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

Substance: Hemopressin

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

Controlled ☐
Not Controlled X

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

- The substance is an endogenous peptide and shows cannabinoid receptor antagonist activity.

Prepared by: ____________________________ Date: ______________
Zack Li

Verified by: ____________________________ Date: ______________
Mark Kozlowski

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: Hemopressin

**Drug Name Status**: Hemopressin is the common name.

**Chemical Name**: Pro-Val-Asn-Phe-Lys-Leu-Leu-Ser-His

**Other Names**: PVNFKLLSH

**Chemical structure**: PVNFKLLSH

**Molecular Formula**: C$_{50}$H$_{79}$N$_{13}$O$_{12}$

**Pharmacological class / Application**: Endogenous peptide

**CAS-RN**: N/A

**International status**:

US: Hemopressin is not listed specifically in the Schedules to the US *Controlled Substances Act* and is not mentioned anywhere on the DEA website.

United Nations: The substance is not listed on the Yellow List - List of Narcotic Drugs under International Control, the Green List - List of Psychotropic Substances under International Control, nor the Red List - List of Precursors and Chemicals Frequently Used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances under International Control.

Canadian Status: Hemopressin is not listed in the schedules to the CDSA. The substance is an endogenous peptide found in the brain and has shown to demonstrate CB$_1$ receptor inverse agonism and antagonism to the same extent as rimonabant in *in vitro* studies$^1$. Rimonabant was previously reviewed and determined to be not controlled. Cannabis receptor agonists have been included under item 1 of Schedule II under the heading “Cannabis, its preparations, derivatives and similar synthetic preparations” whereas cannabinoid receptor antagonists have been specifically excluded. Given that hemopressin demonstrates cannabinoid receptor antagonist activity, it cannot be included under item I of Schedule II to the CDSA.

**Recommendation**: Hemopressin is not included under item 1 of Schedule II to the CDSA and is not a controlled substance.

**Date**: June 7th, 2012.

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$^1$Heimann, AS et al. (2007) Hemopressin is an inverse agonist of CB1 cannabinoid receptors, PNAS. 104: 20588-20593