

## Swainsonine Production in Tissue Culture of *Swainsona* species

**Marilou R. Calapardo\* and Ian J. McFarlane**

\*National Institute of Molecular Biology and Biotechnology (BIOTECH)  
University of the Philippines Los Banos, College, Laguna, 4031 Philippines  
and

School of Biochemistry and Molecular Genetics  
University of New South Wales  
Sydney 2052, Australia

Swainsonine is a toxic indolizidine alkaloid found in the plant, *Swainsona* species (Dorling, 1978; Colgate, 1979). It is a potent inhibitor of the glycoprotein processing pathway in the Golgi apparatus. Specifically, it inhibits mannosidase II resulting in aberrant high mannose glycans. Recent studies showed that swainsonine prevents metastasis of tumor cells and it inhibits solid growth tumor, at least partially (Goss *et al.*, 1994; Baptista *et al.*, 1994).

Four species of *Swainsona*, known and suspected to be toxic, were successfully established *in vitro* as either callus, suspension and root cultures. Induction experiments were performed and swainsonine production assayed. Low swainsonine were obtained from callus and suspension cultures whereas significantly high swainsonine contents were obtained from root cultures. The effect of alkaloid-inducing agents in root cultures are discussed.

## References:

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