



A NEW PYRROLIDINYL-PIPERAZINE ALKALOID DERIVATIVE FROM OXYANTHUS SPECIOSUS DC. (RUBIACEAE)



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1 . Introduction

The investigation of *Oxyanthus speciosus* was motivated since the decoction prepared from its leaves is widely used to treat snake bites, lower fever, stomach and pulmonary ailments, while the roots and stem bark are used to treat snake bites. In addition, twigs and flower buds of this herbal species are applied traditionally against fever, toothache, jaundice and antimycobacterial (Neuwinger et al., 2000; Bouquet, 1969). According to the previous phytochemical studies evidenced the presence of cycloartane glycosides, iridoids, cyanogenic glycosides, phenolic compounds and triterpenes of *Oxyanthus* genus (Nzedong et al., 2012; Rockenbach et al., 1992; Aro et al., 2019b). This paper presents the details of isolation and structure elucidation of one compound and results on the anti-inflammatory activity.

2. Experimental

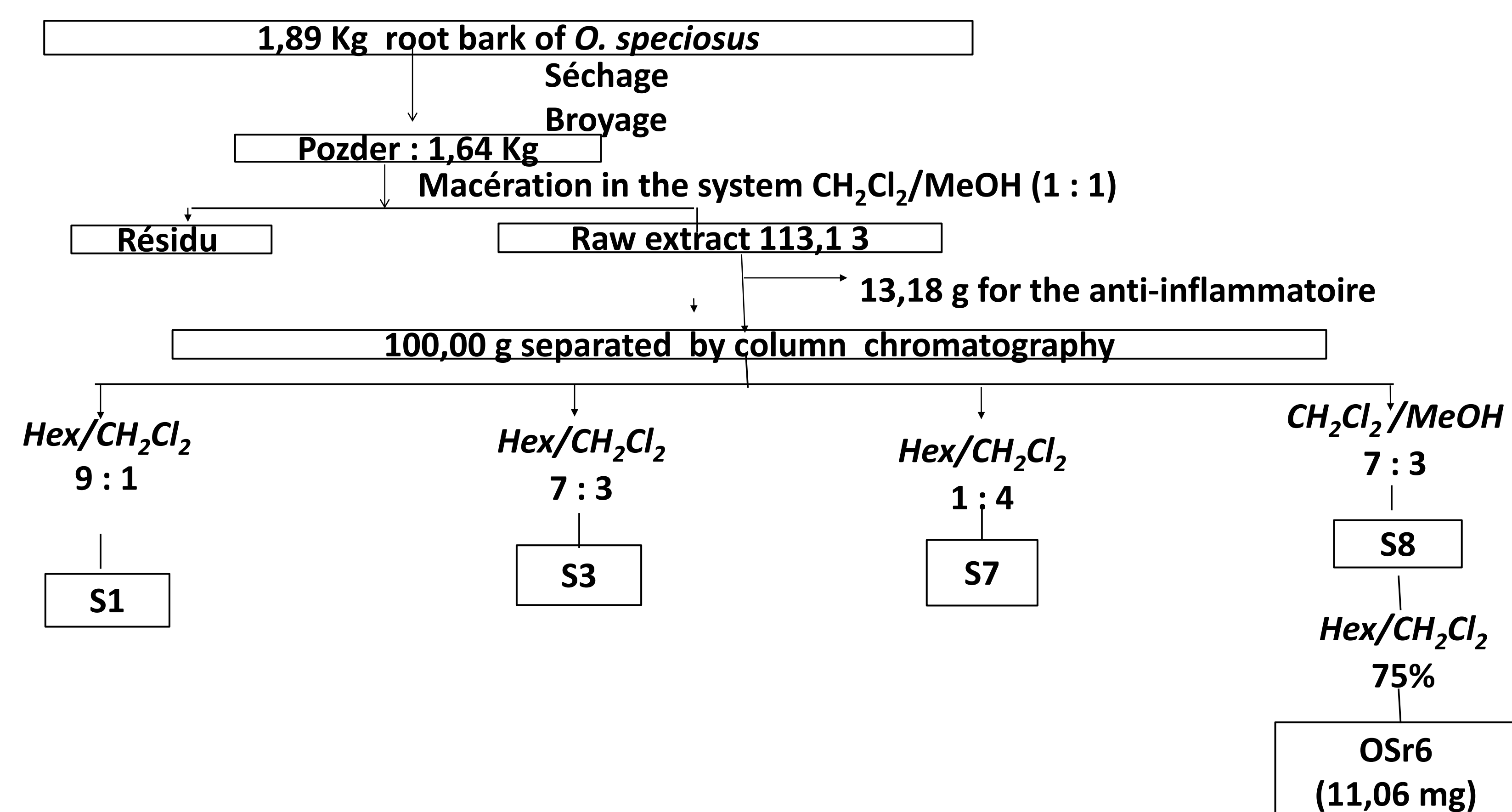
O. speciosus was located at 5°27'0" North longitude, 10°4'0" East latitude. Their roots were collected in July 2017 at Bangwa in the West Region of Cameroon and identified by Victor Nana, botanist. The voucher specimen N° 56388HN/CAM were deposited at the National Herbarium (Yaounde, Cameroon).



Figure 1. Roots of *O. speciosus*

2.2 . Extraction and isolation

The extraction and isolation procedure of *O. speciosus* compounds is resumed in the scheme 1 below.



Scheme 1. Extraction and isolation procedure of *O. speciosus* compounds

3. Results and discussion

A new pyrrolidinyl-piperazine alkaloid derivative named 2-(7'-methylhexyloxy)furan-5'-yl)-6(pyrrolidin-7-yl)piperazine (1) were isolated and possessed potent in vitro anti-inflammatory activity by protein denaturation assay with an IC50 value of $1.930 \pm 0.9123 \mu\text{g/mL}$. (**Table 1**).

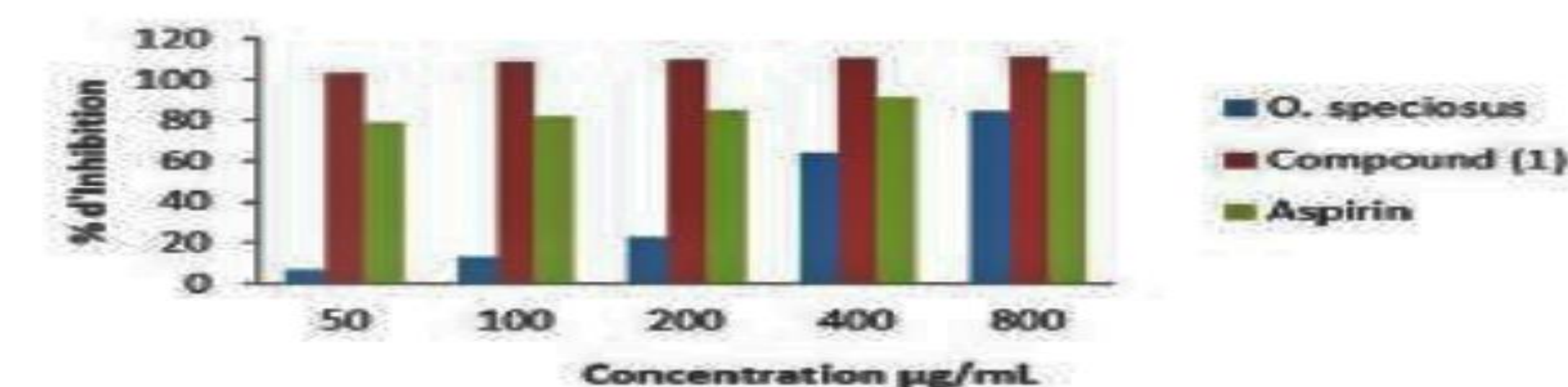
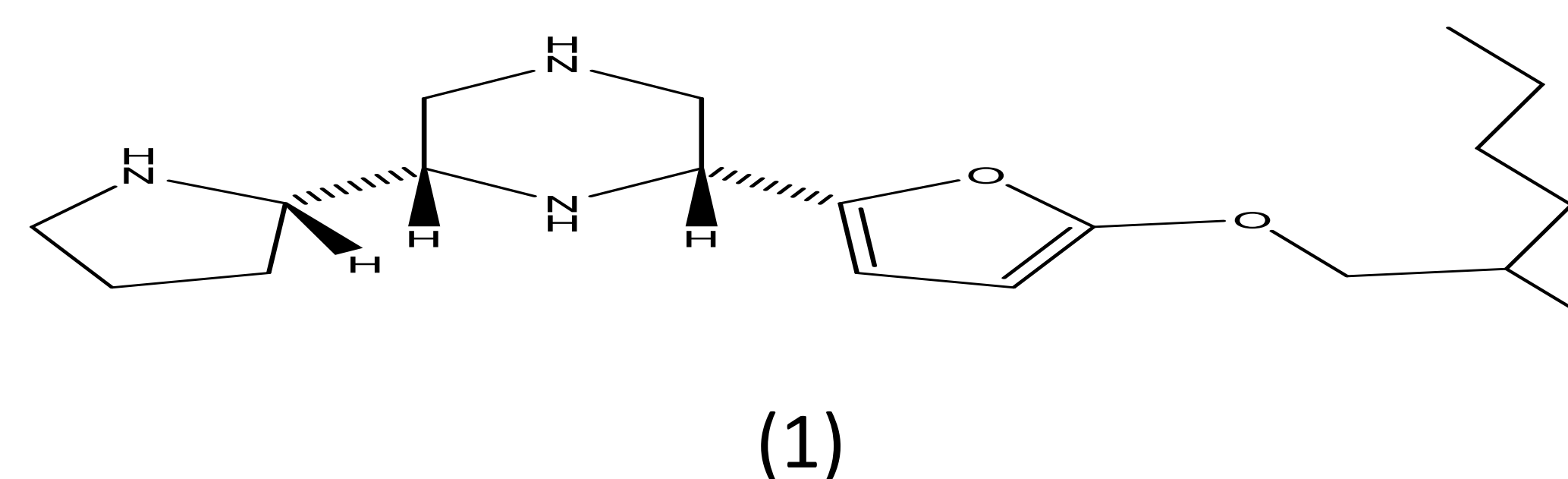


Figure 3. In vitro anti-inflammatory activity of the methanol extract and compound (1). Values are mean of three replicate determinations (n = 5) mean $\pm$ standard deviation.

References

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