

## ICTS Colloquium

Title : Attack and defense in pathogen-plant interactions

Speaker : Ramesh V. Sonti, National Institute of Plant Genome Research, New Delhi

Date : Monday, May 14, 2018

Time : 3:00 PM

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : Plants have powerful inducible immune responses that protect them against the vast majority of potential pathogens. A plant pathogen, by definition, is considered to be able to cause disease only because it has the capacity to suppress host immune responses. We study the mechanisms by which plant immune responses are induced and suppressed during infection using the interaction between rice and the bacterial pathogen, *Xanthomonas oryzae* pv. *oryzae* (Xoo) as a model. We have shown that secreted enzymes which degrade the rice cell wall are important virulence factors of Xoo. Conversely, these enzymes are potent inducers of rice immune responses as their activity in degrading the plant cell wall serves as a mark of infection. Xoo is able to cause disease only because it can suppress these immune responses. The roles of specific Xoo secreted proteins and rice functions in the induction and suppression of host immune responses will be discussed.