

# SCIENTIFIC PANEL ON FOOD ENZYMES (FEZ) 4<sup>th</sup> FEZ Panel meeting



19-21 November 2024

14:00-17:30 / 09:00-17:00/ 09:00-13:00

MINUTES (Agreed on 21/11/2024)

**Location:** Parma/Teleconference

## **Attendees:**

- FEZ Panel Members:  
José Manuel Barat Baviera , Claudia Bolognesi, Francesco Catania, Gabriele Gadermaier, Ralf Greiner, Baltasar Mayo, Alicja Mortensen, Yrjö Roos, Marize De Lourdes Marzo Solano, Monika Sramkova, Hendrik van Loveren, Laurence Vernis, Holger Zorn (Chair)
- European Commission:  
Catherine Evrevin
- EFSA:  
Food Ingredients and Packaging (FIP) Unit: Jaime Aguilera, Magdalena Andryszkiewicz, Laura Cabo Sanmartin, Daniele Cavanna, Valeriu-Georghe Curtui, Ana Criado, Cristina Fernández-Fraguas, Ana Gomes, Natalia Kovalkovicova, Yi Liu, Simone Lunardi, Eleonora Marini, Alexia Ollier, Jeroen Pasch, Silvia Peluso, Maria Chiara Sicuri.

## **1. Welcome and apologies for absence**

The chair welcomed the participants.

Apologies were received from Laurence Vernis for the 20<sup>th</sup> and the 21<sup>st</sup> of November and from Baltasar Mayo on the 21<sup>st</sup> of November from 9.00 to 10.20.

## **2. Adoption of agenda**

The agenda was adopted without changes.

## **3. Declarations of Interest of Panel members**

In accordance with EFSA's Policy on Independence<sup>1</sup> and the Decision of the Executive Director on Competing Interest Management<sup>2</sup>, 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. Agreement of the minutes of the 3<sup>rd</sup> FEZ Panel meeting held on 15-17 October 2024 in Parma**

The minutes of the 3<sup>rd</sup> FEZ Panel meeting were agreed on 17 October 2024.

## **5. Report on written procedure**

No written procedures to report.

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<sup>1</sup> [http://www.efsa.europa.eu/sites/default/files/corporate\\_publications/files/policy\\_independence.pdf](http://www.efsa.europa.eu/sites/default/files/corporate_publications/files/policy_independence.pdf)

<sup>2</sup> [http://www.efsa.europa.eu/sites/default/files/corporate\\_publications/files/competing\\_interest\\_management\\_17.pdf](http://www.efsa.europa.eu/sites/default/files/corporate_publications/files/competing_interest_management_17.pdf)



## 6. Scientific outputs submitted for discussion/adoption

### 6.1 Follow-up opinion linked to EFSA-Q-2021-00298 - Glucose oxidase from a genetically modified *Trichoderma reesei* strain AR-352 ([EFSA-Q-2024-00167](#))

The FEZ Panel discussed all parts of the draft opinion. The opinion was unanimously adopted, subject to the incorporation of editorial changes as suggested during the meeting.

### 6.2 Endo-1,4-beta-xylanase from a genetically modified *Bacillus subtilis* strain AR-153 ([EFSA-Q-2023-00307](#))

The FEZ Panel discussed all parts of the draft opinion. The opinion was unanimously adopted, subject to the incorporation of editorial changes as suggested during the meeting.

### 6.3 Fructanase from a genetically modified *Trichoderma reesei* strain AR-577 ([EFSA-Q-2023-00423](#))

The FEZ Panel discussed all parts of the draft opinion. The opinion was unanimously adopted, subject to the incorporation of editorial changes as suggested during the meeting.

### 6.4 Polygalacturonase (pectinase) and $\beta$ -glucosidase from a non-genetically modified *Aspergillus tubigensis* strain ARO ([EFSA-Q-2023-00657](#))

The FEZ Panel discussed all parts of the draft opinion. The opinion was unanimously adopted, subject to the incorporation of editorial changes as suggested during the meeting.

### 6.5 Xylanase from a genetically modified *Bacillus subtilis* strain LMG S-24584 ([EFSA-Q-2023-00878](#))

The FEZ Panel discussed all parts of the draft opinion. The opinion was unanimously adopted, subject to the incorporation of editorial changes as suggested during the meeting.

### 6.6 Xylanase from the non-genetically modified *Trichoderma citrinoviride* strain HBI-TX01 ([EFSA-Q-2022-00869](#))

The FEZ Panel discussed all parts of the draft opinion. The opinion was unanimously adopted, subject to the incorporation of editorial changes as suggested during the meeting.

### 6.7 $\beta$ -Fructofuranosidase from the non-genetically modified *Saccharomyces cerevisiae* strain CNCM I-3399 ([EFSA-Q-2022-00627](#))

The FEZ Panel discussed all parts of the draft opinion. The opinion was unanimously adopted, subject to the incorporation of editorial changes as suggested during the meeting.

### 6.8 $\alpha$ -L-Arabinofuranosidase from *A. niger* (ARF) ([EFSA-Q-2014-00671](#))

The FEZ Panel discussed and finalised the draft scientific opinion. After amendments, the draft opinion will be presented at the next available FEZ plenary meeting for further discussion and possible adoption.

### 6.9 Acylglycerol lipase from a genetically modified strain of *Penicillium camemberti* (strain AE-LGS) ([EFSA-Q-2015-00757](#))

The FEZ Panel discussed and finalised the draft scientific opinion. After amendments, the draft opinion will be presented at the next available FEZ plenary meeting for further discussion and possible adoption.

### 6.10 Alpha-amylase from a non-genetically modified *Aspergillus oryzae* strain FUA ([EFSA-Q-2023-00360](#))

The FEZ Panel discussed and finalised the draft scientific opinion. After amendments, the draft opinion will be presented at the next available FEZ plenary meeting for further discussion and possible adoption.

### 6.11 Pectinase produced by *Aspergillus niger* CCTCC 2023236 ([EFSA-Q-2023-00227](#))

The FEZ Panel discussed the draft opinion and concluded that additional information is required in order to proceed with the safety assessment of this food enzyme. A request for additional information will be sent to the applicant.



**6.12 Fructosyltransferase from a genetically modified *Yarrowia lipolytica* (EFSA-Q-2024-00010)**

The involved experts discussed the draft opinion and concluded that additional information is required in order to proceed with the safety assessment of this food enzyme. A request for additional information will be sent to the applicant.

**6.13 Prolyl oligopeptidase from a genetically modified *Trichoderma reesei* strain DP-Nyq99 (EFSA-Q-2023-00906)**

The involved experts discussed the draft opinion and concluded that additional information is required in order to proceed with the safety assessment of this food enzyme. A request for additional information will be sent to the applicant.

**6.14 Endo-1,4-beta-xylanase from a genetically modified *Bacillus subtilis* strain DP-Ezd119 (EFSA-Q-2024-00079)**

The involved experts discussed the draft opinion and concluded that additional information is required in order to proceed with the safety assessment of this food enzyme. A request for additional information will be sent to the applicant.

**6.15 Alpha-amylase from a genetically modified *Bacillus licheniformis* strain DP-Dzb105 (EFSA-Q-2024-00087)**

The involved experts discussed the draft opinion and concluded that additional information is required in order to proceed with the safety assessment of this food enzyme. A request for additional information will be sent to the applicant.

**6.16 Follow-up opinion linked to EFSA-Q-2017-00546 - Maltogenic amylase from a genetically modified *Bacillus subtilis* strain BABSC (EFSA-Q-2024-00448)**

The involved experts discussed the draft opinion and concluded that additional information is required in order to proceed with the safety assessment of this food enzyme. A request for additional information will be sent to the applicant.

**6.17 Triacylglycerol lipase from a genetically modified *Komagataella phaffii* strain LALL-LI2 (EFSA-Q-2024-00201)**

The involved experts discussed the draft opinion and concluded that additional information is required in order to proceed with the safety assessment of this food enzyme. A request for additional information will be sent to the applicant.

**6.18 Bacillolysin from a genetically modified *Bacillus amyloliquefaciens* strain NPR (EFSA-Q-2023-00905)**

The involved experts discussed the draft opinion and concluded that additional information is required in order to proceed with the safety assessment of this food enzyme. A request for additional information will be sent to the applicant.

**6.19 Glucoamylase from *Aspergillus niger* strain GAS (EFSA-Q-2023-00239)**

The involved experts discussed the draft opinion and concluded that additional information is required in order to proceed with the safety assessment of this food enzyme. A request for additional information will be sent to the applicant.

## 7. Other scientific topics for information/discussion

None

## 8. Update on new mandates

12 food enzyme applications are in the intake phase. They are EFSA-Q-2023-00434, EFSA-Q-2023-00435, EFSA-Q-2024-00323, EFSA-Q-2024-00425, EFSA-Q-2024-00524, EFSA-Q-2024-



00525, EFSA-Q-2024-00552, EFSA-Q-2024-00636, EFSA-Q-2024-00637, EFSA-Q-2024-00638, EFSA-Q-2024-00645, EFSA-Q-2024-00664.

## 9. Feedback from the Scientific Committee/Scientific Panels/ EFSA/European Commission

### 9.1 Scientific Committee

Not applicable

### 9.2 European Commission

Not applicable

### 9.3 Updates from Panel Working Groups

Not applicable

### 9.4 Updates from EFSA

The Panel was debriefed with the technical meeting on applications for food enzymes held on 24-25 October 2024 at the EFSA premises. The event was physically attended by more than 80 participants, including representatives from industry and the European Commission, EFSA experts and staff, with more than 160 registrants following online. The programme consisted of four sessions to address scientific and procedural issues related to food enzyme applications. Agenda and slides are published at the following website: <https://www.efsa.europa.eu/en/events/technical-meeting-applications-food-enzymes>.

## 10. AoB

None

The next FEZ Panel meeting will take place via webconference from 3 to 5 December 2024.

## 11. Preparatory meetings with risk assessment

Since the last FEZ Plenary meeting, five preparatory meetings chaired by EFSA staff were held as follows.

### Declarations of Interest:

In accordance with EFSA's Policy on Independence<sup>3</sup> and the Decision of the Executive Director on Competing Interest Management<sup>4</sup>, 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 these meetings have been identified during the screening process, and no interests were declared orally by the members at the beginning of each meeting.

### 11.1 Preparatory meeting on Allergenicity

**Time:** 6<sup>th</sup> of November from 9.30 to 12.00

**Location:** Teleconference

### Attendees:

- FEZ Panel Members:

<sup>3</sup> [http://www.efsa.europa.eu/sites/default/files/corporate\\_publications/files/policy\\_independence.pdf](http://www.efsa.europa.eu/sites/default/files/corporate_publications/files/policy_independence.pdf)

<sup>4</sup> [http://www.efsa.europa.eu/sites/default/files/corporate\\_publications/files/competing\\_interest\\_management\\_17.pdf](http://www.efsa.europa.eu/sites/default/files/corporate_publications/files/competing_interest_management_17.pdf)



Gabriele Gadermaier, Hendrik van Loveren

- EFSA:

Food Ingredients and Packaging (FIP) Unit: Magdalena Andryszkiewicz, Cristina Fernández-Fraguas, Silvia Peluso.

### **11.2 Preparatory meeting on dietary exposure**

**Time:** 8<sup>th</sup> of November from 14.00 to 17.00

**Location:** Teleconference

**Attendees:**

- FEZ Panel Members:

José Manuel Barat Baviera, Ralf Greiner, Holger Zorn, Yrjö Roos

- EFSA:

Food Ingredients and Packaging (FIP) Unit: Daniele Cavanna, Yi Liu, Jeroen Pasch, Maria Chiara Sicuri

Apologies were received from Holger Zorn from 16.00 to 17.00.

### **11.3 Preparatory meeting on toxicology**

**Time:** 11<sup>th</sup> of November from 9.00 to 12.00

**Location:** Teleconference

**Attendees:**

- FEZ Panel Members:

Claudia Bolognesi, Alicja Mortensen, Marize De Lourdes Marzo Solano, Monika Sramkova, Hendrik van Loveren

- EFSA:

Food Ingredients and Packaging (FIP) Unit: Ana Criado, Natalia Kovalkovicova, Yi Liu.

### **11.4 Preparatory meeting on technology**

**Time:** 11<sup>th</sup> of November from 14.00 to 16.00

**Location:** Teleconference

**Attendees:**

- FEZ Panel Members:

José Manuel Barat Baviera, Ralf Greiner, Holger Zorn

- EFSA:

Food Ingredients and Packaging (FIP) Unit: Magdalena Andryszkiewicz, Cristina Fernández-Fraguas

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### 11.5 Preparatory meeting on microbiology

**Time:** 13<sup>th</sup> of November from 9.00 to 12.00

**Location:** Teleconference

**Attendees:**

- FEZ Panel Members:  
Baltasar Mayo, Laurence Vernis
- EFSA:  
Food Ingredients and Packaging (FIP) Unit: Jaime Aguilera, Yi Liu, Simone Lunardi, Eleonora Marini.

### 11.6 Outcome

Different sections of a draft opinion were discussed in the respective preparatory meetings. The combined outcome is reported below.

#### 11.6.1 Updated dietary exposure evaluation of the food enzyme endo 1,4- $\beta$ xylanase from the genetically modified *Aspergillus oryzae* strain NZYM-FB ([EFSA-Q-2024-00607](#))

The involved experts discussed and finalised the draft scientific opinion. After amendments, the draft opinion will be presented at the next available FEZ plenary meeting for further discussion and possible adoption.

#### 11.6.2 Updated dietary exposure evaluation of the food enzyme triacylglycerol lipase from the genetically modified *Aspergillus oryzae* strain NZYM-LH ([EFSA-Q-2024-00608](#))

The involved experts discussed and finalised the draft scientific opinion. After amendments, the draft opinion will be presented at the next available FEZ plenary meeting for further discussion and possible adoption.

#### 11.6.3 Updated dietary exposure evaluation of the food enzyme triacylglycerol lipase from the genetically modified *Aspergillus oryzae* strain NZYM-FL ([EFSA-Q-2024-00609](#))

The involved experts discussed and finalised the draft scientific opinion. After amendments, the draft opinion will be presented at the next available FEZ plenary meeting for further discussion and possible adoption.

#### 11.6.4 Updated dietary exposure evaluation of the food enzyme triacylglycerol lipase from the genetically modified *Aspergillus oryzae* strain NZYM-AL ([EFSA-Q-2024-00610](#))

The involved experts discussed and finalised the draft scientific opinion. After amendments, the draft opinion will be presented at the next available FEZ plenary meeting for further discussion and possible adoption.

#### 11.6.5 Updated dietary exposure evaluation of the food enzyme thrombin from cattle and pig's blood ([EFSA-Q-2024-00611](#))

The involved experts discussed and finalised the draft scientific opinion. After amendments, the draft opinion will be presented at the next available FEZ plenary meeting for further discussion and possible adoption.

#### 11.6.6 1,4- $\alpha$ -glucan 6- $\alpha$ -glucosyltransferase from a genetically modified *Trichoderma reesei* strain DP-Nzv57 ([EFSA-Q-2024-00066](#))



The involved experts discussed the draft opinion and concluded that additional information is required in order to proceed with the safety assessment of this food enzyme. A request for additional information will be sent to the applicant.

**11.6.7 Alpha-amylase from a genetically modified *Bacillus licheniformis* strain DP-Dzb106 ([EFSA-Q-2024-00067](#))**

The involved experts discussed the draft opinion and concluded that additional information is required in order to proceed with the safety assessment of this food enzyme. A request for additional information will be sent to the applicant.

**11.6.8 glucan 1,4- $\alpha$ -maltotetraohydrolase from a genetically modified *Bacillus licheniformis* strain DP-Dzf95 ([EFSA-Q-2024-00068](#))**

The involved experts discussed the draft opinion and concluded that additional information is required in order to proceed with the safety assessment of this food enzyme. A request for additional information will be sent to the applicant.

**11.6.9 Maltogenic amylase from a genetically modified *Escherichia Coli* strain MLAVSC ([EFSA-Q-2024-00034](#))**

The involved experts discussed the draft opinion and concluded that additional information is required in order to proceed with the safety assessment of this food enzyme. A request for additional information will be sent to the applicant.

**11.6.10 Acetolactate decarboxylase from a genetically modified *Bacillus subtilis* strain DP-Ezz65 ([EFSA-Q-2024-00069](#))**

The involved experts discussed the draft opinion and concluded that additional information is required in order to proceed with the safety assessment of this food enzyme. A request for additional information will be sent to the applicant.

**11.6.11 Follow-up opinion linked to EFSA-Q-2015-00683 - AMP deaminase from a non-genetically modified *Streptomyces murinus* strain AE-DNTS ([EFSA-Q-2023-00559](#))**

The involved experts discussed the draft opinion and will continue the discussion in a future FEZ Panel meeting.

**11.6.12 Aminopeptidase Y from a genetically modified *Trichoderma reesei* strain DP-Nyf80 ([EFSA-Q-2024-00089](#))**

The involved experts discussed the draft opinion and will continue the discussion in a future FEZ Panel meeting.

**11.6.13 Phospholipase A1 from a genetically modified *Trichoderma reesei* strain DP-Nzk98 ([EFSA-Q-2024-00065](#))**

The involved experts discussed the draft opinion and will continue the discussion in a future FEZ Panel meeting.

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