NEUROSCIENCES

SEROTONERGIC RECEPTOR BINDING ACTIVITY OF *PETIVERIA ALLIACEA* [MAS]

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Petiveria alliacea (PA) is a woody herb found from the Southern U.S. to Argentina. It has been studied for its anti-tumor properties and has ethnopharmacologic uses including the treatment of headache. Migraine headache is a severe neurovascular disorder in which the pathology is thought to center on serotonergic (5HT) systems. Acutely acting anti-migraine drugs appear to bind to a number of 5HT1 receptors, while prophylactic anti-migraine drugs are hypothesized to act via one or more 5HT2 receptors. Samples of PA were collected in Peru in May 1995 and again in November 1995 at different locations. Seventy thousand ethanol extracts of *Petiveria alliacea* were used to displace known radiolabeled ligands from 5HT1a and 5HT2a receptors. *Petiveria alliacea* is inactive at 5HT1a receptors. However, at 5HT2a receptors a 1/100 dilution produces about 90k displacement of 3H-ketanserin. This effect is concentration-dependent over the range 1/100 to 1/1000. *Petiveria alliacea* is now undergoing HPLC fractionation in an attempt to isolate and identify drugs that may be candidates as anti-migraine prophylactics.

PHARMACOLOGY AND TOXICOLOGY

MONTANA HIGHWAYS: SAFE AT ANY SPEED - BUT NOT AT ANY LEVEL (BETTER DRIVING THROUGH CHEMISTRY-NOT) [MAS]

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This project was undertaken to determine whether or not MCA 61-8-402 , paragraph (1); prohibitive DUID legislation should be amended. Statistical data including age, gender, race, blood alcohol concentration (BAC), and drug levels were compiled from 744 subjects over a two (2) year period. These results were compared to a parallel study over a six month period in which data from 376 subjects were compiled regardless of the BAC. The current study indicates an approximate 40% positive drug detection in suspected DUI cases compared to an approximate 39% positive drug rate in drivers where the BAC > 0. 10gm/dl in the six month study. Other than ethanol, the most common drugs detected in drivers were THC (marihuana), followed by amphetamines, benzodiazepines, and opiates. It is the author's contention that the additive effects of drugs in drivers, where the BAC is greater than 0.10 gm/dl, make those drivers as (or far more) dangerous and should not preclude them from drug testing.