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ORAL

Antileukemic and antiplatelet activities of indirubin-3'-oxime, an active ingredient semi-synthesized from indirubin-rich powder of medicinal plant Strobilanthes cusia (Nees.) O. Kuntze (Acanthaceae)

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Abstract

Indirubin-3'-oxime (IOX) is an active ingredient semi-synthesized from indirubin-rich powder produced from medicinal plant Strobilanthes cusia (Nees.) O. Kuntze (Acanthaceae). IOX exhibits antileukemic and antiplatelet activities. IOX inhibited the growth of human promyelocytic leukemia HL-60 cells with a GI50 value of 36.6 µM. Oral administration (20 mg kg-1day-1) of IOX for 3 days significantly prolonged occlusion time in a rat carotid artery injury model, and ADP- and collagen-induced platelet aggregation, comparable with aspirin. IOX markedly reduced collagen-induced phosphorylation of extracellular signal-regulated kinase ERK1/2 and p47, resulting in the blockade of cyclooxygenase (COX)-mediated AA metabolite production in AA-treated platelets. These results indicate that indirubin derivatives might be useful candidate agents for exploring potential antileukemic and antiplatelet drug

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Indirubin-3'-oxime, Strobilanthes cussia

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