Occurrence of *Sclerotium rolfsii* affecting arum lily in Asia

Eisa Nazerian¹ · Samira Peighami Ashnaei²

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During September 2018, the samples including 18 collars of diseased plants from a sample of approximately 2500 *Zantedeschia* spp. plants, were collected from the nursery and ornamental plant production centers located in the north of Iran. Pure fungal cultures were obtained using hyphal tip method. In pathogenicity assays, wounded basal stems of potted plants were inoculated by mycelium plugs of three isolates with three replications. Control plants were inoculated using sterile PDA plaques without the fungus. Re-isolation of the fungus was performed to fulfil Koch's postulates. Disease symptoms appeared as yellowing and dropping of leaves, wilting of plants and the formation of a thin epiphytic white cottony mycelial growth at the collar region. Small brown spherical sclerotia, associated with the rotting tissue, were observed on the collars of diseased plants. The morphological appearance of the fungus included the following. Hyphae: white, branched, 1.4–2.8 µm diameters, with clamp connections; sclerotia: smooth, spherical to ellipsoidal, light brown becoming dark brown with age, 0.6–2.0 mm diameter. Blast searches of the GenBank nucleotide database revealed 98% identity to *Athelia rolfsii* (*Sclerotium rolfsii* KT222899). The sequence of *S. rolfsii* isolate was deposited in GenBank (MK182755). To the best of our knowledge, this is the first study in Asia to determine basal rot disease in *Z. aethiopica* caused by *S. rolfsii*. The disease referred to as “Basal Rot” of *Z. aethiopica* was previously reported in the United States and Brazil (Farr et al. 1989; Mesquita et al. 2007).

References

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✉ Eisa Nazerian
eisanazerian1144@gmail.com

¹ Education and Extension Organization of Jihad-E-Agriculture, Iranian Horticultural Research Institute, Flower and Ornamental Plants Research Center of Iran, Mahalat, Iran

² Plant Disease Research Department, Agricultural Research Education and Extension Organization (AREEO), Iranian Research Institute of Plant Protection, Tehran, Iran