Abstract:

Tumor progression is a complex multistep process in which tumor stroma is heavily involved. Tumor stroma plays a role in almost any step in this process. It may help tumor cells to acquire an invasive phenotype, to undergo epithelial-to-mesenchymal transition, to maintain stemness and to disseminate to other organs. Stroma cells also regulate metastatic activities of tumor cells and determine whether disseminated cancer stem cells remain in a dormant state or whether they grow out to form macrometastatic lesions. Finally, they may have an influence on the sensitivity of tumor cells to drugs and often render tumor cells drug-resistant. Mesenchymal stem cells (MSCs) and cancer-associated fibroblasts (CAFs) are two important types of stromal cells which strongly affect resistance of breast cancer cells to drugs. Approximately two third of breast cancers are positive for the estrogen receptor α, which makes them vulnerable to anti-estrogens and aromatase inhibitors. Resistance to these drugs (endocrine resistance) leads to relapse and unfavorable outcome. A number of mechanisms have been shown to lead to endocrine resistance and are discussed to involve the action of stromal cells, such as MSCs and CAFs.

You are cordially invited to attend this lecture, which will be delivered in English.