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A near full-length sequence of a new tobamovirus infecting Hibiscus rosa-sinensis L. was determined. The genome consists of 58 nucleotides (nt) 5' UTR, followed by a 4.9 kb ORF which methyl transferase helicase domain (128 kDa), readthrough protein RNA dependent RNA polymerase (RdRp) 185 kDa and a 52 kDa protein. The 128 kDa protein had a maximum homology of 51.4 % to TMGMV and amino acids (aa) were 54.3 % identical to TMV- vulgare strain. The 185 kDa RdRp had a maximum homology of 53.5% to TMV-Ob and KGMMV-Y and a 59.6% homology at the aa level to CGMMV-SH. The MP gene encodes 282 aa and its theoretical molecular weight is 30.4 kDa. The nt and as sequence identities of MP ranged from 38.8% to 43.9% and 30.9% to 37.9%, respectively. The CP gene encodes 163 residues and with a theoretical molecular weight of 18.2 kDa The (nt) and aa sequences of the CP were 46.9 % to 51.6% and 45.3% to 57.1% identical to other tobamoviruses, respectively. The predicted virion origin of assembly (OAS) was located in the CP gene. Phylogenetic trees generated based on the nt and aa sequences of RdRp, MP and CP genes indicated that this new virus clustered with subgroup II tobamoviruses. Although the CP ORF of this virus shared a high nt and aa sequence identity with Sunn-hemp mosaic virus (SHMV), Western analysis showed that it is serologically unrelated to SHMV. We propose the name Hibiscus virus S (HVS) for this Singapore isolate. This is the first report on a near full-length sequence of a Tobamovirus that infects hibiscus.

4-04. Occurrence of crown gall of chrysanthemum caused by *Agrobacterium tumefaciens*. Young Kee Lee¹, Jong Hyoung Lee¹, Jin Young Kim², Weon Dae Cho¹, and Jae Soon Cha³.

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Incidence of crown gall on lower stem of chrysanthemum, *Chrysanthemum morifolium* Ramat., was first observed at Hwasung, Gyeonggi, Korea in 2001. Tumors on the stem were 1.5-2 cm in size and semi-round with rough surface texture of dark brown color. Four strains of bacteria isolated from the tumor tissues were characterized. Their colonies were convex, glistening, circular with an entire edge, and white to tannish-cream in color on PDA plus CaCO₃. They were gram negative, oxidase positive, and growing on D1M agar. The bacterial isolates inducing gall formation in chrysanthemum were identified as *Agrobacterium tumefaciens* based on biochemical and physiological characteristics, fatty acid profile using Sherlock Microbial Identification System, and substrate utilization patterns using Biolog Identification System. Young chrysanthemum plants inoculated with the bacteria developed typical galls within two to three weeks. Seedlings of tomato and slices of carrot roots also produced typical galls two to three weeks after inoculation. This is the first report on crown gall of chrysanthemum in Korea.