

# SALICYLIC ACID AMELIORATES SUSCEPTIBLE *VIGNA MUNGO* CULTIVAR TO MUNGBEAN YELLOW MOSAIC INDIA VIRUS INFECTION

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*Assessment of the expression profiles of antioxidative isoenzymes, was done in Mungbean Yellow Mosaic India Virus (MYMIV) susceptible cultivar of Vigna mungo on virus inoculation and salicylic acid (SA) pre-treatment. Disease symptoms were prominent in the virus inoculated plants and absent in the SA pre-treated plants. The role of SA in inducing resistance to MYMIV infection in Vigna mungo has been elucidated by proteomics. Thirteen proteins identified by MALDI-TOF/TOF, predicted to be involved in stress responses, metabolism, energy and secondary metabolism showed differential abundance upon SA treatment. The activity of superoxide dismutase (SOD) and guaiacol peroxidase (GPX) increased in the infected and SA treated plants when compared with control. The zymograms of SOD and GPX in the SA treated plants, with virus infection, showed increased activity for two isoforms of SOD and three isoforms of GPX. In untreated plants, expression of the above isoforms was low for SOD and GPX in the control plants. Catalase (CAT) isoenzymes increased in diseased plants and decreased on SA treatment. Altered expression of the antioxidant enzyme system thereby activating signalling pathways, increased abundance of proteins involved in energy metabolism and activation of defence is responsible for SA mediated resistance in V. mungo.*

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