OPEN ACCESS

sensors

ISSN 1424-8220
www.mdpi.com/journal/sensors

Supplemental Information

Proximal Sensing of Plant-Pathogen Interactions in Spring Barley with Three Fluorescence Techniques. *Sensors* 2014, *14*, 11135-11152

Georg Leufen, Georg Noga and Mauricio Hunsche *

Department of Horticultural Science, Institute of Crop Science and Resource Conservation, University of Bonn, Auf dem Huegel 6, Bonn D-53121, Germany;
E-Mails: gleufen@uni-bonn.de (G.L.); noga@uni-bonn.de (G.N.)

* Author to whom correspondence should be addressed, E-Mail: mhunsche@uni-bonn.de; Tel.: +49-228-73-6540; Fax: +49-228-73-5764.

Figure S1. Fluorescence devices used in this experiment: (**A**) excitation and emission fiber of the time resolved fluorescence spectrometer Lambda 401. Insert at the bottom displays typical fluorescence lifetime curves; (**B**) multiparametric fluorescence spectrometer, Multiplex®; (**C**) lens of the stereomicroscope on which the multispectral fluorescence imaging system Nuance® is mounted. Insert shows a false colour image of foliar diseases on a barley leaf.

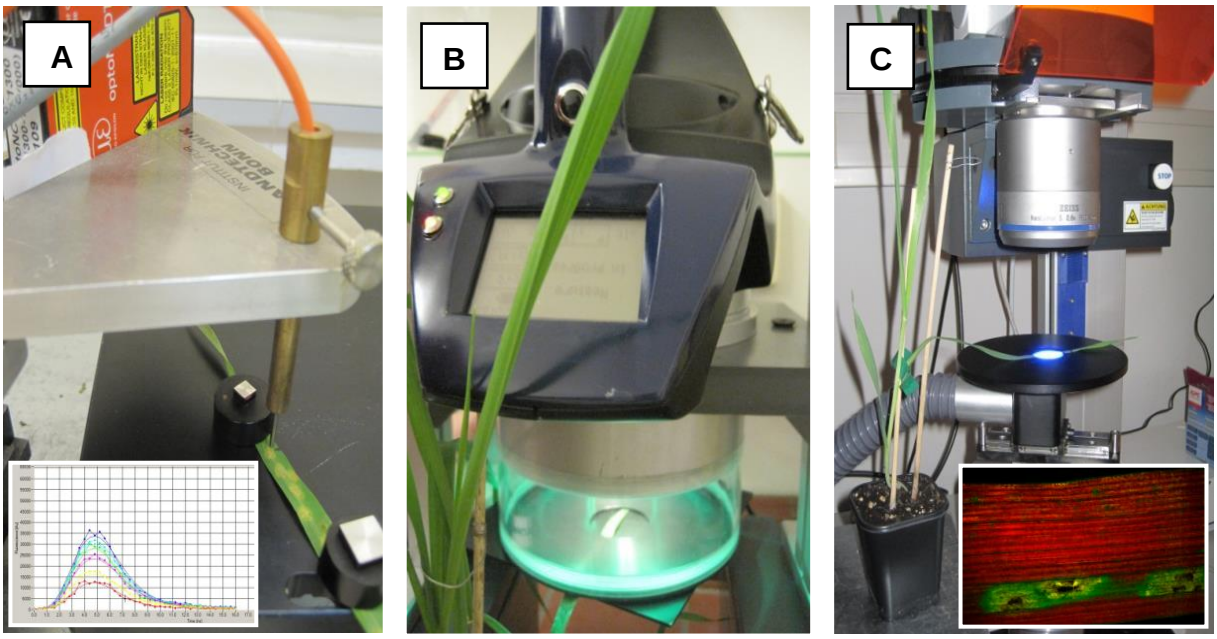
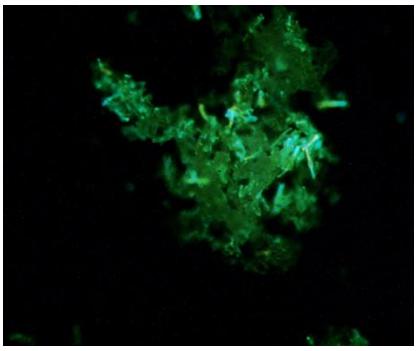
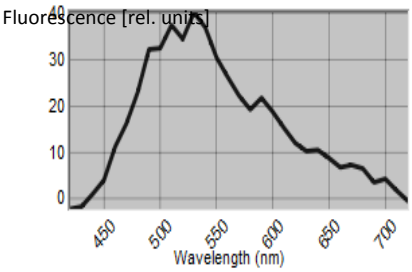
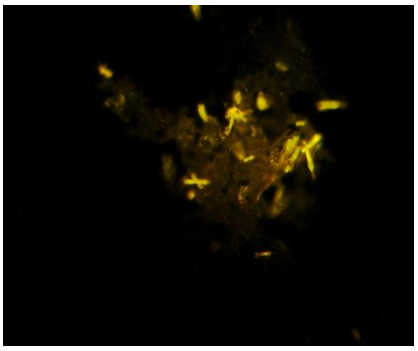
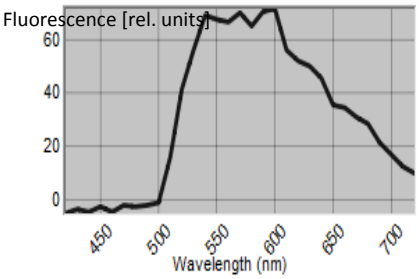


Figure S2. Autofluorescence of *Blumeria graminis* f. sp. *hordei* and *Puccinia hordei* spores and the corresponding spectra recorded from 420-720 nm. Fluorescence was excited with UV and blue light and recorded with a multispectral fluorescence camera mounted on a stereomicroscope equipped with a Zeiss ApoLumar S objective (focus of 17.1 and magnification of 120x). Images were taken from the spores only after powdering them on a black plate as background.

Pathogen	UV excitation	Blue excitation
Blumeria graminis f.sp. *hordei*	 	 
Puccinia hordei