Whole Plant Cannabinoid Nonpharmaceutical Treatment Protocols for a Young Male with Dravet Syndrome

Supplementary file

Table 1: Glossary

Receptor/Term	Definition
Allosteric Receptor Binding	An allosteric enzyme or molecule is one in which binding of one substrate or ligand to one site affects the binding affinity of another site in the same molecule.
CB1	CB1 receptors are G-protein coupled receptors (GPCRs), abundant in neurons, and modulate neurotransmission. THC modulates the CB1 receptors, affecting psychoactivity and inflammation.
CB2	The CB2 receptor is the peripheral receptor for cannabinoids especially where CBD acts as a reverse allosteric ligand. It is mainly expressed in immune tissues, highlighting the possibility that the endocannabinoid system has an immunomodulatory role.
CBC	Cannabichromene is a minor phytocannabinoid
CBCA	Cannabichromenic acid is a minor phytocannabinoid and is the acid precursor to CBC.
CBD	Cannabidiol is a major phytocannabinoid derived from Cannabis sativa species, are devoid of psychoactive activity, with analgesic, anti-inflammatory, antineoplastic and chemopreventive activities. CBD has 15 different isomers.
CBDA	Cannabidiolic acid (CBDA), is a major, non-psychoactive phytocannabinoid produced in hemp cannabis plants, and is the acid precursor to CBD.
CBDV	Cannabidivarin (CBDV) is a minor, non-psychoactive phytocannabinoid produced in hemp cannabis plants that have shown anti-epilepsy activity.
CBN	Cannabinol is a minor, non-psychoactive phytocannabinoid that is derived from oxidized THC.
Clinical Endocannabinoid Deficiency	CED is a theory developed by Ethan Russo, MD, that proposes a deficiency of natural endocannabinoids is the underlying pathophysiology of migraines, fibromyalgia, and irritable bowel syndrome. The deficiency may sometimes begin en utero as a result of maternal obesity.
CYP2C19, CYP2C9, CYP3, and CYP3A4	These genes are members of the cytochrome P450 family. Enzymes produced from cytochrome P450 genes are involved in the formation and metabolism of various molecules and chemicals within cells.
D10-THC	Delta-10 Tetrahydrocannabinol is another positional isomer of THC.
D9-THC	Delta-9 Tetrahydrocannabinol is the most abundant psychoactive isomer of THC.
Entourage Effect	Raphael Mechoulam, PhD and Shimon Ben-Shabat, PhD postulated that the endocannabinoid system demonstrated an "entourage effect", in which a variety of "inactive" metabolites and closely related molecules increased the receptor site activities of the primary endocannabinoids anandamide and 2-arachidonolyglycerol and plant derived phytocannabinoids.
GABA	gamma Aminobutyric acid, γ-Aminobutyric acid) is the chief inhibitory neurotransmitter in the developmentally mature mammalian central nervous system. Its principal role is reducing neuronal excitability throughout the nervous system.
GPAR-55	G protein coupled receptor (GPR) which is sensitive to certain cannabinoids, is expressed in the brain and, in cell cultures, and triggers mobilization of intracellular Ca2+.
Microbiota-Gut-Brain-Axis (MGBA)	Consists of bidirectional communication between the central and the enteric nervous system, linking emotional and cognitive centers of the brain with peripheral intestinal functions.
Phytocannabinoid	Found in the hemp cannabis and medical cannabis plant. Phytocannabinoids bear structural similarity to the other natural endocannabinoids. Common phytocannabinoids include tetrahydrocannabinol (THC), tetrahydrocannabivarin (THCV), cannabidiol (CBD), cannabichromene (CBC) and cannabinol (CBN).
THC	Tetrahydrocannabinol is a major psychoactive phytocannabinoid found in hemp cannabis plants. The legality of hemp cannabis hinges on the percentage by weight of total THC, which is less than 0.3% THC by weight.
THCA	Tetrahydrocannabinolic acid is a non-psychoactive phytocannabinoid produced in hemp cannabis plants, and is the acid precursor to THC. THC has 15 or more isomers.
Transient receptor potential channels	TRPM8, TRPV1-TRPV4, TRPVA1 – TRP channels are a group of ion channels located mostly on the plasma membrane of numerous animal cell types. Some TRP channels are thought to behave like microscopic thermometers and used in animals to sense hot or cold. Some TRP channels are activated by molecules found in spices like garlic (allicin), chili pepper (capsaicin), wasabi (allyl isothiocyanate); others are activated by menthol, camphor, peppermint, and cooling agents; yet others are activated by molecules found in cannabis (i.e., THC, CBD and CBN) or stevia. Some act as sensors of osmotic pressure, volume, stretch, and vibration. Most of the channels are activated or inhibited by signaling lipids and contribute to a family of lipid-gated ion channels.
p450 pathway	A ubiquitous family of enzymes, belonging to the monooxygenase superfamily. They are heme-containing proteins, mainly functioning as catalysts in the oxidation and metabolism of organic compounds.