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第三十屆生物醫學聯合學術年會 投稿摘要表格（正本）

Roles of EZH2 in Metastasis of Gastric Cancer.

顏可欣¹, 廖丹瑋¹, 鄒瑞焯^{1,2}
 Ke-Sin Yan¹, Tan-Wei Liao¹, Rury-Hwang Chou^{1,2}

¹Graduate Institute of Cancer Biology and Center for Molecular Medicine, China Medical University, Taichung 404, Taiwan.

²Department of Biotechnology, Asia University, Taichung 413, Taiwan.

Gastric cancer (GC) is one of most common cancer and second most fatal cancer around the world, especially in East Asia. Metastasis is still the major cause of mortality in patients with cancer. Polycomb repressive complex 2 (PRC2) is the epigenetic regulator, that induces histone H3 lysine 27 tri-methylation (H3K27me3) and silences specific gene transcription. Enhancer of zeste homolog 2 (EZH2) is an enzymatic subunit of PRC2. It is known that EZH2 is associated with the metastatic ability of several aggressive tumors. In this study, we aim to know the roles of EZH2 in regulation of gastric cancer malignancy, such as invasion, migration and its possible molecular mechanism. The high-invasive AGS-1 cells were established from parental AGS cells by *in vitro* invasion selection, and the expressions of EZH2 and EMT (epithelial mesenchymal transition) makers were determined. The results showed that increased level of EZH2 and mesenchymal markers (vimentin and N-cadherin), as well as higher invasive and migratory abilities were observed in AGS-1 cells than that in parental AGS cells. In contrast, E-cadherin, an epithelial marker was decreased in AGS-1 cells. Knockdown of EZH2 resulted in opposite phenomena in AGS-1 cells, suggesting the potential roles of EZH2 in malignancy of gastric cancer. The possible target genes of EZH2, were elucidated by chromatin immunoprecipitation (ChIP) assay and quantitative RT-PCR and their effects on malignancy of gastric cancer were also validated. Here, we provided the evidence for the possible roles of EZH2 in regulation of malignancy of gastric cancer.

第一作者中文姓名：顏可欣	傳真：
電話：(04)2205-2121#7913 手機：0937338940	E-mail：n79927@yahoo.com.tw
地址：台中市北區學士路 6 號癌症中心大樓 9F	