Discussion Chapter 9

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**Response 1**

The genus cannabis refers to a plant that has three main species. These species are *Cannabis sativa*, *Cannabis indica* and *Cannabis ruderalis* (Fergusson & Boden, 2006). These plants comprise of numerous biologically active chemicals known as cannabinoids. Several biological activities of cannabinoids are interceded by their direct contact with two receptors that are closely related. These two receptors are CB 1 and CB 2. Both of these receptors are represented with the class of Gi/o-coupled metabotropic receptors. They are scattered across the central nervous system. CB 1 receptors are localized in neurons while CB 2 receptors are expressed to a much greater extent in microglia which is present in the immune system. After the discovery of cannabinoid receptors facilitates in the search of endogenous substances that interact with the receptors. These endogenous substances are also known as endogenous cannabinoids. Several studies show that endocannabinoids play a vital role in controlling synaptic transmission and neuronal firing rate. Typically, in CBS the CB 1 receptors are expressed on glutamatergic and gabaergic interneurons. Its activations cause inhibition of synaptic transmission. Furthermore, this mechanism is responsible for other clinical effects such as the enhanced activity of glycine receptors and 5-HT receptors (Cilio & Devinsky, 2014).

**Response 2**

Medical marijuana is whole-plant marijuana that is utilized for several medical purposes. Cannabinoids are the substances that exist in medical cannabis that act on cells present in the body. THC and CBD are the two cannabinoids that specifically are used for medical purposes. Although the FDA has approved the use of a plant-based formulation of CBD that is epidiolex to treat seizures yet it only helps in treating patients that a history of Dravet and Lennox-Gastaut syndrome (Maa & Figi, 2014). CBD and THC both have potential side effects. Some of the side effects associated with the use of CBD are decreased appetite, sleepiness, and fatigue. However, it has been observed that CBD also interacts with several seizure medicines. Thus monitoring of CBD is highly recommended.

**References**

Cilio, M. R., Thiele, E. A., & Devinsky, O. (2014). The case for assessing cannabidiol in epilepsy. *Epilepsia*, *55*(6), 787-790.

Fergusson, D. M., Poulton, R., Smith, P. F., & Boden, J. M. (2006). Cannabis and psychosis. *Bmj*, *332*(7534), 172-175.

Maa, E., & Figi, P. (2014). The case for medical marijuana in epilepsy. *Epilepsia*, *55*(6), 783-786.