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Synthesis of Analogues of Arbidol and Their Anti-viral Studies Towards Chikungunya Virus

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Abstract: *The fusion of virus and endosome membranes is an essential early stage in chikungunya virus infection. The low p^H-induced conformational change which promotes the fusogenic activity of the haemagglutinin (HA) is thus an attractive target as an antiviral strategy. The anti-chikungunya drug, arbidol is representative of a class of antivirals which inhibits HA-mediated membrane fusion by increasing the acid stability of the HA. In this study two series of indole derivatives structurally related to Arbidol were designed and synthesized to further probe the foundation of its antiviral activity and develop the basis for a structure–activity relationship (SAR). Ethyl 5-(hydroxymethyl)-1-methyl-2-(phenysulphanylmethyl)-1H-indole-3-carboxylate was identified as one of the most potent inhibitors and more potent than Arbidol against certain subtypes of chikungunya viruses..*

Keywords: Arbidol Derivatives, Antiviral Action, Chikungunya, Indole Analogues

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