Position & Policy Statement of the
American Cannabis Nurses Association (ACNA)

Use and Regulation of Synthetic Cannabinoids and Hemp-Derived Substances (Synthetic and Semi-Synthetic Cannabinoid Receptor Agonists - SCRAs)

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Introduction

The American Cannabis Nurses Association (ACNA) issues this position statement to clarify its stance on the use and regulation of hemp-derived substances, including synthetic and semi-synthetic cannabinoids (Synthetic Cannabinoid Receptor Agonists, SCRAs). This statement reaffirms ACNA's commitment to promoting safe patient access to whole-plant cannabis medicines. It does not address FDA/CSA-regulated prescription synthetic cannabinoids, which remain outside the scope of this document.

Background of the Problem And Definitions

Synthetic cannabinoids, often marketed as "legal highs" or "safe alternatives" to cannabis, first appeared in European recreational and illicit markets in the early 2000s. Compounds such as JWH-018, referred to as "spice" or "K2", were among the earliest identified (2004–2008) and rapidly proliferated worldwide (Darke et al., 2021). Manufacturers continue to alter chemical structures to avoid scheduling and exploiting legal loopholes, complicating public health surveillance and enforcement.

Unlike plant-derived cannabinoids, SCRAs are laboratory-manufactured and frequently exhibit higher receptor binding affinity and potency at CB1/CB2 receptors. This activity increases the likelihood of unpredictable, severe, and sometimes life-threatening toxicological outcomes (de Oliveira et al., 2023; Giorgetti et al., 2020). This activity contributes to an increased risk of

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In the United States, only a few synthetic cannabinoids, such as dronabinol and nabilone, have been approved by the FDA for medicinal use. These remain distinct from unregulated products available in commercial or illicit markets (Clark, 2021).

Definitions:

Whole-Plant Cannabis

- **Whole plant cannabis** is a partial CB1 agonist and exhibits synergistic effects with other phytochemicals, with a much lower risk profile (Sulak, 2021).
- **Cannabis/Marijuana:** Raw preparation of leaves or flowers from the Cannabis plant genus (ANA & ACNA, 2024; NCSBN, 2018).
- **Whole-plant cannabis/marijuana:** Botanical substances containing >0.3% THC by dry weight.
- **Hemp-derived, full-spectrum:** Botanical substances with ≤0.3% THC by dry weight.

Synthetic Cannabinoid Receptor Agonists (SCRAs)

- **Synthetic cannabinoids** (outside of tightly regulated prescription products) have not demonstrated comparable safety or efficacy in modulating the endocannabinoid system.
- *Example:* JWH-018 (*Spice/K2)*: Common names for plant material sprayed with synthetic cannabinoids, sometimes adulterated with cathinones (Grinspoon, 2025).

Semi-Synthetic Cannabioids:

- **Semi-synthetics:** Cannabinoids chemically converted from hemp-derived CBD or other precursors (e.g., terpenes (Hines et al., 2025), Δ8-THC, Δ10-THC, HHC), frequently manufactured without regulatory oversight.

Risks and Public Health Concerns with Health and Safety

Unregulated SCRAs have been associated with significant adverse health outcomes, including:

- Acute psychosis, agitation, paranoia
- Tachycardia, hypertension, chest pain
- Seizures, convulsions, and acute renal failure
- Suicidal ideation, hallucinations, impaired cognition
- Stroke, coagulopathy, intracranial hemorrhage (EMCDDA, 2021; de Oliveira et al., 2023; Giorgetti et al., 2020; Castellanos et al., 2018)

Adverse effects from synthetic cannabinoid receptor agonists (SCRAs) often occur at comparatively lower doses than with botanical cannabis. Unlike Δ9-tetrahydrocannabinol (THC), which functions as a partial CB1 receptor agonist, SCRAs function as full agonists, producing amplified physiologic and neuropsychiatric responses. This heightened receptor activity increases the risk of acute toxicity, dependence, and multi-system harm, with adverse outcomes extending beyond the central nervous system to cardiovascular, renal, respiratory, digestive, and immune systems (Alzu'bi et al., 2024; Cohen & Weinstein, 2018). Chronic use has been linked to more severe health consequences, including cardiovascular disease, long-term kidney impairment, and increased risk of psychotic disorders.

In contrast, botanical full-spectrum cannabis products have been associated with the "entourage effect," in which cannabinoids and terpenes act synergistically to enhance therapeutic benefit and tolerability. This interaction may allow for lower effective dosing and contributes to a comparatively milder adverse effect profile (Leen et al., 2024). However, risks remain when products are manufactured under unregulated or inconsistent processes, which may introduce harmful contaminants and elevate safety concerns.

Regulatory Gaps

- Manufacturers alter structures to circumvent scheduling (EMCDDA, 2021).
- Products are widely marketed online and in retail outlets, often without age restrictions or quality control (NIDA, 2023).
- Public health surveillance, standardized product testing, and labeling remain inadequate.
- Reactive scheduling cannot keep pace with evolving synthetic compounds.

Ethical Considerations

- Restrictive cannabis policy may unintentionally drive individuals toward riskier synthetic alternatives.
- Profit-driven practices by unregulated actors have contributed to restrictions on legitimate hemp-derived products, limiting patient access.
- Nursing ethics require harm reduction, transparency, and prioritization of patient safety through evidence-based education.

ACNA's Position

- ACNA supports patient access to safe, regulated whole-plant cannabis therapeutics.
- ACNA does **not** endorse the use of unregulated synthetic or semi-synthetic cannabinoids due to the risks of unpredictable potency, adverse outcomes, and lack of safety data.
- ACNA supports research distinguishing whole-plant therapeutics from SCRAs to guide evidence-based practice and policy.

- ACNA advocates consistent regulatory standards across all markets, including online and retail sales.

ACNA recommendations:

1. **Discourage Unregulated SCRA Use**
    - Avoid synthetic cannabinoids not prescribed or regulated by the FDA.
2. **Education and Harm Reduction**
    - Provide evidence-based education to patients and the public.
    - Encourage use of full-spectrum, whole-plant cannabis when legally accessible.
    - Promote literacy in interpreting product labeling and Certificates of Analysis (COAs).
3. **Strengthen Regulation**
    - Apply safety standards equally across online and in-person sales.
    - Require age restrictions, standardized labeling, and third-party contaminant testing.
    - Develop proactive, rather than reactive, scheduling approaches.
4. **Promote Research and Awareness**
    - Support research on pharmacology, toxicology, and public health impacts of SCRAs.
    - Enhance public education to reduce stigma and misinformation.
5. **Uphold Patient Access**
    - Protect and expand access to safe, regulated, whole-plant cannabis as the therapeutic standard.

The Ongoing Advocacy of ACNA

The American Cannabis Nurses Association is committed to advancing patient safety and equitable access to evidence-based cannabis therapeutics. As cannabinoid products evolve, nurses must remain proactive in education, practice, and policy guidance. ACNA will continue advocating for harm reduction, regulatory transparency, and safe, whole-plant cannabis medicines as the foundation of cannabinoid-based care.

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