Efek anti virus dari Virgin Coconut Oil terhadap Replikasi Virus Dengue = The antiviral effect of vigin coconut oil to the replication of dengue virus in vitro

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Abstrak

[Kasus Demam Berdarah Dengue (DBD) dan demam dengue (DD) dilaporkan meningkat di seluruh dunia setiap tahunnya, terutama di negara Asia Tenggara termasuk Indonesia Gambaran klinis dari DBD/DD adalah demam, sakit kepala, nyeri otot dan sendi, ruam kulit yang mirip dengan campak, dan hasil lab menunjukkan penurunan
jumlah trombosit. Hingga saat ini belum ada antiviral khusus untuk DBD. Penelitian ini bertujuan untuk mengevaluasi pengaruh virgin coconut oil (VCO) terhadap replikasi virus dengue (DENV). Penelitian ini merupakan penelitian eksperimental yang dilakukan di Laboratorium Mikrobiologi, Departemen Mikrobiologi, Fakultas Kedokteran Universitas Indonesia. Data yang diperoleh ini berasal dari hasil eksperimen yang dilakukan dengan 6 pengulangan untuk setiap perlakuan yaitu pemberian VCO 5%, 1%, 0,5% dan 0,1%, kontrol negatif dan Dimethyl Sulfoxide (DMSO).
Penghambatan replikasi DENV dilihat dengan menghitung titer virus setelah perlakuan VCO. Titer virus dihitung dengan menggunakan metode focus assay. Hasil penelitian menunjukkan bahwa IC50 dari VCO adalah kuat, sementara CC50 VCO adalah moderat. Hal ini menunjukkan bahwa secara signifikan VCO menghambat replikasi
DENV dengan kisaran cukup aman untuk digunakan pada sel dalam dosis terbatas.
Penelitian lebih lanjut perlu dilakukan untuk mengevaluasi efek VCO pada replikasi DENV in vivo, sehingga dapat ditemukan kandidat anti DENV di masa mendatang.;Cases of the Dengue Hemorrhagic Fever (DHF)/Dengue Fever (DF) were reported increasing worldwide annually, especially in South Asia counties including Indonesia The clinical features of DF/DHF are fever, headache, muscle and joint pains, a characteristic skin rash that is similar to measles, which lead to thrombocytopenia as a lab result. Until now, specific antiviral for dengue virus (DENV) is not available yet.
The objective of this research was to evaluate the effect of virgin coconut oil (VCO) to the DENV replication. This research was experimental study and was conducted at Microbiology laboratory, Department of Microbiology, Faculty of Medicine University of Indonesia. The data that was obtained for this study came from the experimental studied with 6 repeated experiments for each treatment of various concentartion of 5%, 1%, 0.5% and 0.1% as well as negative control and Dimethyl Sulfoxide (DMSO). Inhibition of DENV replication was determined by calculating of DENV titer after treated with VCO. The focus assay was used to calculate the DENV titer. The result showed that IC50 and CC50 of VCO was strong and moderate respectively. VCO was significantly inhibited the replication of DENV with adequate safe range to use for cells within limited dosages. Therefore, we concluded that VCO can be a candidate antiviral for DENV. Next study is needed to evaluate the effect of VCO in vivo, therefore we will find an antiviral of DENV virus in future.;Cases of the Dengue Hemorrhagic Fever (DHF)/Dengue Fever (DF) were reported increasing worldwide annually, especially in South Asia counties including Indonesia The clinical features of DF/DHF are fever, headache, muscle and joint pains, a characteristic skin rash that is similar to

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