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Serbian Young Chemists' Club

11th Conference
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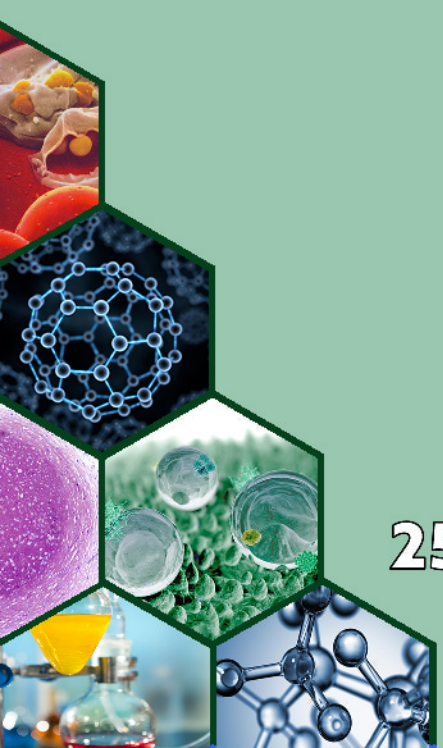
Book of Abstracts



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CB OP 01

The effect of plant extracts, *L. salicaria* and *S. pratensis* on the interaction between copper(II) complexes and biomolecules

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Ferrocene derivatives have previously demonstrated a wide range of antifungal, antibacterial and anticancer activities [1]. Considering this, two copper(II) complexes were synthesized: one containing an amine ligand in a 1:1 ratio (Cu1), and the other incorporating an imine ligand in a 1:2 ratio (Cu2). These complexes were characterized using various spectroscopic methods. Their interactions with biomolecules were subsequently investigated. To potentially enhance their biological activity, the synergistic effects of the complexes in the presence of extracts from *Lythrum salicaria* and *Salvia pratensis* were examined. Extracts obtained from the aerial parts and roots of *L. salivaria* have previously been reported to display significant antimicrobial activity [2].

We investigated the binding affinity of these complexes toward calf thymus DNA (ct-DNA) and human serum albumin (HSA) in the presence of plant extracts, using fluorescence emission spectroscopy. The results indicated that the binding constants of the complexes increased upon addition of the extracts.

References

1. N. Srećković, J. Katanić Stanković, S. Matić, N. Mihailović, P. Imbimbo, D. M. Monti, V. Mihailović, *Ind. Crops Prod.* **2020**, *155*, 112781.
2. M. Patra, G. Gasser, *Nat. Rev. Chem.* **2017**, *1* (9), 0066.

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