Detection of Wolbachia from Isolated Nematode in South Korea

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Wolbachia sp. are maternally inherited endosymbiotic bacteria that infect a wide range of arthropods and have a variety reproductive effects. Recently, several pathogenic species of filarial nematodes have revealed the presence of Wolbachia sp. In this study, we examined the infection of Wolbachia sp. from 20 nematode strains which were isolated through the investigation of soil samples from various biotopes and dead insects in South Korea. The detection of Wolbachia sp was determined by PCR amplification using primers to specific Wolbachia sp. 16s DNA from adults worms. The results showed that Wolbachia sp. are present in seven entomopathogenic nematode strains which respectively belongs to Steinernematidae, Heterorhabitidae and Tylenchida. However, Wolbachia sp. infection has been not found in phytopathogenic nematodes, Pratylenchus sp. and Meloidogyne incognita.