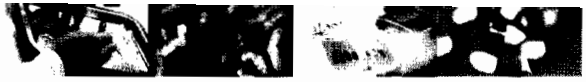

Laribacter hongkongensis, a Novel Bacterium associated with Gastroenteritis and Traveler's Diarrhea

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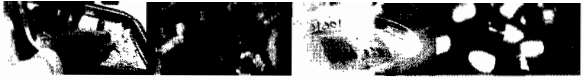
Dr Patrick Woo is currently Associate Professor in the Department of Microbiology, HKU. His research interests include emerging infectious diseases, unexplained infectious disease syndromes, and microbial genomics. His laboratory looks for and characterizes novel causes of unexplained infectious disease syndromes. In the past few years, they have discovered the association between cell-wall-deficient bacteria and neutropenic fever, *Laribacter hongkongensis* and gastroenteritis, *Streptococcus sinensis* and infective endocarditis, *Tsukamurella* and conjunctivitis, and coronavirus HKU1 and respiratory tract infections.

Despite extensive investigations, a microbiological cause cannot be found in about half of the patients with infectious disease. Throughout the years, scientists have spent tremendous efforts in looking for microorganisms associated with these "unexplained infectious disease syndromes". In 2001, *Laribacter hongkongensis*, a novel genus and species, was first discovered in Hong Kong from the blood and empyema pus of a patient with alcoholic cirrhosis. Subsequently, its isolation from patients in other parts of the world was described. Recently, it has been found that this bacterium is associated with community-acquired gastroenteritis and traveller's diarrhoea using cefoperazone MacConkey agar as the selective medium. Consumption of fish and minced fish meat were risk factors for gastroenteritis associated with recovery of *L. hongkongensis*. Freshwater fish was found to be a reservoir of *L. hongkongensis*. Genotypic typing revealed the possibility of presence of virulence clones of *L. hongkongensis*. The class C β-lactamase of *L. hongkongensis*, the first of this type in β-subclass of *Proteobacteria*, was cloned and characterized.



was analyzed in H and E stained brain sections and damage was assessed by calculating the percentage of injured neurons referred to the total number of neurons in an area. We found that the percent of injured neurons was reduced in PARP-/- in all three areas of brain examined: hippocampus (CA1), posterior caudoputamen and anterior caudoputamen. The percent injured neurons was reduced from Wild-Type to PARP-/- animals by 33% in CA1, 47% in posterior caudoputamen, and 40% in anterior caudoputamen. We also found that there was a reduction (35%) in the percent of injured neurons in animals with upregulated superoxide dismutase (SOD+) compared with their Wild-Type controls (C57BL/6).

Finally, we examined whether there exists a gender difference in outcome from CA/CPR and found that the percent-injured cells are less (53%) in normal female than male mice. This gender difference disappeared when the females were ovariectomized, but reappeared when the ovariectomized animals were administrated estradiol. These data demonstrate that both genes and gender are important factors in determining outcome from CA/CPR, and thus may represent two new areas for therapeutic targets to alter outcome from CA/CPR.