

C-15 halogenated acetogenin with antibacterial activity against food pathogens

Abstract

As part of our continuous effort in search of bioactive secondary metabolites from marine organisms, we studied a specimen of red algae, *Laurencia nangii* Masuda from Banggi Island, Kudat District, Sabah. One C-15 acetogenin was isolated and identified as Z-dihydrorhodophytin (1, 15%). This compound showed 100% inhibition against the tested bacteria at 30 μgdisc^{-1} . MIC values for *Salmonella enteritidis*, *Vibrio cholerae* and *Staphalococcus aureus* were 1.25 μgdisc^{-1} , 2.25 μgdisc^{-1} and 2.25 μgdisc^{-1} , respectively ; while *Escherichia coli*, *Salmonella typhii* and *Salmonella thphymunium* were inhibited at MIC value of 7.25 μgdisc^{-1} . This study showed that Z-dihydrorhodophytin (1) has significant antibacterial activity against the tested food pathogens and may have potential to be used as lead pharmaceutical drug candidate in combating "antibiotic resistant bacteria".