中文題目: HOXA9 透過調節胃癌細胞激素受體表現促進胃癌細胞的移動
英文題目: HOXA9 induces cell migration through upregulation of cytokine receptors in human gastric cancer cells
作　　者: 全永旭[1], 劉忠榮[1], 謝孟書[1], 王耀廣[1,2], 余方榮[1], 盧建宇[1*]
服務單位: 高雄醫學大學附設醫院 胃腸內科[1]，高雄市立小港醫院 內科[2]

Background: Epidemiological studies report that gastric cancer is one of the most common cancers worldwide, and is also the second leading cause of cancer-related mortality. The poor prognosis of gastric cancer may be partly attributed to the complicated molecular networks operating the aggressiveness of gastric cancer. Although a large body of studies has revealed the deregulation of certain genes in gastric carcinogenesis, the molecular mechanisms behind gastric tumor development are not yet fully understood.

Method and Material: We applied the HOXA9 short haipinRNA (shRNA) to successfully knock down the expression of *HOXA9* gene and subsequently explore the role of *HOXA9* in CS12 gastric cancer cells. We co-cultured CS12 cells (control shRNA-stable CS12 or HoxA9 shRNA-stable clones) and HBM_MSCs, and then respectively measured the motility of CS12 cells and HBM_MSCs in the co-culture system. We also observed the expression of cytokine receptors in CS12 cells.

Result: We further found that cytokins and chemokines secreted form human bone marrow mesenchymal stem cells (HBM_MSCs) induce cell motility in human CS12 gastric cancer cells. The motility of CS12 cells mainly were promoted by IL-6, IL-8 and/or CXCL-1. When applying *HOXA9* shRNA in CS12 cells to silence *HOXA9* expression, we observed that *HOXA9* knockdown inhibits the expression of cytokine receptor, HBM_MSCs-induced CS12 cell motility, and even reduces CS12 cells-enhanced the capacity of motility in HBM_MSCs.

Conclusion: This study demonstrated that suppressing HOXA9 expression can reduce the expression of cytokine receptor and motility capacity in human gastric cancer cells.