## **Drug Status Report**

**Drug:** Benzylfentanyl

**Drug Name Status**: Benzylfentanyl is the proper name (INN).

Chemical Name: N-(1-benzylpiperidin-4-yl)-N-phenylpropionamide

## **Chemical structure:**

**Molecular Formula:** C<sub>21</sub>H<sub>26</sub>N<sub>2</sub>O

Pharmacological class / Application: Precursor to fentanyl

## **International status:**

US: Benzylfentanyl was added to Schedule I of the CSA under the emergency scheduling provision but the decision was reversed on November 29, 1986 on the basis that the substance was determined to be essentially inactive and had no evidence of abuse potential<sup>1</sup>.

United Nations: The substance is not listed on the Yellow List - List of Narcotic Drugs under International Control nor the Green List - List of Psychotropic Substances under International Control.

Canadian Status: Benzylfentanyl is not currently listed in the Schedules to the CDSA. A review of the current family of fentanyls revealed that substances included under item 16 of Schedule I to the CDSA all contain the following root structure,

 $R = ethyl\ group\ substituted\ variously\ at\ the\ 1\ and\ 2\ postion$ 

R<sub>1</sub>=hydrogen, methoxymethyl or carboxylate alkyl ester

R<sub>2</sub>=phenyl or substituted phenyl

R<sub>3</sub>=alkyl

R₄=hydrogen or alkyl

and that pharmacological activities of the substances was not considered in the review process.

Given that the R-group of benzylfentanyl is not a substituted ethyl group, the substance is not

<sup>&</sup>lt;sup>1</sup>http://www.reginfo.gov/public/do/eAgendaViewRule?pubId=201004&RIN=1117-AB26

considered to contain the essential structural elements of the fentanyls and therefore is not included under the heading "Fentanyls, their salts, derivatives, and analogues and salts of derivatives and analogues, including" of item 16 of Schedule I to the CDSA.

Recommendation: Benzylfentanyl is not included under item 16 of Schedule I to the CDSA and is a not controlled substance.

June 20th 2010