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## Serological detection and genetic characterization of *Pepino mosaic virus* in Moroccan tomatoes

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*Pepino mosaic virus* (PepMV) has become an emerging pathogen that causes significant losses in tomato crops worldwide. Several interception reports of PepMV on Moroccan tomato fruit have been stated, but the current situation of the disease is unlikely and the molecular characterization of PepMV population in Morocco has not been determined yet. A primary aim of this work was to develop a monoclonal antibody-based double antibody sandwich ELISA (DAS-ELISA) with sufficient sensitivity and specificity to detect PepMV in tomato. Another aim was to determine the genetic composition of Moroccan PepMV population. For this purpose, first we generated hybridoma cell lines secreting PepMV-specific Mab. Besides, the genomic nucleotide sequences of a part of RNA-dependent RNA polymerase (RdRp), triple gene block (TGB) and coat protein (CP) were determined. As results, the developed DAS-ELISA test was able to detect PepMV with a suitable sensitivity. Furthermore, the phylogenetic relationship among isolates and the known genotypes showed that the Moroccan population shares a very high sequence identity with CH2 strains. As well, Moroccan isolates reveal some specific single nucleotide polymorphisms that lead to distinct variants. Thus, this study will contribute to a timely and rapid detection of PepMV and the genotype determination would be a prerequisite for prevention and deploying effective strategies in disease management.

### Biography

Amal Souiri is a PhD student from the Faculty of Science, University Mohammed V, Rabat, Morocco. She's a young researcher on virology, molecular biology and cell culture. She has contributed in the development of monoclonal antibodies against *Pepino mosaic virus* infecting tomato crops in Morocco and the genetic characterization of Moroccan PepMV strains. She published several papers in reputed journals and communicated its studies in many international congresses. Also, she participated in the previous edition of Eurovirology organized by OMICS international.

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