My primary research area is protein biochemistry with focus on obtaining a better understanding of the influence of protein functionality on food quality. This includes the functionality, modification and composition of the proteins in the raw material and how the proteins are modified during processing, storage or maturation during food production.

I have mainly been working within the field of meat science investigating the influence of the protein changes and modification on meat quality with focus on protein degradation, phosphorylation and oxidation. My research also includes processing of side-streams from the meat industry into novel ingredients.

I am an expert in the use of proteomics for protein characterization and have experience with different types of gel electrophoresis and mass spectrometry.

Publications

**Comparative analysis of substrate affinity and catalytic efficiency of γ-glutamyltransferase from bovine milk and Bacillus amyloliquefaciens**

Cao, Lichuang, Li, Qian & Lametsch, Rene, 2023, In: Food Chemistry. 405, 8 p., 134930.

**Decolorization of porcine hemoglobin hydrolysates: The role of peptide characteristics and pH values**

Li, Qian, Zhang, Longteng, Li, Y. & Lametsch, Rene, 2023, In: Journal of Food Science. 88, 8

**Elucidation of the Molecular Mechanism of Bovine Milk γ-Glutamyltransferase Catalyzed Formation of γ-Glutamyl-Valyl-Glycine**


**Four novel Curtobacterium phages isolated from environmental samples**


**New Insight into the Substrate Selectivity of Bovine Milk γ-glutamyl Transferase via Structural and Molecular Dynamics Predictions**


**Physicochemical properties, texture, and in vitro protein digestibility in high-moisture extrudate with different oil/water ratio**


**Protein phosphorylation profile of Atlantic cod (Gadus morhua) in response to pre-slaughter pumping stress and postmortem time**

Recent advances on characterization of protein oxidation in aquatic products: A comprehensive review

Three novel Erwinia billingiae phages isolated from organic waste represent three new genera

Cooking affects pork proteins in vitro rate of digestion due to different structural and chemical modifications

Current progress in kokumi-active peptides, evaluation and preparation methods: a review
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Effects of γ-Glutamylated Hydrolysates from Porcine Hemoglobin and Meat on Kokumi Enhancement and Oxidative Stability of Emulsion-Type Sausages
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Morphological and Genetic Characterization of Eggerthella lenta Bacteriophage PMBT5

Rendered-Protein Hydrolysates as a Low-Cost Nitrogen Source for the Fungal Biotransformation of 5-Hydroxymethylfurfural

Salmonella phage akira, infecting selected Salmonella enterica Enteritidis and Typhimurium strains, represents a new lineage of bacteriophages

Structural characteristics of high-moisture extrudates with oil-in-water emulsions

X-ray contrast tomography and Raman spectroscopy methods show heat-induced changes in meat

Applications in nutrition: Peptides as taste enhancers
Effect of the addition of cheese powder and salt content on sensory profile, physicochemical properties and γ-glutamyl kokumi peptides content in dry fermented sausages

Flavor characterization of animal hydrolysates and potential of glucosamine in flavor modulation

Glycation sites and bioactivity of lactose-glycated caseinate hydrolysate in lipopolysaccharide-injured IEC-6 cells

Identification and Activity Characterization of gamma-Glutamyltransferase from Bovine Milk
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Proteolytic activity of selected commercial Lactobacillus helveticus strains on soy protein isolates

Transglutaminase-Mediated Caseinate Oligochitosan Glycation Enhances the Effect of Caseinate Hydrolysate to Ameliorate the LPS-Induced Damage on the Intestinal Barrier Function in IEC-6 Cells

A Rare, Virulent Clostridium perfringens Bacteriophage Susfortuna Is the First Isolated Bacteriophage in a New Viral Genus

Bioactive proteins in bovine colostrum and effects of heating, drying and irradiation

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Joehnke, M. S., Lametsch, Rene & Sørensen, J. C., 2019, In: Food Research International. 123, p. 346-354

Protein hydrolysates of porcine hemoglobin and blood: peptide characteristics in relation to taste attributes and formation of volatile compounds

Quantitative phosphoproteomic analysis of ovine muscle with different postmortem glycolytic rates

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Proteomic profiling of oxidized cysteine and methionine residues by hydroxyl radicals in myosin of pork

Rheological and sensory properties and aroma compounds formed during ripening of soft brined cheese made from camel milk

Structural characteristics of low bitter and high umami protein hydrolysates prepared from bovine muscle and porcine plasma

The effect of protein-to-alginate ratio on in vitro gastric digestion of nanoparticulated whey protein

Novel Variants of Streptococcus thermophilus Bacteriophages Are Indicative of Genetic Recombination among Phages from Different Bacterial Species

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Characterisation of a novel enterobacteria phage, CAjan, isolated from rat faeces

Grating-based X-ray tomography of 3D food structures

Prediction of total fatty acid parameters and individual fatty acids in pork backfat using Raman spectroscopy and chemometrics: understanding the cage of covariance between highly correlated fat parameters

Revalorisation of bovine collagen as a potential precursor of angiotensin I-converting enzyme (ACE) inhibitory peptides based on in silico and in vitro protein digestions

Accurate determination of endpoint temperature of cooked meat after storage by Raman spectroscopy and chemometrics
Antioxidant capacity of hydrolyzed animal by-products and relation to amino acid composition and peptide size distribution

Novel X-ray phase-contrast tomography method for quantitative studies of heat induced structural changes in meat

Phosphoproteome analysis of sarcoplasmic and myofibrillar proteins in bovine longissimus muscle in response to postmortem electrical stimulation

The effects of eating marine- or vegetable-fed farmed trout on the human plasma proteome profiles of healthy men

Water and fat mobility in myofibrillar protein gels explored by low-field NMR

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Effect of modified atmosphere packaging on breaking strength of single muscle fibres from beef and pork

Healthy, nutritious and tasty fish for the future

High oxygen atmosphere packaging affects meat tenderness and protein oxidation

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Is m-Calpain active post-mortem in pork?

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Identification of protein degradation during post-mortem storage of pig meat

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