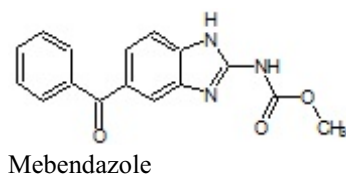
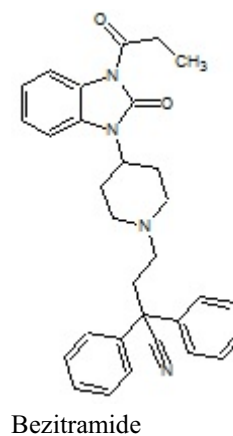
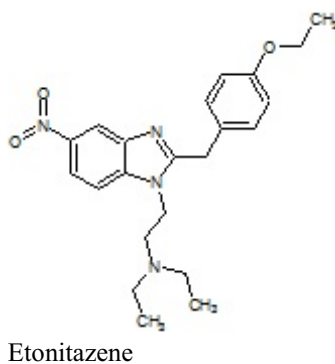
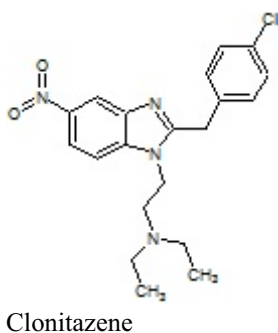
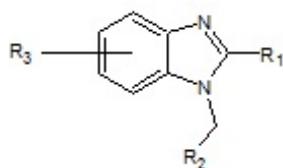


Drug Status Report

Drug: Benzimidazoles

A client requested the status for a series of substances with the general structure I.

Chemical structure:



International status:

Because these substances are novel, they are not specifically controlled internationally.

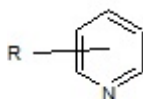
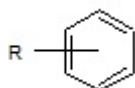
Canadian Status: Item 13 of Schedule I is, "Benzimidazoles, their salts, derivatives and salts of derivatives". There are three benzimidazoles specifically listed under this heading, clonitazene, etonitazene and bezitramide. The structures of these three benzimidazoles are shown above.

Not all benzimidazoles, substances containing the benzimidazole root structure, are included in item 13 of Schedule I. For example, there is a large chemical family of benzimidazoles which are used to treat worm infections in man and animals. Mebendazole (structure above) is one of the better known members of this family. Chemical supply companies sell a broad range of

benzimidazoles.

The substances to be prepared are based on structure I above. The researcher will limit the substituents to:

R₁ and R₂



R₃ Cl, CN, CH₃ or F

There is no common structural feature of the three substances listed in item 13 that sets these substances apart from other benzimidazoles. However, one structural characteristic of clonitazene and etonitazene is the presence of the diethylaminoethyl group on the nitrogen at position 1. None of the proposed substances will have this structural feature. Another structural characteristic of clonitazene and etonitazene is the presence of a substituted benzyl group at position 2. None of the proposed substances will have this structural feature. The substances to be prepared also will not contain the substituents at positions 1 and 2 in bezitramide.

Recommendation: Based on the structures of the substances that will be prepared, the substances are not included in item 13 of Schedule I and are not controlled substances.

April 6, 2008