

Intra- and interspecific variation of cuticular hydrocarbon composition in two *Ectatomma* species (Hymenoptera: Formicidae) based on Fourier transform infrared photoacoustic spectroscopy

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Genet. Mol. Res. 7 (2): 559-566 (2008)

Received March 26, 2008

Accepted June 6, 2008

Published June 24, 2008

ABSTRACT. We have been able to discriminate different castes and sexes of ants in the same colony by measuring cuticular hydrocarbon levels with Fourier transform infrared photoacoustic spectroscopy, compared by canonical discriminant function analysis. We have now applied this methodology to various colonies of two species of ants of the genus *Ectatomma* in the Brazilian Cerrado. There were clear interspecific differences in cuticular hydrocarbons of these ants, with a small intraspecific variation. The differences between colonies were greater in *E. brunneum* than in *E. vizottoi*. Genetic differences among the colonies and species were well estimated by Fourier transform infrared photoacoustic spectroscopy and statistical analyses.

Key words: Fourier transform infrared photoacoustic; *Ectatomma*;
Cuticular hydrocarbon; Interspecific variation