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Supplementary material

Submerged fermentation of mycelial biomass and exopolysaccharide of Philippine *Lentinus tigrinus*: FTIR spectroscopy and bioactivity profiling

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Supplementary Table S1 – α -glucosidase, acetylcholinesterase, and cyclooxygenase inhibitory activity of *L. tigrinus* mycelia and EPS extract at 10 $\mu\text{g mL}^{-1}$

Inhibitory activity		% Inhibition
α-glucosidase		
Mycelia		0.83 $\pm$ 4.12
EPS		2.30 $\pm$ 6.25
Acarbose (+)		88.76 $\pm$ 0.68*
Acetylcholinesterase		
Mycelia		-0.37 $\pm$ 2.66
EPS		0.00 $\pm$ 4.78
Galantamine (+)		98.03 $\pm$ 0.04**
Cyclooxygenase	COX-1	COX-2
Mycelia	-10.82 $\pm$ 2.46	2.36 $\pm$ 8.70
EPS	15.72 $\pm$ 4.41	-13.18 $\pm$ 19.37
Indomethacin (+)	93.98 $\pm$ 1.85*	91.86 $\pm$ 4.40*

*denotes statistically significant differences based on slope-derived comparisons relative to the negative control ($p < 0.05$; independent biological replicates, $n = 2$; technical replicates, $t = 2$).

**denotes statistically significant differences based on mean inhibition values relative to the negative control ($p < 0.05$; independent biological replicates, $n = 2$; technical replicates, $t = 2$).

Supplementary Table S2 – Antioxidant activity of the mycelia and exopolysaccharide extracts of *L. tigrinus*.

Treatment	Scavenging activity (%)
Mycelia	62.69 ^b
EPS	50.76 ^c
Ascorbic acid	92.31 ^a

Each value represents mean $\pm$ standard deviation of the scavenging activities of the mycelia and exopolysaccharide extracts of *L. tigrinus* compared with ascorbic acid ($n=3$). Means with different superscript letters in the same column differ significantly at the 5% significance level. The concentration of extracts used was 1000 $\mu\text{g mL}^{-1}$.

Supplementary Table S3 – Mortality of brine shrimp after 24 h of exposure to the varying concentrations of mycelia and exopolysaccharide extracts of *L. tigrinus*.

Extracts	Concentration ($\mu\text{g mL}^{-1}$)	LC ₅₀ ($\mu\text{g mL}^{-1}$)	Mortality (%)
Mycelia	100,000	10.23	100.00 $\pm$ 0.00 ^a
	10,000		100.00 $\pm$ 0.00 ^a
	1,000		100.00 $\pm$ 0.00 ^a
	100		60.00 $\pm$ 1.00 ^b
	10		46.67 $\pm$ 0.58 ^b
	1	669194.99	23.33 $\pm$ 0.58 ^c
	0.1		13.33 $\pm$ 0.58 ^{cd}
	Saline		0.00 $\pm$ 0.00 ^d
	Ethanol		100.00 $\pm$ 0.00 ^a
EPS	100,000	669194.99	23.33 $\pm$ 0.58 ^b
	10,000		13.33 $\pm$ 0.58 ^c
	1,000		0.00 $\pm$ 0.00 ^d
	100		0.00 $\pm$ 0.00 ^d
	10		0.00 $\pm$ 0.00 ^d
	1	669194.99	0.00 $\pm$ 0.00 ^d
	0.1		0.00 $\pm$ 0.00 ^d
	Saline		0.00 $\pm$ 0.00 ^d
	Ethanol		100.00 $\pm$ 0.00 ^a

Each value represents the mean $\pm$ standard deviation of tests conducted in triplicate (n = 3). Values within the same column that do not share the same superscript letter indicate statistically significant differences at the 5% level of significance using Tukey's HSD.

Supplementary Table S4 – Antibacterial activity of the mycelia and exopolysaccharide of *L. tigrinus* against Gram-positive *Staphylococcus aureus* and Gram-negative *Escherichia coli*.

Treatment	Diameter zone of inhibition (mm)	
	<i>S. aureus</i>	<i>E. coli</i>
Mycelia	8.83 $\pm$ 0.13 ^b	0.00 $\pm$ 0.00 ^b
EPS	0.00 $\pm$ 0.00 ^c	0.00 $\pm$ 0.00 ^b
Streptomycin sulfate (+)	51.28 $\pm$ 0.69 ^a	40.95 $\pm$ 0.11 ^a
Ethanol (–)	0.00 $\pm$ 0.00 ^c	0.00 $\pm$ 0.00 ^b

Each value represents the mean $\pm$ standard deviation of tests conducted in triplicate (n=3). Values within the same column that do not share the same superscript letter indicate statistically significant differences at the 5% level of significance using Tukey's HSD. Note: streptomycin sulfate (+ control), ethanol (– control).