

Declaration of interests

(Please note that high quality of scientific expertise is by nature based on prior experience and that therefore having an interest does not necessarily mean having a conflict of interest)

Name : **Holger Zorn**

Title: **PROF**

Profession : **University Professor**

Current EFSA Involvements

- Member - CEP Panel Experts (2018-2024)
- Member - WG/P/CEP/2018/05 - WG Enzymes

Interests

I. Financial investments

No interests

II. Managerial role

Period: **01/09/2013 - 01/01/2017**

Organisation: **TransMIT Gesellschaft für Technologietransfer mbH, Giessen, Germany**

Impact on annual earnings: **0%**

Subject matter: I was active as Co-Director of the “TransMIT-Center for Analytics, Biotechnology and Safety of Food”. The TransMIT Society for Technology Transfer GmbH” was founded by three central Hessian Universities to make the potentials of the universities accessible to academic and industrial partners. The focus was on the fermentative production of pesticide metabolites, on investigations on the degradation of veterinary drugs in food and in the environment, and on flavor analysis. The “TransMITcenter does not work on or advises on matters falling under CEP panel's remit. Gains have been used for the centre only; no personal payments. Approximately two (one day) meetings per year.

III. Member of a scientific advisory entity

Period: **01/07/2018 - 01/12/2021**

Organisation: **Federal Institute for Risk Assessment**

Impact on annual earnings: **0%**

Subject matter: Member of the BfR Committee for Consumer Products (dedicated to articles designed to come into contact with food, for example, kitchen utensils or packaging materials. They also include utensils, which come into contact with mucous membranes, like cutlery or toothbrushes as well as other items like

cosmetic packaging, bodycare products, toys, joke articles and numerous other products listed in §2 (6) of the German Food and Feed Code (LFGB).). Scientific advice to the German government (Federal Ministry of Food and Agriculture) on the safety of consumer products. Typically one (one day) meeting per year.

Period: **01/04/2011 - 01/12/2017**

Organisation: **Federal Institute for Risk Assessment**

Impact on annual earnings: **0%**

Subject matter: Member of the BfR-panel for food additives, flavour compounds and processing aids. Scientific advice to the German government (Federal Ministry of Food and Agriculture) on the safety of food additives. Typically one (one day) meeting per year.

Period: **01/04/2011 - now**

Organisation: **Research Association of the German Food Industry (FEI) e.V.**

Impact on annual earnings: **0%**

Subject matter: The Research Association of the German Food Industry (FEI) is a non-profit, registered association supporting research projects in all fields of food science, food technology and nutritional science. Member of the scientific board; evaluation of project drafts; projects may address food biotechnology / food enzymes no financial interest

Period: **01/01/2011 - 01/02/2020**

Organisation: **Deutsche Forschungsgemeinschaft**

Impact on annual earnings: **0%**

Subject matter: Member of the German Research Foundation (DFG) Review Board 305 "Biological Chemistry and Food Chemistry) Evaluation of research proposals on basic research.

IV. Employment

Period: **01/10/2014 - now**

Organisation: **Fraunhofer Institute for Molecular Biology and Applied Ecology IME**

Impact on annual earnings: **between 5% and 25%**

Subject matter: Researcher in the field of Insect (Yellow) Biotechnology in secondary employment (6 h per week). The focus is on low molecular weight metabolites of insects or insect associated microorganisms and enzymes for future applications in the fields of white biotechnology and food biotechnology. As far as I am aware, the Fraunhofer research group on Insect Biotechnology and Bioresources has no contracts or other engagements with EFSA or with companies having submitted applications to EFSA.

Period: **01/11/2008 - 01/03/2034**

Organisation: **Justus Liebig University**

Impact on annual earnings: **>25%**

Subject matter: I am responsible for the education of students in the field of Food Chemistry (including food analysis, food toxicology, Food Technology, flavours, Food additives etc.). My main fields of research are: biotechnology and analytics of aroma compounds; food enzymes, fermentation, food biotechnology.

Period: **01/11/2008 - now**

Organisation: **Justus Liebig University Giessen**

Impact on annual earnings: **>25%**

Subject matter: Director of the Institute of Food Chemistry and Food Biotechnology of the Justus Liebig University Giessen. I am responsible for the education of students in the field of food chemistry (including food analysis, food toxicology, food technology, flavours, food additives etc.). My main fields of research are: biotechnology and analytics of aroma compounds; food enzymes, fermentation, food biotechnology. As far as I am aware, the University of Giessen has no contracts or other engagements with EFSA or with companies having submitted applications to EFSA.

V. Occasional consultancy

No interests

VI. Research funding

Period: **01/01/2022 - now**

Organisation: **Bundesministerium für Bildung und Forschung (BMBF), Germany**

Subject matter: Submerged cultivation of basidiomycetes on brewers' spent grains as carbon and nitrogen source.

Does the funding received from the private sector during the two years preceding the submission of the ADol exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/10/2021 - now**

Organisation: **Bundesministerium für Bildung und Forschung (BMBF), Germany**

Subject matter: Evaluation of insect-derived antimicrobial peptides as potential food preservatives.

Does the funding received from the private sector during the two years preceding the submission of the ADol exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/04/2021 - 31/03/2022**

Organisation: **Federal State of North Rhine-Westfalia**

Subject matter: Biotechnological production of fungal mycelium based on sugar side streams

Does the funding received from the private sector during the two years preceding the submission of the ADol exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/06/2020 - now**

Organisation: **Bundesministerium für Wirtschaft und Energie (BMWi), Berlin, Germany**

Subject matter: The aim of the project is to investigate the formation of norisoprenoid flavor compounds by use of textile-bound peroxidases; funding for the university only; no personal payments

Does the funding received from the private sector during the two years preceding the submission of the ADol exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/11/2019 - now**

Organisation: **Bundesministerium für Wirtschaft und Energie (BMWi), Berlin, Germany**

Subject matter: The aim of the project is to identify insect-derived novel enzymes for the hydrolysis of wine protein; funding for the university only; no personal payments

Does the funding received from the private sector during the two years preceding the submission of the ADol exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/08/2019 - 31/01/2022**

Organisation: **Bundesministerium für Wirtschaft und Energie (BMWi), Berlin, Germany**

Subject matter: The aim of the project is the fermentative removal of boar taint aroma compounds.

Does the funding received from the private sector during the two years preceding the submission of the ADol exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/08/2019 - now**

Organisation: **Federal Ministry of Education and Research (BMBF)**

Subject matter: "CocoaFruit" - The aim of the project is the complete utilization of cocoa fruits for innovative food products and ingredients. To this end, side streams of cocoa production will be fermented with edible basidiomycetes.

Does the funding received from the private sector during the two years preceding the submission of the ADol exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/01/2019 - 30/04/2021**

Organisation: **Bundesministerium für Wirtschaft und Energie (BMWi), Berlin, Germany**

Subject matter: Biochemical and molecular biological characterization of lipases derived from edible fungi for dairy applications; funding for the university only; no personal payments

Does the funding received from the private sector during the two years preceding the submission of the ADol exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/04/2018 - 01/03/2020**

Organisation: **Alternative Protein Corp. Limited, Wigan, UK**

Subject matter: Biotechnological production of black soldier fly protein for feed applications; funding for research group only; no personal payments; project is not related to food enzymes

Does the funding received from the private sector during the two years preceding the submission of the ADol exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/12/2017 - now**

Organisation: **LOEWE (Research funding programme of the German federal state of Hesse), Wiesbaden, Germany**

Subject matter: "AromaPlus"; biotechnological production of flavour compounds using submerged cultures of basidiomycetes

Does the funding received from the private sector during the two years preceding the submission of the

ADoI exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/10/2017 - 31/12/2021**

Organisation: **Federal Ministry of Food and Agriculture, Berlin, Germany**

Subject matter: Biotechnological production of uncommon fatty aldehydes with flavour properties.

Does the funding received from the private sector during the two years preceding the submission of the ADoI exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/04/2017 - 31/12/2021**

Organisation: **Federal Ministry of Education and Research (BMBF)**

Subject matter: Valorisation of side-streams of the Citrus industry using the genetic diversity of monokarya from the basidiomycete *Pleurotus sapidus*. The genetic diversity of the basidiospores of *Pleurotus sapidus* obtained from two dikaryotic strains of *P. sapidus* will be exploited.

Does the funding received from the private sector during the two years preceding the submission of the ADoI exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/12/2016 - now**

Organisation: **Symrise**

Subject matter: Joint research project on fermentative production of flavour compounds; funding for the university only; no personal payments; project is not related to food enzymes

Does the funding received from the private sector during the two years preceding the submission of the ADoI exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/07/2015 - 01/06/2018**

Organisation: **Hessen Agentur, Wiesbaden, Germany**

Subject matter: Development of meat analogue products based on basidiomycetous proteins. "Hessen Agentur" is a GmbH 100% owned by the German federal state of Hesse. The project is run with public funding. The project is not related to food enzymes.

Does the funding received from the private sector during the two years preceding the submission of the ADol exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/08/2014 - 31/08/2017**

Organisation: **Bundesministerium für Wirtschaft und Energie (BMWi)**

Subject matter: Production of fungal protein by fermentation of side streams of the food industry by edible basidiomycetes. The project is not related to food enzymes; funding for the university only; no personal payments.

Does the funding received from the private sector during the two years preceding the submission of the ADol exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/03/2014 - 31/05/2017**

Organisation: **Bundesministerium fuer Bildung und Forschung (BMBF)**

Subject matter: Identification and biochemical characterization of lipases derived from edible fungi for dairy applications; funding for the university only; no personal payments

Does the funding received from the private sector during the two years preceding the submission of the ADol exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/10/2013 - 31/03/2017**

Organisation: **Bundesministerium für Bildung und Forschung (BMBF), Germany**

Subject matter: Immobilization of fungal peroxidases on textile carriers; funding for the university only; no personal payments. parts of the project are related to food enzymes

Does the funding received from the private sector during the two years preceding the submission of the ADol exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/01/2013 - 01/12/2016**

Organisation: **LOEWE (Research funding programme of the German federal state of Hesse), Germany, Hesse**

Subject matter: Optimisation of the secondary metabolite profile of the edible fungus *A. aegerita*.

Does the funding received from the private sector during the two years preceding the submission of the ADol exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

Period: **01/01/2010 - now**

Organisation: **LOEWE (Research funding programme of the German federal state of Hesse)**

Subject matter: Identification and characterization of enzymes derived from insects and insect associated fungi; funding for the university only; no personal payments; parts of the project are related to food enzymes

Does the funding received from the private sector during the two years preceding the submission of the ADol exceeds 25% of the total research budget that is managed by you for the area under concern: **No**

Additional Info:

VII. Intellectual property rights

Period: **03/02/2022 - now**

Organisation: **BASF**

Impact on annual earnings: **0%**

Subject matter: Co-inventor of the patent application Pelzer R, Birk F, Fraatz MA, Zorn H (2022) Cyclic compounds as aroma chemicals; patent is not yet granted; all rights transferred from University to BASF; no exploitation rights of the patent, no financial interests

Period: **16/09/2021 - now**

Organisation: **Symrise**

Impact on annual earnings: **0%**

Subject matter: Co-inventor of the patent application Bornscheuer U, Balke K, Geißler T, Ley J, Backes M, Harms C, Hammer A, Fraatz MA, Zorn H (2021) Process for the biotechnological production of aldehyde mixtures; all rights transferred from University to Symrise; patent is not yet granted; no exploitation rights of the patent, no financial interests

Period: **18/11/2020 - now**

Organisation: **Justus Liebig University Giessen**

Impact on annual earnings: **0%**

Subject matter: Co-inventor of the patent application Zorn H, Sommer S, Sella N, Schlering C, Rühl M, Fraatz MA, Büttner J (2020) Biotechnological production of flavor compounds from side streams of blackcurrant (*Ribes nigrum*) by fungi of the division Basidiomycota; patent is not yet granted; all rights transferred from University to Symrise; no exploitation rights of the patent, no financial interests

Period: **01/07/2020 - now**

Organisation: **BASF**

Impact on annual earnings: **0%**

Subject matter: Co-inventor of the patent application Pelzer R, Birk F, Fraatz M, Zorn H (2020) Fermentative production of pyrazines using microorganisms of the genus Pasteurellaceae; patent is not yet granted; all rights transferred from University to BASF; no exploitation rights of the patent, no financial interests

Period: **01/10/2017 - now**

Organisation: **Justus Liebig University Giessen**

Impact on annual earnings: **0%**

Subject matter: Inventor / Co-inventor of the patent application Frettlöh M, Haag T, Zajul M, Ahlborn J, Zorn H (2017) Vitamin B12 and Vitamin D2 containing proteins from non-animal origin for applications as meat replacers; patent is not yet granted; all rights transferred to the company Quh-Lab; no exploitation rights of the patent, no financial interests Basidiomycetous proteins are produced by submerged fermentation of fungi on agricultural side streams. Vitamin D2 is formed by illumination of the cultures with UV-B light, and vitamin B12 is generated by co-culturing of an appropriate bacterium.

Period: **01/08/2017 - now**

Organisation: **Justus Liebig University Giessen**

Impact on annual earnings: **0%**

Subject matter: Inventor / Co-inventor of the patent application Zorn H, Kreuter N, Weichhard E, Fleischner W, Manhard J (2017) Novel lipases from basidiomycetes for dairy applications; patent is not yet granted; all rights transferred to the company optiferm; no exploitation rights of the patent, no financial interests

Period: **01/12/2016 - now**

Organisation: **Symrise**

Impact on annual earnings: **0%**

Subject matter: Inventor / Co-inventor of the patent application Zorn H, Fraatz MA, Goldmann M, Rost J, Hentschel F, Gross E, Ley J, Geißler K, Geißler T, Backes E, Hilmer J-M (2016) Verfahren zur Herstellung verzweigter Aldehyde (process for the production of branched aldehydes); PCT/EP2015/077992; patent is not yet granted; all rights transferred to Symrise; no exploitation rights of the patent, no financial interests

Period: **01/01/2008 - now**

Organisation: **Nestec**

Impact on annual earnings: **0%**

Subject matter: Inventor / Co-inventor of the patent Linke D, Krings U, Zorn H, Rabe S, Ulmer H (2008) Production of gluten-specific peptidases from basidiomycetes and their use in hydrolysis of proteins for food industry applications. WO 2008131938 patent not yet granted; all rights transferred to Nestec; no exploitation rights of the patent, no financial interests

Period: **01/01/2008 - now**

Organisation: **N-Zyme**

Impact on annual earnings: **0%**

Subject matter: Inventor / Co-inventor of the patent Fraatz MA, Kopp SJL, Takenberg M, Krings U, Marx S, Berger RG, Zorn H (2008) Enzymatic synthesis of the grapefruit flavour nootkatone. EP 08.1711483 patent not yet granted; all rights transferred to N-Zyme; no exploitation rights of the patent, no financial interests

Period: **01/01/2008 - now**

Organisation: **DSM**

Impact on annual earnings: **0%**

Subject matter: Inventor / Co-inventor of the patent Zorn H, Szweda R, Wilms J, Kumar M (2008) Method for modifying non-starch carbohydrate material. Eur Pat Appl 26485/EP/P0 non-food application; no exploitation rights of the patent, no financial interests; all rights transferred to DSM

Period: **01/01/2004 - now**

Organisation: **DSM**

Impact on annual earnings: **0%**

Subject matter: Inventor / Co-inventor of the patent Zorn H, Scheibner M, Hülisdau B, Berger RG, de Boer L, Meima RB (2006) Novel enzymes for use in enzymatic bleaching of food products. Eur Pat Appl EP 64132 20060712 all rights transferred to DSM; no exploitation rights of the patent, no financial interests

VIII. Other memberships or affiliations

Period: **01/04/2015 - now**

Organisation: **American Chemical Society**

Impact on annual earnings: **between 5% and 25%**

Subject matter: Associate Editor of the Journal of Agricultural and Food Chemistry

Period: **01/10/2009 - now**

Organisation: **DECHEMA**

Impact on annual earnings: **0%**

Subject matter: The Society for Chemical Engineering and Biotechnology is a non-profit scientific and technical society

Period: **01/03/2009 - now**

Organisation: **German Chemical Society**

Impact on annual earnings: **0%**

Subject matter: The GDCh supports chemistry in teaching, research and application and promotes the understanding of chemistry in the public

IX. Other relevant interest

No interests

User Agreement

I confirm that:

- I think I do not have a conflict of interest with respect to my activity(ies) at EFSA
- ~~I think I have a conflict of interest with respect to my activity(ies) at EFSA~~

Remarks:

I hereby declare that I have read the [EFSA Decision on Competing Interest Management](#) implementing EFSA's Policy on Independence and that the above declaration is truthful and complete.

Doi submitted on: 27-06-2022 - 10:44 (UTC)

Signature: SIGNED

Note regarding the processing of personal data

EFSA processes all Declarations of Interests (DoIs) in accordance with Regulation (EU) 2018/1725. DoI processing is necessary in order to safeguard the independence of EFSA and enable the Authority to carry out its mission and comply with its obligations under Regulation (EC) No 178/2002.

The Executive Director of EFSA is the data controller with respect to the handling of Dols.

Concerned individuals have the right to access, rectify, erase and object to the processing of their ADol at any time. Nevertheless, for certain categories of individuals (e.g., experts), it may be a mandatory requirement to submit a Dol to EFSA so as to verify the absence of conflicts of interests and thus protect the independence of EFSA. Concerned individuals will be contacted if EFSA becomes aware of information that is not consistent with the declared interest such as on the occasion of compliance monitoring activities outlined in the relevant [Standard Operating Procedure](#).

Certain ADols shall be made publicly available in accordance with Article 38(1)(d) of Regulation (EC) No 178/2002. Furthermore, ADols may be transferred to bodies in charge of monitoring, auditing or inspection in conformity with EU Law.

The conservation period for ADols per category of data subjects is 10 years from the date of submission of the relevant ADol.

Concerned individuals may direct any queries regarding personal data processing by EFSA to the data protection officer DataProtectionOfficer@efsa.europa.eu. They are entitled to submit a complaint at any time to the European Data Protection Supervisor: <http://www.edps.europa.eu>

The legal basis for ADol processing is provided for in Articles 22, 37 and 38 of Regulation (EC) No 178/2002.