



## CSRS SCIENTIFIC SEMINAR N°11

Thursday, 04<sup>th</sup> 2010 (Norbert Behi Lecture Hall, CSRS, Km17 Adiopodoumé) 01:00 pm

**Theme: Biodiversity, phylogenetic relationship and antibacterial potential of *Bifidobacterium* species isolated from raw milk production chain in Abidjan (Côte d'Ivoire).**

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### Abstract:

The objective of this study was to determine biodiversity of *Bifidobacterium* species contaminating the informal dairy production chain in Abidjan and evaluate their antibacterial activity against pathogens. *Bifidobacterium* species were identified after sequencing of hsp60 genes. Results showed that *Bifidobacterium* were present in 8.99% of samples. Milkers' hands (14,29%) and cows's udders (14%) were the most contaminated with bifidobacteria. These isolates belong to five different species. Most bifidobacteria isolated, are *B. minimum* (52,9%) and 24.4% are *B. pseudolongum subsp. globosum*. The other strains are composed of one strain of *B. thermophilum*, *B. thermacidophilum subsp. suis* and *B. magnum*. The *Bifidobacterium* species isolated have an antibacterial activities that is not related to bacteriocins production, but organic acids (64.7%), which exert an inhibitory action against *Listeria monocytogenes*, *Salmonella hadar* and *S. typhimurium*, *S. aureus*, *E. coli O27* and *E. coli O157H7*. Ensuring of milk safety along the local milk production chain requires implementation of good hygiene practices, because of the limited antibacterial effect of the *Bifidobacteria* isolated.

**Key-words:** *Bifidobacterium*, hsp60, raw milk, Abidjan