

## **HPR P26. Catalysing the host plant resistance: An insight into phyto-hormone mediated ISR against dry root rot of chickpea**

**Devashish R. Chobe**<sup>1,2</sup>, Avijit Tarafdar<sup>1</sup>, Sharath Chandran US<sup>1</sup>, Reeti Singh<sup>2</sup> and Mamta Sharma<sup>1</sup>

<sup>1</sup>International Crops Research Institute for the Semi-Arid Tropics, Hyderabad, India.

<sup>2</sup>Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior, India.

Email: devashishchobe@gmail.com

Dry root rot (DRR) of chickpea caused by *Rhizoctonia bataticola* has become a serious concern to chickpea production. Changing climatic elements like frequent low soil moisture stress and high temperature are among the probable factors increasing DRR incidence in chickpea. Management of the DRR is challenging, owing to its wide host range, lack of resistant sources and uneconomical chemical control measures. Therefore, an alternate resistance management approach against this disease may be achieved by exploitation of host plant resistance through phyto-hormone mediated induced systemic resistance (ISR). The present study aims to identify the role of phyto-hormones in inducing systemic resistance against chickpea DRR. Two Phyto-hormones Methyl Jasmonic Acid (MeJA) and Salicylic Acid (SA) were used in this study to induce systemic resistance (ISR) against DRR. Of them MeJA was proved to be a robust in playing vital role in inducing resistance against targeted pathogen. The disease severity based on per-cent disease susceptibility index (derived from modified 0-9 rating scale) showed that plants treated with MeJA 50ppm displayed lower degree of DRR severity than the other sub-treatments viz., MeJA at 25ppm and 75ppm. Also, the fungal propagule concentrations present in the root tissues sampled at different time points were analogous with the above findings. A high positive correlation was observed in the results from real-time qPCR based absolute quantification.