

Single nucleotide polymorphisms from *Theobroma cacao* expressed sequence tags associated with witches' broom disease in cacao

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ABSTRACT. In order to increase the efficiency of cacao tree resistance to witches' broom disease, which is caused by *Moniliophthora perniciosa* (Tricholomataceae), we looked for molecular markers that could help in the selection of resistant cacao genotypes. Among the different markers useful for developing marker-assisted selection, single nucleotide polymorphisms (SNPs) constitute the most common type of sequence difference between alleles and can be easily detected by *in silico* analysis from expressed sequence tag libraries. We report the first detection and analysis of SNPs from cacao-*M. perniciosa* interaction expressed sequence tags, using bioinformatics. Selection based on analysis of these SNPs should be useful for developing cacao varieties resistant to this devastating disease.

Key words: Single nucleotide polymorphisms; Expressed sequence tags; Bioinformatics; Witches' broom disease