

Margrethe Gaardløs

✉ margrethe.gaardlos@gmail.com

Born 13.09.1990

Education

- 12.2016–
6.2021 **PhD in Biotechnology**, *Norwegian University of Science and Technology*, Trondheim.
- Supervisors: Finn Lillelund Aachmann and Anne Tøndervik
 - Areas of research: carbohydrate active enzymes, bioinformatics, gene modifications and protein expression, purification, biopolymer chemistry, enzyme design, product characterization, protein-carbohydrate interactions
 - Funded by the Norwegian Research Council, FRIMEDBIO project *Nature's Creation of non-Random Structures: Molecular Mechanisms for Processivity and Specificity of Polysaccharide Modifying Enzymes*
 - Included a work load corresponding to one year of teaching duties at the Department of Biotechnology and Food Science.
- 8.2013–
6.2015 **Master in Biotechnology**, *Norwegian University of Life Sciences*, Ås.
- Specialized in Biochemistry.
- Thesis title: *Expression and characterization of lytic polysaccharide monooxygenases (LPMOs) from Myriococcum thermophilum*
 - Supervisors: Svein Jarle Horn and Trine Isaksen
- 8.2010–
6.2014 **Bachelor in Chemistry**, *Norwegian University of Life Sciences*, Ås, .

Work experience

- 1.2017–8.2019 **Lecturer**, *Norwegian University of Science and Technology*, Trondheim.
Main lecturer for three semesters in the course "Microbiology and Food Safety"
- 1.2016–
11.2016 **Laboratory engineer**, *Sykehusapoteket Rikshospitalet*, Oslo.
Quality control of pharmaceuticals using HPLC and other analytical chemistry methods
- 6.2015–
9.2015 **Research assistant**, *São Paulo State University*, Botucatu, Brasil.
12 weeks internship in biochemistry, expressed and characterized enzymes from fungi and researched immobilization techniques.
- 8.2014–
10.2014 **Research assistant**, *Universidad Nacional del Sur*, Bahia Blanca, Argentina.
10 weeks internship, worked with microscopy of fungal spores.
- 5.2006–
8.2014 **Research assistant**, *Bioforsk Øst Apelsvoll*, Kapp.
Summer job, performed the practical work with agricultural science projects.
- 8.2012–
12.2012 **Assistant teacher**, *Norwegian University of Life Sciences*, Ås.
Assistant teacher in the lab in organic chemistry.

Publications

Insights into the roles of charged residues in substrate binding and mode of action of mannuronan C-5 epimerase AlgE4. Margrethe Gaardl s, Sergey A Samsonov, Marit Sletmoen, Maya H r nevik, Gerd Inger S trom, Anne T ndervik, and Finn Lillelund Aachmann. *Glycobiology* 2021, cwab025, <https://doi.org/10.1093/glycob/cwab025>

Identification of a Pivotal Residue for Determining the Block Structure-Forming Properties of Alginate C-5 Epimerases. Annalucia Stanisci, Anne T ndervik, Margrethe Gaardl s, Anders Lervik, Gudmund Skj k-Br k, H vard Sletta, and Finn L. Aachmann. *ACS Omega* 2020 5 (8), 4352-4361 DOI: <https://doi.org/10.1021/acsomega.9b04490>

The CAZypedia lexicon entry about polysaccharide epimerases, https://cazypedia.org/index.php/Polysaccharide_epimerases.

CAZypedia Consortium. Ten years of CAZypedia: a living encyclopedia of carbohydrate-active enzymes. *Glycobiology*. 2018;28(1):3-8. doi: <https://doi.org/10.1093/glycob/cwx089>