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OCCURRENCE OF *ACINETOBACTER* SPP. IN VEGETABLES

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Acinetobacter spp. have emerged in recent years as pathogens of major public health concern. Despite hospital-acquired infections being the most common form, these organisms are also recognized as responsible for community-associated infections. *Acinetobacter* spp. seem to be widespread in the environment and frequently isolated from water and soil, and have been recovered from various foods, including: vegetables fruits, meat, fish, cheese, milk, soft drinks and natural mineral water. *Acinetobacter lwoffii* and *A. johnsonii* are the predominant species recovered from food. Information about the presence of these organisms in a variety of food items is scarce and in Portugal does not exist. For effective infection control, it is of major importance to collect data about the occurrence of the various *Acinetobacter* species apart from medical sources, in order to understand their mechanisms of transmission and spread between community and hospital.

In this study, samples of different raw vegetables were tested for the presence of *Acinetobacter* spp. using a selective enrichment procedure followed by selective plating for isolation. Samples analysed included lettuce (n=4), parsley (n=1), carrot (n=1), and tomato (n=1). Presumptive colonies of *Acinetobacter* spp. were picked and further confirmed by phenotypic (Gram-stain, catalase and oxidase tests) and genotypic (16S rDNA sequencing) tests. All samples were contaminated with *Acinetobacter* spp. and a total of 54 isolates were confirmed to be *Acinetobacter* spp. These isolates were typed by REP-PCR (Repetitive Extragenic Palindromic sequence-based – Polymerase Chain Reaction), and 28 isolates presenting different typing patterns were selected for molecular identification of *Acinetobacter* species by *rpoB* gene sequencing. Species *A. johnsonii* and *A. calcoaceticus* were the most common with the frequency of 35.7% each. Other species were also found at lower frequencies, namely: *A. guillouiae* (10.7%), *A. tjernbergiae* (3.6 %), *A. beijerinckii* (3.6 %), *A. pittii* (3.6 %), *A. lwoffii* (3.6 %), and *A. bouvetii* (3.6 %).

Vegetables may therefore be a natural habitat of *Acinetobacter* spp. and provide a route by which these bacteria can be introduced into community and health care units and cause infections.