

Simon Gregersen  
Associate Professor  
Department of Chemistry and Bioscience  
The Faculty of Engineering and Science  
Section of Bioresources and Process Engineering  
Food Protein Analytics & Informatics  
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## Qualifications

Nanobioorganic Chemistry, Ph.D., Fluorescent peptide-stabilized silver-nanoclusters: A solid-phase approach for high-throughput ligand discovery, University of Copenhagen  
15 Dec 2010 → 4 Feb 2014  
Award Date: 10 Apr 2014

Nanobiotechnology, M.Sc., Fmoc Solid-Phase Peptide Synthesis of Novel Linear and Cyclic D,L- $\alpha$ -Peptides: A Comparative Study of Supramolecular Self-Assembly and Antimicrobial Activity, Institute of Physics and Nanotechnology, Aalborg  
1 Sept 2008 → 25 Jun 2010  
Award Date: 25 Jun 2010

Nanobiotechnology, B.Sc., De novo Design and Synthesis of Cationic Antimicrobial Peptides  
1 Sept 2005 → 27 Jun 2008  
Award Date: 27 Jun 2008

## Employment

### Associate Professor

Associate Professor  
Department of Chemistry and Bioscience  
The Faculty of Engineering and Science  
Aalborg, Denmark  
1 Mar 2018 → 31 Dec 4712

### Associate Professor

Associate Professor  
The Faculty of Engineering and Science  
Aalborg Øst, Denmark  
1 Mar 2018 → 31 Dec 4712

### Associate Professor

Associate Professor  
Section of Bioresources and Process Engineering  
The Faculty of Engineering and Science  
Aalborg Øst, Denmark  
1 Mar 2018 → 31 Dec 4712

### Food Protein Analytics & Informatics

The Faculty of Engineering and Science  
1 Jan 2025 → present

### External Consultant

VBM Laboratoriet A/S  
Aabybro, Denmark

1 Mar 2018 → 1 Jan 2020

### **R&D Chemist and Project Manager**

VBM Laboratoriet A/S

Aabybro, Denmark

1 Aug 2014 → 28 Feb 2018

### **Post Doctoral Researcher**

University of Copenhagen

Copenhagen, Denmark

1 Mar 2014 → 31 Jul 2014

### **Scientific Assistant**

University of Copenhagen

Copenhagen, Denmark

15 Dec 2013 → 28 Feb 2014

### **Ph.D. Scholar**

University of Copenhagen

Copenhagen, Denmark

15 Dec 2010 → 14 Dec 2013

## **Research outputs**

### **Selective removal of green pigments and associated proteins from clover-grass protein concentrates: molecular insights into a non-destructive, two-stage membrane-based biorefinery concept for high-quality food protein production**

Gregersen Echers, S., Abdul-Khalek, N., Jensen, N. H., Jørgensen, A. K., Mattsson, T., Jørgensen, M. K., Lübeck, P. S. & Lübeck, M., 1 Dec 2025, (E-pub ahead of print) In: Sustainable Food Technology.

### **Residual barley proteins in brewers' spent grains: Quantitative composition and implications for food ingredient applications**

Gregersen Echers, S., Mikkelsen, R. K., Abdul-Khalek, N., Queiroz, L. S., Hobley, T. J., Schulz, B. L., Overgaard, M. T., Jacobsen, C. & Yesiltas, B., Dec 2025, In: Innovative Food Science and Emerging Technologies. 106, 14 p., 104277.

### **Selective removal of green pigments and associated proteins from clover-grass protein concentrates: Molecular insight into a non-destructive, two-stage membrane-based biorefinery concept for high-quality food protein production**

Echers, S. G., Abdul-Khalek, N., Jensen, N. H., Jørgensen, A. K., Mattsson, T., Jørgensen, M. K., Lübeck, P. S. & Lübeck, M., 26 Oct 2025, bioRxiv, 54 p.

### **What's left from the brew? Investigating residual barley proteins in spent grains for downstream valorization opportunities**

Gregersen Echers, S., Mikkelsen, R. K., Abdul-Khalek, N., Queiroz, L. S., Hobley, T. J., Schulz, B., Overgaard, M. T., Jacobsen, C. & Yesiltas, B., 27 Mar 2025, bioRxiv, 49 p.

### **Targeted hydrolysis of native potato protein: A novel workflow for obtaining hydrolysates with improved interfacial properties**

Gregersen Echers, S., Jafarpour, A., Yesiltas, B., García Moreno, P. J., Greve-Poulsen, M., Hansen, D. K., Jacobsen, C., Overgaard, M. T. & Hansen, E. B., Apr 2023, In: Food Hydrocolloids. 137, 108299.

### **Is Gigartina a potential source of food protein and functional peptide-based ingredients? Evaluating an industrial, pilot-scale extract by proteomics and bioinformatics**

Gregersen Echers, S., Abdul-Khalek, N., Mikkelsen, R. K., Holdt, S. L., Jacobsen, C., Hansen, E. B., Olsen, T. H., Sejberg, J. J. P. & Overgaard, M. T., Dec 2022, In: Future Foods. 6, 100189.

### **Advancing green biorefining from the bottom-up: From grass to food protein and ingredients aided by proteomics and bioinformatics**

Gregersen Echers, S., Mattsson, T., Jørgensen, M. K., Gundersen, E., Heiske, S. U., Holt, C., Olsen, M., Stephensen Lübeck, P. & Lübeck, M., 22 Sept 2022.

**Peptide emulsifiers from potato: Structure/function and targeted release**

Gregersen Echers, S., García Moreno, P. J., Yesiltas, B., Jafarpour, A., Bjørlie, M., Hansen, E. B., Marcatili, P., Jacobsen, C., Jones, N. C., Hoffmann, S. V., Wimmer, R. & Overgaard, M. T., 22 Sept 2022.

**Targeted hydrolysis of native potato protein: A novel route for obtaining hydrolysates with improved interfacial properties**

Gregersen Echers, S., Jafarpour, A., Yesiltas, B., García Moreno, P. J., Greve-Poulsen, M., Hansen, D. K., Jacobsen, C., Overgaard, M. T. & Hansen, E. B., 25 May 2022, bioRxiv.

**A potent peptide emulsifier from potato storage proteins and its natural isoforms: Insight into the structure/function relationship of amphipathic,  $\alpha$ -helical peptide emulsifiers, their targeted release, and applicability.**

Gregersen Echers, S., García Moreno, P. J., Yesiltas, B., Jafarpour, A., Bjørlie, M., Hansen, E. B., Marcatili, P., Jacobsen, C., Jones, N. C., Hoffmann, S. V., Wimmer, R. & Overgaard, M. T., 11 Apr 2022.

**Proteomic characterization of pilot scale hot-water extracts from the industrial carrageenan red seaweed *Eucheuma denticulatum***

Gregersen Echers, S., Pertseva, M., Marcatili, P., Holdt, S. L., Jacobsen, C., García Moreno, P. J., Hansen, E. B. & Overgaard, M. T., Mar 2022, In: Algal Research. 62, 15 p., 102619.

**Enzymatic extraction improves intracellular protein recovery from the industrial carrageenan seaweed *Eucheuma denticulatum* revealed by quantitative, subcellular protein profiling: A high potential source of functional food ingredients**

Gregersen Echers, S., Havgaard Kongsted, A.-S., Brønnum Nielsen, R., Hansen, S. S., Lau, F. A., Rasmussen, J. B., Holdt, S. L. & Jacobsen, C., 30 Dec 2021, In: Food Chemistry: X. 12, 100137.

**Applying Quantitative Proteomics for Evaluation of Protein Quality, Nutritional Value, and Extraction Methods in Side-Streams of Industrial Carrageenan Production from the Red Seaweed *Eucheuma denticulatum* (Spinosum)**

Gregersen Echers, S., Yesiltas, B., García Moreno, P. J., Naseri, A., Holdt, S. L., Jacobsen, C., Hansen, E. B., Marcatili, P. & Overgaard, M. T., 1 Oct 2021.

**Microbial proteins: Moving from feed to food applications aided by proteomics and bioinformatics**

Gregersen Echers, S., Yesiltas, B., García Moreno, P. J., Hegelund Olsen, T., Marcatili, P., Jacobsen, C., Hansen, E. B., Ntokou, E., Christensen, I. & Overgaard, M. T., 1 Oct 2021.

**Quantitative proteomics and bioinformatics in seaweed food protein research: Evaluation of extraction methods, bioactive potential, and nutritional value.**

Gregersen Echers, S., Yesiltas, B., García Moreno, P. J., Naseri, A., Holdt, S. L., Jacobsen, C., Hansen, E. B. & Overgaard, M. T., 27 Sept 2021, p. 17. 1 p.

**Proteomic characterization of pilot scale hot-water extracts from the industrial carrageenan red seaweed *Eucheuma denticulatum***

Gregersen Echers, S., Pertseva, M., Marcatili, P., Holdt, S. L., Jacobsen, C., García-Moreno, P. J., Hansen, E. B. & Overgaard, M. T., 14 Dec 2020, 41 p. bioRxiv.

**Insight into the structure/function relationship in amphipathic,  $\alpha$ -helical peptide emulsifiers: A study of a highly potent peptide emulsifier derived from potato storage proteins and its natural isoforms.**

Gregersen Echers, S., García Moreno, P. J., Yesiltas, B., Hansen, E. B., Marcatili, P., Jacobsen, C., Jones, N. C., Hoffmann, S. V., Wimmer, R. & Overgaard, M. T., 22 Jan 2020.

**Peptide-Stabilized, Fluorescent Silver Nanoclusters: Solid-Phase Synthesis and Screening**

Gregersen, S., Jensen, K. J. & Vosch, T. A. J., 3 Nov 2016, In: Chemistry: A European Journal. 22, 51, p. 18492 18500 p., 8.

Flourescent peptide-stabilized silver-nanoclusters, a solid-phase approach for high-throughput ligand discovery  
Gregersen, S., 4 Feb 2014, 1 ed. Copenhagen: Copenhagen University. 172 p.

Novel Peptide Ligands for Stabilization of Fluorescent, Silver Nanoclusters: On-resin Screening of a Peptide Library  
Gregersen, S., Jensen, K. J. & Vosch, T. A. J., 13 May 2013, In: Journal of Peptide Science. 100, p. 269-270 1 p., YI-P 107.

Novel Peptide Ligands for Stabilization of Fluorescent, Silver Nanoclusters: On-resin Screening of a Peptide Library  
Gregersen, S., Jensen, K. J. & Vosch, T. A. J., 13 May 2013.

Peptides as Ligands for Fluorescent, Silver Nanoclusters: Development of a Novel Platform for On-resin Screening  
Gregersen, S., Jensen, K. J. & Vosch, T. A. J., 13 May 2013, In: Journal of Peptide Science. 100, p. 294 1 p., YI-P 216.

Peptides as Ligands for Fluorescent, Silver Nanoclusters: Development of a Novel Platform for On-resin Screening  
Gregersen, S., Jensen, K. J. & Vosch, T. A. J., 13 May 2013.

## Prizes

### 1st place, 2018 AAU PhD/PostDoc Science Slam

Gregersen, S. (Recipient), 9 Nov 2018

### Young Investigator Poster Award

Gregersen, S. (Recipient), 27 Jun 2013

## Awards

### PROINSECT: Discovering new functional ingredients from yellow mealworm and black soldier fly biomass using bioinformatic tools (PROINSECT)

Gregersen, S. (PI)

Ministeriet for Fødevarer, Landbrug og Fiskeri: DKK1,241,269.00

01/04/2025 → 31/03/2028

## Projects

### AQUALity

Gregersen, S. (Supervisor), Boffa, V. (PI), Roslev, P. (PI) & Jørgensen, M. K. (PI)

01/09/2017 → 30/09/2022

### HQProtein: Development of high quality grass-protein foods

Lübeck, M. (CoPI), Jørgensen, M. K. (Project Participant), Gregersen, S. (Project Participant), Jørgensen, A. K. (Project Participant), Mattsson, T. (Project Participant), Orlien, V. (PI), Olsen, K. (Project Participant), Frøst, M. B. (Project Participant), Lübeck, P. S. (Project Participant), Olsen, M. (Project Participant), Brøns, L. (Project Participant) & Jørgensen, M. (Project Participant)

01/01/2023 → 31/12/2025

### PROINSECT: Discovering new functional ingredients from yellow mealworm and black soldier fly biomass using bioinformatic tools (PROINSECT)

Gregersen, S. (PI)

Ministeriet for Fødevarer, Landbrug og Fiskeri

01/04/2025 → 31/03/2028

### Flourescent peptide-stabilized silver-nanoclusters: A solid-phase approach for high-throughput ligand discovery

Jensen, K. J. (Supervisor), Vosch, T. A. J. (Supervisor) & Gregersen, S. (PI)

Familien Hede Nielsens Fond, William Demant Foundation

15/12/2010 → 31/07/2014

**Q-BIOPEP: KVANTIFICERING AF BIOAKTIVE FØDEVAREPEPTIDER FRA KARTOFFELPROTEIN**

Gregersen, S. (CoPI), Wimmer, R. (PI) & Abdul Khalek Gharzeddine, N. (Project Participant)  
Karl Pedersen og Hustrus Industrifond  
15/06/2021 → 14/06/2024

**PhyPro: Phytochemical Protein Modification – Friend or Foe?**

Lübeck, M. (PI), Gregersen, S. (CoPI), Wimmer, R. (Col), Keppler, J. (Col) & Badfar, N. (Project Participant)  
Independent Research Fund Denmark | Technology and Production sciences  
01/04/2022 → 31/12/2025

**SvampeMad: Produktion af nye proteinrige fødevarer ingredienser ved fermentering af organiske restprodukter**

Lübeck, M. (PI), Gregersen, S. (Project Participant), Stephensen Lübeck, P. (Project Participant), Schierbeck-Hansen, J. (Project Participant), Christiansen, A. H. C. (Project Participant), Yang, L. (Project Participant), Orlén, V. (Project Participant), Hansen, T. B. (Project Participant), Koch, A. G. (Project Participant), Larsen, O. V. (Project Participant), Wormslev, E. (Project Participant), Vukusic, M. (Project Participant), Hamann, K. T. (Project Participant), Andersen, E. (Project Participant), Rusbjerg-Weberskov, C. E. (Project Participant) & Terp, M. (Project Participant)  
01/01/2023 → 30/06/2026

**PROVIDE: Protein valorization through informatics, hydrolysis, and separation**

Gregersen, S. (Col), Overgaard, M. T. (CoPI), Hansen, E. B. (PI), Bang-Berthelsen, I. (Project Coordinator), Jacobsen, C. (CoPI), García Moreno, P. J. (Col), Marcatili, P. (CoPI) & Yesiltas, B. (Col)  
01/09/2017 → 30/12/2022

**GRAINPEP: Revealing structure-function relationship of novel spent grain peptides identified by proteomics and bioinformatics**

Gregersen, S. (Col), Jacobsen, C. (PI), Yesiltas, B. (Project Manager), Overgaard, M. T. (CoPI), Knaapila, M. (CoPI) & Mikkelsen, R. K. (Project Participant)  
Novo Nordisk Foundation  
01/04/2022 → 31/08/2025

**SAFEPRO: SAFE sustainable PROtein sources for the future**

Bøgh, K. L. (PI), Sancho, A. (Col), Lübeck, M. (Col), Lübeck, P. S. (Project Participant), Bitsch, S. (Project Participant), Christensen, M. W. (Project Participant), Gregersen, S. (Project Participant) & Badfar, N. (Project Participant)  
01/06/2022 → 01/12/2024

**Græs4Food: Udvikling af en membranproces til raffinering af høj kvalitets fødevarerprotein fra kløvergræs og lucerne**

Lübeck, M. (PI), Stephensen Lübeck, P. (Col), Heiske, S. U. (Project Participant), Jørgensen, M. K. (Col), Jørgensen, A. K. (Project Participant), Gregersen, S. (Project Participant) & Mattsson, T. (Project Participant)  
01/07/2020 → 31/12/2024

**LEAF2FOOD: Unraveling the importance of processing green leafy biomass for the technofunctional properties of food proteins.**

Lübeck, M. (PI), Gregersen, S. (Col), Jørgensen, M. K. (Col), Wimmer, R. (Col), Jørgensen, A. K. (Project Participant), Orlén, V. (Col) & Johansson, E. (Col)  
01/01/2025 → 31/08/2027

**Datasets****CodfishHydrolysatesMS**

Gregersen, S. (Creator), Mendeley Data, 25 Nov 2020  
DOI: 10.17632/pc5h9drk6d.2, <https://data.mendeley.com/datasets/pc5h9drk6d>

**E.denticulatum quant BUP**

Gregersen, S. (Creator), Mendeley Data, 10 Oct 2021  
DOI: 10.17632/y4kmb3tvx.2, <https://data.mendeley.com/datasets/y4kmb3tvx>

**E.denticulatum Quant Method Validation**

Gregersen, S. (Creator), Mendeley Data, 6 Dec 2021

DOI: 10.17632/c8hkst76t4.1, <https://data.mendeley.com/datasets/c8hkst76t4>

**Gigartina pilot scale protein extract BUP**

Gregersen Echers, S. (Creator), Abdul Khalek Gharzeddine, N. (Creator) & Overgaard, M. T. (Owner), PRoteomics  
IDentifications Database (PRIDE), 26 Sept 2022

DOI: 10.6019/PXD034435

**Methotrophic Biomass Quant BUP**

Gregersen, S. (Creator), Mendeley Data, 14 Apr 2021

DOI: 10.17632/g45gbw5r7n.1, <https://data.mendeley.com/datasets/g45gbw5r7n>

**Methotrophic Biomass Quant BUP part2**

Gregersen, S. (Creator), Mendeley Data, 14 Apr 2021

DOI: 10.17632/76v7mnmyr3.1, <https://data.mendeley.com/datasets/76v7mnmyr3>