Institute of Experimental Botany AS CR

Laboratory of Pathological Plant Physiology

invites you to the seminar of

Assoc. Prof. Peter Solomon

Plant Sciences Division

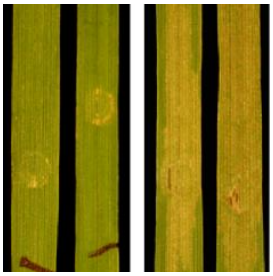
Research School of Biology

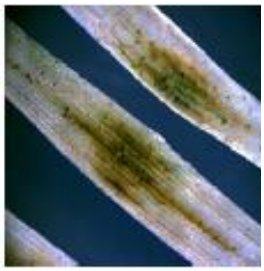
The Australian National University

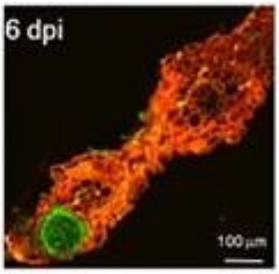
Understanding the *Parastagonospora nodorum* – wheat interaction; is it as simple as we think?

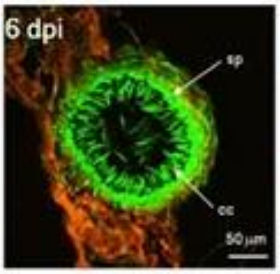
Wednesday, 15th April, 2015, 3:00 pm

Lecture room - Building B2









Annotation

It has long been thought that necrotophic pathogenic fungi use a barrage of lytic enzymes to break down plant cells to access the nutrients held within. In recent years it has emerged that some necrotrophic fungi possess a more complicated and specific infection strategy, appearing reliant on a gene-for-gene mechanism as observed in biotrophic pathogens. For the wheat pathogen *Parastagonospora nodorum*, it has been demonstrated that the basis of this host specific interaction is small cysteine-rich effector proteins secreted during infection (ToxA, Tox1 and Tox3). It is hypothesised that these effectors interact with specific dominant susceptibility genes in the host leading to a programmed cell death response and disease. However, whilst we now understand the requirement of these effector proteins for disease, their modes of action remain poorly understood. In this seminar, I will describe the mechanisms of these effector proteins and discuss the role they play in causing disease.