

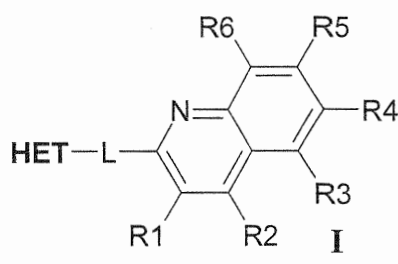
Summary of the Invention

The objective of the present invention is to provide compounds that are selective PDE10A enzyme inhibitors.

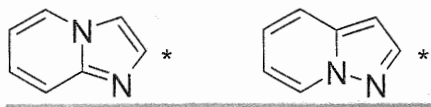
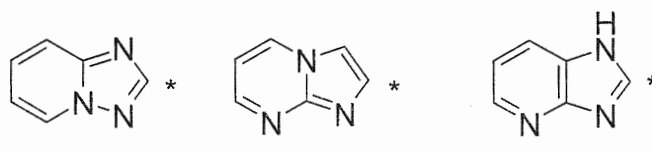
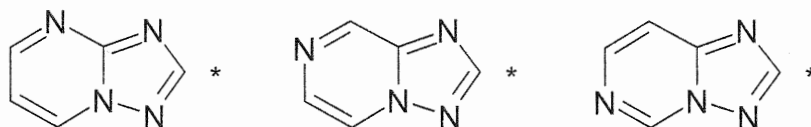
- 5 A further objective of the present invention is to provide compounds which have such activity, and which have improved solubility, metabolic stability and/or bioavailability compared to prior art compounds.

10 Another objective of the invention is to provide an effective treatment, in particular long-term treatment, of a human patient, without causing the side effects typically associated with current therapies for neurological and psychiatric disorders.

In one aspect, there is provided a compound having the structure of formula I:



15 wherein R_1 , R_2 , R_3 , R_4 , R_5 and R_6 are individually selected from the group consisting of hydrogen, hydroxyl, cyano, C_1 - C_6 alkyl, C_1 - C_6 alkoxy, halogen, methylenedioxy, difluoromethylenedioxy and ethylenedioxy; wherein -L- is a linker selected from - CH_2 - CH_2 - and - $CH=CH$ -; wherein HET is selected from the group consisting of:



15

20

wherein one or more of the carbon-bound hydrogen in the HET optionally may be substituted with up to three substituents R7, R8 and R9 individually selected from C₁-C₆ alkyl; halogen; cyano, halo(C₁-C₆)alkyl; aryl, alkoxy and C₁-C₆ hydroxyalkyl; and wherein * denotes the attachment point; and tautomers and pharmaceutically acceptable salts thereof, and polymorphic forms thereof.

In another aspect, there is provided a pharmaceutical composition comprising a therapeutically effective amount of the compound as disclosed herein and a pharmaceutically acceptable carrier, diluent or excipient.

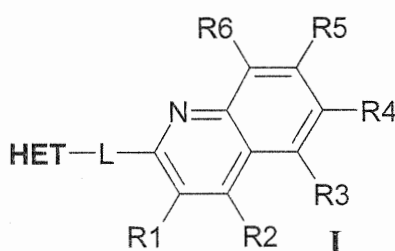
In yet another aspect, there is provided a use of the compound as disclosed herein or a pharmaceutically acceptable salt thereof in the manufacture of a medicament for the treatment of a neurodegenerative or psychiatric disorder.

Further objectives of the invention will become apparent upon reading the present specification.

Detailed description of the invention

Embodiments of the invention

In a first embodiment (E1) the present invention relates to compounds of formula I:



wherein R1, R2, R3, R4, R5 and R6 are individually selected from the group consisting of hydrogen, hydroxyl, cyano, C₁-C₆ alkyl; C₁-C₆ alkoxy, halogen, methylenedioxy, difluoromethylenedioxy and ethylenedioxy

wherein -L- is a linker selected from -CH₂-CH₂- and -CH=CH-