



Universiteit
Leiden
The Netherlands

Disentangling drought-responsive traits with focus on Arabidopsis

Thonglim, A.

Citation

Thonglim, A. (2023, November 9). *Disentangling drought-responsive traits with focus on Arabidopsis*. Retrieved from
<https://hdl.handle.net/1887/3656528>

Version: Publisher's Version

[Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

License: <https://hdl.handle.net/1887/3656528>

Note: To cite this publication please use the final published version (if applicable).

Disentangling drought-responsive traits with focus on Arabidopsis

Ajaree Thonglim. 2023. *Disentangling drought-responsive traits with focus on Arabidopsis*.

PhD Thesis at the University of Leiden, The Netherlands.

ISBN: 978-94-6483-426-0

This PhD research was financially supported by:

Institute for the Promotion of Teaching Science and Technology.
Dutch Research Council NWO (grant ALWOP.488).

This PhD research was carried out at:

Naturalis Biodiversity Center, The Netherlands.
Leiden University, The Netherlands.
University of Bordeaux, France.

Editorial layout and cover design:

Ajaree Thonglim

Disentangling drought-responsive traits with focus on Arabidopsis

Proefschrift

ter verkrijging van
de graad van doctor aan de Universiteit Leiden,
op gezag van rector magnificus prof.dr.ir. H. Bijl,
volgens besluit van het college voor promoties
te verdedigen op donderdag 9 november 2023
klokke 11:15 uur

door

Ajaree Thonglim
geboren te Nakhon Pathom, Thailand
in 1993

Promotor:

Prof. Dr. E. Smets

Co-promotor:

Dr. F. Lens

Promotiecommissie:

Prof. Dr. A.H. Meijer

Prof. Dr. P. van Welzen

Dr. S. Balazadeh

Prof. Dr.ir. K. Steppe (Ghent University, Belgium)

Prof. Dr. S. Jansen (Ulm University, Germany)

TABLE OF CONTENTS

CHAPTER 1	7
General introduction and thesis outline	
CHAPTER 2	43
Intervessel pit membrane thickness best explains variation in embolism resistance amongst stems of <i>Arabidopsis thaliana</i> accessions	
CHAPTER 3	79
Drought response in <i>Arabidopsis</i> displays synergistic coordination between stems and leaves	
CHAPTER 4	125
High leaf water potential: a key to drought resilience in <i>JUB1</i> overexpression lines of <i>Arabidopsis</i> and tomato	
CHAPTER 5	159
General discussion and future perspectives	
SUMMARIES	173
REFERENCES	177
ACKNOWLEDGEMENTS	225
CURRICULUM VITAE	227

