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

Substance: JWH-007; JWH-016; JWH-20

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 substances are cannabinoid receptor agonists and included under item 1 of Schedule II to the CDSA.

Prepared by: _______________________________ Date: Feb 2nd 2011
Evelyn Soo

Verified by: _______________________________ Date: ______
Marianne Tang

Approved by: _______________________________ Date: ______
DIRECTOR, OFFICE OF CONTROLLED SUBSTANCES

This status was requested by: "third party information removed as per agreement with applicant"
Drug Status Report

Drug:  
I - JWH-007  
II - JWH-016  
III - JWH-020

Drug Name Status:  
I - JWH-007  
II - JWH-016  
III - JWH-020 are the common names.

Chemical Name:  
I - 1-pentyl-2-methyl-3-(1-naphthoyl)indole  
II - 1-butyl-2-methyl-3-(1-naphthoyl)indole  
III - 1-heptyl-3-(1-naphthoyl)indole

Chemical structure:

Molecular Formula:  
I = C_{25}H_{25}NO; II = C_{24}H_{25}NO; III = C_{26}H_{27}NO

Pharmacological class / Application: Synthetic cannabinoid receptor agonists

CAS-RN:  
I - 155471-10-6; II - 155471-09-3; III - 209414-09-5

International status:

US: JWH-007, JWH-016 and JWH-020 are not listed specifically in the Schedules to the US Controlled Substances Act and are not mentioned anywhere on the DEA website.

United Nations: The substances are 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-007, JWH-016 and JWH-020 are not currently listed in the CDSA. JWH-007 and JWH-016 have been reported to demonstrate potent binding affinities for the CB₁
and CB$_2$ receptors, while the affinity of JWH-020 towards the cannabinoid receptors is considered moderate. Nonetheless, the substances have been reported to be cannabinoid receptor agonists, with JWH-007 reported to be twice as potent as THC \textit{in vivo}\(^1\).

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<thead>
<tr>
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<th>$K_i$ (nM)</th>
<th>$ED_{50}$ (umole/kg)</th>
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<tbody>
<tr>
<td></td>
<td>CB1</td>
<td>CB2</td>
</tr>
<tr>
<td>JWH-007</td>
<td>9.5 ± 4.5</td>
<td>2.9 ± 3.0</td>
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<tr>
<td>JWH-016</td>
<td>22.0 ± 1.5</td>
<td>4.3 ± 1.6</td>
</tr>
<tr>
<td>JWH-020</td>
<td>128 ± 17</td>
<td>205 ± 20</td>
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Cannabinoid receptor agonists have been declared to be included within item 1 of Schedule II to the CDSA by virtue of being “similar synthetic preparations” while cannabinoid receptor antagonists have been declared to fall outside item 1 of Schedule II to the CDSA. Since these substances are cannabinoid receptor agonists, they are considered to be included under item 1 of Schedule II to the CDSA.

**Recommendation:** JWH-007, JWH-016 and JWH-020 are included under item 1 of Schedule II to the CDSA and are controlled substances.

**Date:** 2 February 2011