Detection of a novel ilarvirus in *Passiflora edulis* in Colombia

Christian Lüchau[1], Joseph Cutler[1], Juliane Langer[1], Orlando Acosta[2], Gerhard Fischer[2], Fánor Casierra[3], Adriana Castañeda[4], Mónica Betancourt[5], Wilmer Cuéllar[6], Eduardo Stasiukynas[7] Susanne von Bargen[1], Carmen Büttner[1]

[1] *Humboldt-Universität zu Berlin, Division Phytomedicine, Lentzeallee 55/57, 14195 Berlin, Germany*
[2] *Universidad Nacional de Colombia, Bogota, Colombia*
[3] *Universidad Pedagógica y Tecnológica de Colombia, Tunja, Colombia*
[4] *Instituto Colombiano Agropecuario (ICA), Bogota, Colombia*
[5] *Corporación Colombiana de Investigación Agropecuaria (CORPOICA), Bogota, Colombia*
[6] *International Center for Tropical Agriculture (CIAT), Cali, Colombia*
[7] *Hacienda Misiones, Cundinamarca, Colombia*

ABSTRACT

Colombia is one of the world's most important producers and exporters of tropical fruits. These fruits are gaining substantial importance for the country. Nevertheless, it lacks a robust preventive management programme for the control of plant viruses. The consumption of purple passion fruit (*Passiflora edulis* Sims) is growing worldwide and due to Colombia's climatic and geographical conditions, it could play a leading role in this market. Next Generation Sequencing (NGS) has demonstrated the presence of a new virus related to members of the *Ilarvirus* genus in Colombian *P. edulis*. The spread of this virus could mean a drastic reduction in crop yields and significant economic losses. Therefore, the detection and characterisation of this plant pathogen is essential to Colombian farmers for preventing its infection and negative impacts on this important crop. In order to examine the frequency and distribution of this virus in Colombia, to characterize the symptoms associated with it, and to identify the pathways for its transmission, an RT-PCR based detection of the virus was established. For this purpose, Samples of *P. edulis* were collected in Cundinamarca and Boyaca, Colombia, thereafter total nucleic acid was isolated from leaf samples of diseased passion fruit plants and primers were used to detect the RNA1, RNA2 and RNA3 of the ilarvirus by RT-PCR. The new ilarvirus was detected in leaf material of the Cundinamarca region with deformations, blistering and chlorotic spots.