Effects of Chloroprocta sp. maggot filtrates on extracellular matrix reduction and embedded Staphylococcus epidermidis viability

Publons ID	38122259
Wos ID	WOS:000416365700013
Doi	
Title	Effects of Chloroprocta sp. maggot filtrates on extracellular matrix reduction and embedded Staphylococcus epidermidis viability
First Author	
Last Author	
Authors	Anjarwati, DU; Nuryastuti, T; Riwanto, I; Wahyono, H;
Publish Date	SEP 2017
Journal Name	MALAYSIAN JOURNAL OF MICROBIOLOGY
Citation	1
Abstract	a:3:{i:0;s:327:"Aims: The objective of the study was to analyze the activity of local maggot filtrates from Chloroprocta sp. green flies in diminishing the embedded Staphylococcus epidermidis viability through destruction (reduction) of the biofilm of extracellular matrix and analyzes the precence of protease, a compound of maggot filtrates.";i:1;s:1085:"Methodology and results: A microtiter plate biofilm assay with crystal violet staining was used to measure the effects of various maggots filtrates concentrations on the S. epidermidis biofilm matrix reduction. Maggot filtrates reduced the biofilm extracellular matrix of both S. epidermidis ATCC 35984 and ATCC 35983 significantly up to 80% ($p < 0.05$). Scanning electron microscopy which was performed to confirm the reduction effects indicated in line with the results. Both embedded S. epidermidis strains viability was meassured by using 3-(4,5-dimethylthiazol- 2-yl)-2,5-diphenyl tetrazolium bromide (MTT) assay. Embedded cells viability decreased significantly by up to 50% ($p < 0.05$) after 3 h and 24 h at the different concentrations. Finally, there were very strong and significant correlations ($r = 1$, $p < 0.0001$) between biofilm reduction and embedded cells viability of both strains. Furthermore, Chloroprocta sp. maggot filtrates containing gelatinase, a protease enzyme metalloproteinase classes, with the protein content is 358 mu g/mL and protease activity of 3.3 U/mg.";i:2;s:320:"Conclusion, significance and impact of study: Chloroprocta sp. maggot filtrates, containing gelatinase has an antibacterial activity that increase the reduction of the extracellular matrix and decrease the viability of embedded S. epidermidis. These results may have the implications in therapeutic fields in the future.";}
Publish Type	Journal
Publish Year	2017
Page Begin	235
Page End	243
Issn	1823-8262
Eissn	2231-7538
Url	https://www.webofscience.com/wos/woscc/full-record/WOS:000416365700013
Author	Dr Dr DWI UTAMI ANJARWATI, M.Kes, Sp.MK