

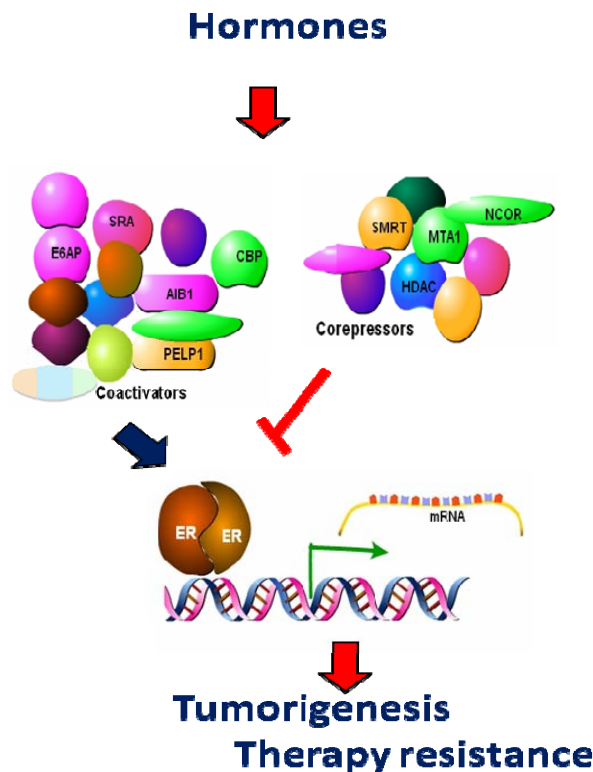
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Steroid hormones play pivotal roles in sex differentiation, reproductive functions and are implicated in the progression of endocrine-related cancers in women. The biological functions of steroidal hormones are mediated by nuclear receptors (NRs). NRs are implicated in the progression of a number of diseases, including women's cancers. Coregulators are an integral part of NR pathway and their composition in a given cell determine the magnitude and specificity of the NR signaling. NR-coregulators have potential to function as master genes and alterations in both levels and functions of NR coregulators are reported to occur during cancer progression. Deregulation of these coregulators could influence target gene expression and participate in the development of hormone-responsive cancers.

Our laboratory is interested in understanding the biological as well as pathological significance of estrogen receptor (ER) coregulators in hormonal signal transduction and hormonal therapy resistance. We use diverse models to study the significance of ER-coregulators in breast, uterus, ovarian cancers and in neurological disorders. Our lab current research interests include: (1) characterizing the function of coregulators in estrogen mediated cell cycle progression, extra-nuclear signaling, and chromatin remodeling; (2) developing transgenic and knock-out mouse models for coregulators; (3) characterizing the role of estrogen receptor coregulators in tumorigenesis / hormonal resistance; (4) identifying novel molecular targets for therapeutic intervention / early detection of cancer; (5) testing the significance of coregulators as a biomarker(s) for breast and ovarian cancer progression; and (6) developing drugs targeting NR-Coregulators interface for treating hormonal cancers.



Key Recent Publications

1. Cancer Research, 70(10):4092-101, 2010. <http://www.ncbi.nlm.nih.gov/pubmed/20460518>
2. EMBO Reports, 11(6):438-44, 2010. <http://www.ncbi.nlm.nih.gov/pubmed/20448663>
3. Cancer Research, 70(18):7166-75, 2010. <http://www.ncbi.nlm.nih.gov/pubmed/20807815>
4. Breast Cancer Res Treat, 2010. <http://www.ncbi.nlm.nih.gov/pubmed/21184269>
5. Clin Cancer Res. 15;17(8):2250-9, 2011. <http://www.ncbi.nlm.nih.gov/pubmed/21421858>
6. PLoSOne.2011;6(6):e21095, 2011. <http://www.ncbi.nlm.nih.gov/pubmed/21695158>
7. Breast Cancer Research, 2011. <http://www.ncbi.nlm.nih.gov/pubmed/21834972>