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Drug discovery targets: 5-HT6 receptor

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The serotonergic (5-HT) nervous system has been implicated in cognitive function and feeding behavior. At present, there are a number of compounds undergoing biological testing for 5-HT6 receptor antagonism. Preclinical data have confirmed potent and selective antagonism for several compounds in vitro at the rat and human 5-HT6 receptor. Favorable cognition-enhancing effects have been demonstrated in rats, with significant improvement in memory retention, consolidation and spatial learning. Therefore, 5-HT6 antagonism has been proposed as a promising approach for treating cognitive impairment associated with neuropsychiatric disorders (e.g., Alzheimer's disease, schizophrenia). Furthermore, these compounds facilitate a reduction in food intake, fat absorption and body weight in genetic and dietary models of obesity. This review summarizes the progress with 5-HT6 receptor antagonists as a therapeutic strategy for Alzheimer's disease- and schizophrenia-associated cognitive dysfunction and obesity.

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