BBGS503 Zhang Lectures (Nuclear Receptors)

Lecture 1 – Feb 4th

- Introduction
    - Discovery of nuclear receptor superfamily of transcription factors
    - Overall function
    - Unique features of the ligands – Lipophilic small molecules
    - Biological functions of nuclear receptors and involvement in cancer
    - Domain structure
    - Generic pathways
- Structure and function of DNA-binding domain
    - P-box
    - D-box
    - Half-Site
    - 1-5 rule

Lecture 2 – Feb 5th

- Structure and function of the ligand-binding domain
    - Overall role of ligands in transcriptional regulation by nuclear receptors
    - Discovery of co-repressors and co-activators
    - Interplay of corepressors, coactivators and ligands
    - Interplay of receptor conformation, coregulator binding, ligand, and receptor function
    - Agonist, antagonist, receptor conformation and
- Nuclear receptors as drug target