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HR EXCELLENCE IN RESEARCH

**„NICOLAE TESTEMITANU” STATE UNIVERSITY  
OF MEDICINE AND PHARMACY**

## NEW MOLECULAR INHIBITORS AS ANTICANCER AGENTS

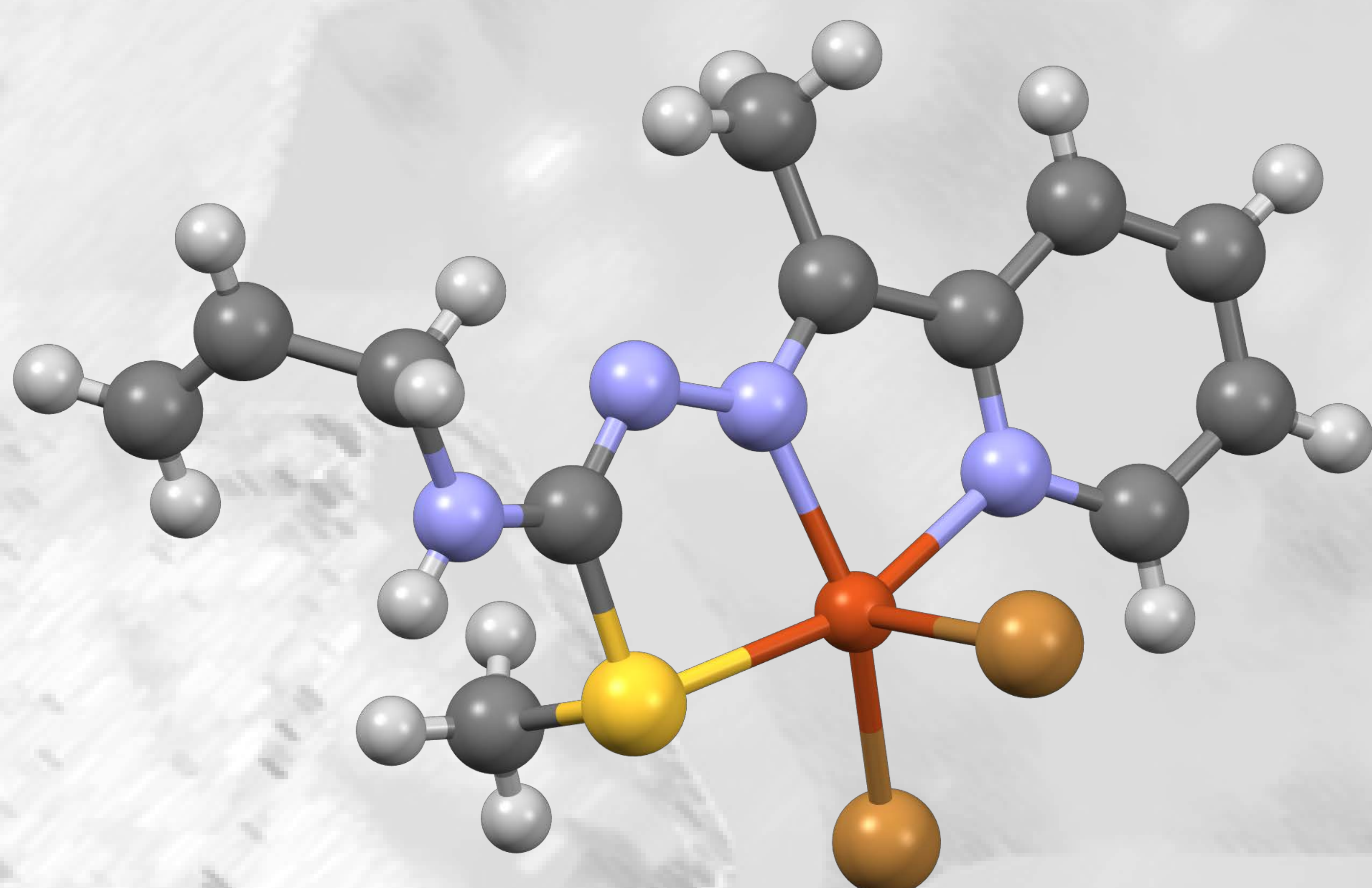
**PATENT:** MD 4764/2022.03.31; MD 4778/2022.07.31

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**APPLICATION FIELDS:** Medicine – pharmacy – cosmetics.

**AIM:** Chemical synthesis, characterization of new synthetic inhibitors of human rhabdomyosarcoma RD cells that may find application in medicine.

**SOLUTION:** New copper coordination compounds with thiocarbamide ligands have been obtained using the directed synthesis method.



**The IC<sub>50</sub> values towards RD cells**

| Compound            | IC <sub>50</sub> , µmol/L |
|---------------------|---------------------------|
| Prototype           | 1,4                       |
| Structural analog   | 0,68                      |
| Claimed substance 1 | 0,16                      |
| Claimed substance 2 | 0,05                      |

**ADVANTAGES:** The described copper coordination compounds inhibit the growth and multiplication of human rhabdomyosarcoma RD cells. These agents exceed 8.75-28 times the analogous characteristics of the prototype that is used in medical practice, and 4.25-13.6 times analogous characteristics of the structural analog. The discovered properties of these substances are of interest for medical practice for enhancement of the arsenal of human rhabdomyosarcoma inhibitors.

**IMPLEMENTATION STAGE:** At the laboratory level.

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