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Positions

2021-	Tenure track adjunkt på Institut for Agroøkologi, AU.
2017-20	Akademisk medarbejder på Institut for Molekylærbiologi og Genetik, AU, (2017-2019) og Institut for Agroøkologi (2020) på Lessismore projektet.
2013-17	Post doc. på Institut for Molekylærbiologi og Genetik, AU, på “Non-inhibited barley/wheat-feed enzyme combinations for improved feedstuff value” projektet.
2012-13	Post doc. på Institut for Molekylærbiologi og Genetik, AU, på Bio4Bio projektet
2012	Post doc at Dept. of Molecular Biology and Genetics, AU, on a proof of concept project.

Education

2011	Ph.d. i plantemolekylærbiologi, Aarhus Universitet. Afhandling: “Unraveling the Major Triticeae Phytases – Towards cereals with high grain phytase activity” forsvaret 30 juni 2011
2007	Civilingeniør i bioteknologi, Aalborg Universitet

Scientific summary

My work concerns the improvement of cereals and grasses with molecular methods. This can be either directly i.e. plant transformation or indirectly by identifying molecular targets for conventional breeding. My Ph.D work focused on the endogenous cereal phytases. Some cereals e.g. rye and wheat which belong to the Triticeae tribe have high phytase activity in the mature grains. This can be beneficial for the uptake of minerals when the grains are used in food or feed. I cloned the responsible *PAPhy* genes from crop, relict and wild Triticeae and studied the evolutionary history of the *PAPhy's* in order to understand how the high phytase trait came about and find ways to improve it further.
My current work concerns the involvement of laccases in cell wall lignification. Plant laccases are multigene families with e.g. 17 and 14 members in *Arabidopsis thaliana* and maize (*Zea mays* L.) respectively. The functional assignment of individual laccases in relation to cell wall lignification is therefore a major challenge, but also an opportunity. Thus, laccases may offer a route to modulate cell wall recalcitrance while maintaining agronomical performance. This would be highly valuable in energy- as well as forage crops. My studies are therefore performed on perennial ryegrass (*Lolium perenne* L.) which is an important forage- and potential energy crop. Key methods in my work are molecular cloning, plant transformation, gene discovery by e.g. library screening and PCR based methods, qPCR, and recombinant expression of plant proteins in *Pichia pastoris*.

Bibliometric summary (Complete list available in PURE)

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Conferences

I have participated as a speaker in the 6th European Symposium on Enzymes in Grain Processing (2011).

Innovation

My Ph.D work has resulted in patent applications PCT/EP2012/057515 and US 61/479,689 High expression cereal phytase gene.

Knowledge exchange

I have given lectures at local high schools and hosted talented high school students who did part of their exam projects in our lab. Further, I have contributed to a high school textbook; Bioteknologi –En temabog. SYSTIME 2011, ISBN 9788761630957.