

## Alkaloids and carboxylic acids from *Piper nigrum*

### ABSTRACT

Detailed chemical studies were carried out on the roots of *Piper nigrum*. Six alkaloids and four carboxylic acids were isolated and identified from this study. The alkaloids were piperolactam A (1), piperolactam D (2), cepharadione A (3), piperine (4), sylvamide (5) and 2,4-tetradecadienoic acid isobutyl amide (6). The carboxylic acids were tetracosanoic acid, p-hydroxy-m-methoxycinnamate ester (7), 3,4-methylenedioxy cinnamic acid (8), 2-butenedioic acid, mono-(2-methylpropyl) ester (9) and 3,4-methylenedioxy benzoic acid (10). Larvicidal assays on *Aedes aegypti* were carried out on the crude extracts of these plants as well as the pure compounds. The larvae were found to be susceptible to some of these extracts and compounds. This paper reports the isolation and characterization of these compounds as well as bioassay data. This is the first report on the presence of piperolactam A (1), piperolactam D (2) cepharadione A (3) and sylvamide (5) in *Piper nigrum*.

**Keyword:** Alkaloids; Carboxylic acid; *Piper nigrum*; Larvicidal