3rd World Congress and Expo on Applied Microbiology

November 07-09, 2016 Dubai, UAE

Epidemiology of Crimean Congo hemorrhagic fever in Iran

Sadegh Chinikar¹ and Nariman Shahhosseini² ¹Pasteur Institute of Tehran, Iran ²Bernhard Nocht Institute for Tropical Medicine, Germany

Crimean Congo Hemorrhagic Fever (CCHF) is a zoonotic viral disease caused by infected tick bite, contact with blood or tissues of infected livestock and nosocomially. CCHF is a life-threatening virus with a 5-50% fatality rate. CCH was reported by Chumakov in 1970 in Iran. Since establishment of the Arboviruses and Viral Hemorrhagic Fevers laboratory (National Reference Laboratory) at Pasteur Institute of Iran in 2000, probable human cases have been investigated for CCHF infection serologically and molecularly. Although the infection rates fluctuate year to year, males were the most affected gender. Geographically, Sistanva Baluchistan, Khorasan and Isfahan provinces had the highest CCHF infected cases. Given profession, slaughterers and farmers were the most high-risk occupation. CCHF is one of the most important viral emerging zoonotic diseases in Iran. CCHF has been mainly seen in certain professions and regions, as it is mainly related to imported livestock from neighboring countries. Data with respect to the gender acquired infection shows that CCHF infection in male is more than female, which seems due to male implication in high risk professions. To establish preventive strategies for CCHF, firstly awareness and training programs for high risk professions and secondly conducting joint projects with neighboring countries on ticks can play a critical role in the control of disease.

sadeghchinikar@yahoo.com

Role of *Pseudomonas fluorescens* EGD-AQ6 biofilms in degrading elevated levels of p-hydroxybenzoate

Saheli Ghosh, Asifa Qureshi and H J Purohit

CSIR-National Environmental Engineering Research Institute, India

P seudomonas fluorescens EGD-AQ6 is an environmental bacterium isolated from domestic sewage waste water, India, degrades and produces flocculent, non-mucoidal biofilms under high concentration (>10 mM) of aromatic compounds like 4-hydroxybenzoate (4-HBA). The study aimed to characterize and understand the role of biofilms formed by the bacteria in combating such stress. Batch degradation experiments, fluorescent microscopy and gene expression analysis revealed its degradation efficacy under biofilm conditions. The characterization of the whole genome sequence (WGS) of the strain *Pseudomonas fluorescens* EGD-AQ6 showed presence of genes degrading 4-HBA like 4-hydroxybenzoate hydroxylase which degraded the compound via and three biofilm forming operons in the genome which was analyzed through RAST. One of the operon was characterized as pgaABCD locus, which encodes an adhesin, composed of poly β (1-6) galactosamine (PGA), responsible for cell to surface and cell to cell adhesion. While pelABCDEF and alginate polysaccharides which are composed of glucose and N-acetyl glucosamine (NAG), for building and development of extracellular polymeric matrix. Consequently these features endorse this strain to be unique in degradation of different xenobiotics under biofilm phenotype thereby proving an effective candidate in bioremediation technology. *Pseudomonas fluorescens* EGD-AQ6 has been submitted as reference sequence genome in NCBI.

saheli08@gmail.com