

## IMMUNOMOLECULAR DETECTION AND CHARACTERISATION OF *POTYVIRUS* CAUSING MOSAIC IN COWPEA IN KERALA

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### ABSTRACT

*Cowpea (Vigna unguiculata (L.) Walp.) Family Leguminosae, an important dual purpose legume crop is severely affected by Potyviruses causing mosaic diseases. Present investigation aims at studying the symptomatology and mechanical transmission of these Potyviruses, along with their biological, immunological, molecular detection and characterisation. Direct antigen coating-Enzyme linked immunosorbent assay (DAC-ELISA) and Dot immunobinding assay (DIBA) identified the potyvirus as Blackeye cowpea mosaic virus (BICMV). Reverse transcription-Polymerase chain reaction (RT-PCR) further confirmed the results and the isolate shared a 97 per cent homology with Bean common mosaic virus (BCMV) strain Blackeye from Karnataka. A transmission of 80 per cent was observed for BICMV through mechanical inoculation. Chenopodium amaranticolor was identified as a potential indicator plant for the biological detection of BICMV infection.*

**KEYWORDS:** Cowpea, Blackeye Cowpea Mosaic Virus (BICMV), DAC-ELISA, DIBA, RT-PCR, Chenopodium amaranticolor

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