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Abstract book

Anticancer Pt and Ru compounds with a targeting mode of action

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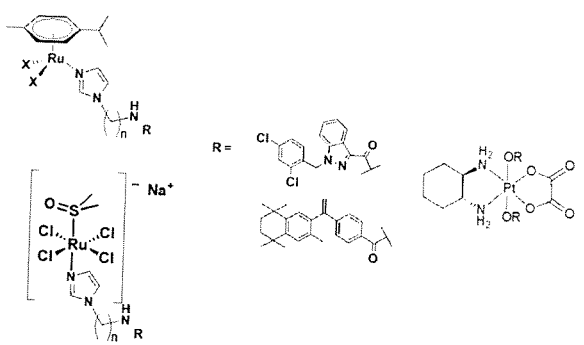
The majority of new metal-based anticancer compounds contain cytotoxic platinum moiety [1]; however, in recent years there has been a shift of interest in the development of non-classical platinum or non-platinum anticancer drugs and the Pt(IV) and ruthenium-based compounds are the most actively studied candidates.

The activity and specificity of metal-based anticancer compounds can be modulated by ligand environment. A dual drug concept is a modern approach in the anticancer drug design. Attachment of Pt or Ru moiety to the targeting biologically active organic molecules can drastically increase anticancer properties and provide a multitargeting mode of action. In our group, we applied lonidamine, bexarotene moiety as targeting bioligands [2,3]. Lonidamine is known to inhibit the aerobic glycolysis in cancer cells while simultaneously enhancing glycolysis in the normal cells. Bexarotene is known as an agonist of the retinoid X receptor and specific against T-cell lymphoma.

In our presentation will focus on the hybrid complexes based on lonidamine, bexarotene tethered to the ruthenium or platinum unit. Pt(IV), Ru(II) and Ru(III) compound found to be highly cytotoxic against the number of the human cancer cell lines and show good potential in *in vivo* studies.



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