

W490 **Epigenetic Regulation of Flower Development in the Oil Palm**

Date: Sunday, January 15, 2012

Time: 2:45 PM

Room: Pacific Salon 4-5 (2nd Floor)

Alain Rival , CIRAD, UMR DIADE, MONTPELLIER, France
Thierry Beule , CIRAD, UMR DIADE, MONTPELLIER, France
Frédérique Richaud , CIRAD, UMR DIADE, MONTPELLIER, France
Pascal Ilbert , CIRAD, UMR DIADE, MONTPELLIER, France
Estelle Jaligot , CIRAD, UMR DIADE, MONTPELLIER, France

The *mantled* floral phenotype which occurs in somatic embryo-derived oil palms (*Elaeis guineensis* Jacq.) shows detrimental consequences on the large scale production of clonal planting material for this strategic oil crop. Indeed, *mantled* somaclonal variants display a feminization of male floral organs which bears a major threat on the formation of oil-producing fruits. The unpredictability of such variation warrants the search for molecular markers for an early detection. In parallel, the *mantled* phenotype provides a challenging puzzle to the researcher since it is both reminiscent of floral abnormalities governed by MADS Box genes in model plants and susceptible to provide insights into the particulars of sex differentiation and flower organogenesis in Palms species. Since a genome-wide deficit in DNA methylation has been demonstrated in *mantled* tissues and since gene expression differs substantially with respect to true-to-type material, it is now widely accepted that this unstable variant phenotype is correlated with (and likely caused by) the disturbance of epigenetic mechanisms during the *in vitro* micropropagation process, which involves a series of differentiation/dedifferentiation phases. Our talk provides an update on ongoing research work aimed at deciphering the role of epigenetic regulations in the floral development of the oil palm.

[Back to: Palm Genomics & Genetics](#)

[<< Previous Abstract](#) | [Next Abstract >>](#)
