Comparison of the antimicrobial activities of Syzygium jambos (L.) extracts with other tannin containing plant extracts

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Abstract

Syzygium jambos (L.) Alston (Myrtaceae) is a widespread medicinal plant traditionally used in sub-Saharan Africa to treat infectious diseases. Acetone and aqueous extracts from the bark of Syzygium jambos were tested for antimicrobial activity in vitro by the agar dilution method in petri dishes. Both extracts showed some activity against the tested micro-organisms. They proved to be particularly effective on Staphylococcus aureus, Yersinia enterocolitica and coagulase negative staphylococci among which Staphylococcus hominis, Staphylococcus cohnii and Staphylococcus warneri. These properties seem to be related to the high tannin content of S. jambos extracts (respectively 77 and 83% for the aqueous and acetone extracts determined according to the European Pharmacopoeia method) which were generally more active than Hamamelis virginiana, Krameria triandra, Alchemilla vulgaris and Rubus fruticosus extracts containing respectively 48, 44, 46 and 28% tannins. Furthermore, elimination of tannins totally suppressed these antimicrobial activities.


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