An Alternative Antimicrobial Approach to Fight Bacterial Pathogens from Phellinus linteus

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Abstract : The objective of this research was focused on investigating in vitro antimicrobial activity of Phellinus linteus fruiting body extracts on Pseudomonas aeruginosa, Escherichia coli, Staphylococcus aureus and Methicillin-resistant Staphylococcus aureus. Phellinus linteus fruiting body was extracted with ethanol and ethyl acetate and was vaporized. The disc diffusion assay was used to assess antimicrobial activity against tested bacterial strains. Primary screening of chemical profile of crude extract was determined by using thin layer chromatography. The positive control and the negative control were used as erythromycin and dimethyl sulfoxide, respectively. Initial screening of Phellinus linteus crude extract with the disc diffusion assay demonstrated that only ethanol had greater antimicrobial activity against Pseudomonas aeruginosa, Escherichia coli, Staphylococcus aureus and Methicillin-resistant Staphylococcus aureus and Methicillin-resistant Staphylococcus aureus and Methicillin-resistant Staphylococcus aureus and Methicillin-resistant Staphylococcus aureus and 0.25 mg/ml. of Escherichia coli and Staphylococcus aureus, respectively. TLC chemical profile of extract was represented at R_f ≈ 0.71-0.76.

Keywords : Staphylococcus aureus, Escherichia coli, Phellinus linteus, Methicillin-resistant Staphylococcus aureus, antimicrobial activity

Conference Title : ICPPS 2017 : International Conference on Pharmacology and Pharmaceutical Sciences

Conference Location : Tokyo, Japan

Conference Dates : May 28-29, 2017

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