

**4-05. Two new species of *Trichoderma* isolated from commercially grown oyster mushroom, *Pleurotus ostreatus* (oral)**

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We describe two new *Trichoderma* species associated with oyster mushroom in Korea. *Trichoderma* green mould has been one of the most serious diseases of oyster mushroom in Korea. Of these the predominant species are two unrecorded species. We designed as *Trichoderma* sp. Korean type 1 (Th K1) and *Trichoderma* sp. Korean type 2 (Th K2), respectively. Th K1 and Th K2 can be distinguished from previously reported *Trichoderma* species as well as each other in morphological characteristics including growth rate at 35°C, colony morphology, conidia shape and branch pattern of phialides. Sequence of the ITS region of rDNA, the protein coding translation elongation factor gene(EF-1 $\alpha$ ), and RNA polymeraseII (RPB2) not only clearly separated *Trichoderma* sp. Korean types from their closely related *T. harzianum* biotype but also distinguished them from each other. Analyses of the EF-1 $\alpha$  and RPB2 sequences were found to be more useful for establishing systematic relationships among *Trichoderma* isolates than those of the ITS sequence.

Based on the results of morphological and molecular characteristics. We propose the two *Trichoderma* sp. Korean types as the new species

**4-06. Characterization and diagnosis of YMV-K strains infecting Chinese yam(*Dioscorea opposita* Thunb. cv. Dung-Gun-Ma) in Korea. (oral)**

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YMV-K strains were purified from *D. opposita* Thunb. cv. Dung-Gun-Ma showing mosaic symptom on their leaves. YMV-K strains were filamentous particles of 780nm in length and induced cytoplasmic disorder such as inclusion body formation. Nucleotide and amino acid sequences of 5'-UTR, P1 and CP of YMV-K strains shared 80.8, 64.7 and 98.3% identity respectively to JYMV J1 in the mean value. Purification of YMV-K strains according to JYMV purification method(S. Fuji) was conducted to product antiserum. With antiserum against YMV-K strains, the Various diagnosis methods such as IC-RT-PCR, DIBA, RIPA and indirect-ELISA were used to detect YMV-K strains in Chinese yam plant.

**4-07. Laf Blight of Peony caused by *Phytophthora cactorum* (oral)**

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A leaf blight disease was found on peony plants growing in the first author's apartment garden in May, 2003. A species of *Phytophthora* was isolated from the lesions. The isolate readily produced sporangia and sex organs on V8 juice agar plates. Sporangia were papillate, ovoid to subspherical and caduceus with a pedicel. Sporangia were 33.6-38.4 x 33.6 $\mu$ m with l/b ratio approximately 1.14, papillae 4-5 $\mu$ m high, pedicels also 4-5 $\mu$ m long. Oogonia were spherical, 28.8 $\mu$ m in diameter. Antheridia were globose, 14.4 $\mu$ m in diameter and mating with oogonia paragynously. Mycelia grew best at 30 $^{\circ}$ C and did not grow at 35  $^{\circ}$ C or above, and at 5 $^{\circ}$ C. The morphological characteristics conformed to *P. cactorum*.

**4-08. Leaf Blight of *Fatsia japonica* caused by *Phytophthora cactorum* (oral)**

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A leaf blight disease was found on *Fatsia japonica* plants growing in the first author's apartment garden in May, 2003. Major symptoms were leaf blight and petiole rot. A species of *Phytophthora* was isolated from the lesions. The isolate readily produced sporangia and sex organs on V8 juice agar plates. Sporangia were papillate, ovoid to subspherical and caducous with a pedicel. Sporangia were 33.6-38.4 x 33.6 $\mu$ m with l/b ratio approximately 1.14, papillae 4-5 $\mu$ m high, pedicels also 4-5 $\mu$ m long. Oogonia were spherical, 28.8 $\mu$ m in diameter. Antheridia were globose, 14.4 $\mu$ m in diameter and mating with oogonia paragynously. Mycelia grew best at 30 $^{\circ}$ C and did not grow at 35  $^{\circ}$ C or above, and at 5 $^{\circ}$ C. The morphological characteristics conformed to *P. cactorum* (Leb. And Cohn) Schroeter.

**4-09. Shoot Blight of Suckers of Common Lilac caused by *Phytophthora citricola* Sawada (oral)**

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Shoot blight was occurring on shoots of suckers of common lilac (*Syringa vulgaris* L.) growing in first author's apartment garden in May 2003. A species of *Phytophthora* was isolated from the lesions. The isolate did not sporulate on agar media but formed sporangia in water and also formed sex organs in single culture. Sporangia were semipapillate, ovoid obpyriform, measured 45.6-52.8 x 33.6-36.0 $\mu$ m. Sporangia were very variable in shape. Optimum temperature for mycelial growth was 25 $^{\circ}$ C. Oogonia were spherical and antheridia were paragynous. Optimum temp for mycelial growth was 25 $^{\circ}$ C. The isolate was identified as *Phytophthora citricola* on the basis of the morphological characteristics and cardinal temperature.

**4-10. Leaf blight of Castor Bean Plants caused by 2 Species of *Phytophthora*(oral)**