



2. Imagine that you are the head of the pharmacodynamics department at *Better Minds, Inc.* and need to decide on the most promising memory enhancer for young adults. Your department has identified three novel structurally different nicotinic acetylcholine receptor agonists and characterized their binding to two important subtypes of receptors that are present in the brain. The binding was studied by competitively displacing radioactive acetylcholine by each of the novel agonists. In each experiment, the concentration of labeled acetylcholine was the same and the concentration of the agonists was varied. Independent studies showed that acetylcholine has a nearly similar affinity toward these two receptor subtypes. Analyze this data and suggest which of the three compounds is the most promising lead for further development of cognitive enhancers that FDA is most likely to accept? Justify your answer. (4 pts)

