

中文題目: CXCL-1 調節人類間質幹細胞所參與的胃癌細胞移行

英文題目: Human mesenchymal stem cells induces human gastric cancer cell motility by secreting CXCL-1

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**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. Mesenchymal stem cell (MSC), a type of stem cell, is shown that it might be involved in cancer metastasis. Here we will investigate the role of CXCL-1 in human mesenchymal stem cell-mediated growth and motility in human gastric cancer.

**Method and Material:** We culture human gastric cancer cells and human bone marrow mesenchymal stem cells (HBMMSCs) in the co-culture system. The motility of gastric cancer was measured using modified Boyden chambers with filter inserts for 24-well dishes containing 8- $\mu$ m pores. CXCL-1 and CXCL-1 neutralizing antibody were used to measure the inhibitory effect of motility in gastric cancer cells.

**Result:** The results from human cytokine arrays showed that HBMMSCs notably secrete CXCL-1 protein. Administration of CXCL-1 specific neutralizing antibody significantly inhibits HBMMSCs-induced motility activity in human gastric cancer cells. Treatment of recombinant CXCL-1 confirmed the role of CXCL-1 in mediating HBMMSCs-upregulated cell motility.

**Conclusion:** These results suggest that CXCL-1 significantly mediates HBMMSCs-induced motility in human gastric cancer cells.