Chapter 5

N,N-DIMETHYLTRYPTAMINE

Kamile YUCEL[1]

INTRODUCTION

A mystery that has been going on for centuries. The N,N-dimethyltryptamine (DMT) molecule, which is found in every living thing, especially in humans at the time of birth and death, and which some claim to open the door of the parallel universes, is a very harmful hallucinogen for some. This substance, which was used only by shamans who lived in different geographies in their time, and started to be in trance, spread to the whole world and started to attract the attention of artists and scientists. So what is this DMT?

Hallucinogens are described as psychoactive substances that cause changes in perception and mood without being addictive. Psychoactive substances have amazed and impressed people with their effects since their discovery. However, although they have existed in human pharmacology for thousands of years and played profound roles in the development of science, psychology and culture, the biochemical mechanisms of how hallucinogens change perception and consciousness remain unclear.[1,2]

DMT (Figure 1) is an N-methylated indolamine derivative, which is a serotonergic hallucinogen tryptamine alkaloid found in various plants (especially *Prestonia amazonica* belonging to the *Apocynaceae* family), as well as in the mammalian brain,

[1] Assistant Professor, KTO Karatay University, kamile_yucel@hotmail.com

Although low levels of DMT can be used as an endogenous anxiolytic, high, "unnatural" levels of DMT (such as those associated with psychedelic/hallucinogenic activity) are reported to cause excessive changes in consciousness[11], but there is a need for a further investigation into its function and interaction with other neurotransmitter systems. Given the hypotheses put forward about DMT, we can state that it deserves a special stuation for further research. Experimental studies with DMT are not sufficient, and it will take a long time and hard work to be able to state that DMT has clinically appropriate uses.

We think that increasing the frequency of sampling, focusing on sample collection storage conditions or using devices with high sensitivity and specificity such as Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS) can be guiding in reaching clearer and more accurate data about DMT.

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