DIVERSITY OF BRADYRHIZOBIA ISOLATED FROM A WIDE RANGE OF FOREST LEGUMES
NATIVE OF GUYANA AND AFRICA BY ANALYSIS OF PARTIAL 16S-23S rDNA INTERGENIC
SPACER SEQUENCING

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Tropical rain forests are characterised by a high diversity of plant species. Only 30% of the trees in
the world have been investigated for their capacity of developing nitrogen fixing symbioses and only
a limited number of Rhizobium strains from leguminous trees have been isolated and characterised.
The rhizobial diversity in Brazil has been recently studied by Moreira et al. (1993, 1998) using partial
16S rDNA gene sequences. We isolated 100 slow-growing bacterial strains from nodules of 7 forest
legumes native of Guyana belonging to the genera Andira, Dalbergia, Michaerium, Indigofera,
Erythrina, Clitoria and Desmodium, from 17 legumes natives of Guinea belonging to the genera
Pentaclethra, Aubrevilea, Mimoso, Desmodium, Piptadenium, Calaposium, Centrosema, Mucuna,
Millera, Pterocarpus, Erythrina, Abrus, Samanea, Arthrosamanea, Piptadenia and Albizia, and from 7
generes of Madagascar, Dalbergia, Albizia, Desmodium, Crotalaria, Chaddia, Cadia et Mundulea;
representing 13 tribes belonging to either of the three subfamilies of the Leguminosae. The isolates
were examined by analysis of partial 16S-23S rDNA Intergenic Spacer (IGS) sequences, a technique
described by Willems et al. (in press) as a rapid tool to evaluate the diversity of bradyrhizobia isolated
from tropical trees.

146.
FOURTH EUROPEAN NITROGEN FIXATION CONFERENCE

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September 16-20/2000
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