PMM - 353 Synthesis, Characterization and Detection of New Designer Drugs in Herbal Incenses Like "Spice"

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Introduction

In December/January 2008/9 two new classes of designer drugs (CP 47,497-C8 homolog and the aminoalkylindol JWH-018) were disclosed in herbal incenses including the most popular product "Spice" [1,2]. As a consequence, on January 22nd 2009, the German Health Authorities prohibited the detected synthetic cannabinoids JWH-018 and CP 47,497-C8 [3]. While the German regulation included several homologues of CP 47,497-C8 (alkyl side chain C_6 to C_9), only one representative of the alkylaminoindoles (JWH-018) was banned. However, in-vitro data suggest that JWH-018 analogues possess equal or higher affinity to the cannabinoid receptors CB1 and CB2 than Δ^9-THC [4].

Method

Homologs of the aminoalkylindoles were synthesized and characterized by NMR and accurate GC-EI-MS measurements. Based on these datasets a screening method for these new classes of designer drugs was established. Herbal mixtures available on the German market were screened and the detected synthetic cannabimimetics were quantified.

Preliminary Data

Our screening of herbal mixtures demonstrated that just 4 weeks after the prohibition took effect a multitude of "second generation products" appeared on the "gray market". We could demonstrate the emergence of a new, so far not regulated, alkylaminoindol indented to replace the recently prohibited JWH-018. Furthermore, we were able to show, that despite of the prohibition CP 47,497-C8 containing products were still available on the German market. On the other hand, it seems that the success of "Spice" has reared some copycats that offer the same image, but might be of "real" herbal origin and do not contain cannabimimetics.

Novel Aspects

A screening method for new cannabimimetic drugs was developed to facilitate and accelerate the detection in herbal incenses like "Spice".

References

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