

## Production of Tuberlike Sclerotia of Medicinal Value by *Pleurotus tuberregium* (Fr.) Sing.

Alice W. Chen<sup>1</sup> and Nia-Lai Huang<sup>2</sup>

<sup>1</sup>Specialty Mushrooms, 1730 Penfield Rd., No. 41, Pefield, NY 14526, USA, and <sup>2</sup> Saming Mycological Institute, Saming, Fujian Province, China

*Pleurotus tuberregium* (Fr.) Sing. (= *Lintinus tuberregium*), known as tiger milk mushroom in China, thrives in tropical or subtropical climates. Molecular studies suggested its possible origin in the Australasian-Pacific region with isolates of high genetic diversity. The species, with a tetrapolar mating system, is widely distributed in such places as Africa (Nigeria, Ghana, Cameroon), Australia, Papua New Guinea, Malaysia, Burma, Indonesia, and Yunan province in China. The mushroom has gilled fruiting bodies and white spore print. Typically funnel-shaped when young, the pilei are golden in color and become brownish as the mushroom grows. Although edible, mushrooms of *P. tuberregium* do not have much flavor or aroma according to Chinese standards. The mushrooms also become fibrous during morphogenesis. In addition, Ogun-dana and Fagala (1981) detected a low level of toxic hydrocyanic acid in their examination. There was also a low level of oxalic acid which

can reduce the food value. Economically important, however, are sclerotia formed underground in natural habitats, sometimes enormous in size, 10–30 cm in diameter. These sclerotia, hard in nature, remained viable for 7 years, and can survive adverse environments such as drought. The outer surface is white when first formed; the sclerotia become brownish in time. The inner mycelial structure is white. Fruiting bodies can arise from sclerotia under favorable conditions. Although may harbor microbial contaminants, sclerotia can be used as inoculum if a high rate of spawning is used. African tribesmen have long used the tuberlike sclerotia, high in protein content, in dry form in food preparations, and fresh (bitter) and dry forms in medicinal preparations to treat skin disease, inflammation, headache, stomach problems, cold, asthma, fever, high blood pressure, and smallpox. Since B. H. Oso's report in 1977, many have engaged in cultivation and related research on this species.