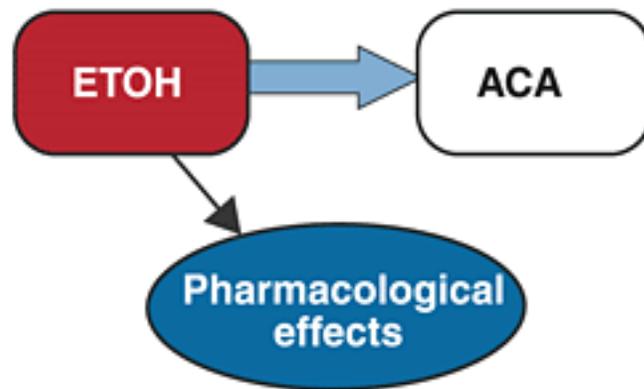
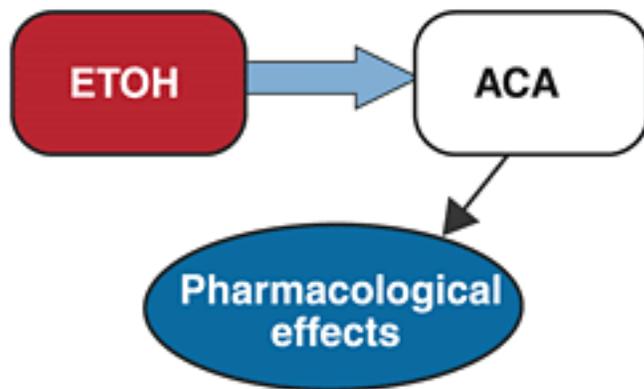


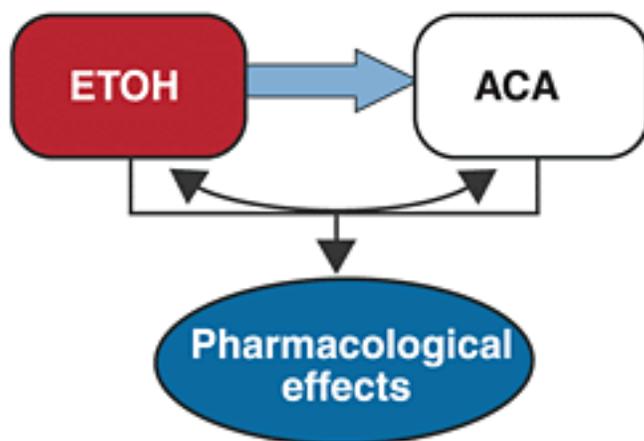
Schematic representation of three alternative models that account for the role of acetaldehyde in ethanol's (ETOH's) effects



Full Prodrug Model



Modulation Model



According to the ethanol model, acetaldehyde (ACA) does not contribute at all to ethanol's overall pharmacological effects, and all effects are mediated directly by the molecular action of ethanol. The full prodrug model states that all pharmacological effects of ethanol are mediated by acetaldehyde. According to this model, ethanol would be a mere prodrug without pharmacological effect of its own. Finally, the intermediate modulation model stipulates that acetaldehyde synergistically interacts with ethanol to modulate ethanol's pharmacological effects.