A157 Vasorelaxant activity of the roasted seeds of *Senna occidentalis*

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Despite the presence of a large array of pharmacological and non-pharmacological means to lower blood pressure, few if any are considered entirely satisfactory because of either an unacceptable side-effects profile or possibly more importantly, because they have a disappointing effect on reducing morbidity and mortality resulting from coronary heart disease. Much effort is thus being devoted to the development of new drugs, new concepts or new management (1). *Senna occidentalis* L. (Leguminosae) is a widely used medicinal plant. In Ghana and other subtropical regions of the world, the dried, roasted seeds have been traditionally used as a remedy for hypertension amongst others (2).

The aim of this research is to investigate the anti-hypertensive activity of the seeds.

Crude extracts from solvents of increasing polarity (1:1 dicholormethane/ethyl acetate, methanol and water) were tested in the rat aortic ring *in vitro* assay system. The methanolic extract exhibited the highest vasorelaxant activity (EC_{50} 9.7 mg/ml) with the aqueous and 1:1 dicholormethane/ethyl acetate extracts showing weak activity. Further fractionation of the MeOH extract by Vacuum Liquid Chromatography (VLC) on silica gel 60 afforded ten fractions following elution with a dichloromethane : 70% aqueous methanol gradient. Fraction 5 showed prominent vasorelaxant activity compared with the crude methanolic extract. This fraction is currently being investigated in order to isolate the chemical constituents responsible for the observed activity as well as the mechanisms of action of the active principles.

The reported vasorelaxant activity of the seed extract supports its traditional use as a remedy for hypertension.

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A158 Chemical and anti-platelet constituents from Formosan *Zanthoxylum simulans*

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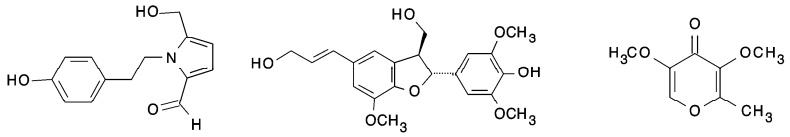
Zanthoxylum simulans Hance is a prickly shrub, distributed throughout mainland China and Taiwan (1). Four alkaloids have been identified from the root and root bark of the mainland China species (2) and extensive phytochemical studies have been carried out on the root bark (3-5), the root wood (6) and the stem bark (7) of the Formosan species, along with study of its anti-platelet aggregation activities. Chemical studies of the stem wood have never been conducted previously, but the stem wood has also shown significant anti-platelet aggregation activity. This investigation of the stem wood of *Z. simulans* Hance has resulted in the isolation of three new compounds: a pyrrole alkaloid, pyrrolezanthine (**1**); a neolignan, (-)-simulanol (**2**) and a monocyclic γ–pyrone, zanthopyranone (**3**), together with twenty-eight known compounds. In this symposium, we report the isolation and structural elucidation of **1-3** as well as identifying ten compounds, skimmianine, γ-fagarine, haplopine, huajiaosimuline, zanthobungeanine, benzosimuline, (+)-platydesmine, (-)-syringaresinol, (±)-pinoresinol and (-)-balanophonin as anti-platelet aggregation constituents.



1 **2** **3**

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