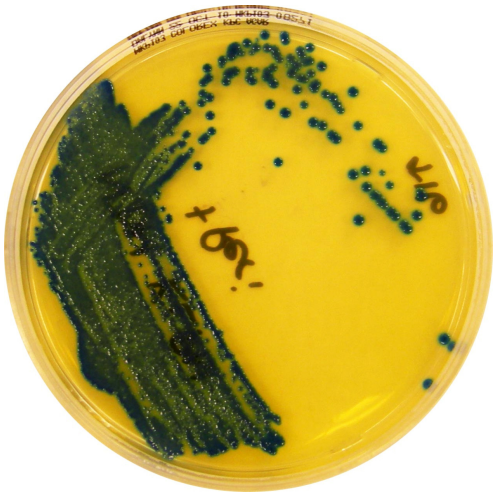
NDM-1 carrying bacteria: CHROMagar KPC for screening



Growth of NDM-1 K. pneumoniae strain on CHROMagar KPC

CHROMagar KPC The solution to screen NDM-1 bacteria

CHROMagar KPC was designed to select carbapenem-resistant bacteria. The NDM-1 gene confers also this kind of resistance to enterobacteriaceae. Thus, CHROMagar KPC should be an exellent screening tool.

NDM-1: A growing issue for the clinicians

According to CDC (USA):"Antimicrobial resistance in Gram-negative bacteria is a well-recognized problem, and a new resistance mechanism found in three U.S. Enterobacteriaceae could compound this challenge. This new mechanism, New Delhi Metallo-beta-lactamase (NDM-1), is linked to receipt of medical care in India or Pakistan, where it is common among enteric bacteria. NDM-1 is an enzyme that destroys many commonly used antibiotics, rendering them ineffective. It is carried on a mobile element that can readily spread to other bacteria. In order to prevent transmission of bacteria possessing NDM-1 in the U.S., CDC is alerting clinicians to be aware of NDM-1 in patients who have recently received medical care in India or Pakistan and requesting that carbapenem-resistant enteric bacteria from these patients be sent to CDC for further investigation. Also, CDC is reiterating the importance of implementing CDC recommendations to prevent the spread of these highly resistant organisms."
Abstract from: Detection of Enterobacteriaceae Isolates Carrying Metallo-Beta-Lactamase — United States, 2010 - CDC Division of News and Electronic Media

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« The World Health Organization (WHO) and public health agencies around the world must significantly ramp up screening and surveillance of a new breed of drug-resistant bacteria carrying the gene for New Delhi metallo-beta-lactamase-1(NDM-1), warned a panel of expert micropathologists at the American Society for Microbiology annual meeting this week in Boston, Massachusetts. [……]
NDM-1 is an enzyme that makes bacteria resistant to a broad range of beta-lactam antibiotics, including carbapenem antibiotics, which are among the last-case treatments for infection when other drugs fail. »
Abstract from: Canadian Madical Association Journal – September 16th 2010

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« Provinces and territories are not required to report cases of NDM-1 to PHAC; however PHAC encourages hospitals to report healthcare-associated infections to their province or territory. »
Abstract from: Public Health Agency of Canada – Important Notices

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科瑪嘉 KPC 是設計專門用來篩選抗碳青黴烯類腸道細菌的培養基，而 NDM-1 也屬於此類別。因此科瑪嘉 KPC 為篩選此種細菌最出色的產品。

根據美國 CDC 的指出，關於革藍氏陰性菌的抗藥性一直是大家公認的問題，而新的抗藥機轉出現更加深了這個挑戰。NDM-1 的傳染與印度以及巴基斯坦的醫療照護有關， 也常在腸道細菌中發現。NDM-1 可以破壞許多目前常用抗生素的酵素，並使之無效，且此基因會在各細菌間傳播，造成含有可產生此酵素的基因的細菌種類變多。為了防止細菌間的傳播，美國 CDC 提醒臨床醫生要注意最近有到印度或是巴基斯坦且受過醫療照顧的患者，並要求將從這些病患身上取得的抗碳青黴烯類腸道細菌送到 CDC 做進行進一步調查。此外，美國 CDC 也發布了防止這些高度抗藥性基因在細菌間傳播。世界衛生組織和在世界各地的公共衛生機構必須作一個大量的監督以及檢查此帶有全新抗藥性的細菌。在加拿大的 PHAC 方面，雖然不要求各省回報相關案件，但是鼓勵醫院向各自省分報告目前感染情況。