

## First Report of *Klebsiella Pneumoniae* Co-Producing NDM-1 and VIM-1 Carbapenemases from a Meat Sample in Japan- Tadashi Shimamoto- Hiroshima University

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Carbapenems are a class of highly potent antibiotics that are commonly used as last-resort antibiotics for treatment of severe infections caused by multi-drug-resistant bacteria. Therefore, carbapenem antibiotics are not licensed for food producing animals in many countries, only for human use. This study was designed to elucidate the incidence and molecular characterization of food borne carbapenemases producing bacteria in Japan. A total 28 meat samples were collected from local groceries in Higashi-Hiroshima city, Hiroshima, Japan and tested for carbapenemases-encoding genes. Interestingly, 17 bacterial isolates were recovered and only one isolate confirmed to harbor both blaNDM-1 and blaVIM-1. To the best of our knowledge, this is the first report of carbapenem-resistant *Klebsiella pneumoniae* isolated from food in Japan that produces NDM-1 and VIM-1 carbapenemases. The strain was resistant to various antibiotics and harbored blaNDM-1, blaSHV-71, blaCTX-M-15, blaTEM-1, qnrS-1, and aac

(6')-1b as well as two class 1 integrons: One containing blaVIM-1 and the other aadB-aadA2 and belongs to Sequence Type (ST) 30. In addition, blaNDM-1 was carried on an untypeable self-transmissible plasmid >90 kb in size. Our results are of a great interest and urge the authorities to consider the food as a potential source for carbapenemases and to comprise it for carbapenemase-producing organisms surveillance programs.

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