

## **Production of matrix degrading enzymes by skin fibroblast-tumor cell interaction**

**Yo Mori**

*Tokyo College of Pharmacy*

The involvement of tumor cell-fibroblast interaction in matrix metalloproteinases (MMPs) and tissue inhibitor of metalloproteinases (TIMP) production was examined. Co-cultures of human skin fibroblasts with human MCF-7 cells of epithelial origin showed increased MMP and TIMP production when compared to cultures of the individual cells. The effect was dependent on the cellular ratio between human skin fibroblasts and MCF-7 cells. The stimulatory factors can be detected in the conditioned medium from MCF-7 cell cultures. The addition of membrane fractions prepared from MCF-7 cells to the fibroblast cultures also stimulated MMP and TIMP production. However, kinds of increased MMPs were different from kinds of MMPs induced by soluble factors released from tumor cells.

These results demonstrated that MCF-7 cells have two forms of stimulatory factor MMP stimulatory factors that is present at outer surface of MCF-7 cells and MCF-7 cells derived factors that stimulate MMP production of fibroblasts.