Abstract

Around 20 million individuals in eastern Africa and the Arabian Peninsula chew the fresh leaves and twigs of *Catha edulis* Forsk (khat) for its pyschostimulatory effect, a practice deeply rooted in their traditions and cultures. In 1975, the main active ingredient of khat, cathinone, was identified, and found to be structurally related to and with effects similar to amphetamines and other psychostimulants. Animal studies on the neurobiology of khat are sparse and sporadic, being a neglected area of research in the field of drugs of abuse, and most work has focused on the action of cathinone rather than on khat extracts. Like other psychostimulants, the target of khat and cathinone action on the central nervous system is the dopaminergic system involving the nucleus accumbens. Studies on peripheral tissue also show it effects on the serotoninergic system. In animal self-administration studies, cathinone exhibits an addictive and abuse potential and produces psychomotor sensitization. However, there is little information from either human or animal studies on the short- and long-term effect on brain function of daily or frequent khat use with different patterns of consumption; nor is there information on pre-natal and adolescent exposure to khat or its neurotoxic potential. More research on the effects of khat use is needed as it contains a cocktail of alkaloids which is consumed by the user.