

Inhibition of Cholinesterase by Dialkylcarbamates

Šárka Štěpánková^{a,*}, Karel Komers^b,
Alena Komersová^b, Markéta Masopustová^b,
and Alexander Čegan^a

^a Faculty of Chemical Technology, University of
Pardubice, Department of Biological and Biochemical
Sciences, Štrossova 239, 530 03 Pardubice,
Czech Republic.

Fax: (0042046) 603 7068.

E-mail: sarka.stepankova@upce.cz

^b Faculty of Chemical Technology, University of
Pardubice, Department of Physical Chemistry,
nám Čs. legií 565, 532 10 Pardubice, Czech Republic

* Author for correspondence and reprint requests

Z. Naturforsch. **62c**, 308–310 (2007); received October 2/
November 24, 2006

The pI_{50} index and separation coefficients of chosen 3-*N,N*-diethylaminophenyl-*N',N'*-dialkylcarbamates were determined. Index pI_{50} (pI_{50} = negative logarithm of molar concentration of inhibitor inhibiting the enzyme activity by 50%) describes the effectiveness of the inhibitor. The rate of ability of the inhibitor to pass the blood-brain barrier is usually described by the separation coefficient in a system *n*-octanol/water (K_{ow}). Obtained results were compared with pI_{50} and K_{ow} of Exelon[®], the commercially used drug against the Alzheimer's disease.

Key words: Cholinesterase Inhibitors, pI_{50} , K_{ow}