... that root border-like cells of *Arabidopsis thaliana* and flax are required for plant protection.

Root *Arabidopsis thaliana* and flax root tips release cells known as “root border-like cells” in the rhizosphere. Due to their particular location at the interface between root and soil, one can speculate that these cells are crucial in root-microbe interaction. However the function of root-border-like cells has not been studied so far.

For the first time, we have investigated the responses of root border-like cells of *Arabidopsis* and flax to the Microbe Associated Molecular Pattern (MAMP) flagellin 22 and peptidoglycan. Both MAMPs triggered a rapid oxidative burst in root border-like cells and deposition of callose a well-known marker of plant defense against pathogens. Furthermore, modifications in the cell wall distribution of extensin epitopes also occurred. Extensins are hydroxyproline-rich glycoproteins that enhance the mechanical strength of the cell wall. In addition flagellin 22 induced over-expression of genes involved in the plant immune response in root border-like cells of *Arabidopsis*. Our findings demonstrate that root border-like cells of flax and *A. thaliana* are able to perceive an elicitation and activate defense responses. We also show that cell wall extensin is involved in innate immunity response of root border-like cells.