

## The spice phenomenon: Clinical effects and current trends in product composition

**Maren Hermanns-Clausen**

University Medical Center, Germany

The recreational use of synthetic cannabinoids as popular alternatives to Cannabis is a relatively new phenomenon. Since identification of CP-47,497-C8 and JWH-018 as undeclared additives in “herbal mixtures” named for example “Spice” the growth in Spice use their use has increased because the synthetic cannabinoids are considered legal and are currently not detected on urine drug screen. Popularity is further driven by easy access via the Internet and affordability. After the first countries put CP-47,497 and JWH-018 under legal control in 2009, more than 30 different compounds with agonistic activity on the CB1 receptor were identified in herbal blends. Many of the already known products have changed composition regarding kind and/or amount of synthetic additives over time and hundreds of new products have been marketed. Because the synthetic CB1 receptor agonists are full-agonists with high affinity to the CB1 receptor in contrast to the partial-agonist low-affinity delta-9-tetrahydrocannabinol, they are potentially more harmful. This assumption is supported by the fact that there is an increasing number of reports on acute intoxications by these compounds. A variety of somatic and neuropsychiatric effects is described in acute poisoning, especially tachycardia, vomiting, hypokalemia, myoclonia, generalized convulsions, agitation, and acute psychosis. Reports on myocardial infarction and acute renal failure which were associated with the use of synthetic cannabinoids emphasize the need for prospective studies on acute toxicity in humans. Chronic use of synthetic cannabinoids may result in tolerance and withdrawal symptoms.

### Biography

Maren Hermanns-Clausen has completed her Doctor of Medicine at Philipps University Marburg in 1990. Since 1994 she is a ‘Specialist for Internal Medicine’. She is head of the Poisons Information Center and senior physician in the Department for Paediatrics and Adolescent Medicine. Additional information: “Clinical toxicologist ‘GfKT’”, Chairwoman of the Committee for the Assessment of Intoxications of the BfR (Federal Institute for Risk Assessment) since 2008. She has published more than 15 papers in reputed journals.

[maren.hermanns-clausen@uniklinik-freiburg.de](mailto:maren.hermanns-clausen@uniklinik-freiburg.de)