

## Abstract of Poster Presentation for 22nd New Phytologist Symposium

### **AvrAC, a *Xanthomonas campestris* pv. *campestris*-specific type III effector, triggers ETI in *Arabidopsis* vasculature**

**ENDRICK GUY<sup>1</sup>, MATTHIEU CHABANNES<sup>1</sup>, AHMED HAJRI<sup>2</sup>, TRISTAN BOUREAU<sup>2</sup>, STEPHANE POUSSIER<sup>2</sup>, MATTHIEU ARLAT<sup>1</sup>, LAURENT D. NOËL<sup>1</sup>**

*1*Laboratoire des Interactions Plantes Micro-organismes, UMR CNRS-INRA 2594-441, Chemin de Borde Rouge, F-31326 Castanet-Tolosan, France; *2*UMR PaVé INRA/AGROCAMPUS OUEST-INHP/UA, 2, rue le Nôtre, F-49045, Angers, France

<http://www.newphytologist.org/effectors/default.htm>

*Xanthomonas campestris* pv. *campestris* (*Xcc*) is the causal agent of black rot on Brassicaceae and causes disease on cabbage and *Arabidopsis* for instance. The *avrAC* gene encodes an *Xcc*-specific type III effector which is responsible for avirulence on *Arabidopsis* ecotype Col-0 exclusively when *Xcc* is inoculated in the leaf vasculature. PCR and dot-blot hybridization performed on a large collection of plant pathogenic bacteria revealed that *avrAC* is specific to *Xcc*. The analysis of more than 50 *Xcc* strains reveals that *avrAC* displays a very low allelic diversity and belongs to the *Xcc* variable effectome. Moreover, the presence of *avrAC* is tightly correlated with an increase in *Xcc* aggressiveness on susceptible *Arabidopsis* and nonhost pepper plants. We show that the “Leucine-Rich Repeat” (LRR) and “Filamentation induced by cAMP” (Fic) domains are both required for avirulence on resistant *Arabidopsis* and aggressiveness on pepper. Interestingly, the Fic domains of the VopS and IbpA effectors from animal pathogens were recently shown to mediate protein adenylation, a yet unknown protein posttranslational modification. Strategies developed to dissect *avrAC* functions *in planta* and to study plant vascular immunity will be presented.