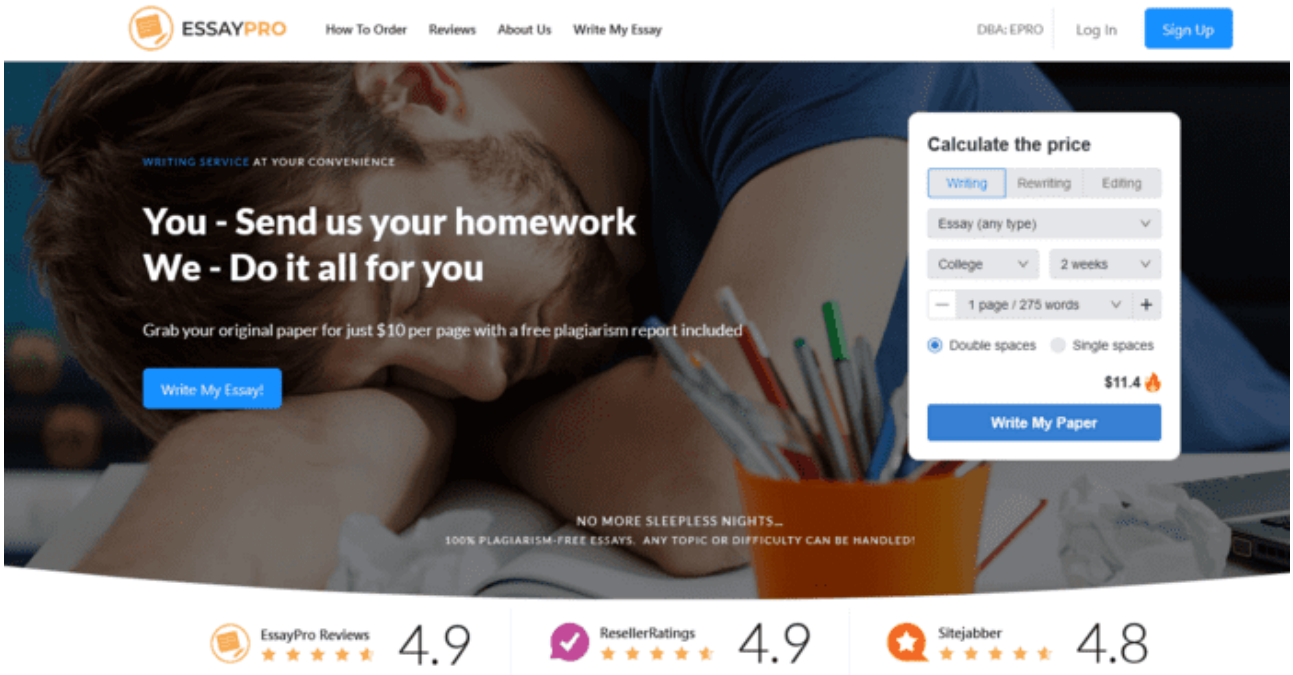
Part of the Neuron Affected, Inhibitory or Excitatory Potential Changes and Ion Channels Affected by Psilocybin



ENTER HERE => https://bit.ly/abcdessay108

Part of the Neuron Affected, Inhibitory or Excitatory Potential Changes and Ion Channels Affected by Psilocybin

Psilocybin belongs to the classification of drugs called hallucinogens. Hallucinogens typically act by stimulating serotonin receptors at different times or for longer durations than serotonin itself would (Kalat 2004). When psilocybin enters the brain, the enzyme alkaline breaks down one of its phosphate groups through hydrolysis. It then becomes psilocin, an even

stronger hallucinogen (Psilocybin 2003). It is particularly potent due to the position of its hydroxyl group (Jacobs 1984). Psilocin is a postsynaptic serotonin receptor agonist. In other words, its similar structure allows it to mimic serotonin, fitting into some types of serotonin receptors and producing the same effect as endogenous serotonin (Merriam Webster 2003). Specifically, psilocin activates the 5HT2A and 5HT1A receptors. Stimulation of 5HT1 receptors is associated with an inhibitory response while stimulation of the 5HT2 receptors is associated with an excitatory response. Soma of the serotonergic neurons are located in the midline raphe nuclei of the pons and in the medulla oblongata. Axons extend to the basal ganglia, hypothalamus, limbic forebrain, parts of the cerebral cortex, and to the spinal cord (Kruk and Pycock 1979). Functions believed to be moderated by serotonin include sleep, mood, arousal, control of motor activity, hunger, thermoregulation, and some neuroendocrine control mechanisms in the hypothalamus. (Powell 2004, Kruk and Pycock 1979).

One theory states that effects caused by psilocin result from stimulation of receptors in the raphe nuclei. According to this theory, the...

... middle of paper ...

...ocal Net Common Molecule. (2003) Reciprocal

Net Site Network.

http://www.reciprocalnet.org/recipnet/showsample.jsp?sampleId=27

344568

Rabin, Richard A., Regina, Meridith, and Doat, Mirielle J.C. 5-

HT2A Receptor-stimulated Phosphoinositide Hydrolysis in the

Stimulus Effects of Hallucinogens. (2001) Pharmacology,

Biochemistry and Behavior. Volume 72, 2002. (pp 29-37)

Department of Pharmacology and Toxicology, School of Medicine

and Biomedical Sciences, State University of New York at

Buffalo, Buffalo, NY.

Vollenweider, Franz X, M.D., Vontobel, Peter, PhD., Hell,

Daniel, M.D., and Leenders, Klaus, M.D. (1998) 5HT Modulation of

Dopamine Release in Basal Ganglia in Psilocybin Induced

Psychosis in Man: A PET Study with [11C]raclopride.

Neuropsychopharmacology 1999, Volume 20, Number 5. (pp 424-431)

New York, New York: Elsevier Science Inc.

- Sample Registered Nurse Resume Format
- First Of All Secondly Essay