Nicotine diminishes anticonvulsant activity of antiepileptic drugs in mice.

Miroslaw Czuczwar\textsuperscript{1}, Jacek Ki\textsuperscript{\textsuperscript{\textdegree}}, Piotr Czuczwar\textsuperscript{1}, Marian Wielosz\textsuperscript{1}, Waldemar Turski\textsuperscript{1,2,\#}

\textsuperscript{1}Department of Pharmacology and Toxicology, Medical University, Jaczewskiego 8, PL 20-090 Lublin, Poland, 
\textsuperscript{2}Department of Toxicology, Institute of Agricultural Medicine, Jaczewskiego 2, PL 20-950 Lublin, Poland


Nicotine administered acutely at subconvulsive dose of 4 mg/kg, significantly decreased the protective activity of valproate, carbamazepine, diphenylhydantoin, phenobarbital, topiramate and lamotrigine against maximal electroshock-induced tonic convulsions in mice. The obtained data may suggest that interaction between nicotine and antiepileptic drugs should be carefully considered as a cause of the therapeutic failure in epileptic patients.

**Key words:** nicotine, antiepileptic drugs, seizures

\# correspondence; e-mail: turskiwa@asklepios.am.lublin.pl