Health Canada Santé Canada

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

Substance: 7alpha-allyltestosterone

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 has not been reported in the literature to display any anabolic activity and has not been shown to be a derivative of testosterone. Therefore, the substance is not included under Item 23 of Schedule IV to the CDSA.

Prepared by: _____ Date: August 10, 2011
Zack Li

Verified by: _____ Date: _____
Mark Kozlowski

Approved by: _____ Date: _____
DIRECTOR, OFFICE OF CONTROLLED SUBSTANCES

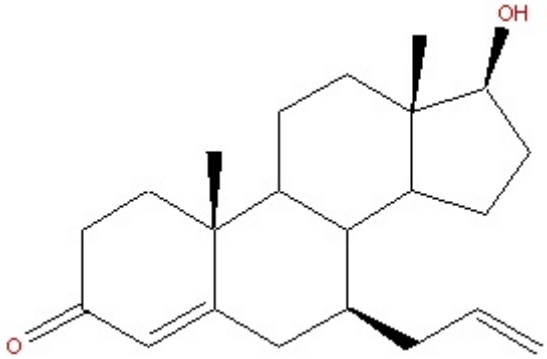
This status was requested by: Tanya Arcand, OCS

Drug Status Report

Drug: 7alpha-allyltestosterone

Drug Name Status: 7alpha-allyltestosterone is the common name.

Chemical Name: (7S,10R,13S,17S)-7-allyl-17-hydroxy-10,13-dimethyl-6,7,8,9,10,11,12,13,14,15,16,17-dodecahydro-1H-cyclopenta[a]phenanthren-3(2H)-one



Other Name: 7alpha-(prop-2-en-1-yl)-17beta–hydroxyandrost–4–en–3–one

Chemical structure:

Molecular Formula: $C_{22}H_{32}O_2$

CAS RN: Unknown

Pharmacological class / Application: Anabolic steroids and derivatives

International status:

US: 7alpha-allyltestosterone is not listed on 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: 7alpha-allyltestosterone is reported to be an intermediate in the multi-step synthesis of two novel dimeric forms of testosterone, which have been shown in the scientific literature to be promising drug candidates for the treatment of prostate cancer[1]. Testosterone is currently listed as sub-item 23(40) in Schedule IV to the CDSA under the heading "Anabolic steroids and their derivatives", however, 7alpha-allyltestosterone has not been reported to display any anabolic activity. In addition, the substance cannot be considered a direct derivative of testosterone, as it is synthesized in a 3-step process from testosterone and is not a metabolite of testosterone. Therefore, 7alpha-allyltestosterone cannot be included under sub-tem 23(40) of Schedule IV to the CDSA.

Recommendation: 7alpha-allyltestosterone is not included under item 23 of Schedule IV to the CDSA and is not a controlled substance.

Date: August 10, 2011

[1]Bastien. D., et al (2010). First synthesis of separable isomeric testosterone dimers showing differential activities on prostate cancer cells. Bioorganic & Medicinal Chemistry Letters **20:**2078-2081