1037-00-65   **Yangjin Kim*** (`ykim@mbi.osu.edu`), Mathematical Biosciences Institute, OSU, Jennings Hall, 3rd Floor, 1735 Neil Avenue, Columbus, OH 43210, **Avner Friedman**, Mathematical Biosciences Institute, OSU, Jennings Hall, 3rd Floor, 1735 Neil Avenue, Columbus, OH 43210, **Michael Ostrowski**, Human Cancer Genetics Program, OSU, 370A Tzagournis Medical Research Facility, 426 W. 12th Ave, Columbus, OH 43210, **Julie Wallace**, Human Cancer Genetics, Ohio State University, 370A Tzagournis Medical Research Facility, 426 W. 12th Ave, Columbus, OH 43210, and **Fu Li**, Human Cancer Genetics, Ohio State University, 370A Tzagournis Medical Research Facility, 426 W. 12th Ave, Columbus, OH 43210. *Transformed Epithelial cells and fibroblasts/myofibroblasts interaction in Breast Tumor: A Mathematical Model and Experiments.* Preliminary report.

We developed a transwell model to understand the role of fibroblasts/myofibroblasts in early development of breast cancer. Tumor cells located in bottom of well were allowed to communicated with fibroblasts/myofibroblasts on top insert via growth factors through the holes of size 0.4 micron on membrane between two cell cultures. A mathematical model of density of tumor cells, fibroblasts/myofibroblasts, and concentration of EGF, TGF-beta was used to explore the interaction between tumor cells and fibroblasts/myofibroblasts. (Received January 21, 2008)