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Tumor microenvironment with breast cancer cells promoted invasion and tube formation of endothelial colony forming cells (ECFC)

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The tumor microenvironment is recognized as a key factor in multiple stages of cancer progression, immune-escaping, and distant metastasis. Endothelial colony forming cells (ECFC) is the circulating endothelial precursor that contributes to building new blood vessels in adult body. Here, we investigated the effect of surrounding breast cancer cells on invasive phenotype and angiogenic property of ECFC by using co-culture systems. In the indirect co-culture system with MDA-MB-231 breast cancer cells, invasion phenotype of ECFC was significantly increased compared to the cells cultured alone. Tube formation of ECFC was enhanced by direct co-culture with MDA-MB-231 cells. Taken together, the present study suggest that the interaction with breast cancer cells may promote aggressiveness of ECFC.

Biography

Aree Moon is a Professor at College of Pharmacy, Duksung Women's University. She received her BS degree at College of Pharmacy, Seoul National University, Seoul, Korea in 1983. She moved to the USA and continued to study in Biochemistry. She got her PhD degree at Department of Biochemistry and Biophysics, Iowa State University, Iowa, USA in 1989. Since 1995, she has been a Professor at College of Pharmacy, Duksung Women's University. She has received a number of awards including The Presidential award, The Order of Science and Technology Merit and the Korea L'Oreal-UNESCO Award for woman in science.

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