

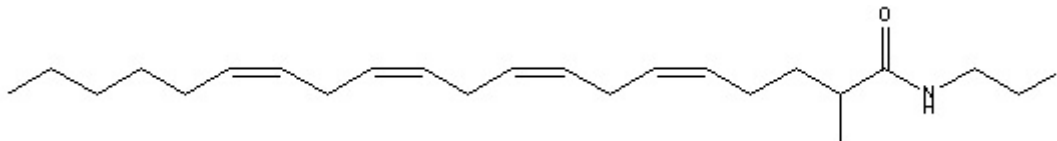
Drug Status Report

Drug: (±)-2-methylarachidonoyl-2'-fluoroethylamide

Drug Name Status: (±)-2-methylarachidonoyl-2'-fluoroethylamide is the common name.

Chemical Name: 5Z,8Z,11Z,14Z-Eicosatetraenamide, 2-methyl-, N-(2-fluoroethyl)-

Chemical structure:



Molecular Formula: C₂₃H₃₈FNO

Pharmacological class / Application: cannabinoid receptor agonist

International status:

US: (±)-2-methylarachidonoyl-2'-fluoroethylamide is not listed in the Schedules to the CSA and is not mentioned on the DEA website

United Nations: The substance is not listed on the Yellow List - List of Narcotic Drugs under International Control. The drug is not listed on the Green List - List of Psychotropic Substances under International Control.

Canadian Status: (±)-2-methylarachidonoyl-2'-fluoroethylamide is a synthetic analogue of anandamide and demonstrates enhanced binding at the cannabinoid receptors, particularly the CB₁ receptor^{1,2}. The substance has been shown to display effective agonist activity at the cannabinoid receptors in *in vivo* studies.

Cannabinoid receptor agonists have been declared to be included within item 1 of Schedule II to the CDSA by virtue of being “similar synthetic preparations.” Cannabinoid receptor antagonists have been declared to fall outside item 1 of Schedule II to the CDSA. Given the selectivity of (±)-2-methylarachidonoyl-2'-fluoroethylamide towards the cannabinoid receptors as well as *in vivo* evidence of its potent agonist activity, the substance is included in item 1 of Schedule II to the CDSA.

¹Ryan, WJ. *et al.* (1997) Synthesis of the (+) and (-)-2-methylarachidonoyl-2'-fluoroethylamide (O-689), *Bioorg. Med. Chem. Lett.* **7**: 2669-2672.

²Lin, S. *et al.* (1998) Novel Analogues of Arachidonyl ethanolamide (Anandamide): Affinities for the CB₁ and CB₂ Cannabinoid Receptors and Metabolic Stability, *J. Med. Chem.* **41**:5353–5361.

Recommendation: (\pm)-2-methylarachidonoyl-2'-fluoroethylamide is included in item 1 of Schedule II to the CDSA and is a controlled substance.

April 8th, 2010.