Hormonal therapy is a common part of breast carcinoma treatment in patients whose tumors express estrogen and progesterone receptors. The aim of hormonal therapy is to prevent proliferative effect of hormones througt their receptor proteins in order to inhibit tumor growth. However, certain number of tumors is resistant to hormonal therapy despite expression of hormonal receptors. Presently, the reasons of this resistance are not fully understood. Oxysterols are hydroxylated cholesterol derivates, which may play some role in development of the resistance. They may interfere with hormonal therapy effect and influence some signal pathways leading to cancer progression. This study comes with results of gene expression of proteins influenced by oxysterol action, metabolic and transport proteins, transcription factors and members of signaling pathways that may be related to oxysterol effect. This thesis identifies some candidate genes for future analysis on the basis of comparison of gene expression between estrogen receptor positive and negative tumors and correlation with clinopathological data. The final goal should lead to discovery of new diagnostic markers for breast cancer therapy.