7. The heterocyclic compound of the formula (1) according to claim 3 selected from the group consisting of:

(1) 7-[4-(4-benzo[b]thiophen-4-yl-piperazin-1-yl)butoxy]-1H-quinolin-2-one,

~~(2) 7-[3-(4-benzo[b]thiophen-4-yl-piperazin-1-yl)propoxy]-1H-quinolin-2-one,~~

~~(3) 7-[3-(4-benzo[b]thiophen-4-yl-piperazin-1-yl)propoxy]-3,4-dihydro-1H-quinolin-2-one,~~

~~(4) 7-[4-(4-benzo[b]thiophen-4-yl-piperazin-1-yl)butoxy]-3,4-dihydro-1H-quinolin-2-one,~~

~~(5) 7-[4-(4-benzo[b]thiophen-4-yl-piperazin-1-yl)butoxy]-1-methyl-3,4-dihydro-1H-quinolin-2-one and~~

~~(6) 6-[3-(4-benzo[b]thiophen-4-yl-piperazin-1-yl)propoxy]-3,4-dihydro-1H-quinolin-2-one;~~

or a salt thereof.

8. The heterocyclic compound of the formula (1) according to claim 4 selected from the group consisting of:

(1) 7-[3-(4-benzo[b]thiophen-4-yl-piperazin-1-yl)propoxy]-3,4-dihydro-2H-isoquinolin-1-one

(2) 7-[3-(4-benzo[b]thiophen-4-yl-piperazin-1-yl)propoxy]-2-methyl-3,4-dihydro-2H-isoquinolin-1-one,

(3) 7-[4-(4-benzo[b]thiophen-4-yl-piperazin-1-yl)butoxy]-2-methyl-3,4-dihydro-2H-isoquinolin-1-one,

(4) 7-[4-(4-benzo[b]thiophen-4-yl-piperazin-1-yl)butoxy]-3,4-dihydro-2H-isoquinoline-1-one,