

First report of *Helicocephalum sarcophilum* (*Zoopagomycotina*) in Iran

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Mushroom production units of Kermanshah province were sampled during 2012-13, and 50 fungal isolates were obtained. *Verticillium fungicola* with the most number of isolates, *Trichoderma harzianum* and *Trichothecium* sp. were the most frequent fungi associated with the cultivated mushroom, *Agaricus bisporus*. Seven isolates were obtained from the cap of *A. bisporus* with following characteristics: colony white to gray (Fig. 1a and b), vegetative hyphae colorless, aseptate, branched and 4/5–14 μm diam (Fig. 1c). Sporangiphores solitary, erect, unbranched, variable in size, 130–200 μm long, anchored at base by four to five rhizoids, 15–20 μm long, diam 2–3 μm and with an apex that coils or less commonly remains straight and becomes moniliform (Fig. 1e and f). Sporangia globose, white to brownish, 43 (36–57) μm in diam (Fig. 1g-i). Sporangiospores ellipsoid, continuous, 5 (3–7) \times 9/5 (6–12) μm (Fig. 1j). The isolates were identified as *Helicocephalum sarcophilum* Thaxter (*Helicocephalidaceae*, *Zoopagomycotina*), based on the morphological characters. According to the published data, this is the first report of the species for mycobiota. Moreover, this is the first report of *Helicocephalum* associated with *A. bisporus* for the world (Borowska 1997; Drechsler 1934; Kitz and Embree 1989; Roux 1996). Species of *Helicocephalum* are not reported in the literature often and new taxa are rarely described. The isolates are kept in the fungal collection of the Department of Plant Protection, Razi University, Kermanshah, Iran.

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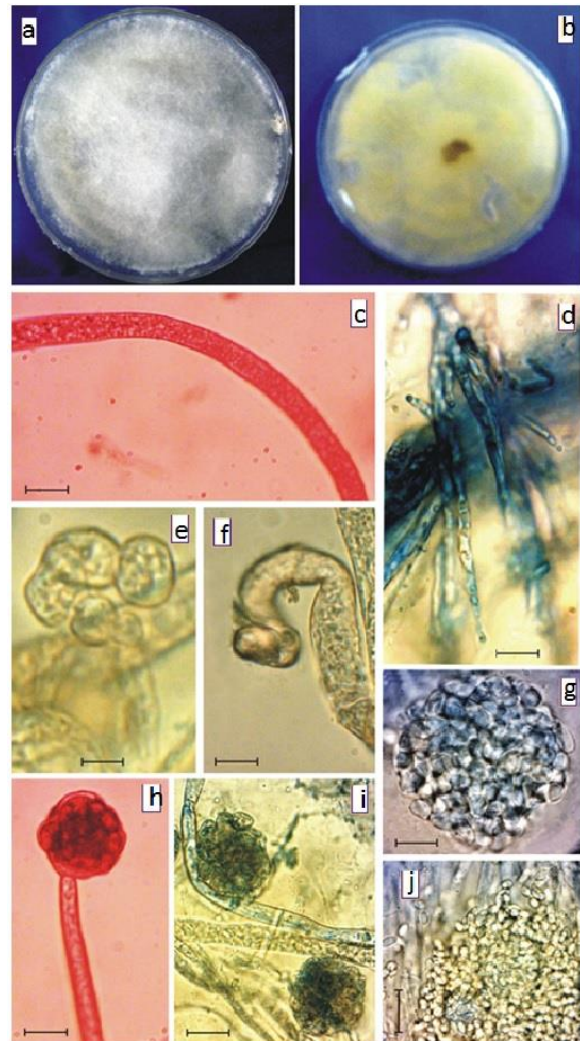


Fig 1. *Helicocephalum sarcophilum*. **a.** Colony of after 14 days, **b.** reverse of colony after 14 days, **c.** Non-septate hyphae, **d.** Rhizoid, **e.** Sporangiphore and apical spore chain, **f.** Apex of sporangiophore, **g-i.** Sporangium with sporangiospores, **j.** Sporangiospores. (Bars = Figs c, d, f, g, h, i, j = 25 μm , Fig. e = 10 μm).