

OR-61**Potential of Mycelia and Culture Broth of the Tiger's Milk Mushroom as Source of Nutraceuticals and Substitute for the Naturally Occuring Sclerotia**

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The tiger's milk mushroom, *Lignosus rhinocerus* (Cooke) Ryvarden, has long history of use as natural remedies for ailments by the local and indigenous communities in Malaysia. From the ethnobotanical perspective, only the sclerotia were claimed to have medicinal values; however, the supply of sclerotia from the wild is limited. Solid-substrate cultivation of the sclerotia of *L. rhinocerus* takes a long time and the yield is inconsistent. Alternatively, the mycelia can be produced in a shorter time through liquid fermentation. In the present study, bioactivities of extracts of the sclerotia as well as mycelia and culture broth of *L. rhinocerus* were assessed. Extracts of mycelia and culture broth of *L. rhinocerus* exhibited significantly higher antioxidant capacities as measured by the radical scavenging, reducing capacity and metal chelating assays. On the other hand, extracts of the sclerotia displayed stronger growth inhibitory effect against various cancer cell lines. The nature of potential bioactive components responsible for the *in vitro* antioxidant and cytotoxic activities was unravelled based on the results of chromatographic analysis of extracts. The occurrence of bioactive components in *L. rhinocerus* varied according to cultivation techniques and mushroom developmental stages. The mycelia and culture broth of *L. rhinocerus* might emerge as alternative source of nutraceuticals depending on the desired bioactive components.

Keywords: Medicinal mushrooms, antioxidant, cytotoxic.
