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 ✓
- Not Controlled ☐

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: _________________________________ Date: Dec 8th 2010

Evelyn Soo

Verified by: _________________________________ Date: __________

Marianne Tang

Approved by: _________________________________ Date: __________

DIRECTOR, OFFICE OF CONTROLLED SUBSTANCES

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-Flurophenyl)-1-pentylpyrrol-3-yl)-naphthalen-1-ylmethanone

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

**Chemical structure:**

![Chemical structure of JWH-307]

**Molecular Formula:** C_{26}H_{24}FNO

**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 CB\(_1\) and CB\(_2\) receptors. JWH-307 has been reported in the scientific literature to display a strong binding affinity for the cannabinoid CB\(_1\) and CB\(_2\) receptors\(^1\) and *in vivo* studies have shown the substance to be quite a potent cannabinoid receptor agonist with ED\(_{50}\) values of 0.24 mg/kg for spontaneous activity, 0.53 mg/kg for tail flick and 0.96 mg/kg for rectal temperature\(^2\). Cannabinoid receptor


\(^2\)Personal 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