Dr. Thomas D Alcock

Postdoctoral Researcher | Crop Physiology
School of Life Sciences, Technical University of Munich

31.01.1993 | Freising, Germany | English (native); German (B2)

Research goals

Identification of plant molecular and genetic processes that control the accumulation of mineral nutrients that are important for human health, to reduce the prevalence of micronutrient deficiencies in human populations.

Key skills

Extensive experience in elucidating plant processes via both forward and reverse genetics approaches. Particular expertise in genomics and transcriptomics, including downstream analysis and candidate gene confirmation, tissue sectioning and confocal microscopy, elemental analysis of bulk plant tissue samples and spatial distribution analysis of tissue sections, general molecular biology proficiency.

Substantial teaching and supervisory experience.

Academic experience

Postdoctoral Researcher, Crop Physiology, School of Life Sciences, Technical University of Munich, Germany. December 2020 – present. Supervisor: Prof. Gerd Patrick Bienert. Identifying molecular bases of boron efficiency in *Brassicaceae*. Characterising variation in and factors controlling maize (*Zea mays*) micronutrient accumulation under water limitation.

Postdoctoral Researcher, Future Food Beacon of Excellence, University of Nottingham, UK. January 2020 – December 2020. Supervisors: Prof. Stephen J Ramsden and Prof. David E Salt. A harmonised reanalysis of variation in greenhouse gas emissions from oil crop production systems.

Postdoctoral Research Fellow, Future Food Beacon of Excellence, University of Nottingham, UK. February 2019 – January 2020. Supervisors: Prof. Martin R Broadley and Prof. Neil S Graham. Using linked-read sequencing to map the genetic basis of elevated shoot magnesium and calcium in a *Brassica rapa* EMS mutant. Position awarded through the Future Food Beacon Doctoral Prize.

Qualifications

Doctorate, School of Biosciences, University of Nottingham, UK. October 2014 – January 2019. “Nutrient Accumulation in *Brassica*: Identification of New Targets for Crop Improvement and Biofortification”. Supervisors: Prof. Martin R Broadley and Prof. Neil S Graham. Degree awarded 17. July 2019.

Bachelor degree, BSc Biology (Hons), School of Life Sciences, University of Nottingham, UK. September 2011 – June 2014.

Research activities and distinctions

Scientific coordinator of the Crop Physiology ICP-MS pipeline, 2021 – present.
Member of the German Society of Plant Nutrition e.V., 2022 – present.
Awarded €3,000 from Leonhard Lorenz Stiftung, December 2023.
Organiser, International Boron Conference, Hohenheim, September 2023.
President of the UoN Future Food Student and Staff Association, 2019 – 2020.
Lecturer, Molecular Biology Workshop, Benin Republic, April 2019.
Awarded £1,500 from UoN Future Food Partnership Fund, March 2019.
Awarded £2,000 from UoN 4* Paper Enhancement Fund, January 2019.
Awarded UoN Future Food Doctoral Prize, £24,000 stipend, December 2018.
Awarded beamtime worth ca. €30,000 at Elettra Sincrotrone, February 2018.

10 peer-reviewed scientific publications. H-index: 8. Citations: 370.

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