

***IN SILICO* PHARMACOKINETIC AND TOXICOLOGICAL STUDY OF DNASE INHIBITORS**

*Ana Kolarević¹, Gordana Kocić², Denitsa Yancheva³,
Andrija Šmelcerović^{1,4}*

Deoxyribonucleases (DNases) are the enzymes able to catalyze DNA hydrolysis and they play important roles in cell function, while DNase inhibitors are the compounds able to control or modify their activities. Using admetSAR, Toxtree and OSIRIS Property Explorer, we calculated and compared pharmacokinetic and toxicological properties of some natural and synthetic DNase inhibitors. Finally, we selected among the DNase inhibitors the ones with the most favorable toxicological and pharmacokinetic profiles. *Acta Medica Medianae* 2016; 55(4):5-13.

Key words: *DNase inhibitors, in silico study, pharmacokinetic properties, toxicological properties*