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Erratum

The Publishers would like to apologie for an error that occured on the title page of *Journal of Enzyme and Medicinal Chemistry,* April 2006; 21(2): 145–155.

The correct title page is below.

*Semisynthesis and cytotoxic activities of andrographolide analogues

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Abstract

Andrographolide **1,** a diterpenoid lactone of the plant *Andrographis paniculata*, known to possess antitumour activity in *in vitro* and *in vivo* breast cancer models was subjected to semisynthesis leading to the preparation of a number of novel compounds. These compounds exhibited *in vitro* antitumour activity with moderate to excellent growth inhibition against MCF-7 (breast) and HCT-116 (colon) cancer cells. Compounds 3,19-(2-chlorobenzylidene)andrographolide(**5**), 3,19-(3-chlorobenzylidene)andrographolide(**6**), 3,19-(3-fluorobenzylidene)andrographolide(**7**), 3,19-(4-fluorobenzylidene)andrographolide(**8**), 3,19-(2-fluorobenzylidene)andrographolide(**10**), 3,19-(2-chloro-5-nitrobenzylidene)andrographolide (**21**), 3,19-(4-chlorobenzylidene)andrographolide(**30**) and 3,19-(2-chloro-4-fluorobenzylidene) andrographolide(**31**) were also screened against 60 NCI (National Cancer Institute, USA) human tumour cell lines derived from nine cancer cell types.

Keywords: *Andrographolide, semisynthesis, cytotoxicity, National Cancer Institute (NCI), MTT assay*

Introduction

Andrographis paniculata Nees (Acanthaceae), also known commonly as 'king of bitters', is a well-known herb in India, China and Southeast Asia. Extracts of *A. paniculata* has been shown to possess antiinflammatory, antiviral, immunostimulatory, hypoglycemic, hypotensive and anticancer activities [1–8]. The main components of *A. paniculata* are diterpenes, flavonoids and stigmasterols [8] with the major constituents being the labdane diterpenoids [9,10]. Andrographolide **1** (Figure 1) is the major diterpenoid of *A. paniculata* extract and chemically designated as 3-{2-[decahydro-6-hydroxy-5-(hydroxymethyl)-5,8a-dimethyl-2-methylene-1-napthalenyl]ethylidene}dihydro-4-hydroxy-2(3*H*)-furanone. Andrographolide is found in the whole plant but is mostly concentrated in the leaves. Anticancer activity of andrographolide in human cancer cells and immunomodulatory activities in human immune cells has been reported recently [11]. However, andrographolide lacks selectivity and potency towards several tumour cell lines. To improve upon its selectivity and potency as an anticancer agent, several attempts have been made to chemically modify the molecule so as to improve its structure-activity relationships (SAR). Here, a series of novel analogues of andrographolide were synthesised and evaluated for *in vitro* antitumour activity against different cancer cell lines. The majority of the analogues demonstrated good *in vitro* antitumour activity.

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