



For immediate release

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Annotation of the genome of a newly sequenced latex-timber clone leads the way for further genetic improvement

Malaysia, 12th October 2010 - The Minister of Plantation Industries and Commodities Tan Sri Bernard Dompok made an announcement today at the Malaysian Rubber Board's (MRB) Technology Transfer Day 2010 at Sungei Buloh, Selangor, Malaysia.

"The advent of MRB's *Hevea* (rubber tree) genome sequencing project was announced at MICCOS 2009. The project was undertaken by MRB's research centre in United Kingdom, the Tun Abdul Razak Research Centre (TARRC), in collaboration with The Genome Analysis Centre (TGAC) based at the Norwich Research Park, Norwich, England."

"Here, the MRB takes pride in presenting the completion of the RRIM 928 genome sequence in just over a year after the first announcement. The RRIM 928 clone was developed through conventional breeding by the MRB to produce both high yields of natural rubber latex and rubberwood timber. These two strategically important feedstocks are of increasing importance to the world's economy as sustainability of such renewable resources is becoming a key consideration."

"The challenge posed by the size and anticipated complexity of *Hevea* genome was overcome by using a combination of different sequencing platforms that allowed generation of fast and accurate quality sequence to cater for genome coverage and assembly. An early calculation indicates that 20% of the genome contains functional genes, which may translate to about 43,000 genes. Annotation of the sequences revealed a high similarity of the functional regions of the *Hevea* genome to other related species. These findings were obtained by integrating the *Hevea* genome with the existing MRB's *Hevea* latex and leaf transcriptomes. The ultimate aim is to narrow down on the genes linked to latex yield, rubberwood timber, disease resistance and other commercially important traits that are crucial for further improvement of this important commodity, and in addressing many of the issues facing rubber growers and manufacturers worldwide."

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