CYTOTOXICITIES OF N,N'-BIS(3-DIMETILAMINO-1-ARYL-PROPYLIDENE)HYDRAZINE DIHYDROCHLORIDES

1Kaan KÇUKÇÖGLÜ, 1Mustafa Gül, 1H. İnci GUL, 2Osmo HANNINEN, 1 Mustafa ATALAY
1Atatürk University, Faculty of Pharmacy, Department of Pharmaceutical Chemistry, Erzurum, Turkey
2University of Kuopio, Department of Pharmaceutical Chemistry, Finland

Synthesis of N,N'-bis (3-dimethylamino-1-aryl-propyldiene) hydrazine dihydrochlorides were carried out according to the literature procedure [1] by using acetonaphone or substituted acetonaphones as the ketone component of the reactions while dimethylamine hydrochloride was the amine component of the reactions. Substituents were methyl for 2, methoxy for 3, hydroxy for 4 and chloro for 5 at the para position of the phenyl ring while compound 1 was unsubstituted.

Chemical structures of the compounds were confirmed by 1H NMR. Cytotoxicity of the compounds was determined against Jurkat cells which is human T lymphocytes cells. Reference compounds were 5-fluorouracil and melphalane. All compounds have shown more powerful activity than both references, cytotoxicity values of the compounds were in the range of 9.75-13.27μM. The most effective compound was 4 in four compounds studied.


SYNTHESIS OF 1-[3-(PIPERIDINOMETHYL)-4-HYDROXYPHENYL]-3-ARYL-2-PROPEN-1-ONES AND EVALUATION OF THEIR ANTICONVULSANT ACTIVITIES

1H. İnci GÜL, 2K. Özden YERDELEN, 3Ünsal ÇALIŞ
1Atatürk University, Faculty of Pharmacy, Department of Pharmaceutical Chemistry, 25240 Erzurum, Turkey
2Hacettepe University, Faculty of Science, Department of Chemistry, 06532 Beytepe- Ankara, Turkey
3Izmir Institute of Technology, Faculty of Science, Department of Chemistry, 35430 Izmir, Turkey

In this study, Mannich bases with piperidine, 1-[3-(piperidinomethyl)-4-hydroxyphenyl]-3-aryl-2-propen-1-one, B1-B5, were synthesized starting from the chalcones, 1,3-diaryl-2-propen-1-one, A1-A5.

Chemical structures of the compounds have been confirmed by 1H-NMR, 13C-NMR, IR, and UV spectra and elemental analysis. Anticonvulsant activities of the compounds were evaluated by MES, scMet tests. Neurotoxicities of the compounds were also evaluated by rotordot test [1, 2].

None of the compounds showed neurotoxicity at the screening of anticonvulsant activity. Compounds B1-B5 at MES test, compounds B1-B3 at scMet test have shown anticonvulsant activity at different dose levels (30-300 mg/kg) and time periods (1/2 h, 4 h).

To conclude, of the compounds B4, B5 against grand-mal epilepsy, B1, B2 and B3 against both types of epilepsy, can be chosen as candidate compounds to develop new anticonvulsant compounds for further studies.