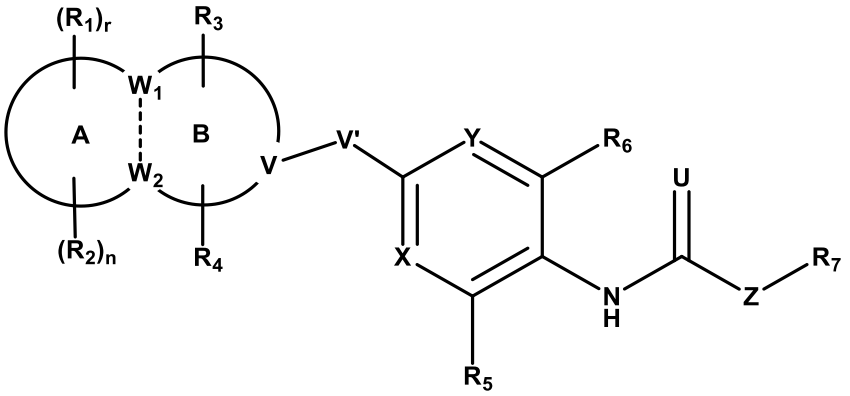
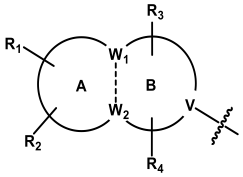
Claims

1. A compound of formula I, or a pharmaceutically acceptable salt thereof,

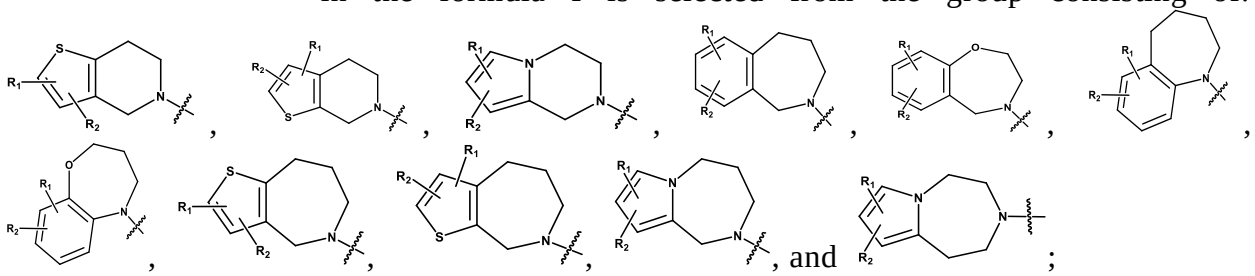


Formula I

wherein,



in the formula I is selected from the group consisting of:



R_1 and R_2 are independently selected from the group consisting of: hydrogen, halogen, substituted or unsubstituted C_{1-6}alkyl and substituted or unsubstituted C_{1-6}alkoxy; and the "substituted" refers to being substituted by one or more substituents selected from halogen;

n and r are independently selected from the group consisting of: 1 and 2;

V' is $-(CH_2)_p-$,;

p is 0;

X and Y are independently CR_9;

R_9 is hydrogen;

R_5 and R_6 are independently C_{1-6} alkyl;

U is O;

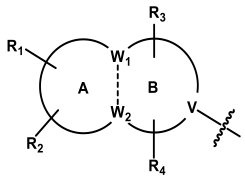
Z is $-(CH_2)_q-$;

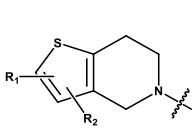
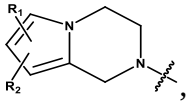
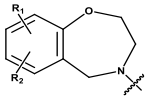
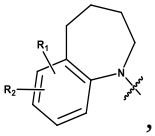
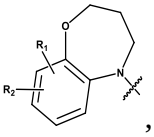
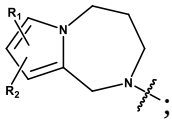
q is selected from the group consisting of: 1 and 2;

R_7 is C_{3-6} cycloalkyl, and the cycloalkyl is substituted by one or more C_{1-6} alkyl.

2. The compound according to claim 1, or a pharmaceutically acceptable salt thereof, wherein, Z is CH_2.

3. The compound according to claim 1, or a pharmaceutically acceptable salt thereof, wherein,



in the formula I is selected from the group consisting of: , , , , , and ;

R_1 and R_2 are independently selected from the group consisting of: hydrogen, halogen, substituted or unsubstituted C_{1-6}alkyl and substituted or unsubstituted C_{1-6}alkoxy; and the "substituted" refers to being substituted by one or more substituents selected from halogen;

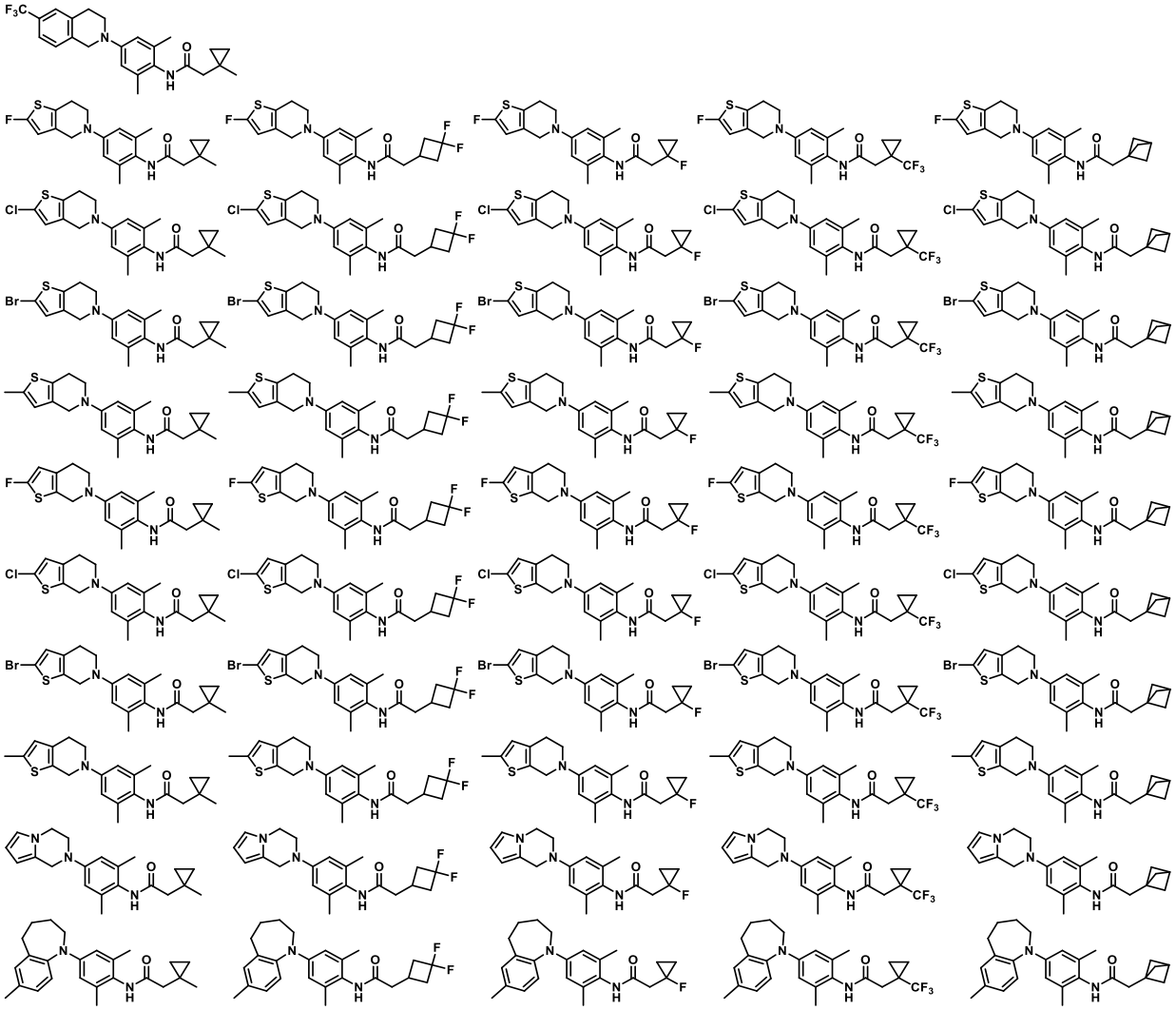
n and r are independently selected from the group consisting of: 1 and 2.

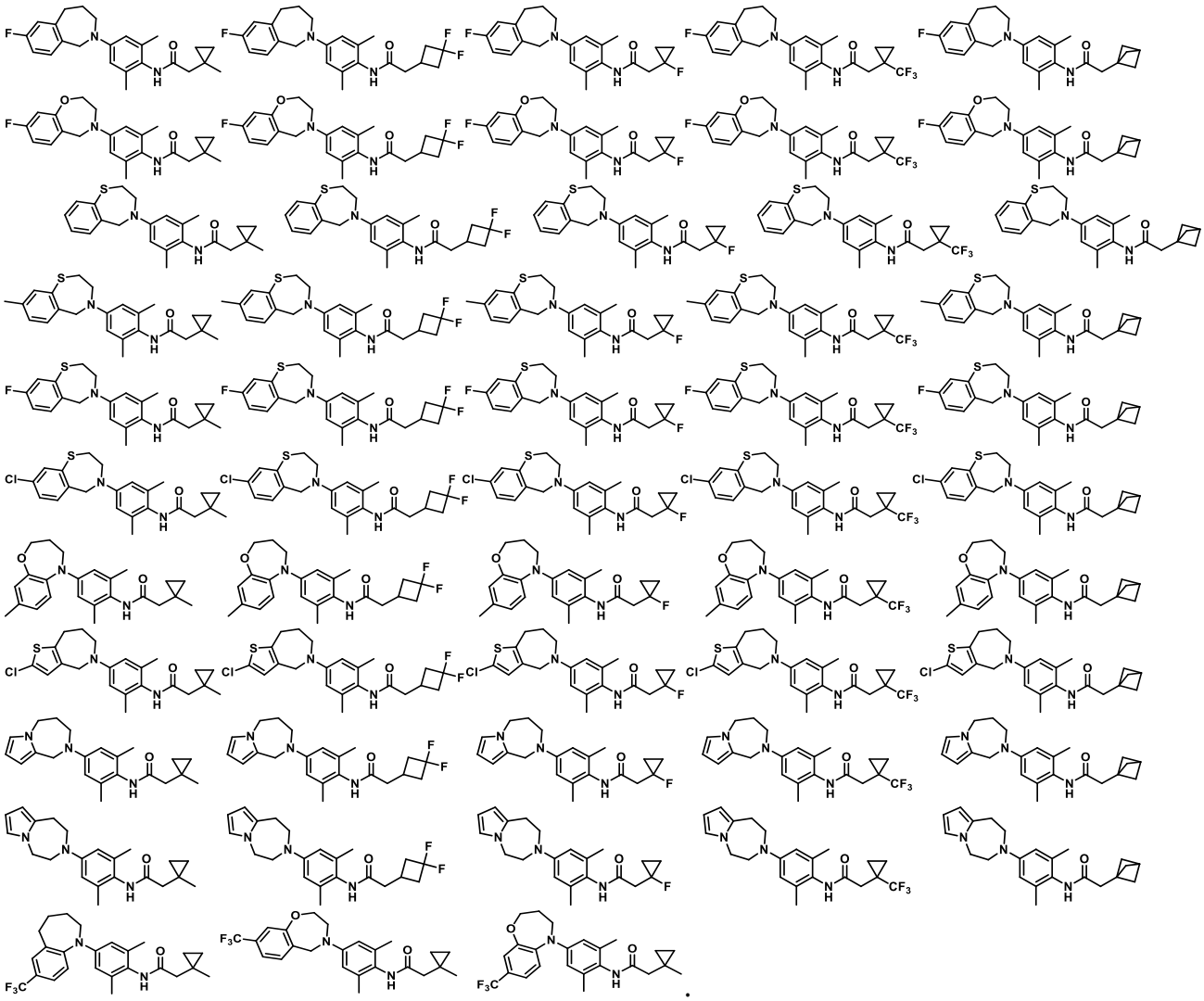
4. The compound according to claim 1, or a pharmaceutically acceptable salt thereof, wherein,

R_1 and R_2 are independently selected from the group consisting of: hydrogen, halogen and substituted or unsubstituted C_{1-6}alkyl;

n is selected from the group consisting of: 1 and 2.

5. A compound, or a pharmaceutically acceptable salt thereof, wherein, the compound is selected from the group consisting of:





6. A pharmaceutical composition comprising one or more pharmaceutically acceptable carriers and a therapeutically effective amount of the compound according to claim 1 or 5 or a pharmaceutically acceptable salt thereof.

7. A use of the compound according to claim 1 or 5 or a pharmaceutically acceptable salt thereof in the preparation of a drug for the prevention and/or treatment of a disease sensitive to potassium ion channels; the disease sensitive to potassium ion channels is a central nervous system disease.