

中文題目: MICRORNA 在幽門螺旋桿菌誘導之胃癌的應用

英文題目: The application of microRNA in helicobacter pylori-induced gastric cancer

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Background: In the world, gastric cancer is one of the most common cancer, particularly in East Asian populations. There are several causes of gastric cancer, and the infection-induced cancer was considered by *Helicobacter pylori* (*H. pylori*) infection most frequently, which is a heterogeneous species. In addition, previous study also found that microRNA plays an important role and involved in tumorigenesis of *H. pylori* related gastric cancer. However, the molecular mechanism of miRNAs in gastric cancer related to *H. pylori* has not been fully understood. To investigate whether miRNAs are associated with *H. pylori* in patients with gastric cancer.

Method and Material: We profiled miRNA expression in serum samples from *H. pylori*-infected gastric cancer, gastric cancer, *H. pylori*-infected gastritis and gastritis using an Illumina HiSeq2500 Small RNA Sequencing array for discovery cohort. To further understand the significance of miRNA expression in gastric cancer patients, serum levels of miRNA were measured in the sera of 40 gastric cancer patients by quantitative RT-PCR (qRT-PCR) and correlated with the clinicopathological parameters of these patients for validation cohort.

Result: The results revealed that miR-18a and miR-4286 expression was highly expression in *H. pylori*-infected gastric cancer group compare to other group. We also showed that miR-18a and miR-4286 expression was significantly correlated with clinicopathological parameters including pathologic stage and grade.

Conclusion: From these results, it demonstrates that serum miR-18a and miR-4286 level in *H. pylori*-infected gastric cancer may be a useful prognostic biomarker and in the future it may offer a novel therapeutic avenue in gastric cancer.