

GRADUATE MODULE

Title of Module: Physiology of Plant Disease Resistance

Instructor: Dr. B. Prithiviraj, Department of Environmental Sciences, NSAC

Timing: October-November 2011

Module Description

This module will focus on the physiological basis of plant resistance against microbial pathogens. Specific topics that will be dealt with are: enzymes in plant disease resistance; effect of microbial infection on whole plant physiology, systemic acquired resistance (SAR); role of salicylic acid, jasmonic acid, ethylene and interplay of these signal molecules and biochemical pathways in plant disease resistance. Induced systemic resistance (ISR) elicited by plant-growth promoting rhizobacteria. Inter and intra- plant signal molecules in disease resistance.

Format:

The course will consist of lectures, seminars and discussion; three hours per week over 4 weeks. I intend to use skype for course delivery to students at remote locations. Therefore students are advised to have access to internet and webcam.

Method of Evaluation:

Class Participation: 20 Points

Final Exam: 40 Points

Term Paper: 40 Points

Prerequisites:

A senior level course in Plant Pathology or Microbiology or Biochemistry or Molecular Biology