CHEM 495. Topics: Biochemistry, Physiology and Neurochemistry of Beer, Wine and Alcohol. Intersession (Rome) 2023

Block IV - Possible Exam Questions

1) Outline the basic anatomy of a neuron and what happens at a neuron's synapse. Include the secretion and uptake of one of the neurotransmitters and the involvement of a glial/astrocyte cell in your answer.
2) Describe the action potential and the route the potential takes from synapse to synapse. What is an IPSP and an EPSP. How does an excitatory and an inhibitory neurotransmitter integrate into these concepts?
3) There is a balance between two neurotransmitter systems in acute alcohol consumption. What are they and how do they function (transmitter, receptor/channel, neurons involved and effected)?
4) Ethanol is thought to bind directly to a number of receptor/channels impacting the acute reward for drinking. Pick one and describe the possible mechanism (there are more than we discussed in class – see the linked paper(s) plus your notes).
5) How does our brain adapt as alcohol intake shifts from acute to chronic alcohol use and then during withdrawal? How does this change the way we may act?
6) How does dopamine and opioids interact in acute alcohol consumption to bring about the euphoria of drinking?