[illegible]

[illegible] ATCC11778 [illegible]
P. robusticus [illegible] P. igniarius, P. linteus [illegible]
[illegible] P. linteus [illegible] (9) [illegible] (1) [illegible]
[illegible] (10) [illegible]
[illegible]
[illegible] Phellinone [illegible] (7) [illegible]
[illegible]
[illegible] P. linteus [illegible]
[illegible] (11) [illegible] Bacillus subtilis ATCC1090 [illegible]
[illegible]
[illegible]
[illegible] Wang [illegible] (2) [illegible]
[illegible] Phellinus [illegible] Phellinsin A [illegible]
[illegible]
[illegible] 76 µg/ml IC50 [illegible] Saccharomyces cerevisiae [illegible]
[illegible]
[illegible]
[illegible] (12) [illegible] Hervey Anchel [illegible]
[illegible] (13) [illegible] 1941 [illegible] Wilkins
[illegible] Ganoderma lucidum (Basidiomycota) [illegible] 2000 [illegible]
[illegible] (14) [illegible]
Phellinus [illegible] Pleuromutilin
[illegible] (4) [illegible]
[illegible]
[illegible] (5 6) [illegible]
[illegible] P. gilvus [illegible]
[illegible] E. coli ATCC25922, L. plantarum ATCC14917
[illegible] K. pneumonia ATCC10031
[illegible] Phellinus conchatus [illegible]
[illegible]
[illegible] (MIC) [illegible] (7) [illegible]
[illegible] (MBC) [illegible] B. cereus [illegible] Phellinus [illegible]

Microbroth

37

(dilution

CFU.ml

MBC (9929)

CFU CFU.ml

(1819)

Total phenol

37

(content

Folin-Ciocalteu

(1819)

96

100

20 10 5 3 2 1 0

100

1000 500 250 100 50 0

Folin-Ciocalteu

(7%) Na2CO3

:(MBC: Minimum Bactericidal Concentration)

(mg.ml

765

9999

MBC

MBC

		(ME) 5mg.ml	(BE) 5mg.ml		(chloro) 30µg.ml	(eryth) 15µg.ml
	P.aeroginosa	10	8	8	16	9
	E. coli	-	-	-	27	-
	S. aureus	13	13	6	10	15
	E. feacalis	-	-	-	22	12
	B. cereus	13	12	6	10	15

P. conchatus Staphylococcus aureus

S. aureus

mg.ml MBC

MIC

P. conchatus Bacillus cereus

P. conchatus MBC MIC

	M	MB	MC
S. aureus			
MIC (mg.ml)	2	1	4
MBC (mg.ml)	4	2	8
B. cereus			
MIC (mg.ml)	5/0	5/0	5/0
MBC (mg.ml)	01	1	01
P. aeruginosa			
MIC (mg.ml)	2	2	8
MBC (mg.ml)	4	4	16

P. conchatus Pseudomonas aeruginosa

(3)

S.

aureus

[illegible] MIC=2 [illegible] P. aeruginosa [illegible] mg.ml MBC= 4 [illegible] mg.ml [illegible]

[illegible] P. rimosus [illegible] flaccose G. lucidum [illegible]

[illegible] P. rimosus [illegible] 0/5 mg.ml [illegible] (21) [illegible] P. conchatus [illegible] (MIC: 1.5 mg.ml) [illegible]

[illegible] Ganoderma lucidum [illegible] 500 mg/ml [illegible]

[illegible] P. conchatus [illegible] mg.ml [illegible] (14) [illegible]

[illegible] Sheenan [illegible] P. rimosus [illegible] (21) [illegible]

[illegible] (MW) (MB) (MC) (M) [illegible] Folin-Ciocalteu [illegible] P. conchatus [illegible] (84.87±0.73 mg GA.gr extract) [illegible]

P. conchatus [illegible]

[illegible]	[illegible]	[illegible]
80/34±1/59	(M) [illegible]	1
12/34±0/12	(MC) [illegible]	2
73/87±0/84	(MB) [illegible]	3
27/67±0/12	(MW) [illegible]	4

[illegible]

[illegible] (21) [illegible] P. conchatus [illegible] mg.ml [illegible] S. aureus [illegible] P. aeruginosa [illegible] B. cereus [illegible] (MBC) [illegible] (MIC) [illegible]

[illegible] (Proton motive force) PMF [illegible]
[illegible] (Electron flow) [illegible]
[illegible] (22) [illegible]
[illegible]
[illegible]
[illegible]
[illegible] P. conchatus [illegible]

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Collection and Identification of a Medicinal Mushroom, Phellinus Conchatus in Iran and Investigation of the Antibacterial Activity of Total Methanol Extract and Fractional Extracts

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Abstract

Introduction: Macromycetes are considered as new resources for medicine with various biological properties. One of the most important medicinal fungi in Iran is Phellinus conchatus. This genus contains 359 species around the world of which 12 species are reported from the north regions of Iran. Phellinus species have anticancer, antioxidant and antibacterial effects. Moreover, they have been used in traditional medicines for treatment of several diseases. Due to increasing bacterial resistance to existing antibiotics, it seems that research for new sources of antibiotics is necessary.

Methods: The purpose of this research was to collect and identify the species with respect to hosts, dispersal, macromorphological and micromorphological characters of the species, and their biological effect against Gram-negative bacteria and Gram-positive bacteria was evaluated using total methanol extract and it's fractional extracts(chloroform, butanol and water extracts) using disk diffusion method, minimum inhibitory concentrations(MICs) and minimal bactericidal concentrations(MBCs).

Results: The results of disk diffusion tests showed that all extracts except aqueous extract had growth inhibitory effects on three bacteria; Staphylococcus aureus, Bacillus cereus and Pseudomonas aeruginosa. The butanolic extract showed the best result in growth inhibition against the bacteria, especially on Pseudomonas aeruginosa . The MICs and MBCs of the butanol extract of these bacteria were(1, 2mg.disk), (2, 4 mg.disk) and(8, 16mg.disk), respectively.

Conclusion: The results show that different extracts, especially butanol extract have high antibacterial activities which indicate the presence of active components in this fraction. More fractionation studies are under way to isolate the antibacterial components in the butanolic extract.

Keywords: Anti- Bacterial Agents; Antioxidants; Plants, Medicinal; Iran; Methanol

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