

Kasper Engholm-Keller  
Postdoc

Ingredient and Dairy Technology

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## Short presentation

I am a protein chemist with 15 years of experience in mass spectrometry-based protein analysis and cell biology. My research is focused on establishing analytical methods for analysis of proteins and their modifications and to utilise these methods to study how different treatments of food ingredients and products affect these modifications and thereby the protein structure and function.

## Qualifications

Biochemistry and molecular biology, PhD, NordCEE og Biologisk Institut, Syddansk Universitet  
1 Mar 2008 → 28 Jun 2011

Award Date: 15 Sep 2011

Biochemistry and molecular biology, MSc, NordCEE og Biologisk Institut, Syddansk Universitet

Award Date: 15 Mar 2008

Biochemistry and molecular biology, BSc, NordCEE og Biologisk Institut, Syddansk Universitet

Award Date: 30 Aug 2005

## Employment

### Postdoc

Ingredient and Dairy Technology

Frederiksberg C

20 Nov 2017 → nu

### Postdoctoral researcher

Children's Medical Research Institute

Australia

1 Jul 2012 → 31 Jul 2017

### Postdoctoral researcher

NordCEE og Biologisk Institut, Syddansk Universitet

Odense, Denmark

1 Jul 2011 → 30 Jun 2012

## Research outputs

### **A Gently Processed Skim Milk-Derived Whey Protein Concentrate for Infant Formula: Effects on Gut Development and Immunity in Preterm Pigs**

Aasmul-Olsen, Karoline, Akilloğlu, H. G., Christiansen, Line Iadsatian, Engholm-Keller, Kasper, Brunse, Anders, Stefanova, Denitsa Vladimirova, Bjørnshave, A., Bechshøft, M. R., Skovgaard, K., Thymann, Thomas, Sangild, Per Torp, Lund, Marianne N. & Bering, S. B., 2024, In: Molecular Nutrition and Food Research. 68, 6, 2300458.

### **Reactivity and mechanism of the reactions of 4-methylbenzoquinone with amino acid residues in $\beta$ -lactoglobulin: A kinetic and product investigation**

Liu, Jingyuan, Engholm-Keller, Kasper, Poojary, Mahesha Manjunatha, Bevilacqua, Marta, Andersen, Mogens Larsen & Lund, Marianne N., 2024, In: Food Chemistry. 434, 10 p., 137473.

**Resolving fluorescence spectra of Maillard reaction products formed on bovine serum albumin using parallel factor analysis**

Risum, Anne Bech, Bevilacqua, Marta, Li, C., Engholm-Keller, Kasper, Poojary, Mahesha Manjunatha, Rinnan, Åsmund & Lund, Marianne N., 2024, In: Food Research International. 178, 113950.

**The impact of lager brewing yeasts on flavor stability of pilot-scale beer during storage**

Murmann, A. N., Bevilacqua, Marta, Danielsen, Bente Pia, Jansson, T., Engholm-Keller, Kasper, Poojary, Mahesha Manjunatha, Arneborg, Nils & Lund, Marianne N., 2024, In: European Food Research and Technology. 250, p. 715-725

**Covalent bonding of 4-methylcatechol to  $\beta$ -lactoglobulin results in the release of cysteine-4-methylcatechol adducts after in vitro digestion**

Waqar, K., Engholm-Keller, Kasper, Joehnke, M. S., Chatterton, Dereck Edward Winston, Poojary, Mahesha Manjunatha & Lund, Marianne N., 2022, In: Food Chemistry. 397, 9 p., 133775.

**Cysteine residues are responsible for the sulfurous off-flavor formed in heated whey protein solutions**

Li, C., Paulsen, P. A., Akilloğlu, G., Nielsen, S. B., Engholm-Keller, Kasper & Lund, Marianne N., 2022, In: Food Chemistry: Molecular Sciences. 5, 9 p., 100120.

**Detection of protein oxidation products by fluorescence spectroscopy and trilinear data decomposition: Proof of concept**

Bevilacqua, Marta, Engholm-Keller, Kasper, Risum, Anne Bech, Rinnan, Åsmund & Lund, Marianne N., 2022, In: Food Chemistry. 396, 9 p., 133732.

**Oxidation of Whey Proteins during Thermal Treatment Characterized by a Site-Specific LC-MS/MS-Based Proteomic Approach**

Li, C., Nielsen, S. B., Engholm-Keller, Kasper & Lund, Marianne N., 2022, In: Journal of Agricultural and Food Chemistry. 70, 14, p. 4391-4406

**Site-Specific Characterization of Heat-Induced Disulfide Rearrangement in Beta-Lactoglobulin by Liquid Chromatography-Mass Spectrometry**

Li, C., Engholm-Keller, Kasper & Lund, Marianne N., 2022, In: Journal of Agricultural and Food Chemistry. 70, 3, p. 847-856

**UHT treatment and storage of liquid infant formula affects protein digestion and release of bioactive peptides**

Ye, Y., Engholm-Keller, Kasper, Fang, Y., Nielsen, C. F., Jorda, A., Lund, Marianne N. & Chatterton, Dereck Edward Winston, 2022, In: Food & Function. 13, 1, p. 344-355

**TWIST1 and chromatin regulatory proteins interact to guide neural crest cell differentiation**

Fan, X., Pragathi Masamsetti, V., Sun, J. Q. J., Engholm-Keller, Kasper, Osteil, P., Studdert, J., Graham, M. E., Fossat, Nicolas Julien & Tam, P. P. L., 2021, In: eLife. 10, 33 p., e62873.

**Generation of Aggregates of  $\alpha$ -Lactalbumin by UV-B Light Exposure**

Zhao, Z., Engholm-Keller, Kasper, Poojary, Mahesha Manjunatha, Boelt, S. G., Rogowska-Wrzesinska, A., Skibsted, Leif Horsfelt, Davies, Michael J. & Lund, Marianne N., 2020, In: Journal of Agricultural and Food Chemistry. 68, 24, p. 6701-6714 14 p.

**SNAP-25 phosphorylation at Ser187 is not involved in  $Ca^{2+}$  or phorbol ester-dependent potentiation of synaptic release**

Ruiter, M., Houy, S., Engholm-Keller, Kasper, Graham, M. E. & Sørensen, Jakob Balslev, 2020, In: Molecular and Cellular Neuroscience. 102, 103452.

**A systems-level Characterization of the Differentiation of Human Embryonic Stem Cells into Mesenchymal Stem Cells**

Billing, A. M., Dib, S. S., Bhagwat, A. M., da Silva, I. T., Drummond, R. D., Hayat, S., Al-Mismar, R., Ben-Hamidane, H., Goswami, N., Engholm-Keller, Kasper, Larsen, M. R., Suhre, K., Rafii, A. & Graumann, J., 2019, In: Molecular & Cellular Proteomics. 18, 10, p. 1950-1966 17 p.

**The interaction of assembly protein AP180 and clathrin is inhibited by multi-site phospho-mimetics**

Moshkanbaryans, L., Chan, L., Engholm-Keller, Kasper, Wark, J. R., Robinson, P. J. & Graham, M. E., 2019, In: *Neurochemistry International*. 129, 5 p., 104474.

**The temporal profile of activity-dependent presynaptic phospho-signalling reveals long-lasting patterns of poststimulus regulation**

Engholm-Keller, Kasper, Waardenberg, A. J., Müller, J. A., Wark, J. R., Fernando, R. N., Arthur, J. W., Robinson, P. J., Dietrich, D., Schoch, S. & Graham, M. E., 2019, In: *PLOS Biology*. 17, 3, 46 p., e3000170.

**Affinity proteomics for interactome and phosphoproteome screening in synaptosomes**

Engholm-Keller, Kasper, Bache, N., Rao, S. R., Wark, J. R., Larsen, M. R., Robinson, P. J. & Graham, M. E., 2018, *Synaptosomes*. Murphy, K. M. (ed.). Springer, p. 165–191 (*Neuromethods*, Vol. 141).

**Improving the Phosphoproteome Coverage for Limited Sample Amounts Using TiO<sub>2</sub>-SIMAC-HILIC (TiSH) Phosphopeptide Enrichment and Fractionation**

Engholm-Keller, Kasper & Larsen, M. R., 2016, *Phospho-Proteomics: Methods and Protocols*. von Stechow, L. (ed.). 2. ed. Humana Press, p. 161–177 (*Methods in Molecular Biology*, Vol. 1355).