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## BOOK OF ABSTRACTS

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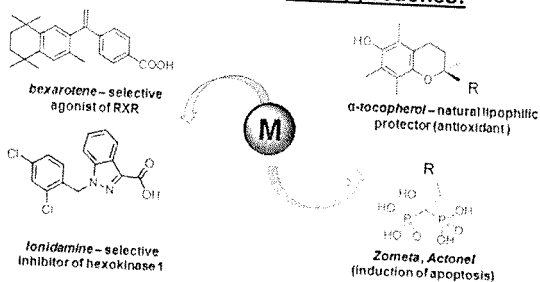
## Medicinal Inorganic Chemistry as a Tool for Metal-Based Drug Design

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There is an urgent need for the discovery of new drugs with novel modes of biological action, because several diseases develop resistances to known drugs. Metal compounds (metal-based drugs) might offer biological and chemical diversity that is distinct from that of organic substances. Nowadays metal-based drugs are a commercially important sector of the pharmaceutical market. It has become increasingly apparent that metal-based pharmaceuticals can play a crucial role in oncology, treatment of metabolism- and genetic disorders, cardiovascular disease, gene therapy, inflammation, stroke, diabetes, malaria, and neurological disease. The goal of medicinal chemists is to create new inorganic molecules as drug candidates. We will discuss the need for rationalization of the investigational approaches available to create hybrid metal-based drugs. Our key approaches were (1) to maintain the interaction with the target, and (2) to keep the balance between the antitumor potency and general toxicity. Scheme illustrates our **two approaches**:



The biological activity has been studied in *in vitro*, *ex vivo*, *in vivo* experiments and in enzymatic reactions with targets (*xanthine oxidase*, *lipoxygenase*, *glutathione reductase*, *thioredoxin reductase* etc.).

Thus, we can conclude that the combination of two physiologically active moieties in a molecule is a promising approach to find the novel hybrid pharmaceutical agents.

### Acknowledgements

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### References

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