



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

Substance: Cannabidiol hydroxyquinone

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 a derivative of cannabidiol and therefore must be included under item 1(3) 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: third party information removed as per agreement with applicant

Drug Status Report

Drug: Cannabidiol hydroxyquinone

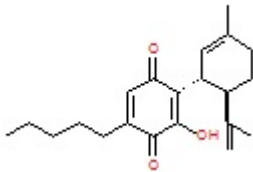
Drug Name Status: HU-331 is the common name.

Chemical Name: 3-hydroxy-2-[(1R,6R)-3-methyl-6-(1-methylethenyl)-2-cyclohexen-1-yl]-5-pentyl-2,5-cyclohexadiene-1,4-dione

Other Names:

(1R-trans)-3-hydroxy-2-[3-methyl-6-(1-methylethenyl)-2-cyclohexen-1-yl]-5-pentyl-2,5-cyclohexadiene-1,4-dione

Chemical structure:



Molecular Formula: C₂₁H₂₈O₃

Pharmacological class /Application: Synthetic cannabinoid

CAS-RN: 137252-25-6

International status:

US: Cannabidiol hydroxyquinone is not listed specifically in the US *Controlled Substances Act*.

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: Cannabidiol hydroxyquinone is a quinone derivative of cannabidiol and is not listed specifically in the CDSA. The substance has been reported to be synthesized directly from cannabidiol and to display potent anti-cancer activity¹. However, there are no reports that the substance behaves as either a cannabinoid agonist or antagonist.

Cannabidiol is currently listed as item 2(3) in Schedule II to the CDSA under the heading "Cannabis, its preparations, derivatives and similar synthetic preparations". While cannabidiol hydroxyquinone is not a cannabinoid receptor agonist, it is nonetheless a derivative of

¹Kogan, NM. *et al.* (2004) Synthesis and antitumor activity of quinonoid derivatives of cannabinoids, J. Med. Chem. **47**:3800-3806.

cannabidiol and therefore is captured under item 2(3) of Schedule II to the CDSA.

Recommendation: Cannabidiol hydroxyquinone is included under item 1(3) of Schedule II to the CDSA and is a controlled substance.

Date: 8 December 2010