Mechoulam on Cannabidiol

The emerging significance of cannabidiol is one of the most important developments in cannabinoid research in recent years. It is a lipid that is present in the plant as a major component and it is the_unique biological properties that have attracted the interest of researchers. Cannabidiol (CBD) is a non-psychoactive cannabinoid which is present in high concentrations in hemp plants.

Mechoulam discovered CBD as a major component of the cannabis plant and he has been studying its effects for over 30 years. He and his colleagues have shown that CBD has a wide range of therapeutic effects, including anti-inflammatory, anti-anxiety, anti-seizure, and anti-psychotic properties.

Mechoulam is a professor at the Hebrew University in Jerusalem and he has been working on the development of CBD as a treatment for a variety of medical conditions. In his recent talk at the IACM meeting, he discussed the latest research on the use of CBD in the treatment of cancer, pain, and neurological disorders.

At the IACM meeting, Mechoulam and Christian Slepeck, director of THC-Pharm, a Frankfurt company that synthesizes CBD and other cannabinoids, shared their research on the potential of CBD as a treatment for cancer.

Mechoulam said, “We should try it with humans in a few years.” He went on: “What about sleep? I’m jumping from thing to thing to show you that CBD does quite a lot of things and I’m not sure that all of them are according to the same mechanism.”

Mechoulam was part of a group led by Eric Murillo-Rodriguez that administered CBD to rats and determined that while THC caused sleepiness, CBD increased wakefulness and significantly decreased REM sleep. According to Mechoulam, “When one says ‘cannabis causes sleep,’ one should think really of two compounds, one that causes sleep and one that causes awakening.”

The anti-nausea and memory extinction effects of CBD “seem to be closely related,” Mechoulam said. He described the problem of anticipatory nausea, for which no good drugs are available. (The effects of chemotherapy can be so nauseating that patients start vomiting when they see the doctor or nurse who is going to administer the treatment.)

Linda Parker at the University of Guadalajara showed shrews to start vomiting by administering lithium fluoride at a certain location. When the shrews were subsequently placed in that location they began vomiting. But if given CBD, they could be moved to the dreaded location without vomiting. [THC is anti-emetic, too; the advantage of CBD in this instance may be legal rather than medical.]

“The conditioned-wretching reaction was completely abolished,” Mechoulam declared. “Can we abolish other kinds of conditioning?”

He described an experiment in which rats had a choice of two paths, one leading to cocaine. Rats like cocaine (and amphetamine) and will learn to choose the path leading to it. But if injected with CBD, they no longer show a preference for cocaine!

Mechoulam characterized post-traumatic stress disorder, certain phobias and forms of chronic pain as “human situations which are conditioned” and might be amenable to treatment with CBD. “I know that many patients with PTSD take cannabis, self administered,” Mechoulam said. He has been trying to interest the Israeli Ministry of Health in testing CBD and THC at various ratios to treat PTSD.