

Ute Weisz  
Associate Professorship of Plant Proteins and Nutrition



## Research interests

Prof. Weisz's research focuses on the extraction, characterisation and modification of plant proteins with tailored functional properties. These include nutritional, sensory and technofunctional characteristics that are important for subsequent use in foods (e.g. milk and meat alternatives). Modification processes can be used to improve these functions, for example by removing anti-nutritive substances.

Prof. Weisz studied food technology at the University of Hohenheim and specialised in plant food technology during her doctorate. She started working with plant proteins at the Fraunhofer IVV in 2007 and held various positions there, most recently as the Head of the Food Process Development Department. In 2020 Prof. Weisz was appointed as the professor of Food Sciences at the University of Bonn and she held this post for almost three years, before taking on the role of Professor of Plant Proteins and Nutrition at the TUM in October 2023.

## Employment

### Associate Professorship of Plant Proteins and Nutrition

Technical University of Munich

1 Oct 2023 → 31 Mar 2045

### Lecturer - Food Technology

GIST-TUM Asia Singapore

Singapore, Singapore

1 Sep 2024 → present

### Member of the Committee on Plant Science, Agriculture and Food Biotechnology

Novo Nordisk Foundation

Denmark

1 Jul 2024 → present

### Lecturer - Food Sciences

Rheinische Friedrich-Wilhelms-Universität Bonn

Germany

1 Oct 2023 → 31 Dec 2024

### Scientific Advisor

Fraunhofer Institute for Process Engineering and Packaging IVV

1 Jan 2021 → present

### Professor of Food Sciences

Rheinische Friedrich-Wilhelms-Universität Bonn

Germany

1 Jan 2021 → 30 Sep 2023

### Head of Department 'Food Development

Fraunhofer Institut für Verfahrenstechnik und Verpackung (IVV)

Germany

1 Nov 2018 → 31 Dec 2020

### Group Leader 'Fermentation of Plant Materials'

Fraunhofer Institut für Verfahrenstechnik und Verpackung (IVV)  
Germany  
1 Feb 2016 → 31 Dec 2020

**Deputy of the Head of Department 'Process Engineering'**

Fraunhofer Institut für Verfahrenstechnik und Verpackung (IVV)  
Germany  
1 Jul 2008 → 29 Feb 2016

**Scientific Associate**

Universität Hohenheim  
1 Nov 2006 → 31 Jan 2007

## Research outputs

**Effects of processing methods of unfermented cocoa beans from Indonesia on the chemical and physical characteristics of butter and cake**

Tunjung Sari, A. B., Efraim, P., Song, X., Rothkopf, I., Schweiggert-Weisz, U., Schieber, A. & Gola, S., Mar 2025, In: Journal of Agriculture and Food Research. 19, 101563.

**Enhancing Plant-Based Protein Processing with Supercritical Fluids: Hemp Press Cake as a Case Study**

Dziuballe, A., Etzbach, L., Schweiggert-Weisz, U., Pajnik, J., Luca, S. V. & Minceva, M., 25 Feb 2025.

**Opportunities and challenges of plant proteins as functional ingredients for food production**

Etzbach, L., Gola, S., Küllmer, F., Acir, I. H., Wohlt, D., Ignatzy, L. M., Bader-Mittermaier, S. & Schweiggert-Weisz, U., 10 Dec 2024, In: Proceedings of the National Academy of Sciences of the United States of America. 121, 50, p. e2319019121

**Impact of short-term germination on dehulling efficiency, enzymatic activities, and chemical composition of mung bean seeds (*Vigna radiata* L.)**

Wintersohle, C., Arnold, S. J., Geis, H. M., Keutgen, F., Etzbach, L. & Schweiggert-Weisz, U., 1 Dec 2024, In: Future Foods. 10, p. 100416

**Enzyme-assisted hydrolysis of *Theobroma cacao* L. pulp**

Bickel Haase, T., Babat, R. H., Zorn, H., Gola, S. & Schweiggert-Weisz, U., Dec 2024, In: Journal of Agriculture and Food Research. 18, 101466.

**Impact of short-term germination on dehulling efficiency, enzymatic activities, and chemical composition of mung bean seeds (*Vigna radiata* L.)**

Wintersohle, C., Arnold, S. J., Geis, H. M., Keutgen, F., Etzbach, L. & Schweiggert-Weisz, U., Dec 2024, In: Future Foods. 10, 100416.

**Conching of dark chocolate - Processing impacts on aroma-active volatiles and viscosity of plastic masses**

Guckenbiehl, Y., Romero, A. M. M., Haug, H., Ortner, E., Rothkopf, I., Schweiggert-Weisz, U., Buettner, A. & Gola, S., 31 Oct 2024, In: Current Research in Food Science. 9, 11 p., 100909.

**Opinion Piece: New Plant-Based Food Products Between Technology and Physiology**

Schweiggert-Weisz, U., Etzbach, L., Gola, S., Kulling, S. E., Diekmann, C., Egert, S. & Daniel, H., Oct 2024, In: Molecular Nutrition and Food Research. 68, 20, 2400376.

**Der Innovationsraum NewFoodSystems und die Transformation unserer Ernährungs- und Lebensmittelsysteme**

Fink, L., Bunzel, D., Horn, J., Etzbach, L., Daniel, H., Schweiggert-Weisz, U. & Kulling, S. E., Sep 2024, In: Ernährungs Umschau. 71, 9, p. M521-M529

Distribution and transition of aroma-active compounds in dark chocolate model systems under conching conditions  
Guckenbiehl, Y., Ortner, E., Rothkopf, I., Schweiggert-Weisz, U., Ziegleder, G., Buettner, A. & Naumann-Gola, S., 30 Mar 2024, In: Food Chemistry. 437, 137861.

**Effekt des Schälvorgangs hinsichtlich einer möglichen Reduktion ausgewählter antinutritiver Inhaltsstoffe in sechs Phaseolus vulgaris L. Sorten**

Vieler, L., Föddisch, J., Etzbach, L. & Weisz, U., 2024.

**Einfluss der Isolationsparameter auf die Gewinnung und Zusammensetzung von Mungbohnenproteinisolaten**

Wintersohle, C., Etzbach, L. & Weisz, U., 2024, In: Deutsche Lebensmittel-Rundschau.

**Einfluss der Keimung auf die Farbe, Enzymaktivitäten und die chemische Zusammensetzung von Mungbohnen**

Wintersohle, C., Arnold, S., Geis, H. M., Etzbach, L. & Weisz, U., 2024.

**NewFoodSystems: a large research cluster of academia and industry in Germany**

Kulling, S. E., Fink, L., Schweiggert-Weisz, U., Horn, J. & Daniel, H., 2024.

**Verbesserung der Löslichkeit von Proteinen aus Hanfpresskuchen (Cannabis sativa L.) zur Optimierung der Protein- und Produktausbeute**

Dziuballe, A., Grabosch, L., Salewski, B., Acir, I.-H., Etzbach, L. & Weisz, U., 2024.

**Aroma-active volatiles and rheological characteristics of the plastic mass during conching of dark chocolate (vol 162, 112063, 2022)**

Guckenbiehl, Y., Martin, A., Ortner, E., Rothkopf, I., Schweiggert-Weisz, U., Buettner, A. & Naumann-Gola, S., Jun 2023, In: Food Research International. 168, 1 p., 112063.

Corrigendum to "Aroma-active volatiles and rheological characteristics of the plastic mass during conching of dark chocolate" [Food Res. Int. 162 (Part B) (2022) 112063] (Food Research International (2022) 162(PB), (S0963996922011218), (10.1016/j.foodres.2022.112063))

Guckenbiehl, Y., Martin, A., Ortner, E., Rothkopf, I., Schweiggert-Weisz, U., Buettner, A. & Naumann-Gola, S., Jun 2023, In: Food Research International. 168, 112757.

**Physicochemical and chemical properties of mung bean protein isolate affected by the isolation procedure**

Wintersohle, C., Kracke, I., Ignatzy, L. M., Etzbach, L. & Schweiggert-Weisz, U., Jan 2023, In: Current Research in Food Science. 7, 100582.

**Thermal stabilisation of cocoa fruit pulp — Effects on sensory properties, colour and microbiological stability**

Bickel Haase, T., Naumann-Gola, S., Ortner, E., Zorn, H. & Schweiggert-Weisz, U., Jan 2023, In: Current Research in Food Science. 7, 100549.

**Potential of selected common bean varieties (Phaseolus vulgaris L.) as raw material for the production of protein isolates**

Vieler, L., Paquignon, T., Etzbach, L. & Weisz, U., 2023.

**Aroma-active volatiles and rheological characteristics of the plastic mass during conching of dark chocolate**

Guckenbiehl, Y., Martin, A., Ortner, E., Rothkopf, I., Schweiggert-Weisz, U., Buettner, A. & Naumann-Gola, S., Dec 2022, In: Food Research International. 162, 112063.

**Quantitative Structure-Property Relationship (QSPR) of Plant Phenolic Compounds in Rapeseed Oil and Comparison of Antioxidant Measurement Methods**

Platzer, M., Kiese, S., Asam, T., Schneider, F., Tybussek, T., Herfellner, T., Schweiggert-Weisz, U. & Eisner, P., Jul 2022, In: Processes. 10, 7, 1281.

**Nutritional Composition of Beach-Cast Marine Algae from the Brazilian Coast: Added Value for Algal Biomass Considered as Waste**

Mandalka, A., Cavalcanti, M. I. L. G., Harb, T. B., Toyota Fujii, M., Eisner, P., Schweiggert-Weisz, U. & Chow, F., 1 May 2022, In: Foods. 11, 9, 1201.

Radical Scavenging Mechanisms of Phenolic Compounds: A Quantitative Structure-Property Relationship (QSPR) Study  
Platzer, M., Kiese, S., Tybussek, T., Herfellner, T., Schneider, F., Schweiggert-Weisz, U. & Eisner, P., 4 Apr 2022, In: *Frontiers in Nutrition*. 9, 882458.

Enzymatic Hydrolysis and Fermentation of Pea Protein Isolate and Its Effects on Antigenic Proteins, Functional Properties, and Sensory Profile

Arteaga, V. G., Demand, V., Kern, K., Strube, A., Szardenings, M., Muranyi, I., Eisner, P. & Schweiggert-Weisz, U., 1 Jan 2022, In: *Foods*. 11, 1, 118.

Recovery, isolation, and characterization of food proteins

Schweiggert-Weisz, U. & Zannini, E., 1 Jan 2022, In: *Foods*. 11, 1, 70.

Aroma properties of cocoa fruit pulp from different origins

Haase, T. B., Schweiggert-Weisz, U., Ortner, E., Zorn, H. & Naumann, S., 1 Dec 2021, In: *Molecules*. 26, 24, 7618.

Contribution of *s. XYLOSUS* and *l. Sakei ssp. carnosus* fermentation to the aroma of Lupin protein isolates

Schlegel, K., Ortner, E., Buettner, A. & Schweiggert-Weisz, U., Jun 2021, In: *Foods*. 10, 6, 1257.

Screening of twelve pea (*Pisum sativum* L.) cultivars and their isolates focusing on the protein characterization, functionality, and sensory profiles

Arteaga, V. G., Kraus, S., Schott, M., Muranyi, I., Schweiggert-Weisz, U. & Eisner, P., Apr 2021, In: *Foods*. 10, 4, 758.

Effects of extrusion processing on the physicochemical and functional properties of lupin kernel fibre

Naumann, S., Schweiggert-Weisz, U., Martin, A., Schuster, M. & Eisner, P., Feb 2021, In: *Food Hydrocolloids*. 111, 106222.

Fermentation of lupin protein hydrolysates—effects on their functional properties, sensory profile and the allergenic potential of the major lupin allergen lup an 1

Schlegel, K., Lidzba, N., Ueberham, E., Eisner, P. & Schweiggert-Weisz, U., Feb 2021, In: *Foods*. 10, 2, 281.

Sensory profile, functional properties and molecular weight distribution of fermented pea protein isolate

García Arteaga, V., Leffler, S., Muranyi, I., Eisner, P. & Schweiggert-Weisz, U., Jan 2021, In: *Current Research in Food Science*. 4, p. 1-10 10 p.

Common trends and differences in antioxidant activity analysis of phenolic substances using single electron transfer based assays

Platzer, M., Kiese, S., Herfellner, T., Schweiggert-Weisz, U., Miesbauer, O. & Eisner, P., 2021, In: *Molecules*. 26, 5, 1244.

Effect of physicochemical properties of carboxymethyl cellulose on diffusion of glucose

Miehle, E., Bader-Mittermaier, S., Schweiggert-Weisz, U., Hauner, H. & Eisner, P., 2021, In: *Nutrients*. 13, 5, 1398.

How does the phenol structure influence the results of the folin-ciocalteu assay?

Platzer, M., Kiese, S., Herfellner, T., Schweiggert-Weisz, U. & Eisner, P., 2021, In: *Antioxidants*. 10, 5, 811.

Effect of enzymatic hydrolysis on molecular weight distribution, techno-functional properties and sensory perception of pea protein isolates

García Arteaga, V., Apéstegui Guardia, M., Muranyi, I., Eisner, P. & Schweiggert-Weisz, U., Oct 2020, In: *Innovative Food Science and Emerging Technologies*. 65, 102449.

**Mechanisms of interactions between bile acids and plant compounds—a review**

Naumann, S., Haller, D., Eisner, P. & Schweiggert-Weisz, U., 2 Sep 2020, In: *International Journal of Molecular Sciences*. 21, 18, p. 1-20 20 p., 6495.

Characterisation of the molecular interactions between primary bile acids and fractionated lupin cotyledons (*Lupinus angustifolius* L.)

Naumann, S., Schweiggert-Weisz, U. & Eisner, P., 1 Sep 2020, In: *Food Chemistry*. 323, 126780.

Effect of enzyme-assisted hydrolysis on protein pattern, technofunctional, and sensory properties of lupin protein isolates using enzyme combinations

Schlegel, K., Sontheimer, K., Eisner, P. & Schweiggert-Weisz, U., 1 Jul 2020, In: *Food Science and Nutrition*. 8, 7, p. 3041-3051 11 p.

Food proteins from plants and fungi

Schweiggert-Weisz, U., Eisner, P., Bader-Mittermaier, S. & Osen, R., Apr 2020, In: *Current Opinion in Food Science*. 32, p. 156-162 7 p.

Technofunctional and sensory properties of fermented lupin protein isolates

Schlegel, K., Leidigkeit, A., Eisner, P. & Schweiggert-Weisz, U., 13 Dec 2019, In: *Foods*. 8, 12, 678.

**Retention of primary bile acids by lupin cell wall polysaccharides under in vitro digestion conditions**

Naumann, S., Schweiggert-Weisz, U., Haller, D. & Eisner, P., Sep 2019, In: *Nutrients*. 11, 9, 2117.

**In vitro interactions of dietary fibre enriched food ingredients with primary and secondary bile acids**

Naumann, S., Schweiggert-Weisz, U., Eglmeier, J., Haller, D. & Eisner, P., Jun 2019, In: *Nutrients*. 11, 6, 1424.

Enzymatic hydrolysis of lupin protein isolates—Changes in the molecular weight distribution, technofunctional characteristics, and sensory attributes

Schlegel, K., Sontheimer, K., Hickisch, A., Wani, A. A., Eisner, P. & Schweiggert-Weisz, U., 2019, In: *Food Science and Nutrition*. 7, 8, p. 2747-2759 13 p.

**Differentiation of adsorptive and viscous effects of dietary fibres on bile acid release by means of in vitro digestion and dialysis**

Naumann, S., Schweiggert-Weisz, U., Bader-Mittermaier, S., Haller, D. & Eisner, P., Aug 2018, In: *International Journal of Molecular Sciences*. 19, 8, 2193.

High pressure processing assisted enzymatic hydrolysis – An innovative approach for the reduction of soy immunoreactivity

Meinlschmidt, P., Brode, V., Sevenich, R., Ueberham, E., Schweiggert-Weisz, U., Lehmann, J., Rauh, C., Knorr, D. & Eisner, P., 1 Apr 2017, In: *Innovative Food Science and Emerging Technologies*. 40, p. 58-67 10 p.

The effects of pulsed ultraviolet light, cold atmospheric pressure plasma, and gamma-irradiation on the immunoreactivity of soy protein isolate

Meinlschmidt, P., Ueberham, E., Lehmann, J., Reineke, K., Schlüter, O., Schweiggert-Weisz, U. & Eisner, P., 1 Dec 2016, In: *Innovative Food Science and Emerging Technologies*. 38, p. 374-383 10 p.

Influence of the Isolation Method on the Technofunctional Properties of Protein Isolates from *Lupinus angustifolius* L.  
Muranyi, I. S., Otto, C., Pickardt, C., Osen, R., Koehler, P. & Schweiggert-Weisz, U., 1 Nov 2016, In: *Journal of Food Science*. 81, 11, p. C2656-C2663

Protein distribution in lupin protein isolates from *Lupinus angustifolius* L. prepared by various isolation techniques

Muranyi, I. S., Volke, D., Hoffmann, R., Eisner, P., Herfellner, T., Brunnbauer, M., Koehler, P. & Schweiggert-Weisz, U., 15 Sep 2016, In: *Food Chemistry*. 207, p. 6-15 10 p.

Soy protein hydrolysates fermentation: Effect of debittering and degradation of major soy allergens

Meinlschmidt, P., Schweiggert-Weisz, U. & Eisner, P., 1 Sep 2016, In: *LWT*. 71, p. 202-212 11 p.

Immunoreactivity, sensory and physicochemical properties of fermented soy protein isolate  
Meinlschmidt, P., Ueberham, E., Lehmann, J., Schweiggert-Weisz, U. & Eisner, P., 15 Aug 2016, In: Food Chemistry. 205, p. 229-238 10 p.

Odour-active volatiles in lupin kernel fibre preparations (*Lupinus angustifolius* L.): effects of thermal lipoxygenase inactivation  
Stephany, M., Kapusi, K., Bader-Mittermaier, S., Schweiggert-Weisz, U. & Carle, R., 1 Jul 2016, In: European Food Research and Technology. 242, 7, p. 995-1004 10 p.

Flavor release from sugar-containing and sugar-free confectionary egg albumen foams  
Tyapkova, O., Siefarth, C., Schweiggert-Weisz, U., Beauchamp, J., Buettner, A. & Bader-Mittermaier, S., 1 Jun 2016, In: LWT. 69, p. 538-545 8 p.

Enzyme assisted degradation of potential soy protein allergens with special emphasis on the technofunctionality and the avoidance of a bitter taste formation  
Meinlschmidt, P., Schweiggert-Weisz, U., Brode, V. & Eisner, P., 1 May 2016, In: LWT. 68, p. 707-716 10 p.

Lipoxygenase inactivation kinetics and quality-related enzyme activities of narrow-leaved lupin seeds and flakes  
Stephany, M., Eckert, P., Bader-Mittermaier, S., Schweiggert-Weisz, U. & Carle, R., 1 May 2016, In: LWT. 68, p. 36-43 8 p.

Enzymatic treatment of soy protein isolates: effects on the potential allergenicity, technofunctionality, and sensory properties  
Meinlschmidt, P., Sussmann, D., Schweiggert-Weisz, U. & Eisner, P., 1 Jan 2016, In: Food Science and Nutrition. 4, 1, p. 11-23 13 p.

In vitro-study of antioxidant extracts from *Garcinia mangostana* pericarp and Riesling grape pomace - a contribution to by-products valorization as cosmetic ingredients  
Wittenauer, J., Schweiggert-Weisz, U. & Carle, R., 2016, In: Journal of Applied Botany and Food Quality. 89, p. 249-257 9 p.

Polyphenols as active ingredients for cosmetic products  
Zillich, O. V., Schweiggert-Weisz, U., Eisner, P. & Kerscher, M., 1 Oct 2015, In: International Journal of Cosmetic Science. 37, 5, p. 455-464 10 p.

Effect of high moisture extrusion cooking on protein-protein interactions of pea (*Pisum sativum* L.) protein isolates  
Osen, R., Toelstede, S., Eisner, P. & Schweiggert-Weisz, U., 1 Jun 2015, In: International Journal of Food Science and Technology. 50, 6, p. 1390-1396 7 p.

Enzyme-assisted process for DAG synthesis in edible oils  
Von Der Haar, D., Stäbler, A., Wichmann, R. & Schweiggert-Weisz, U., 1 Jun 2015, In: Food Chemistry. 176, p. 263-270 8 p.

Lipoxygenase activity in different species of sweet lupin (*Lupinus* L.) seeds and flakes  
Stephany, M., Bader-Mittermaier, S., Schweiggert-Weisz, U. & Carle, R., 1 May 2015, In: Food Chemistry. 174, p. 400-406 7 p.

Influence of Protein Extraction Techniques of Different De-oiled Residues from *Jatropha curcas* L. on Protein Recovery and Techno-functional Properties  
Gofferjé, G., Zöttl, A., Stäbler, A., Herfellner, T., Schweiggert-Weisz, U. & Flöter, E., Apr 2015, In: Waste and Biomass Valorization. 6, 2, p. 225-235 11 p.

Inhibitory effects of polyphenols from grape pomace extract on collagenase and elastase activity  
Wittenauer, J., MäcKle, S., Sußmann, D., Schweiggert-Weisz, U. & Carle, R., Mar 2015, In: Fitoterapia. 101, p. 179-187 9 p.

Enzymatic esterification of free fatty acids in vegetable oils utilizing different immobilized lipases  
von der Haar, D., Stäbler, A., Wichmann, R. & Schweiggert-Weisz, U., 17 Jan 2015, In: *Biotechnology Letters*. 37, 1, p. 169-174 6 p.

Enzyme-assisted deacidification of Jatropha crude oil by statistical design of experiments  
Gofferjé, G., Gebhardt, M., Stäbler, A., Schweiggert-Weisz, U. & Flöter, E., 1 Oct 2014, In: *European Journal of Lipid Science and Technology*. 116, 10, p. 1421-1431 11 p.

Kinetics of enzymatic esterification of glycerol and free fatty acids in crude Jatropha oil by immobilized lipase from *Rhizomucor miehei*  
Gofferjé, G., Stäbler, A., Herfellner, T., Schweiggert-Weisz, U. & Flöter, E., Sep 2014, In: *Journal of Molecular Catalysis B: Enzymatic*. 107, p. 1-7 7 p.

High moisture extrusion cooking of pea protein isolates: Raw material characteristics, extruder responses, and texture properties  
Osen, R., Toelstede, S., Wild, F., Eisner, P. & Schweiggert-Weisz, U., Apr 2014, In: *Journal of Food Engineering*. 127, p. 67-74 8 p.

Enzymatic degumming of crude jatropha oil: Evaluation of impact factors on the removal of phospholipids  
Gofferjé, G., Motulewicz, J., Stäbler, A., Herfellner, T., Schweiggert-Weisz, U. & Flöter, E., 5 Feb 2014, In: *Journal of the American Oil Chemists' Society*. 91, 12, p. 2135-2141 7 p.

Comparison of two protein extraction techniques utilizing aqueous de-oiled residue from *Jatropha curcas* L  
Gofferjé, G., Klingele, S., Stäbler, A., Schweiggert-Weisz, U. & Flöter, E., Feb 2014, In: *Waste and Biomass Valorization*. 5, 1, p. 33-41 9 p.

Screening of impact factors on the enzymatic neutralization of Jatropha crude oil  
Gofferjé, G., Gebhardt, M., Stäbler, A., Schweiggert-Weisz, U. & Flöter, E., Feb 2014, In: *European Journal of Lipid Science and Technology*. 116, 2, p. 185-192 8 p.

Characterisation of flavour-texture interactions in sugar-free and sugar-containing pectin gels  
Tyapkova, O., Bader-Mittermaier, S., Schweiggert-Weisz, U., Wurzinger, S., Beauchamp, J. & Buettner, A., Jan 2014, In: *Food Research International*. 55, p. 336-346 11 p.

An optimization approach for the production of fatlike protein isolates from different leguminous seeds using response surface methodology  
Sussmann, D., Halter, T., Pickardt, C., Schweiggert-Weisz, U. & Eisner, P., Dec 2013, In: *Journal of Food Process Engineering*. 36, 6, p. 715-730 16 p.

Microscopic characterisation and composition of proteins from lupin seed (*Lupinus angustifolius* L.) as affected by the isolation procedure  
Muranyi, I. S., Otto, C., Pickardt, C., Koehler, P. & Schweiggert-Weisz, U., Dec 2013, In: *Food Research International*. 54, 2, p. 1419-1429 11 p.

Antioxidant activity, lipophilicity and extractability of polyphenols from pig skin - development of analytical methods for skin permeation studies  
Zillich, O. V., Schweiggert-Weisz, U., Hasenkopf, K., Eisner, P. & Kersch, M., Nov 2013, In: *Biomedical Chromatography*. 27, 11, p. 1444-1451 8 p.

Release and in vitro skin permeation of polyphenols from cosmetic emulsions  
Zillich, O. V., Schweiggert-Weisz, U., Hasenkopf, K., Eisner, P. & Kersch, M., Oct 2013, In: *International Journal of Cosmetic Science*. 35, 5, p. 491-501 11 p.

Influence of different processing parameters on the isolation of Lupin (*Lupinus Angustifolius* L.) protein isolates: A preliminary study  
Sussmann, D., Pickardt, C., Schweiggert, U. & Eisner, P., Feb 2013, In: *Journal of Food Process Engineering*. 36, 1, p. 18-28 11 p.

Thermodynamic behavior of erythritol in aqueous solutions and in gelatine gels and its quantification  
Tyapkova, O., Bader-Mittermaier, S. & Schweiggert-Weisz, U., 2013, In: *Thermochimica Acta*. 565, p. 124-131 8 p.

Characterisation and quantification of xanthenes from the aril and pericarp of mangosteens (*Garcinia mangostana* L.) and a mangosteen containing functional beverage by HPLC-DAD-MS<sup>II</sup>  
Wittenauer, J., Falk, S., Schweiggert-Weisz, U. & Carle, R., Sep 2012, In: *Food Chemistry*. 134, 1, p. 445-452 8 p.

Rice Starch Diversity: Effects on Structural, Morphological, Thermal, and Physicochemical Properties-A Review  
Wani, A. A., Singh, P., Shah, M. A., Schweiggert-Weisz, U., Gul, K. & Wani, I. A., Aug 2012, In: *Comprehensive Reviews in Food Science and Food Safety*. 11, 5, p. 417-436 20 p.

Influence of polyols and bulking agents on flavour release from low-viscosity solutions  
Siefarth, C., Tyapkova, O., Beauchamp, J., Schweiggert, U., Buettner, A. & Bader, S., 15 Dec 2011, In: *Food Chemistry*. 129, 4, p. 1462-1468 7 p.

Mixture design approach as a tool to study in vitro flavor release and viscosity interactions in sugar-free polyol and bulking agent solutions  
Siefarth, C., Tyapkova, O., Beauchamp, J., Schweiggert, U., Buettner, A. & Bader, S., Dec 2011, In: *Food Research International*. 44, 10, p. 3202-3211 10 p.

#### **Ortsbestimmung: Wie zukunftsfähig ist die wissenschaftliche Ausbildung in den Lebensmittel- und Ernährungswissenschaften?**

Klein, U. I., Schweiggert, U. & Daniel, H., May 2011, In: *Ernährungs Umschau*. 58, 5, p. 250+251-257

Radio-frequency heating: A new method for improved nutritional quality of tomato puree  
Felke, K., Pfeiffer, T., Eisner, P. & Schweiggert, U., May 2011, In: *Agro Food Industry Hi-Tech*. 22, 3, p. 29-32 4 p.

Lupine Kernel Fiber: Metabolic Effects in Human Intervention Studies and Use as a Supplement in Wheat Bread  
Fechner, A., Schweiggert, U., Hasenkopf, K. & Jahreis, G., 1 Jan 2011, *Flour and Breads and their Fortification in Health and Disease Prevention*. Elsevier, p. 463-473 11 p.

Influence of chemical and physical modification on the bile acid binding capacity of dietary fibre from lupins (*Lupinus angustifolius* L.)  
Cornfine, C., Hasenkopf, K., Eisner, P. & Schweiggert, U., 1 Oct 2010, In: *Food Chemistry*. 122, 3, p. 638-644 7 p.

Sustainable sunflower processing - I. Development of a process for the adsorptive decolorization of sunflower [*Helianthus annuus* L.] protein extracts  
Weisz, G. M., Schneider, L., Schweiggert, U., Kammerer, D. R. & Carle, R., Oct 2010, In: *Innovative Food Science and Emerging Technologies*. 11, 4, p. 733-741 9 p.

Investigations on the bile acid binding mechanisms of lupin dietary fibre  
Schweiggert, U., Cornfine, C., Eisner, P. & Hasenkopf, K., 2010, *Dietary Fibre: New Frontiers for Food and Health*. Wageningen Academic Publishers, p. 251-260 10 p.

Enzyme-assisted liquefaction of ginger rhizomes (*Zingiber officinale* Rosc.) for the production of spray-dried and paste-like ginger condiments  
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Effects of processing and storage on the stability of free and esterified carotenoids of red peppers (*Capsicum annuum* L.) and hot chilli peppers (*Capsicum frutescens* L.)  
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Effects of blanching and storage on capsaicinoid stability and peroxidase activity of hot chili peppers (*Capsicum frutescens* L.)  
Schweiggert, U., Schieber, A. & Carle, R., Sep 2006, In: Innovative Food Science and Emerging Technologies. 7, 3, p. 217-224 8 p.

Characterization of major and minor capsaicinoids and related compounds in chili pods (*Capsicum frutescens* L.) by high-performance liquid chromatography/atmospheric pressure chemical ionization mass spectrometry  
Schweiggert, U., Carle, R. & Schieber, A., 31 Jan 2006, In: Analytica Chimica Acta. 557, 1-2, p. 236-244 9 p.

Inactivation of peroxidase, polyphenoloxidase, and lipoxygenase in paprika and chili powder after immediate thermal treatment of the plant material  
Schweiggert, U., Schieber, A. & Carle, R., 1 Dec 2005, In: Innovative Food Science and Emerging Technologies. 6, 4, p. 403-411 9 p.

An innovative process for the production of spices through immediate thermal treatment of the plant material  
Schweiggert, U., Mix, K., Schieber, A. & Carle, R., Jun 2005, In: Innovative Food Science and Emerging Technologies. 6, 2, p. 143-153 11 p.

Characterization of carotenoids and carotenoid esters in red pepper pods (*Capsicum annuum* L.) by high-performance liquid chromatography/atmospheric pressure chemical ionization mass spectrometry  
Schweiggert, U., Kammerer, D. R., Carle, R. & Schieber, A., 2005, In: Rapid Communications in Mass Spectrometry. 19, 18, p. 2617-2628 12 p.

Process for the recovery of a carotene-rich functional food ingredient from carrot pomace by enzymatic liquefaction  
Stoll, T., Schweiggert, U., Schieber, A. & Carle, R., Dec 2003, In: Innovative Food Science and Emerging Technologies. 4, 4, p. 415-423 9 p.

## Activities

### **BMBF NewFoodSystems Workshop "Zukunft is(s)t jetzt: Hanf und Ölsamen - kleine Samen, große Chance"**

Weisz, U. (Organizer), Etzbach, L. (Organizer), Fink, L. (Organizer), Horn, J. (Organizer), Kulling, S. E. (Organizer), Daniel, H. (Organizer) & Ritter, G. (Organizer)  
18 Feb 2025 → 19 Feb 2025

### **Alternative Proteine - wo geht die Reise hin?**

Weisz, U. (Speaker)  
20 Jan 2025

### **„How processing of protein-rich plant materials affects protein ingredient functionality“**

Weisz, U. (Speaker) & Daniel, H. (Speaker)  
4 Dec 2024

### **BMBF NewFoodSystems Webinar "Nagoya-Protokoll – Grundlagen, Entwicklungen und Erfahrungen"**

Horn, J. (Organizer), Weisz, U. (Organizer), Etzbach, L. (Organizer), Fink, L. (Organizer), Kulling, S. E. (Organizer) & Daniel, H. (Organizer)  
28 Nov 2024

**Workshop-Moderation "Planetary Health Diet aus bayerischer Perspektive"**

Horn, J. (Participant), Weisz, U. (Speaker) & Kussmann, M. (Speaker)  
21 Nov 2024

**Fachkongress „Über den Tellerrand: Ernährungssysteme mit Zukunft“**

Horn, J. (Participant), Weisz, U. (Participant), Fink, L. (Participant) & Daniel, H. (Participant)  
20 Nov 2024 → 21 Nov 2024

**BMBF NewFoodSystems Webinar "Rechtliche Regelungen rund um alternative Proteine – Novel Food-Verordnung, Kennzeichnung & Bewerbung"**

Horn, J. (Organizer), Weisz, U. (Organizer), Etzbach, L. (Organizer), Daniel, H. (Organizer), Kulling, S. E. (Organizer), Fink, L. (Organizer) & Ballke, C. (Organizer)  
11 Nov 2024

**Von der Futtermittelzutat zur Lebensmittelzutat: Herausforderungen von Pflanzenproteinen für die Herstellung funktioneller Lebensmittel**

Weisz, U. (Speaker)  
11 Oct 2024

**BMBF NewFoodSystems Day 2024**

Horn, J. (Organizer), Weisz, U. (Organizer), Etzbach, L. (Organizer), Daniel, H. (Organizer), Fink, L. (Organizer), Kulling, S. E. (Organizer), Schlegel, M. (Organizer), Müller, D. (Organizer) & Fink, D. (Organizer)  
28 Sep 2024

**BMBF NewFoodSystems Podiumsdiskussion „Neue Lebensmittel auf dem Teller: Was erwartet uns?“**

Horn, J. (Organizer), Weisz, U. (Organizer), Etzbach, L. (Organizer), Fink, L. (Organizer), Kulling, S. E. (Organizer), Daniel, H. (Organizer), Stephan, A. (Speaker), Eisner, P. (Speaker), Hamm, U. (Speaker) & Brandenburg, J. (Speaker)  
9 Aug 2024

**Member of Novo Nordisk Foundation Committee on Plant Science, Agriculture, and Food Biotechnology**

Weisz, U. (Consultant)  
1 Jul 2024 → ...

**Novo Nordisk Foundation (External organization)**

Weisz, U. (Chair)  
1 Jul 2024 → ...

**BMBF NewFoodSystems Workshop "Zukunft is(s)t jetzt - die Vielfalt der Algenküche"**

Horn, J. (Organizer), Fink, L. (Organizer), Etzbach, L. (Organizer), Ritter, G. (Organizer), Weisz, U. (Organizer), Daniel, H. (Organizer) & Kulling, S. E. (Organizer)  
4 Jun 2024 → 5 Jun 2024

**BMBF NewFoodSystems Workshop "Zukunft is(s)t jetzt - die Vielfalt der Algenküche"**

Horn, J. (Organizer), Etzbach, L. (Organizer), Weisz, U. (Organizer), Daniel, H. (Organizer), Kulling, S. E. (Organizer), Fink, L. (Organizer) & Ritter, G. (Organizer)  
4 Jun 2024 → 5 Jun 2024

**Mitglied der Fachkommission Humanernährung der UFOP**

Weisz, U. (Consultant)  
1 May 2024 → ...

**UFOP - Union zur Förderung von Öl- und Proteinpflanzen (External organization)**

Weisz, U. (Chair)  
1 May 2024 → ...

**Beteiligung von NewFoodSystems am Messe-Gemeinschaftsstand „Schaufester Bioökonomie“ des Projektträger Jülich**  
Horn, J. (Organizer), Weisz, U. (Organizer), Etzbach, L. (Organizer), Fink, L. (Organizer), Kulling, S. E. (Organizer) & Daniel, H. (Organizer)  
22 Apr 2024 → 26 Apr 2024

**From Feed Ingredient to Food Ingredient: Exploring the Potential and Challenges of Plant Proteins in Functional Food Production**  
Weisz, U. (Speaker)  
18 Apr 2024

**Vom Feld bis auf den Teller: Wie Pflanzenproteine Ernährung und Landwirtschaft transformieren!**  
Weisz, U. (Speaker)  
11 Apr 2024

**BMBF NewFoodSystems Webinar "Patente und Recherche"**  
Horn, J. (Organizer), Weisz, U. (Organizer), Etzbach, L. (Organizer), Kulling, S. E. (Organizer), Fink, L. (Participant), Daniel, H. (Organizer) & Weisse, R. (Speaker)  
14 Mar 2024

**BMBF NewFoodSystems Workshop „Kontroversen in neuen Lebensmittelsystemen – Welche Ansätze sind zukunftsfähig?“**  
Horn, J. (Organizer), Etzbach, L. (Organizer), Weisz, U. (Organizer), Kulling, S. E. (Organizer), Fink, L. (Organizer) & Strassner, C. (Organizer)  
7 Mar 2024

**17. Wissenschaftstagung Ökologischer Landbau**  
Horn, J. (Participant), Etzbach, L. (Participant), Weisz, U. (Participant), Kulling, S. E. (Participant) & Fink, L. (Participant)  
5 Mar 2024 → 8 Mar 2024

**Perspektiven der Lebensmittelwirtschaft an eine pflanzenbasierte Ernährung: Anforderungen an Pflanzenzüchtung und Lebensmittelwirtschaft**  
Weisz, U. (Speaker)  
19 Feb 2024

**Transforming Food Systems through Innovations: NewFoodSystems Initiative**  
Weisz, U. (Speaker)  
13 Dec 2023

**Bioökonomieforum 2023 – Veränderung gestalten 2023!**  
Weisz, U. (Participant), Etzbach, L. (Participant), Fink, L. (Participant) & Kulling, S. E. (Participant)  
4 Dec 2023 → 5 Dec 2023

**Allergenes Potenzial pflanzlicher Lebensmittelproteine und Erstellung einer Proteindatenbank**  
Weisz, U. (Speaker)  
23 Nov 2023

**BMBF NewFoodSystems Workshop “Zukunft is(s)t jetzt – Hülsenfrüchte mal anders gemacht”**  
Horn, J. (Organizer), Etzbach, L. (Organizer), Fink, L. (Organizer), Ritter, G. (Organizer), Weisz, U. (Organizer), Daniel, H. (Organizer) & Kulling, S. E. (Organizer)  
14 Nov 2023 → 15 Nov 2023

**BMBF NewFoodSystems Workshop “Zukunft is(s)t jetzt – Hülsenfrüchte mal anders gemacht”**  
Horn, J. (Organizer), Etzbach, L. (Organizer), Weisz, U. (Organizer), Daniel, H. (Organizer), Kulling, S. E. (Organizer), Fink, L. (Organizer) & Ritter, G. (Organizer)  
14 Nov 2023 → 15 Nov 2023

**Max Rubner-Institut (External organization)**

Weisz, U. (Member)

1 Nov 2023 → ...

**Mitglied des wissenschaftlichen Beirats des Max Rubner-Instituts**

Weisz, U. (Consultant)

1 Nov 2023 → ...

**Potenzial und Herausforderungen pflanzlicher Proteine als funktionelle Zutaten für die Lebensmittelherstellung**

Weisz, U. (Speaker)

12 Oct 2023

**Pflanzliche Proteinzutaten als Rohstoffe für die Herstellung von Alternativprodukten – Herausforderungen und Möglichkeiten**

Weisz, U. (Speaker)

10 Oct 2023

**Revolutionising Food Systems: Possible Strategies for Sustainable and Functional New Food Production**

Weisz, U. (Speaker)

19 Sep 2023 → 22 Sep 2023

**The 9th Chemical Sciences and Society Summit**

Weisz, U. (Participant)

19 Sep 2023 → 22 Sep 2023

**BMBF NewFoodSystems Workshop "Zukunft is(s)t jetzt – Hülsenfrüchte mal anders gemacht"**

Horn, J. (Organizer), Etzbach, L. (Organizer), Fink, L. (Organizer), Ritter, G. (Organizer), Weisz, U. (Organizer), Daniel, H. (Organizer) & Kulling, S. E. (Organizer)

27 Jun 2023 → 28 Jun 2023

**BMBF NewFoodSystems Workshop "Zukunft is(s)t jetzt – Hülsenfrüchte mal anders gemacht"**

Horn, J. (Organizer), Etzbach, L. (Organizer), Fink, L. (Organizer), Ritter, G. (Organizer), Weisz, U. (Organizer), Daniel, H. (Organizer) & Kulling, S. E. (Organizer)

27 Jun 2023 → 28 Jun 2023

**Potential pflanzlicher Proteine als funktionelle Zutaten für die Lebensmittelherstellung - Entwicklung einer Proteindatenbank**

Weisz, U. (Speaker)

9 May 2023

**BMBF NewFoodSystems Ausstellung "Unsere Lebensmittelsysteme im Wandel der Bioökonomie"**

Horn, J. (Organizer), Weisz, U. (Organizer), Etzbach, L. (Organizer), Fink, L. (Organizer), Kulling, S. E. (Organizer) & Daniel, H. (Organizer)

14 Apr 2023 → 8 Oct 2023

**BMBF NewFoodSystems Minisymposium „Innovationsraum NewFoodSystems“**

Weisz, U. (Organizer), Etzbach, L. (Organizer), Kulling, S. E. (Organizer) & Gola, S. (Organizer)

16 Mar 2023

**60. Wissenschaftlicher Kongress der DGE**

Weisz, U. (Organizer), Etzbach, L. (Participant), Kulling, S. E. (Organizer) & Gola, S. (Participant)

15 Mar 2023 → 17 Mar 2023

#### **60. Wissenschaftlicher Kongress der DGE**

Weisz, U. (Chair) & Nöthlings, U. (Chair)  
15 Mar 2023 → 17 Mar 2023

#### **Pflanzenbasierte Ernährung – welche Herausforderungen ergeben sich für pflanzliche Proteinzutaten?**

Weisz, U. (Speaker)  
15 Mar 2023

#### **BMBF NewFoodSystems Day 2022**

Weisz, U. (Organizer), Etzbach, L. (Organizer), Fink, L. (Organizer), Kulling, S. E. (Organizer), Daniel, H. (Organizer) & Schlegel, M. (Organizer)  
24 Sep 2022

#### **Argelander Stiftung der Universität Bonn (External organization)**

Weisz, U. (Member)  
1 Jan 2022 → 30 Dec 2023

#### **Gutachterin der Argelander-Stiftung**

Weisz, U. (Consultant)  
1 Jan 2022 → 30 Dec 2023

### **Projects**

#### **Development of Plant-based Dairy Analogues Using the Interaction of Lentil (*Lens culinaris Medic*) Protein Isolate and Lentil Starch and Enzymatic Treatments**

Rezaei, A. (PI), Weisz, U. (Col) & Etzbach, L. (Col)  
1/02/25 → 31/07/26

#### **EXIST - Gründungsstipendium CircularGrain**

Weisz, U. (PI)  
1/12/24 → 30/11/25

#### **FAPESP/BAYLAT: Food BaySP workshops - Adding value to agroindustrial by products**

Weisz, U. (PI)  
1/10/24 → 29/11/26

#### **Leg4Future: Ganzheitliche Verwertung von Mungobohnen und Linsen – Herstellung qualitativ hochwertiger Proteinkonzentrate und Nutzung der Nebenströme**

Weisz, U. (PI) & Etzbach, L. (CoPI)  
1/10/24 → 30/09/27

#### **Hemp4Food: Innovationsraum: NewFoodSystems – Hemp4Food – Umsetzungsphase, TPD**

Weisz, U. (PI), Etzbach, L. (CoPI) & Dziuballe, A. (Col)  
1/09/23 → 31/12/25

#### **NewFoodSystems: "Innovationsraum: NewFoodSystems - Verwertung und Management - Umsetzungsphase"**

Weisz, U. (PI), Horn, J. (Col) & Etzbach, L. (Col)  
1/03/23 → 31/12/25