Miran Jeong et al., Madridge J Cancer Stud Res. 2017
http://dx.doi.org/10.18689/2640-5180.a2.003

Tumor-associated macrophages (TAMs) promote ovarian cancer cell migration/invasion via activation of the CCL7-CCR3 axis

Miran Jeong and **Jung-Hye Choi**
Department of Life and Nanopharmaceutical Sciences, Kyung Hee University, South Korea

The tumor microenvironment is critical for cancer pathobiology and has been reported to play an important role in the development of cancer metastasis. In the tumor microenvironment, macrophages can be educated by a tumor may turn into tumor-associated macrophages (TAMs) that may promote tumor growth, migration, invasion, and metastasis. However, it has been poorly understood TAMs interact with ovarian cancer cells.

In the present study, we have demonstrated that the conditioned medium (CM) from TAMs (TAM-CM) significantly increased the migration and invasion of human ovarian cancer cells. To find out which cytokines are involved in the increase, we performed cytokine array and real time PCR in TAMs. The expression and production of CC chemokine ligand 7 (CCL7) was higher in TAMs than regularmacrophages. Moreover, CCL7, its receptor CCR3 was found to be highly expressed in human ovarian cancer cells. Inhibition of CCL7-CCR3axis markedly attenuated the TAM-CM-induced migration/invasion. Taken together, these data suggest that TAM promotes ovarian cancer cell migration/invasion through the CCL7-CCR3 pathway.

Biography:

Ms. Miran Jeong is from the Department of Life and Nanopharmaceutical Sciences, Kyung Hee University, Seoul, South Korea. Her research interests are understanding tumor stromal interactions in ovarian tumor microenvironment that promote angiogenesis, ascites and peritoneal spread, and also to identifying target receptors to develop therapeutic strategies for complementing current treatment regimens in ovarian cancer.