



STATUS DECISION OF CONTROLLED AND NON-CONTROLLED SUBSTANCE(S)

Substance: JWH-307

Based on the current information available to the Office of Controlled Substances, it appears that the above substance is:

Controlled [checked]
Not Controlled [unchecked]

under the schedules of the Controlled Drugs and Substances Act (CDSA) for the following reason(s):

- The substance is an efficacious cannabinoid receptor agonist included under item 1 of Schedule II to the CDSA.

Prepared by: Evelyn Soo Date: Dec 8th 2010

Verified by: Marianne Tang Date:

Approved by: DIRECTOR, OFFICE OF CONTROLLED SUBSTANCES Date:

This status was requested by: CBSA

Drug Status Report

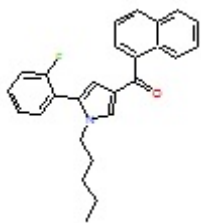
Drug: JWH-307

Drug Name Status: JWH-307 is the common name.

Chemical Name: (5-(2-Fluorophenyl)-1-pentylpyrrol-3-yl)-naphthalen-1-ylmethanone

Other Names: JWH307; (5-(*o*-Fluorophenyl)-1-pentylpyrrol-3-yl)-naphthalen-1-ylmethanone

Chemical structure:



Molecular Formula: C₂₆H₂₄FNO

Pharmacological class / Application: Cannabinoid receptor agonist

CAS-RN: UNKNOWN

International status:

US: JWH-307 is not listed in the US Controlled Substances Act and is not mentioned anywhere on the DEA website.

United Nations: The substance is not listed specifically on the Yellow List - List of Narcotic Drugs under International Control nor the Green List - List of Psychotropic Substances under International Control.

Canadian Status: JWH-307 is not listed specifically in the CDSA. The substance belongs to a large family of JWH compounds that were synthesized to investigate the relationship between the chemical properties of such compounds and their affinities for the cannabinoid CB₁ and CB₂ receptors. JWH-307 has been reported in the scientific literature to display a strong binding affinity for the cannabinoid CB₁ and CB₂ receptors¹ and *in vivo* studies have shown the substance to be quite a potent cannabinoid receptor agonist with ED₅₀ values of 0.24 mg/kg for spontaneous activity, 0.53 mg/kg for tail flick and 0.96 mg/kg for rectal temperature². Cannabinoid receptor

¹Huffman, JW. et al. (2006) 1-Alkyl-2-aryl-4-(1-naphthoyl)pyrroles: New high affinity ligands for the cannabinoid CB₁ and CB₂ receptors, *Bioorg. Med. Chem. Lett.* **16**:5432-5435.

²Personal communication with Prof. J W Huffman.

agonists have been declared to be included within item 1 of Schedule II to the CDSA by virtue of being “similar synthetic preparations.” Cannabinoid receptor antagonists have been declared to fall outside item 1 of Schedule II to the CDSA. Given the high affinity of JWH-307 for the CB₁ and CB₂ receptors as well as *in vivo* evidence of its potent agonist activity, JWH-307 should be included in item 1 of Schedule II.

Recommendation: JWH-307 is included under item 14 of Schedule I to the CDSA and is a controlled substance.

Date: 8 December 2010