



Australian
National
University

PhD exit seminar: Mosaic eucalypts: Chemical variation and differential gene expression within a *Eucalyptus melliodora* and an *E. sideroxylon* tree.

Thursday 11 July 2013 1 – 2pm

Amanda Padovan Division of Evolution, Ecology & Genetics, RSB

Gould seminar room (Rm 235) Gould Building (Bldg. 116), Linnaeus Way, ANU



Mosaic *Eucalyptus* trees provide unparalleled natural experiments to understand how plants control the synthesis of chemical defences against herbivorous insects and mammals. In natural eucalypt mosaics, different branches on a single tree show vastly different leaf chemical profiles (chemotypes) and thus vastly different responses to herbivores (resistant or susceptible). I have been working with two such mosaic eucalypts (*E. melliodora* and *E. sideroxylon* - figured left), where the leaves of the resistant chemotype have a different terpene profile compared with the leaves of the susceptible ecotype. Chemotypic variation of terpenes is under strong genetic control and the terpene biosynthetic pathway is well described. However little is known about the genetic control over genes within this pathway, especially the terpene synthase gene family (the last step in the pathway). The overall aim of my thesis was to explore the genetic variation, particularly in the terpene biosynthetic pathway, that accompanies the chemical variation in these two mosaics and propose a mechanism for the development of mosaic eucalypts.

Presented by

ANU College of
Medicine, Biology
& Environment

Contact details

E lisa.schwanz@anu.edu.au T 02 612 52040
This lecture is free and open to the public
EEG Seminar information:
biology.anu.edu.au/News/events-eeeg.php
CRICOS# 00120C

PUBLIC LECTURE