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Arabidopsis AGC3 kinases and PIN plasma membrane abundance

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Curriculum vitae

Kasper van Gelderen was born on the April 26th, 1982 in De Bilt, the Netherlands. He went to high school at the Nijmeegse Scholengemeenschap in Groenewoud, and in 2001 he started his Biology study at Wageningen University. After obtaining his BSc degree in Cell Biology in 2004, Kasper took a break to become a full-time board member of the student association SSR-W. In 2007 he continued with his Master studies at Wageningen University. He did an internship at the Nematology department under the supervision of Dr. Geert Smant and Dr. Wiebe Postma, where he worked on the interaction between the golden nematode (*Globodera Rostochiensis*) effector SPRYSEC19 and the tomato R-gene SW5F (Postma *et al.*, 2012) and is most likely triggered by the recognition of effectors in stylet secretions. However, the actual role of these secretions in the activation and suppression of effector-triggered immunity is largely unknown. Here we demonstrate that the effector SPRYSEC-19 of *Globodera rostochiensis* physically associates in planta with the leucine-rich repeat (LRR). For his second internship, Kasper worked under the supervision of Dr. Paul Bundock and Dr. Robert Sevenier at Keygene NV on dsRNA induced double-stranded-breaks in order to facilitate gene editing in tomato protoplasts. After obtaining his Master degree in Cell Biology in September 2010, Kasper started as PhD student in the group of Prof. Remko Offringa at the Institute of Biology of Leiden University, studying the role of plant-specific AGC kinases in promoting polar auxin transport by stabilizing the plasma membrane abundance of the PIN auxin efflux carrier. These studies are described in this thesis, of which Chapter 4 has been published in *Molecular Plant* (van Gelderen *et al.*, 2016). In November 2014 Kasper started as Post-Doctoral researcher in the group of Prof. Ronald Pierik at the Plant Ecophysiology department of Utrecht University, where he currently investigates the effect of Far-Red-light induced shade avoidance on root development in *Arabidopsis thaliana*.

List of publications

- Postma, W.J., Slootweg, E.J., Rehman, S., et al.** (2012) The Effector SPRYSEC-19 of *Globodera rostochiensis* Suppresses CC-NB-LRR-Mediated Disease Resistance in Plants. *Plant Physiol.*, **160**, 944–54.
- van Gelderen, K., van Rongen, M., Liu, A., Otten, A. and Offringa, R.** (2016) An INDEHISCENT-Controlled Auxin Response Specifies the Separation Layer in Early Arabidopsis Fruit. *Mol. Plant*, **9**, 857–869.

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