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PaperTitle **Pathogenic Characteristics in Chryseobacterium Species**

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ABSTRACT

In 1994, the genus Chryseobacterium was established from predominantly Flavobacterium species. It then consisted of 6 species. Since then, several more species were identified. The genus currently consists of 18 species. They are found in diverse habitats such as water, plant roots, food and even the clinical environments. Although some of the species in this genus is recognized as food spoilers, the significance in terms of pathogenicity to man, has never been investigated. The aim of this study was, therefore, to evaluate common virulence factors of 14 species to determine their threat as a pathogen.

Enzymatic analysis and antibiotic resistance tests were performed on 14 Chryseobacterium species (Edberg et al., 1996; Pavlov et al., 2004). Tests were performed at 25°C and 37°C to determine if growth in a mammal body was feasible. All species grew at 25°C but only 5 species were able to grow at 37°C. Haemolytic activity was found in 7 species, no coagulase, chondroitinase or hyaluronidase activity was found. Elastin seemed to inhibit growth of the species. DNase activity was present in 7 species, lecithinase activity in 5 species, proteinase activity in all species, lipase activity in 8 species, fibrinolysin activity in 12 species and gelatinase activity in all of the 14 species.

Antibiotics tested included ampicillin (10 species resistant), streptomycin (14), erythromycin (10), kanamycin (14), gentamycin (14) and cefotaxime (5).

The results indicated that the following species may act as opportunistic pathogens: *C. vrystaatense*, *C. shigense*, *C. soldanellicola*, *C. indologenes*, *C. gleum*, *C. daecheongense* and *C. taenense*.