First report of groundnut bud necrosis virus natural occurrence in *Solanum nigrum* L. in India

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Solanum nigrum L., commonly known as black nightshade (makhoi in India) belongs to the family Solanaceae, is distributed worldwide. It is considered a weed species of agriculture and horticulture crops in most parts of the world besides being cultivated in some countries (Jagatheeswari et al. 2013). In a study conducted during 2014–2016 to identify weed hosts harbouring groundnut bud necrosis virus (GBNV, genus *Orthospovirus*, family *Bunyaviridae*) in and around GBNV infected tomato fields from Budamanahalli (Bengaluru rural district, Karnataka, India), it was observed that many *S. nigrum* plants showed symptoms of possible viral infections. The plants showed mosaic pattern on young leaves and mild mosaic or yellow dotting on older leaves. The testing of samples (symptomatic –25 and asymptomatic –5) by DAC-ELISA using polyclonal antibodies raised against GBNV nucleocapsid (N) protein reported to detect all serogroup IV tospoviruses (Mandal and Jain 2010) indicated the presence of the virus in all the symptomatic plants. To further confirm the presence of GBNV, total RNA was extracted from symptomatic and healthy leaf samples using TRI reagent (Sigma-Aldrich USA) and subjected to RT-PCR using GBNV specific primers (FP - 5'TTACAATTCCAGCG AAGGAC 3', RP -5'AGAGCAATCGAGGCGCTAA 3'). All the symptomatic samples showed an amplicon of size 898 bp. RT-PCR product was cloned in pTZ57R/T vector, sequenced and N gene sequence deposited in GenBank (KX244340). The sequence analysis confirmed it to be

GBNV. Apart from Budamanahalli fields, *S. nigrum* samples collected from other places of Karnataka and Telangana were also positive for presence of GBNV. To our knowledge, this is the first confirmed report of natural occurrence of GBNV on *S. nigrum* from India. *S. nigrum* is known to act as a reservoir host for tomato spotted wilt virus and vector *Thrips tabaci* in tobacco crop (Chatzivassiliou et al. 2007). Present study suggests that it might also serve as an important reservoir host for GBNV in tomato.

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