

CANNABIS AND PAIN



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ALLAN I. FRANKEL, MD WWW.GREENBRIDGEMED.COM

- 41 years as a practicing Doctor Of Internal Medicine, specializing in the use of dosed cannabis medicines for the past 13 years.
- Dosed cannabis medicines recommended to over 10,000 patients during this time.
- Graduate of the UCLA School of Medicine.
- Presenter in multiple CME accredited grand rounds lectures on internal medicine and therapies in medical cannabis. Participant in round table discussions on the topic of future therapies and research for medical cannabis, sponsored by the California Medical Association and the Los Angeles County Medical Association.
- Clinical professor for the UCLA School of Medicine for 12 years.
- Developed the Chartscape medical software program used by the UCLA Bowyer Oncology Center, and the eScript medical software utilized by Kaiser Permanente Health System.

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ABOUT YOU

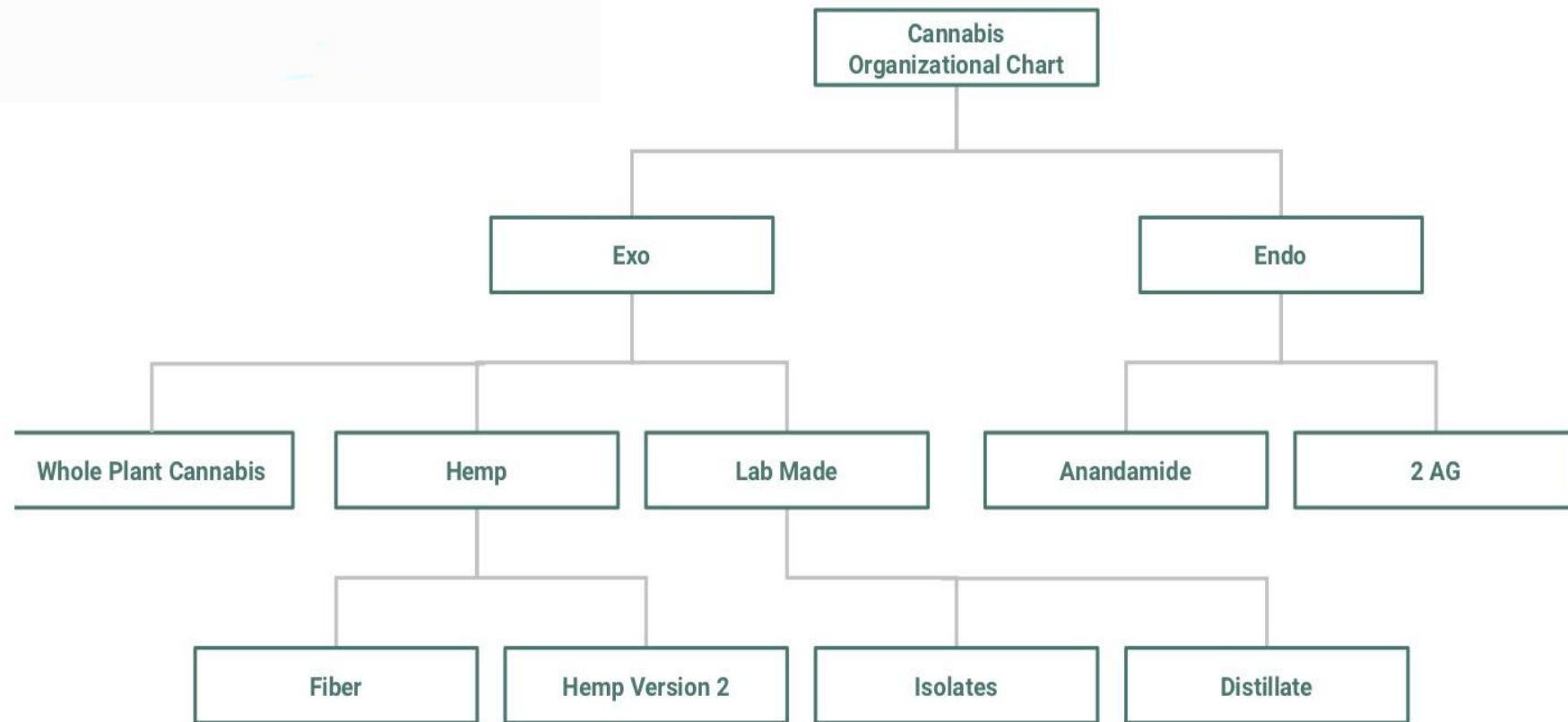
- Can you recommend cannabis to your patients?
- What is the legal requirement?
- Is there any required training in California?
- Conant Decision - 9TH Federal Circuit Court
- What is the risk with the medical board?



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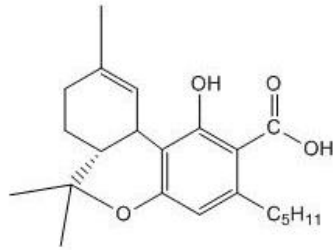


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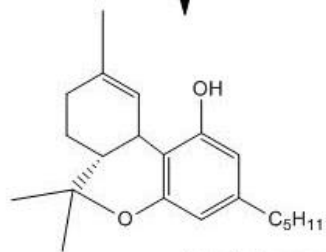
THE KEY PLAYERS

Plant Derived Cannabinoids

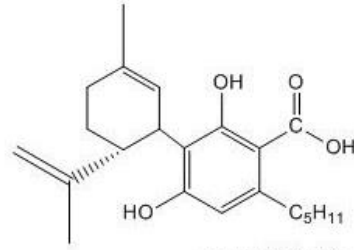


tetrahydrocannabinolic acid (THCA)

-CO₂ (decarboxylation)

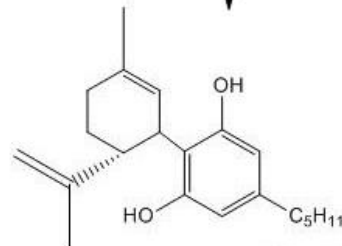


tetrahydrocannabinol (THC)



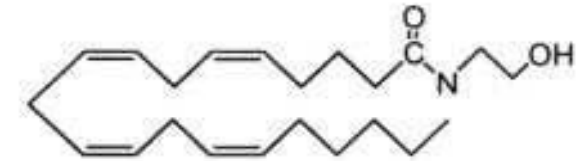
cannabidiolic acid (CBDA)

-CO₂ (decarboxylation)

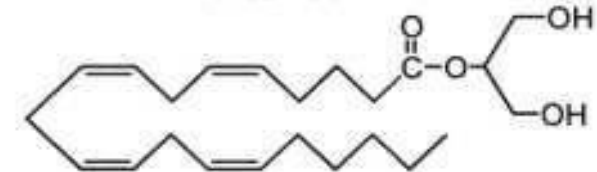


cannabidiol (CBD)

Endogenous Cannabinoids



Anandamide



2-Arachidonylglycerol (2-AG)

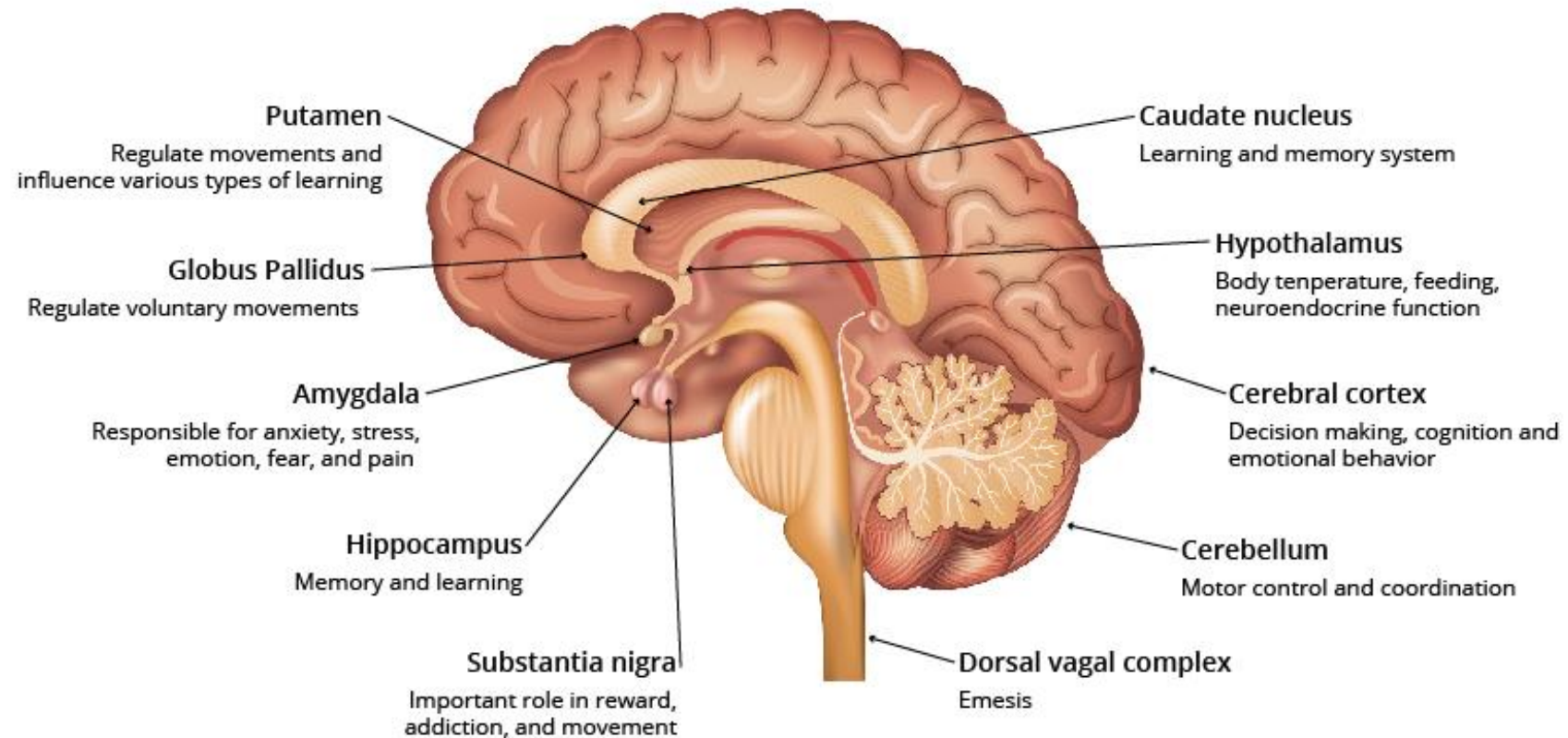
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CANNABINOID RECEPTORS



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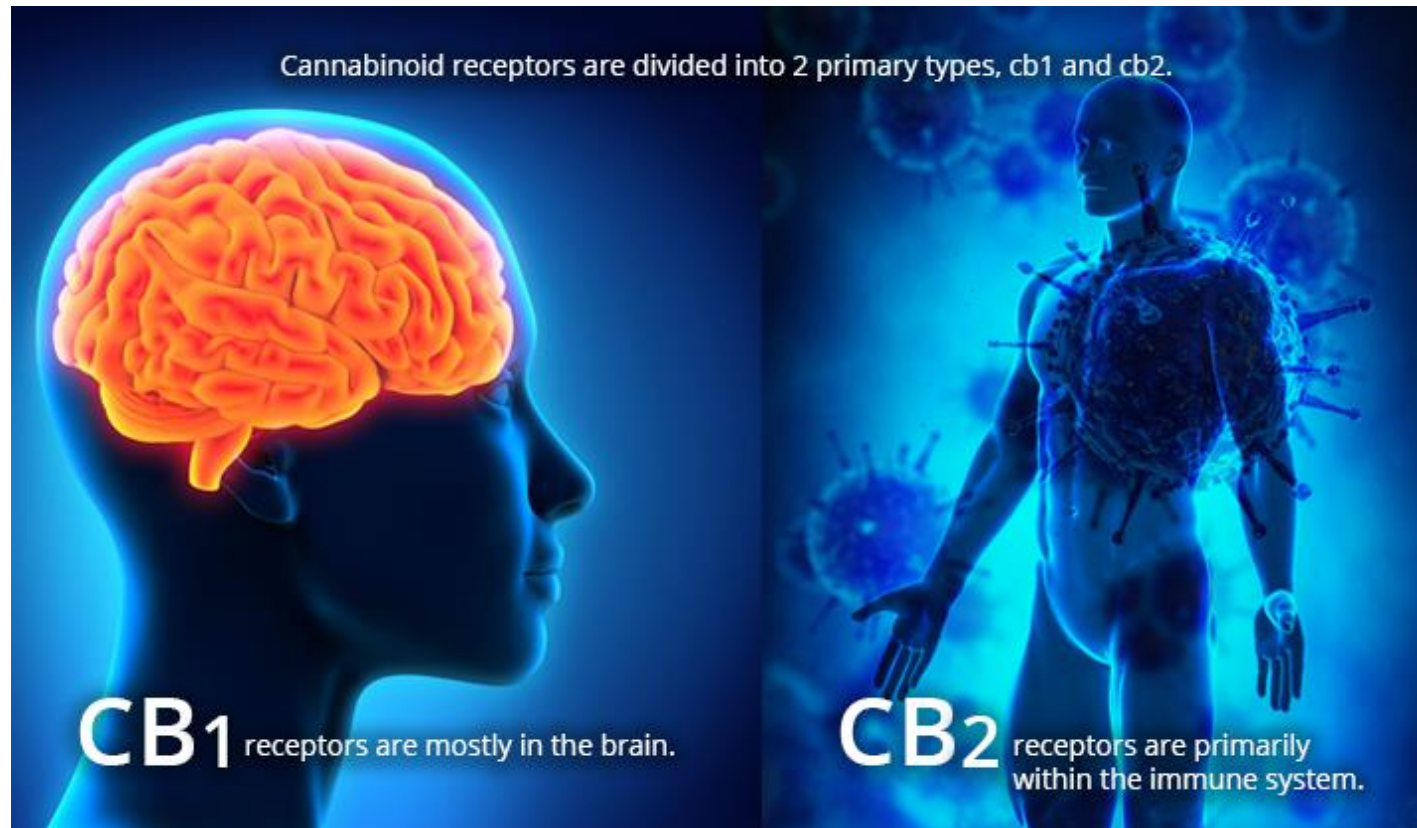


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THE ENDOCANNABINOID SYSTEM

Discovered While Looking For CBD And THC Receptors



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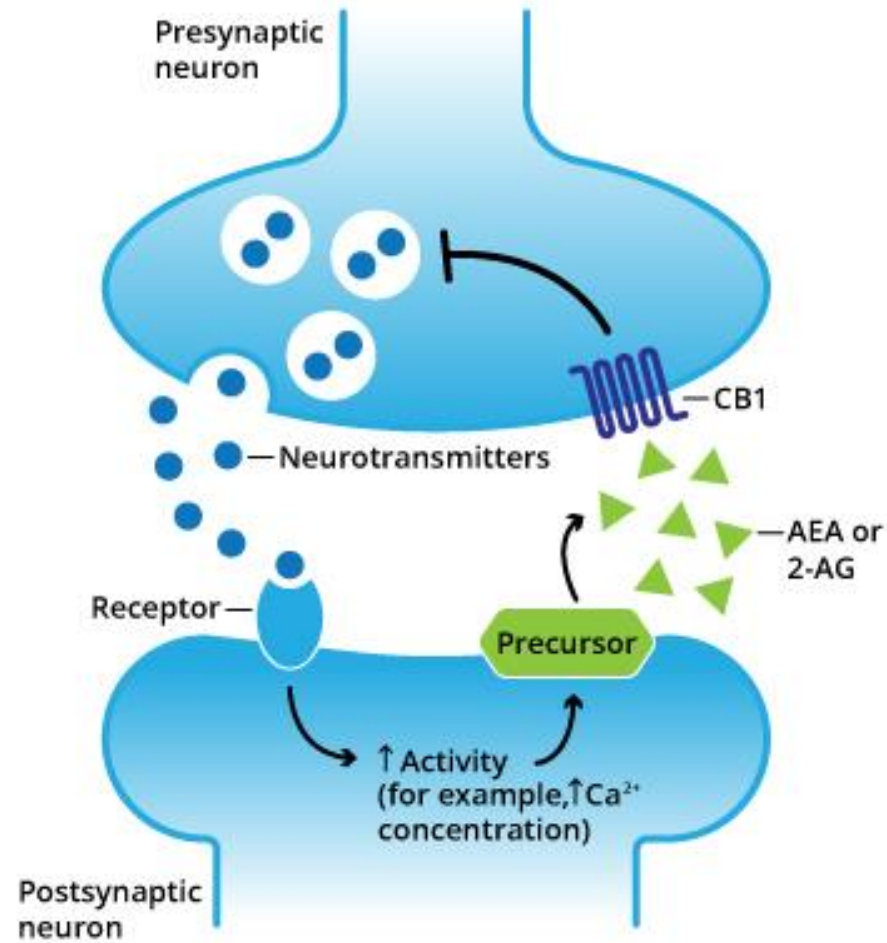
THE ENDOCANNABINOID SYSTEM (cont'd)

- Hundreds of receptors in virtually every cell in the body
- Anandamide, the “THC” like functioning endocannabinoid
- 2 AG, the “CBD” like functioning endocannabinoid
- Hundreds more receptors and endocannabinoids
- This huge system is being studied in hundreds of universities
- Pharmaceutical companies and the endocannabinoid system
- Two pharmaceutical endocannabinoid based therapies failed



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NEUROTRANSMISSION AND CANNABIS



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BENEFITS OF THE MAJOR CANNABINOIDS

- ▶ Analgesic
- ▶ Anorectic
- ▶ Anti-inflammatory
- ▶ Anti-ischemic
- ▶ Antibacterial
- ▶ Anti-diabetic
- ▶ Antiemetic
- ▶ Anti-epileptic
- ▶ Antimicrobial
- ▶ Anti-proliferative
- ▶ Anti-psoriatic
- ▶ Anti-psychotic
- ▶ Anti-spasmodic
- ▶ Anxiolytic
- ▶ Bone stimulant
- ▶ Immunosuppressive
- ▶ Intestinal anti-prokinetic
- ▶ Neuro-protective
- ▶ Vaso-relaxant



THE ENTOURAGE EFFECT

- In addition to the common primary cannabinoids, whole plant cannabis medicines deliver:
 - Less common cannabinoids
 - Terpenes
 - Flavonoids
 - Waxes, Lipids, etc.
 - Over 1000 unique molecules found in cannabis



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CANNABINOIDS AS ESSENTIAL NUTRITION

- Endocannabinoid role in maintaining your body's homeostasis
- Clinical Endocannabinoid Deficiency Syndrome
 - Fibromyalgia
 - Migraine
 - Irritable Bowel Syndrome
- Endocannabinoid “tone”
- Cannabis as a supplement
- Decreasing dose of CBD over time



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SYSTEMIC EFFECTS OF CANNABIS

- Anti-inflammatory
- Anti-spasmodic
- Mitochondrial modulation
- Immune system modulation



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CANNABIS AND THE P450 SYSTEM

- The interaction of cannabis medicine with Cytochrome P450
- The effect of different pathways of cannabis administration
- CBD can increase amount of P450 enzymes
- Effect of changes in Cytochrome P450 on other therapies
- Concerns regarding required dosing of Epidiolex and other single molecule CBD products leading to more drug-drug interaction



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CANNABIS AND INFLAMMATORY PAIN

Degenerative Joint Disease

- ▶ Generally begin with 1:1 CBD:THC-A
- ▶ Might also begin with 20:1 CBD:THC
- ▶ Minimal THC dosing
- ▶ THC-A is clinically like adding dose of NSAID
- ▶ COX 2 inhibitor
- ▶ Using THC
 - ▶ THC alone
 - ▶ THC with CBD



INFLAMMATORY AND NEUROPATHIC PAIN

- RA and other autoimmune based conditions
 - Generally use combination of CBD, THC, THC-A
 - Possible new indication for THC-V
 - Depression and pain
 - Combination of CBD, THC, THC-V
 - THC-V possibly best for mood, pain issues, and more
 - Transdermal therapy for joints and neuropathy



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THC-V AND NEUROPATHIC PAIN

- Works well with chemo-induced neuropathy, as well as other drug based neuropathy
- Very good initial response using transdermal THC-V with excipient to maximize dermal penetration
- Shingles
- Dental pain, Gingivitis



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Copy of presentation as PDF: <https://internationalpain.org/ipain-summit-2019/> and the iPain App



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CANNABIS AND PAIN

Continued from the Patient Perspective



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Amanda Greene – Panel Leader

- Amanda Greene, known as **LA Lupus Lady**
- iPain Featurette for Lupus and Arthritis,
- iPain Hero of Hope; Patient Advocacy 2018
- Amanda is actively involved in healthcare advocacy, she live with with Lupus and other autoimmune conditions; fibromyalgia, osteoarthritis and Rheumatoid Arthritis.
- In 2018, Amanda shared her patient experience at HIMSS in a session about the impact of Health Technology on her healthcare.
- Also, in 2018 she was recognized with the WEGO Health Award for Healthcare Collaborator: Patient.
- In May of 2019 the Lupus Research Alliance honored Amanda as a Lupus Luminary.
- She is passionate about exploring alternative treatment options to manage pain, storytelling and working together to improve the patient experience.



Trisha Hall

- also known as FizzBubbles
- 100% disabled United States Marine Corps Veteran who has overcome seemingly insurmountable odds, to be who she is today: thriving in spite of sustaining a career-ending traumatic brain injury.
- Through hard work and perseverance, she founded her own Dream & Water a lifestyle brand that meticulously formulates products for men women and their children who are looking for an all-natural and organic green solution to their skincare needs.



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