviewed by Members via correspondence. The final text is being cleared by Chair's action.
- Mung Bean Protein RP32 – the updated Committee Advice Document was reviewed as an intersessional item by correspondence. The final text was cleared by Chair's action. The document will be published in due course.

5. *Fusarium str. flavolapis* RP1637

ACNFP/172/01

An application for *Fusarium str. flavolapis* biomass (Fy Protein®) a protein derived from a fungi mycelial biomass for use in the general population was reviewed for a second time. The Secretariat provided Members with a draft Committee Advice Document to support the Committee's review. The review identified several areas that required further information from the applicant to complete the assessment.

Members discussed the quality of the genome sequencing data. The data was deemed sufficient to confirm the identity the novel food. However, a query was

raised on whether a metabolic pathway identified in the source organism could be a hazard. Members raised concerns with the production process. In particular, the need for a food safety management risk assessment from the applicant.

Information on composition was considered insufficient, and several questions raised on the methods used and interpretation of the data to characterise the novel food and sources of variation in the production process. Members also noted that RNA content had not been investigated in the context of if RNA was present at levels associated with health impacts. It was agreed that further investigation by the applicant was needed to assure this would not pose a human safety risk.

Further revision of the specifications was advised to ensure that the novel food was fully characterised and potential hazards to be managed included. A further piece of work on stability was recommended to fully understand how the novel food will be impacted by storage.

Nutrition, ADME and allergenicity issues were discussed. These including whether the fibre content of the novel food could have effects on the gut and any impact on the digestion and absorption of the novel food. Members advised that the nitrogen conversion factor should be reconsidered for appropriate protein content determination. Additionally, it was noted that the PDCAAS method to consider amino acid-specific digestibility had been used which has some limitations for interpretation over the DIAAS protein quality determination method which is international recommended.

The Committee commented that comparison with existing foods can be useful to provide context to analysis, however, applicants should consider carefully what represents an appropriate comparison for the novel food seeking authorisation. The potential for the novel food to replace sources of key nutrients in the diet were noted and further information was advised to be requested on how it would be ensured the novel food would not deliver a nutritional disadvantage.

Regarding toxicological information, it was advised that further information on the 90-day study was needed to appropriately assess the applicant’s conclusions.

The Committee agreed to conduct an in-depth review of the information on allergenicity to support the assessment of this novel food.

Action: The Secretariat to seek feedback from Members regarding the allergenicity review

Action: The Secretariat to seek further information from the applicant and update the draft Committee Advice document.

6. β-lactoglobulin RP1571

ACNFP/172/02

An application for β-lactoglobulin (BLG), a protein ingredient, was reviewed for the first time. The Secretariat provided Members with a draft Committee Advice Document to support the Committee's review. The review identified several areas that required further information from the applicant to complete the assessment.

Members advised that further information on the structure of the novel food, in particular the tertiary structure, was required to support the conclusion that the novel food is structurally equivalent to naturally occurring bovine BLG. The production process was reviewed in detail. Members advised the Secretariat to seek additional information on the genetically modified microorganism used as a processing aid for precision fermentation. This was needed as there is less experience of use for this production organism. Further information on the HACCP plan and Critical Control Points was also raised by Members as an area for further assessment.

Members advised that further explanation should be sought on the variability in the nutrient profile and heavy metal content to confirm that the novel food can be produced consistently. Queries were also raised on the potential to bind lipids or other molecules and how this would influence how the novel food performed. Similarly, further information was needed on the microbial parameters of the novel food.

Additionally, further information on the stability parameters was required to understand the impact of storage.

The Committee advised that the specifications would need to be updated to include additional parameters as appropriate for the characterisation of the novel food from the analyses.

Members discussed whether consumption of the novel food would be nutritionally disadvantageous for different population groups under the proposed conditions of use. Further information from the applicant on this was advised to assess this aspect further.

The Committee noted that β-lactoglobulin is a protein from milk and a known food allergen. Further exploration is needed to understand whether β-lactoglobulin has the same allergenicity when produced using precision fermentation as when produced in milk. Queries were also raised on how it would be ensured that those with milk allergies would not consume products containing the novel food depending on the food categories authorised.

Action: The Secretariat to seek additional information from the applicant to further the assessment of the novel food and update the draft Committee Advice document.

7. Fermotein RP1215

ACNFP/172/03

The Committee had previously reviewed this application for the first time in the February 2025 170th meeting. The Secretariat had sought further information from the applicant on the information gaps identified in the meeting. The Committee considered the responses from the applicant covering identity, production process, composition, proposed uses, nutrition and allergenicity. These were reviewed.

Members noted that the applicant’s responses did not fully address the issues raised prompting further review of these areas. The Committee discussed in detail what information would be needed to inform the assessment.

Members explored the new information provided by the applicant on identity and further reviewed the production process. Members noted the additional information on the genetic characterisation and bioinformatics analysis. However, questions were raised on the monitoring of strain identity and genetic stability over time and how this would be managed to ensure consistency in the novel food. Further queries were also raised on the effectiveness of the microbial management measures and how this is evidenced.

The Committee suggested that the form of vitamin D reported should be explained further by the applicant to support accurate characterisation of the fungal derived novel food. Issues regarding the variation in moisture content observed were raised and further information would be needed for the assessment of microbial risks. Members reiterated the need to understand the impact of the level of RNA present in the novel food on levels of nucleic acid exposure associated with health impacts from Uric acid formation in tissues.

Further justification was also needed on the choice of specification parameters and their limits in context with the compositional data and with consideration for sources of variation from the production process.

Regarding the nutritional analyses and assessment of any nutritional disadvantage, it was noted that the information on protein levels should be provided using the standard conversion factor for labelling purposes whilst using the calculated nitrogen factor based on amino acid composition. It was advised that further information was needed to understand the impact of replacing existing protein sources in the diet with this novel food such as impact on fatty acid and micronutrient exposure. Regarding ADME, it was recommended that further information on the protein digestibility data was needed to further understand the issue of protein quality.

Action: The Secretariat to seek additional information from the applicant to further the assessment of the novel food.

8. Allulose RP1130 (reserved business)

ACNFP/172/04

The Committee had previously reviewed this application for the first time in the November 2024 169th meeting. The Secretariat had sought further information from the applicant on the information gaps identified. The Committee was invited to consider the responses from the applicant covering identity, production process, composition and stability, specification, proposed uses and anticipated intakes and ADME.

Members considered the new information on the allulose structures useful. However, a closer review from specific Members who were not in attendance for the current review would be sought to complete the assessment on identity.

Members discussed the additional details provided on the production process including information on the enzyme used for the conversion of fructose into allulose. Members advised that further information was needed to review the potential for contamination within the chromatography steps, such as the cross use of columns. The changes in production resulting in a higher purity product were also not fully explained and it was advised that further information is sought from the applicant to assess this further. The data package on the production process would be reviewed in more depth outside of the meeting.

Regarding stability of the syrup form, the information on accumulating levels of Maillard Reaction Products (MRPs) and specific compounds formed during its shelf life were not sufficiently evaluated by the applicant in terms of food safety. It was advised that further information is sought to understand this further. Members discussed the potential for acrylamide formation as an MRP contaminant and its management in the production of allulose. It was considered that allulose is likely to have a similar propensity for acrylamide formation as fructose. This information would support users of the novel food to use it appropriately.

The information on the estimated intakes in younger age groups provided by the applicant was reviewed by Members along with the outcome of the FSA's Exposure Assessment Team review of the information to date on exposure for this application. The issue of broad food category uses for this novel food was raised including whether there would be risks to non-target consumers if exposed to allulose. It was agreed that the exposure assessments would be reviewed again following further review of the ADME and toxicological information.

Data gaps on ADME had not been sufficiently addressed by the applicant's literature review. Uncertainty also remained with regards to long term exposure. It was noted that the information to date for this novel food was largely focused on gastrointestinal effects. Information was lacking on the distribution of the novel food within the body, the fate of unmetabolised allulose and the toxicological significance of the route of excretion via the kidneys. The Secretariat will follow up with Members to gather all input and inform the additional information from the applicant as recommended.

Action: Members to conduct additional reviews on several aspects of the application.

Action: The Secretariat to seek additional information from the applicant to further the assessment of the novel food.

9. NS-B5ØØ27-4 oilseed rape RP1745 (reserved business)

ACNFP/172/05

An application for the authorisation of genetically modified NS-B5ØØ27-4 oilseed rape had been thoroughly reviewed by the ACNFP PGT sub-committee. The outcome was reviewed and collectively endorsed by the full ACNFP Committee.

Action: Secretariat to update the finalised Committee Advice Document in view of Members comments.

10. RF3 CQ Brassica juncea RP2178 (reserved business)

ACNFP/172/06

An application for the authorisation of genetically modified RF3 CQ Brassica juncea had been thoroughly reviewed by the ACNFP PGT sub-committee. The outcome was reviewed and collectively endorsed by the full ACNFP Committee.

Action: Secretariat to update the finalised Committee Advice Document in view of Members comments.

11. DP-915635 maize (*Zea mays*) RP2242 (reserved business)

ACNFP/172/06

An application for the authorisation of genetically modified DP-915635 maize (*Zea mays*) had been thoroughly reviewed by the ACNFP PGT sub-committee. The outcome was reviewed and collectively endorsed by the full ACNFP Committee.

Action: Secretariat to update the finalised Committee Advice Document in view of Members comments.

12. Items for Information

12.1 Novel Food Policy Update - Written

The Committee was provided with a written update on the issues under consideration regarding novel foods.

12.2 GM Policy Update - Written

The Committee was provided with an written update on the issues under consideration regarding GM.

12.3 SACS Update - Written

The Committee was provided with a written update on the activities of the different SACs.

12.4 Decision Panel Outcomes Update - Written

The Committee was provided with a written update on the activities of the FSA Decision Panel.

12.5 CCP Tasting Guidance Update (reserved business) - Written

The Committee was provided with information on a proposed update to the applicant guidance for conducting novel food tasting trials.

Date of next meeting

The next ACNFP meeting will be held as a 2-day hybrid meeting on the 24th and 25th of September 2025 in London and online.