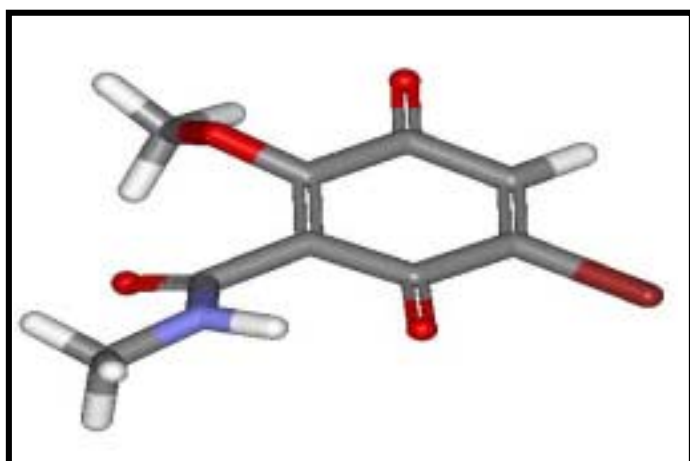
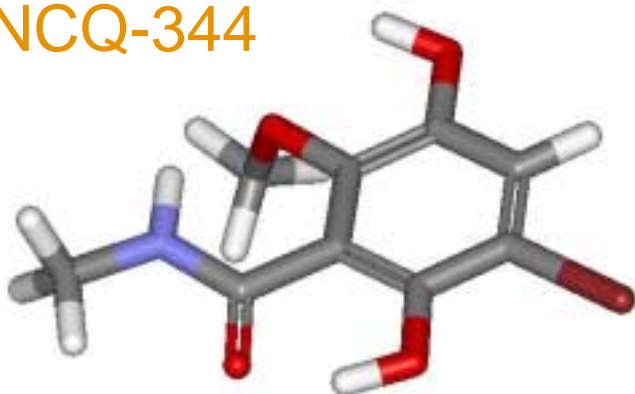
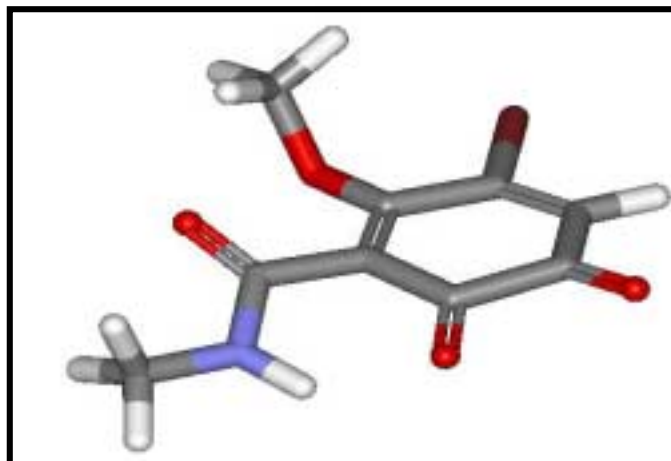
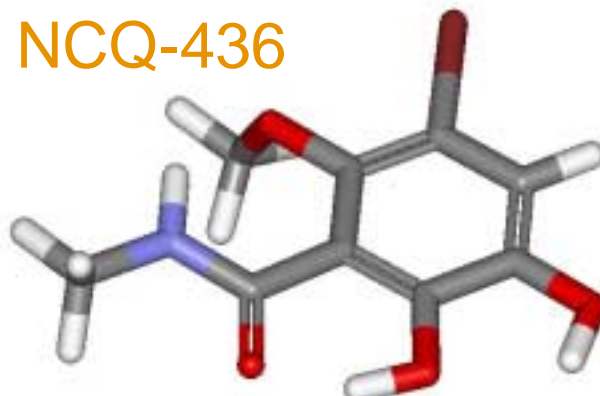


NCQ-344



NCQ-436



For NCQ-344, hydrogen bonding between an aromatic hydroxyl group adjacent the amide oxygen help stabilize the hydroquinone form making para-quinone formation less exothermic (although still spontaneous) than what is observed for unsubstituted hydroquinone.

For NCQ-436, additional hydrogen bonding can occur due to adjacent hydroxyl groups providing greater stabilization. In addition, a repulsive interaction between the methoxy oxygen and amide oxygen destabilises the quinone. Taken together, quinone formation from NCQ-436 does not occur spontaneously.