



Prof. Dr. ir. Stephen Depuydt

Department of Molecular Biotechnology
Plant Biotechnology Research Center
Lab of Plant Growth analysis



Office #1005, Ghent University Building, Incheon Global Campus, 119-5 Songdomunhwa-Ro, Yeonsu-Gu, Incheon, Korea



Phone +82 32 626 4202



Email Stephen.depuydt@ghent.ac.kr

Short Biographie

Stephen Depuydt graduated from Ghent University in 2004 as a Bio-Engineer (Cell and gene biotechnology) *magna cum laude*. In 2008 he obtained his PhD degree with a dissertation that dealt with the molecular biology of the *Rhodococcus fascians* – plant interaction. After his PhD, he received a Marie Curie Postdoctoral fellowship to work at the Department of Molecular Plant Biology at the University of Lausanne (Switzerland), further specializing in developmental plant biology and plant hormone interactions. In 2012 he subsequently re-joined Ghent University as an FWO (National Research Foundation Flanders) postdoctoral fellow, starting up research towards the mode of action of a novel plant hormone.

Since august 2014 he works as a Professor at Ghent University Global Campus in Korea where he heads the lab of Plant Growth Analysis of the Plant Biotechnology Research Centre. There, he started up research towards how novel and sustainable biostimulants (e.g. derived from algae and sponges) can improve and influence plant growth and yield. For this, the lab focuses specifically on elongation in both *Arabidopsis thaliana* and *Oryza sativa* and is developing bio-assays to do so. The lab also applies genome editing techniques to improve the yield of a local rice variety. To this end he has fruitful and ongoing collaborations with several labs and research groups in Korea as well as of the Ghent University home campus, e.g., the department of plant biotechnology and bioinformatics from Ghent University and the department of Plant Systems Biology of the VIB.

Research Area

Plant Molecular Biology; Plant Biotechnology;
Plant Hormone Biology; *Arabidopsis thaliana*, *Oryza sativa*

Education

(2004) Ghent University, Belgium: Bio-engineer in cell- and genebiotechnology; magna cum laude (engineering degree)

(2008) Ghent University, Belgium: PhD in Sciences (Biotechnology), (PhD)

Experience

(2008~2010) Marie-curie Outgoing International Post Doctoral Fellow, University of Lausanne (Switzerland)

(2010~2012) First assistant, University of Lausanne, Switzerland

(2012~2014) FWO postdoctoral Fellow at Ghent University and Flanders Institute for Biotechnology (Belgium)

(2014-current) Professor at Ghent University (Belgium) and Ghent University Global Campus (Korea)

Top 5 Selected Publications

Vlaminck L, Sang-Aram C, Botterman D, Uy CJC, Harper MK, Inzé D, Gheysen G, Depuydt S. Development of a novel and rapid phenotype-based screening method to assess rice seedling growth. *Plant Methods*. 2020 Oct 15;16:139. doi: 10.1186/s13007-020-00682-6. PMID: 33072175; PMCID: PMC7560306.

De Saeger J, Van Praet S, Vereecke D, Park J, Jacques S, Han T, Depuydt S. Toward the molecular understanding of the action mechanism of *Ascophyllum nodosum* extracts on plants. *J Appl Phyco* 2019 Sep 10;32, 573 doi:10.1007/s10811-019-01903-9

Lee H, Park J, Shin K, Depuydt S, Choi S, De Saeger J, Han T. Application of a programmed semi-automated *Ulva pertusa* bioassay for testing single toxicants and stream water quality. *Aquat Toxicol*. 2020 Apr;221:105426. doi: 10.1016/j.aquatox.2020.105426. Epub 2020 Jan 31. PMID: 32036234

Park J, Yoon JH, Depuydt S, Oh JW, Jo YM, Kim K, Brown MT, Han T. The sensitivity of an hydroponic lettuce root elongation bioassay to metals, phenol and wastewaters. *Ecotoxicol Environ Saf*. 2016 Apr;126:147-153. doi: 10.1016/j.ecoenv.2015.12.013. Epub 2015 Dec 31. PMID: 26748376.

Jiang L, Matthys C, Marquez-Garcia B, De Cuyper C, Smet L, De Keyser A, Boyer FD, Beeckman T, Depuydt S, Goormachtig S. Strigolactones spatially influence lateral root development through the cytokinin signaling network. J Exp Bot. 2016 Jan;67(1):379-89. doi: 10.1093/jxb/erv478. Epub 2015 Oct 31. PMID: 26519957; PMCID: PMC4682444.

**Full
Bibliography
URL Link**

<https://biblio.ugent.be/publication?text=Depuydt+Stephen>

**Patent /
Projects**

- Plant B&B Network

**Research
Field of
Interests**

Plant Hormone Biology, Plant Developmental Biology, Cell Elongation; Genome Editing; Phytotoxicity

**Organization
of Interests**
visiting, research
collaboration,
networking, etc.

-