Plant Physiology

Dean and Vice-Dean of the Faculty of Science of the

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Amsterdam, April 7, '14

Dear Dean and Vice-Dean,

Thesis evaluation Roman Pleskot

Charles University in Prague

Concerning:

To:

It was my pleasure to evaluate the thesis of Ing. Roman PLESKOT. His work, entitled "The role of signaling phospholipids in the regulation of plant polar growth" clearly meets and exceeds the standards for obtaining a PhD degree.

I have followed Roman Pleskot's work over the last years, as he has already managed to publish most of the chapters in international peer-reviewed journals of high impact. At the time of their publication, I had already read these papers with great interest, and I am happy to see now the final result of his PhD research, including the new work and the discussion to put all the papers in perspective. Importantly, I think the thesis is more than the sum of the papers. The work is well written and was a pleasure to read.

The candidate uses a wide variety of techniques, ranging from whole cell physiology, genetic tools and confocal imaging to molecular dynamics of protein-lipid interactions. Together, the work answers important questions on how phospholipid signals, in particular PA and PIP₂, function in regulation of polar plant cell growth.

Most of the questions I will ask during the defense will concern Chapter 3, on the use of Spo20p-PABD as a biosensor of PA. The implication of a genetically encoded biosensor to allow live imaging of PA is a major breakthrough in the field. And while the data presented are convincing, still a number of questions remain, which I would like to discuss with the candidate during the defense. These include the use of chemical inhibitors, rather than mutants, in this chapter, as well as in chapter 2, while in chapter 1 also genetic tools (PLD knock-down) are used to reveal the functional role of PLD-derived PA formation in planta. I would also like to further discuss the possible role of PA in clathrin-mediated endocytosis in plants.

In conclusion, I consider the thesis suitable for defense as its quality clearly fullfills the criteria necessary for obtaining a PhD degree.

I look forward to the defense on April 23,

Sincerely,

Christa Testerink

Christa Testerink, PhD Assistant Professor

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