

ANTIDIABETIC AND ANTIOXIDANT ACTIVITIES OF SIX EDIBLE MUSHROOMS GROWN IN BANGLADESH

Debu Kumar Bahttacharjya*

Executive Summary

Six species of edible mushrooms are commercially available in Bangladesh, namely, *Pleurotus ostreatus* (PO2), *Pleurotus djmore* (POP), *Pleurotus sajor-caju* (PSC), *Pleurotus citrinopileatus* (PY), *Pleurotus florida* (FLO), *Pleurotus cystidiosus* (PCYS). Methanol and water extracts were prepared from these edible mushrooms and their antioxidant activity and α -glucosidase inhibitory activity were studied. The water extract of *Pleurotus djmore* (POP) had the highest total phenolic content (30.8 mg GAE/g sample extract) and the highest DPPH scavenging activity (IC_{50} : 0.33 mg/mL). Likewise, the methanolic extract of *Pleurotus djmore* (POP) showed the highest α -glucosidase (from *Saccharomyces cerevisiae*) inhibitory activity (IC_{50} : 1.27 mg/mL). The outcomes suggested that *Pleurotus djmore* (POP) can be utilized for the development of α -glucosidase (*S. cerevisiae*) inhibitory activity and antioxidant activity.

*Professor, Dept. of Biochemistry and Molecular Biology, Sher-e-Bangla Agricultural University, Dhaka, Bangladesh