第二十八屆生物醫學聯合學術年會 **ABSTRACT FORM （正本）**

BMP-7 透過c-Src, PI3K/Akt, NF-κB路徑增加αvβ3 integrin的表現及人類軟骨肉瘤細胞移行
BMP-7 promotes αvβ3 integrin expression and cell motility through c-Src, PI3K/Akt, and NF-κB signaling pathway in human chondrosarcoma

楊舒婷[1],林智暘[2] 湯智昕[3,2*]
Shu-Ting Yang[1], Chih-Yang Lin[2], Chih-Hsin Tang[3, 2*]

[1] 中國醫藥大學藥學系 [2] 中國醫藥大學基礎醫學研究所 [3] 中國醫藥大學醫學系藥理科
[1]Department of Pharmacy, China Medical University, Taichung, Taiwan
[2]Graduate Institute of Basic Medical Science, China Medical University, Taichung, Taiwan
[3]Department of Pharmacology, School of Medicine, China Medical University, Taichung, Taiwan

Background:

Bone morphogenetic protein 7 (BMP-7) encoded in a member of the TGF-β superfamily. Like other members of the BMP family of proteins, it plays a key role in the transformation of mesenchymal cells into bone and cartilage. However, the effect of BMP-7 on migration activity in human chondrosarcoma cells is still unknown.

Materials & Methods

Cancer cells migration activity was examined using the Transwell assay. The c-Src, PI3K/AKT, and NF-κB phosphorylation was examined by using Western blot method. The qPCR was used to examine the mRNA expression of integrins. A transient transfection protocol was used to examine the NF-κB activity.

Results

Here we found that BMP-7 directed chondrosarcoma cells migration involves αvβ3 integrin up-regulation. BMP-7 mediated migration and αvβ3 integrin up-regulation were attenuated by the inhibitors and the mutant of c-Src, PI3K/Akt, and NF-κB cascades. It activated the c-Src, PI3K/Akt and NF-κB signaling pathway after BMP-7 treatment was demonstrated.

Conclusion

Taken together, our results indicated that BMP-7 enhances the migration of chondrosarcoma cells by increasing αvβ3 expression through c-Src, PI3K/Akt, and NF-κB signal transduction pathway.

第一作者中文姓名：楊舒婷 **傳真：**