

CBB 430: Applied Bioinformatics and Computational Biology  
Winter 2025 (Su)

Module 3, Homework 2

**Due: 3/12/2025**

In your assigned groups, analyze how various estrogen receptor (ER) ligands bind and interact with the receptor during molecular dynamics simulations. Your goal is to assess the unique mechanisms of action (MOA) of these ligands and investigate the potential structural basis for their differential downstream signaling.

To aid your analysis, utilize the tools and methods covered in class, and incorporate additional techniques as appropriate. Each group member should prepare a **five-panel figure** that compares the MOA of the antiestrogen ligands. At least one panel must involve an analysis technique not covered in class. Alongside the figure, include a concise **results section** (maximum 500 words) that describes your findings and interprets the data presented in the panels.

This assignment is designed to be collaborative, encouraging active discussion and data sharing within your group. However, all figures and accompanying text must be prepared **individually** to reflect your personal interpretation and understanding.