Mendeleev 2019

XI International Conference on Chemistry
for Young Scientists

BOOK OF ABSTRACTS

Ru(II)-ARENE COMPLEXES WITH LONIDAMINE AND BEXAROTENE LIGANDS: STABILITY AND BIOLOGICAL ACTIVITY

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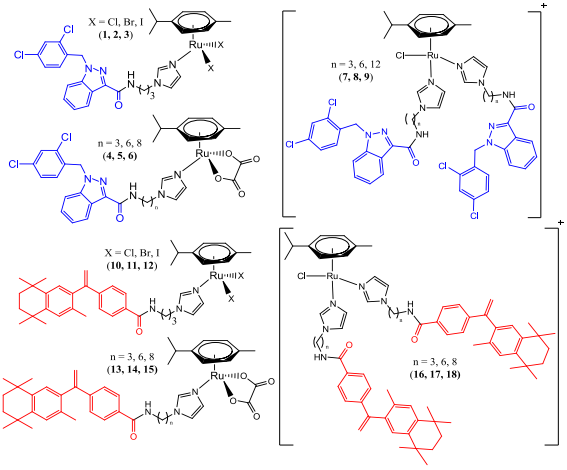
After platinum drugs widely used in the cancer chemotherapy, the most promising compounds are Ru(II)-arene complexes such as RAPTA-C. Earlier we reported analogues of RAPTA-C with biologically active targeting ligands [1] based on lonidamine and bexarotene (compounds with well-known tumor specific molecular targets). It was reported earlier that Ru(II)-arene complexes with heterocycle ligands may enter in ligand exchange reactions with coordinating solvents, for example, water or DMSO. To increase the stability of our complexes with bioactive targeting ligands we replaced chloride ligands with a ligand that can resist hydrolysis or fast ligand exchange.



For all Ru(II)-arene complexes cytotoxicity were studied by MTT-test using a small library of the human cancer cell lines, the lipophilicity of complexes with oxalate moiety **4-6**, **13-15** was determined by HPLC. Stability of new compounds was investigated in DMSO containing solutions, it was shown that our complexes resistant for ligand exchange reactions.

References

[1] Nosova Y.N., Karlov D.S., Pisarev S.A., **Shutkov I.A.**, Palyulin V.A., Baquié M., Milaeva E.R., Dyson P.J., Nazarov A.A. // J. Organomet. Chem. 2017, V. 839, P. 91-97.

This work was supported by Russian Science Foundation (19-13-00084)