

# Phytochemical and Pharmacological Investigations of *Virola oleifera* Leaves

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A methanolic extract and two fractions (*n*-hexane and ethyl acetate) from *Virola oleifera* leaves and some compounds (one lignan and two flavonoids) were investigated to verify the analgesic activity by using the writhing test in mice. The crude methanolic extract showed a moderate analgesic effect (about 40% of inhibition in this test at 10 mg/kg), whereas *n*-hexane and ethyl acetate fractions caused inhibition of  $51.3 \pm 5.9\%$  and  $50.5 \pm 6.3\%$ , respectively. Oleiferin-C (**1**), a lignan isolated from the *n*-hexane fraction, showed an interesting analgesic potential in this model when compared to two standard drugs, paracetamol (4-acetamidophenol) and aspirin (acetylsalicylic acid). The ID<sub>50</sub> calculated for this compound was 17.25  $\mu\text{mol/kg}$ , with confidence interval between 13.7 and 21.3  $\mu\text{mol/kg}$ , being about 8 times more potent than the standard drugs. The mixture of two glycoside-flavonoids, identified as astilbin (**2**) and quercitrin (**3**), also exhibited good analgesic activity, causing 63% of reduction of abdominal constriction in mice. These results suggest beneficial effect of this plant to treat dolorous processes.