

ANTITUMOR ACTIVITIES OF POLYOXOTUNGSTATES

T.Gutul^{1,*}, A.Dimoglo², S.Korkmaz², A. Mirzac³

¹*Institute of Electronic Engineering and Nanotechnologies 'D.Ghitu', Academy of Sciences of Moldova, Academiei str. 3/3, Chisinau, MD-2028 Republic of Moldova;*

²*Gebze Technical University, Gebze-Kocaeli, Turkey;*

³*Institute of Applied Physics, Academy of Sciences of Moldova, Academiei str. 5, Chisinau, MD-2028 Republic of Moldova*

*E-mail: tatiana.g52@mail.ru

Polyoxometalates (PMs) as discrete metal-oxide cluster anions comprise a versatile class of inorganic, anionic clusters that have a wide variety of structures, sizes, and a combination of different metals

Recent investigation of anti-tumor, -viral, and -bacterial activities of PMs shows induced cell-apoptosis, inhibition of binding of virus to receptor, the inhibition of bacterial growth [1].

We have synthesized for the first time polyoxometalates of different structural types. Thereof, we have produced hybrid materials and studied their inhibiting properties on neuroblastoma cell line [2]. In the **Fig. 1** we bring forward some polyoxometalates samples selected to study the antitumor activity on neuroblastoma cells SH-SY5Y. We remarked good antitumor properties of this polyoxometalate.

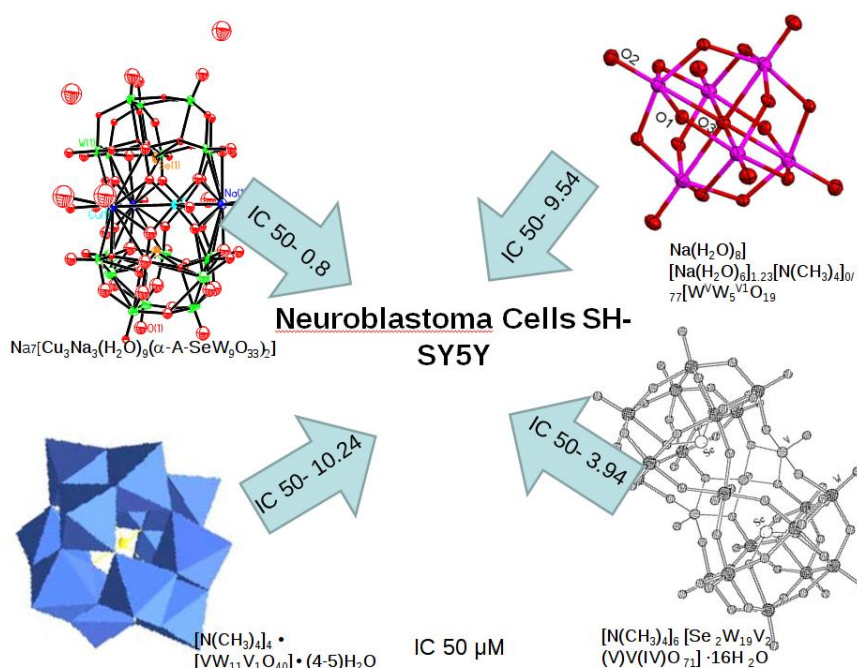


Figure 1. Polyoxometalates samples selected to study the antitumor activity on neuroblastoma cells SH-SY5Y.

[1]. T. Yamase, J.Mater.Chem, **15**, 4773-4782, (2005)

[2]. T.Guțul, A.Dimoglo, P.Petrenko, S.Korkmaz, T. Mironic Utilizareacomplecșilor polioxometalați cu atomi de seleniu centrali în calitate de compuși cu activitate antitumorală. Brevet de invenție MD4282. 2014-04-30.