

## IDENTIFICATION AND MOLECULAR STUDIES ON *Cucumber mosaic VIRUS* IN IRAQ.

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### ABSTRACT

The objective of the study is to characterize new strain of *Cucumber mosaic cucumovirus* (CMV), based on symptoms on indicator plants, serological characteristics and the molecular weight of virus coat proteins on SDS-polyacrylamide gel electrophoresis. Leaves from symptomatic cucumber plants were extracted with 0.01 M phosphate buffer and mechanically inoculated on cucumber plants, and those exhibited mosaic symptoms were used as virus source. A number of indicator plants were mechanically inoculated with an extract of symptomatic leaves. The virus was extracted and purified from cucumber infected plants. Samples from pure virus preparation were analyzed on polyacrylamide gel containing SDS by electrophoresis. A part of symptomatic leaves was treated with anti-CMV polyclonal antibodies by Immunocromatography. Results showed that the virus induced chlorotic local lesions on the inoculated leaves of *Nicotiana tabacum* cv. Xanthi, and mosaic on beans. A precipitation line was appeared on the Immunostrip treated with symptomatic leaf extracts, this line is absent on immunostrip treated with asymptomatic leaves. The analysis of purified virus and on SDS-polyacrylamide gel electrophoresis revealed two protein bands of 24 and 26 Kd. These results indicate that the virus under study is CMV. The responded of *N. tabacum* Xanthi to virus inoculation by chlorotic lesions, and the apparition of 2 protein bands on acrylamide gel representing the molecular weights of virus coat protein indicates a new strain of CMV in Iraq.

**Key word:** Immunostrip, gel electrophoresis, *Cucumber mosaic virus*.