

## A Pink-Pigmented Facultative Methylobacterium sp Isolated from Retama monosperma Root Nodules

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**Abstract :** A pink-pigmented, aerobic, facultatively methylotrophic bacterium, was isolated from Retama monosperma root nodules and identified as a member of the genus Methylobacterium. Inoculation of R. monosperma plants by a pure culture of isolate strain under a hydroponic condition, resulted, 10 dpi, the puffiness at lateral roots. The observation in detail the anatomy and ultra-structure of infection sites by light and electron microscopy show that the bacteria induce stimulation of the division of cortical cells and digestion of epidermis cells then, Methylobacterium was observed in the inter and intracellular spaces of the outer cortex root. These preliminary results allow us to suggest the establishment of an epi-endosymbiotic interaction between Methylobacterium sp and R. monosperma.

**Keywords :** endophytic colonization, Methylobacterium, microscopy, nodule, pink pigmented, Retama monosperma

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