Abstract

Stenotrophomonas maltophilia is an emerging nosocomial pathogen. Despite the broad spectrum of syndromes associated with S. maltophilia infections, little is known about its virulence factors, including siderophore production. The aims of this work were to detect S. maltophilia siderophores and to determine their chemical nature. We studied 31 S. maltophilia isolates from device-associated infections, recovered over the period 2006-2011 at Hospital de Clínicas José de San Martín, Buenos Aires, Argentina, and the strain K279a, whose genome has been fully sequenced. The production of siderophores was screened by the chrome azurol S (CAS) agar assay, previously modified to detect siderophores in this species. When grown on modified CAS agar plates, all the clinical isolates and K279a were CAS-positive for siderophore production. In order to determine the chemical nature of siderophores, the Csáky (hydroxamate-type) and Arnow (catechol-type) assays were used. All S. maltophilia isolates produced catechol-type siderophores, but hydroxamate-type siderophores were not detected.

Keywords

Stenotrophomonas maltophilia, siderophores, CAS agar, Csáky, Arnow.