New derivatives of nitroquipazine as potential antidepressive drugs

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Several new potential SERT and 5-HT1A receptor ligands have been obtained and submitted for pharmacological screening. The compounds were evaluated in SERT affinity tests and appeared to possess high (nanomolar) affinity to SERT. Some compounds were examined in in vivo hypothermia test in mice. Compounds AZ-06 and AZ-08, diminished mice body temperature, the effect being reversed by 5-HT1A receptor selective antagonist WAY-100635. Compounds AZ-06 and AZ-08 exhibited thus behavioural properties of 5-HT1A receptor presynaptic agonists [1]. Additionally, compounds AZ-06 and AZ-08 reduced the immobility time of mice in the forced swimming test [2] what indicates their potential antidepressant properties. This study was supported by a grant PNRF-103-AI-1/07 through the Norwegian Financial Mechanism. 1. Goodwin GM, De Souza RJ, Green AR. The pharmacology of the hypothermic response in mice to 8-hydroxy-2-(di-n-propylamino)tetralin (8-OH-DPAT). A model of presynaptic 5-HT1 function. Neuropharmacology, 1985, 24, 1187-1194. 2. Porsolt RD, Bertin A, Jalfre M. Behavioral despair in mice: a primary screening test for antidepressants. Arch. Int. Pharmacodyn. Ther., 1977, 229, 327-336.