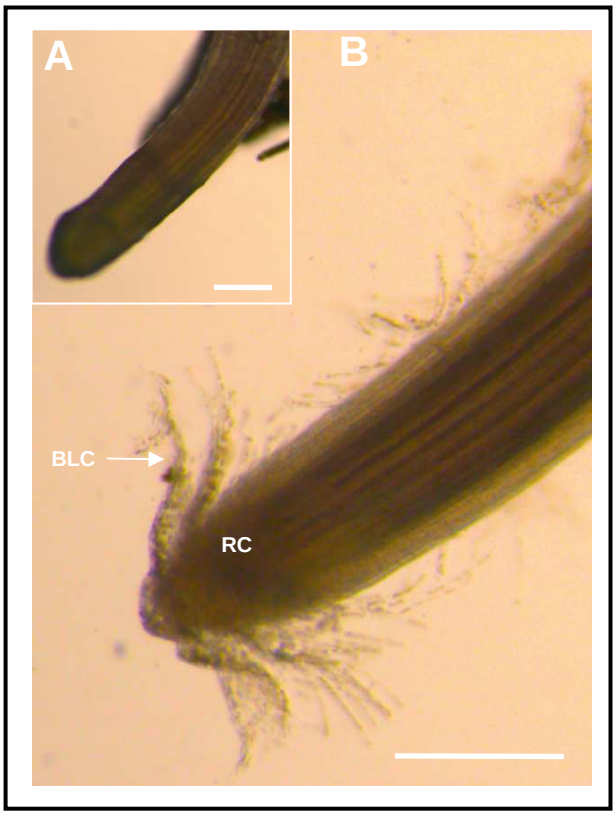

Figure S1. Bright field micrographs of *B. napus* root apex grown through soil.
A, In the absence of water, border-like cells are pressed closely against the root cap. B, After immersion in water, border-like cells radiate outwards while remaining attached to the root cap and. BLC, border-like cells; RC, root cap. Bars = 100 µm (A and B).

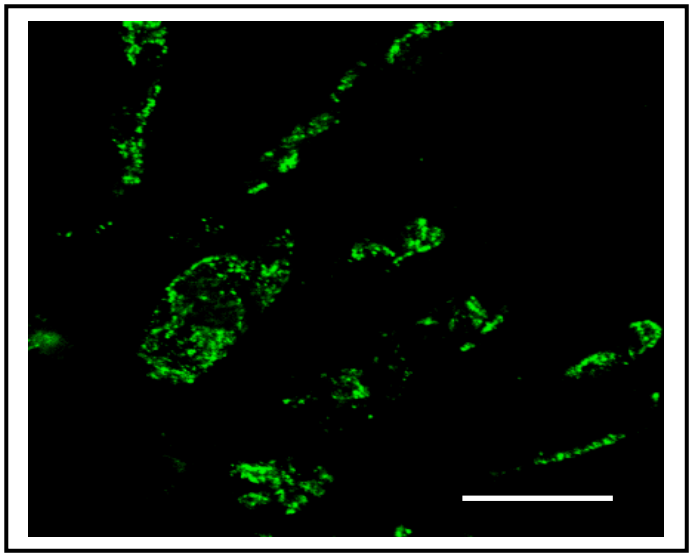

Figure S2. Border-like cells from *B. napus* root stained with Calcein-AM. The cells exhibit a strong fluorescence indicative of their viability. Bar= 50 µm.

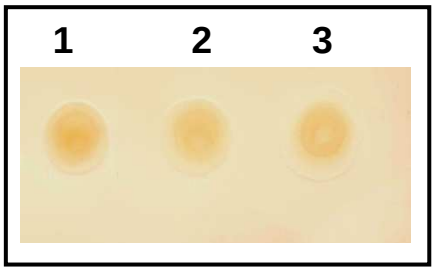

Figure S3. Immunodot staining of arabinogalactan proteins using β-GlcY reagent. Lane 1, gum Arabic (1 mg. mL^{-1}) was used as a control; lanes 2 and 3, cell wall fraction isolated from *B. napus* and *P. sativum* root caps respectively.

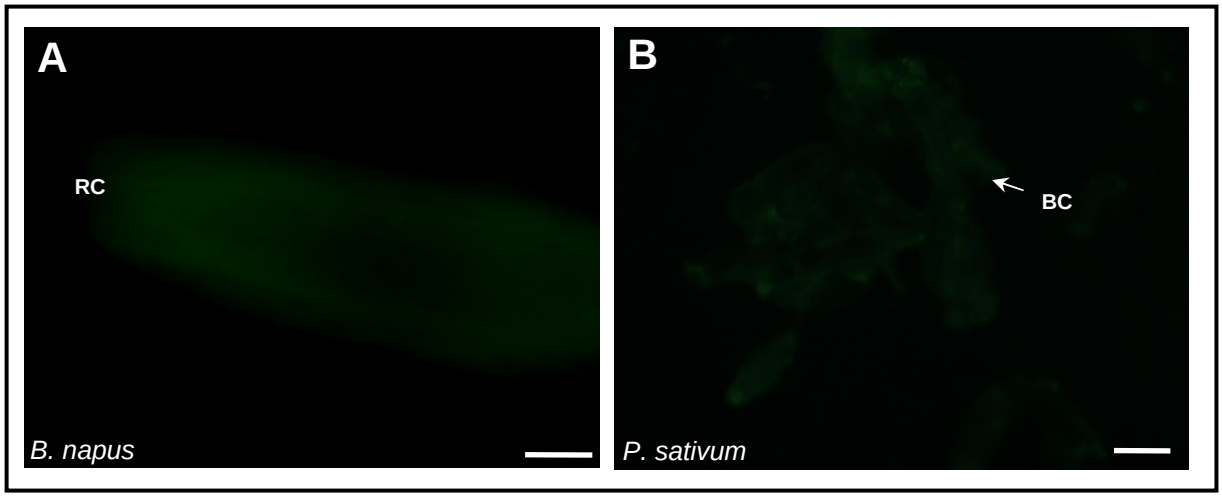

Figure S4. Immunofluorescence controls in which the primary antibody is omitted. Root apices and border cells/border-like cells are only stained with the secondary antibody FITC-conjugated anti-rat IgG for *B. napus* (A) and *P. sativum* (B). Samples show no labelling. Bars = 20 µm.

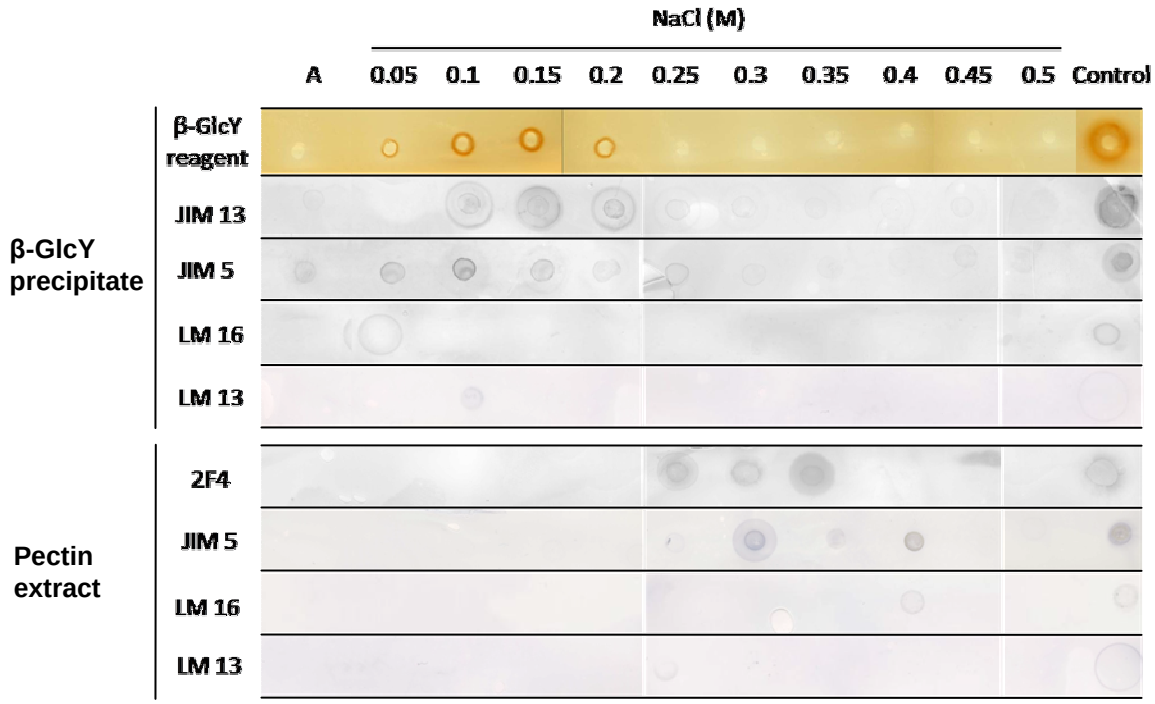

Figure S5. Anion-exchange chromatography of β-GlcY precipitate or pectin extract from *P. sativum* root caps.

The presence of arabinogalactan protein and pectin epitopes were revealed by radial diffusion and dot blotting (see supplemental Table I, list of antibodies and their respective epitopes). Arabinogalactan proteins bound to the column were eluted with 0.05 to 0.2 M NaCl as revealed by β-GlcY staining and JIM13 blotting. Pectins contained in the β-GlcY precipitate were detected in 0.05 to 0.25 NaCl fractions by anti-pectin antibodies (JIM5, 2F4, LM16 and LM13). Anion exchange chromatography was not able to separate arabinogalactan proteins from potential contaminating pectins in the β-GlcY precipitate. It should be noted that pectins extracted from *P. sativum* root caps were eluted in different fractions as compared to pectins found in the β-GlcY precipitate. These results seem to confirm that pectins detected in the β-GlcY precipitate are covalently/strongly bound to arabinogalactan proteins rather than being co-precipitated in the same fraction. A, unbound fraction. Control experiments were carried out using gum Arabic (detection with β-GlcY or JIM 13) or citrus pectins (detection with the antibodies JIM5, LM 16, LM 13, 2F4).

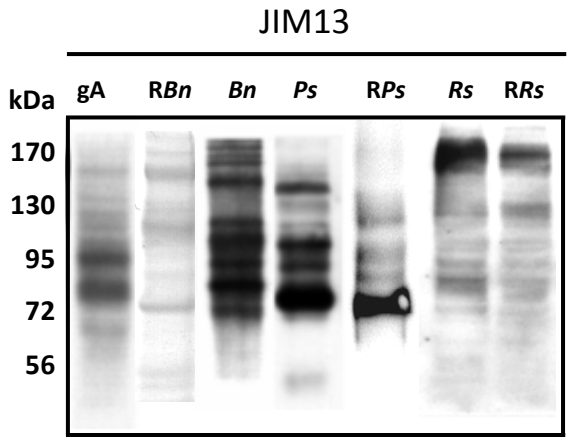

Figure S6. Western blot analysis of selected fractions extracted from entire roots and root caps (including border and border-like cells). The β-GlcY precipitate was ran on gels, blotted and probed with anti-sera recognizing arabinogalactan proteins (JIM13). Molecular mass is indicated in kilodaltons (kDa) on the left. gA indicates gum Arabic, *Bn*, *Ps* and *Rs* indicates material from root cap of *B. napus*, *P. sativum* and *Raphanus sativus*, respectively. R*Bn*, R*Ps* and R*Rs* indicates materiel from roots without root cap of *Brassica napus, P. sativum and Raphanus sativus*, respectively. Note the presence of sharp bands revealed by the mAb used.

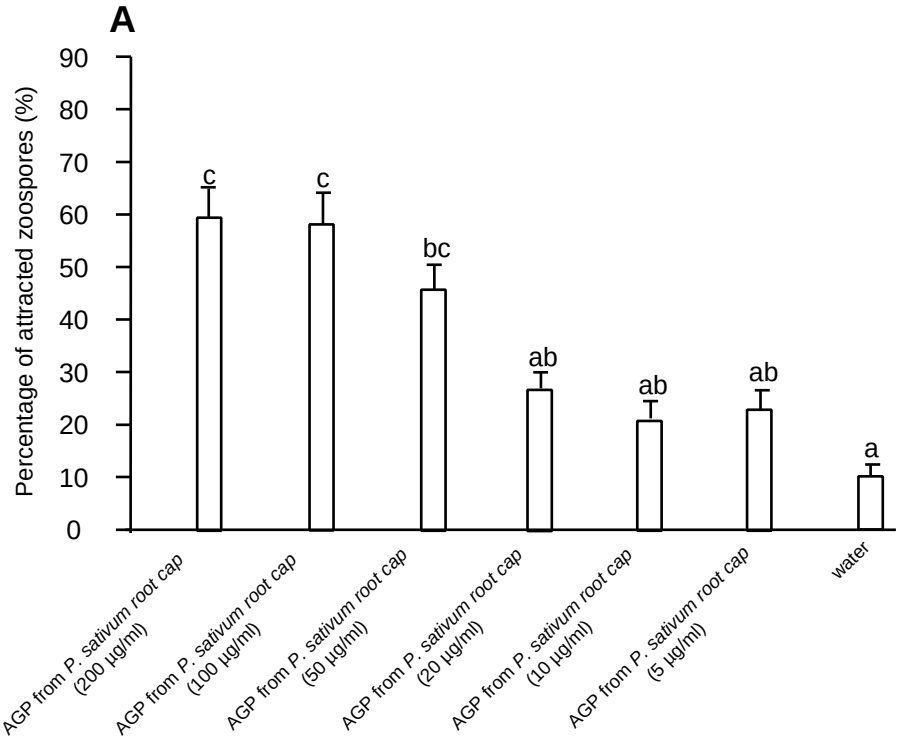

Figure S7. Chemotactic response of *A. euteiches* zoospores to various concentrations of arabinogalactan proteins over a period of 4h. Bars plot mean ± SEM of three replicates, based on 200 zoospores per replicate. AGP, arabinogalactan proteins.

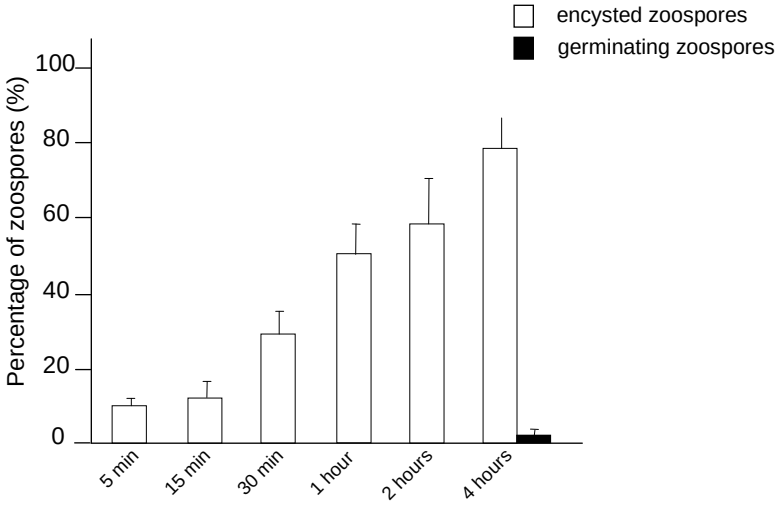

Figure S8. Time course of encystment and germination responses of *A. euteiches* zoospores in presence of water.

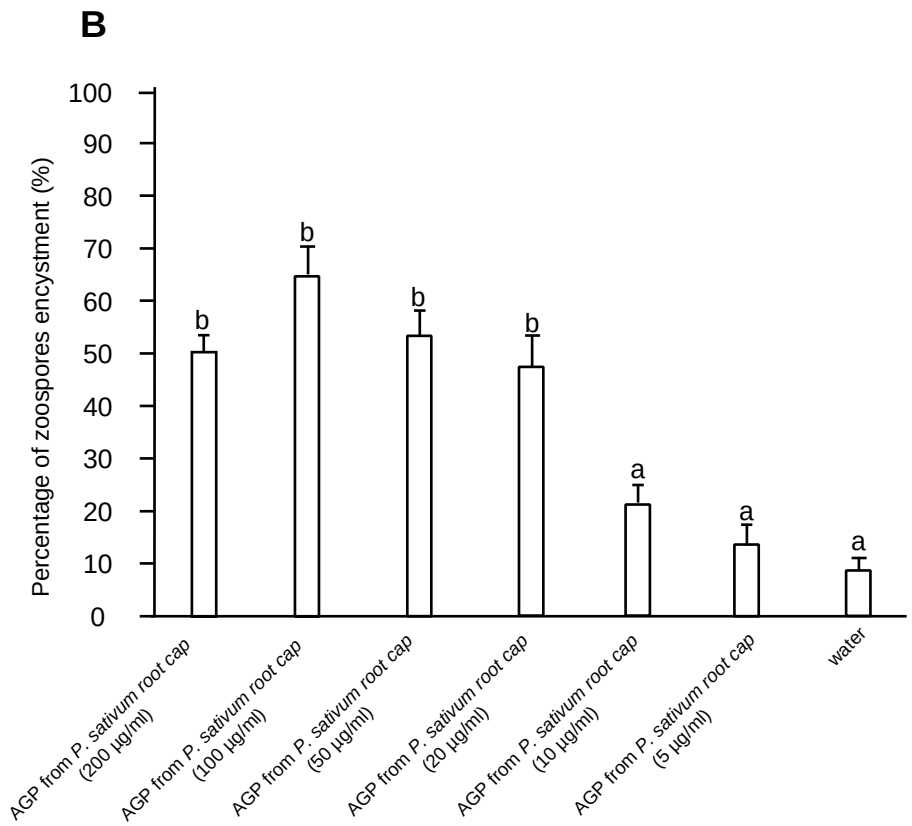

Figure S9. Encystment of zoospores as a function of various arabinogalactan protein concentrations. Bars plot mean ± SEM of three replicates, based on 200 zoospores per replicate. AGP, arabinogalactan proteins.

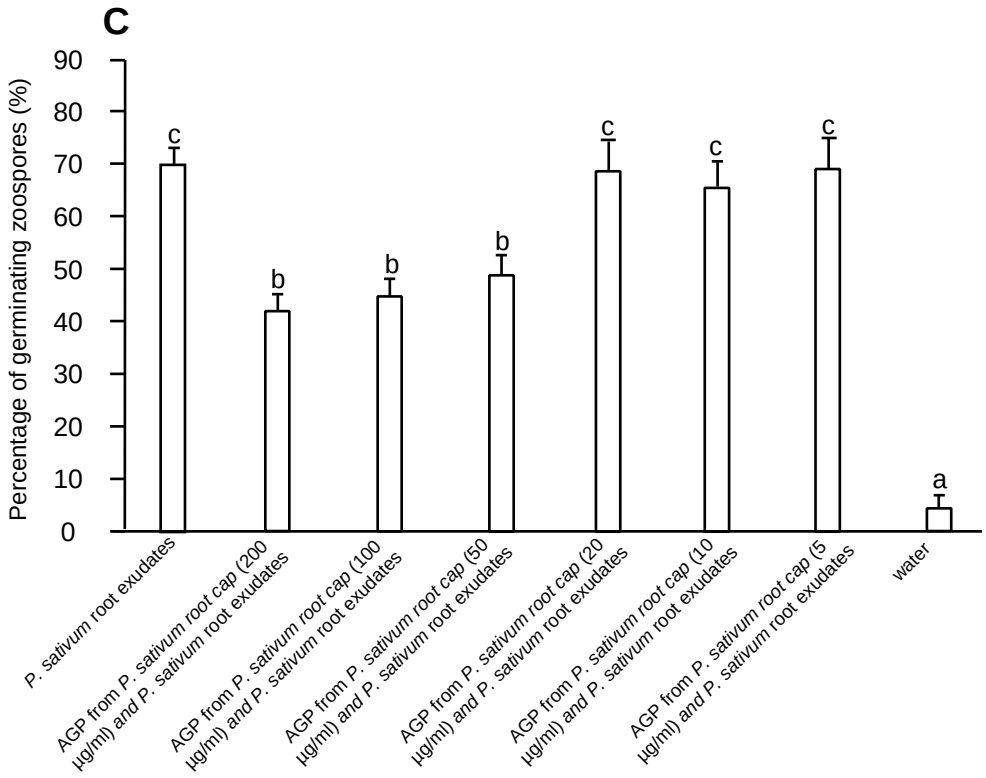

Figure S10. Germination of encysted zoospores as a function of various concentrations of arabinogalactan proteins. Bars plot mean ± SEM of three replicates based on at least 200 zoospores per replicate. AGP, arabinogalactan proteins.