ID der Kurzfassung : **247**

Surface and wastewater as reservoirs for a broad spectrum of health related klebsiellae? Insights into the diversity and potential impact of isolates from natural and human-associated sources in Haïti

Inhalt

Klebsiellae are nosocomial pathogens increasingly notified by public health services. Due to their high adaptability and their ability to acquire foreign DNAs, human infections with MDR-isolates are challenging to treat. In addition, environmental klebsiellae are also reliable indicators for the dynamics in resistance acquisition in ecosystems caused by pollutions forcing the adaption of these bacteria. As comprehensive information from different ecosystems is lacking, klebsiellae from surface/wastewater were investigated in Haïti. Here, we report on 58 Klebsiella-isolates collected from 12 stations during an environmental survey of Vibrio in 2021, ten years after the beginning of the local cholera outbreak. Isolates genome profiling showed a broad variety of XbaI-PFGE pattern. Phenotypically, only some isolates exhibit resistances to the tested antimicrobials, which were shown to be in good agreement with the resistance genes determined by WGS. In addition, some of the isolates further exhibit a strong hypermucoviscity. In silico dissection of the klebsiellae genomes provides a detailed insight into the genetics and their potential impact for human health. Dissection of environmental Klebsiellae provides information about sources of antimicrobial resistance acquisition, hotspots for the evolution of the bacteria and the general occurrence of clinically relevant lineages, which may affect the health of the local human population due to the colonization of susceptible people.

Keywords

Klebsiella, AMR, genome, diversity, detection, environment

Registration-ID code

546

Professional Status of the Speaker

Senior Scientist

Junior Scientist Status

No, I am not a Junior Scientist.

Thema Einordnung: Environmental factors & Ecology of Zoonotic Infections

Typ des Beitrags: Both Options Possible