

FUIOR, Arcadie, GULEA, Aurelian, GARBUZ, Olga et al. Screening of biological properties of MoV2O2S2- and MoV2O4-based coordination complexes: Investigation of antibacterial, antifungal, antioxidative and antitumoral activities versus growing of *Spirulina platensis* biomass. In: Journal of Inorganic Biochemistry. 2021. ISSN 0162-0134.

This paper deals with the biological potential of coordination compounds based on binuclear core $[\text{Mo}^{\text{V}}_2\text{O}_2\text{E}_2]^{2+}$ (E = O or S) coordinated with commercially available ligands such as oxalates (Ox^{2-}), L-cysteine (L-cys^{2-}), L-histidine (L-his^-), Iminodiacetate (IDA^{2-}), Nitrilotriacetate (HNTA^{2-} or NTA^{3-}) or ethylenediamine tetraacetate (EDTA^{4-}) by means of various *in vitro* assays in a screening approach. Results suggest that the obtained complexes show weak antibacterial and antifungal properties while not being cytotoxic on cancerous and mammalian cells. In contrast, $[\text{Mo}_2\text{O}_2\text{E}_2(\text{L-cys})_2]^{2-}$ complexes stand out as powerful antioxidant, whereas $[\text{Mo}_2\text{O}_2\text{E}_2(\text{EDTA})]^{2-}$ associating tetraphenylphosphonium counter-cations display strong antibiotic activity. Finally, some complexes have evidenced a positive activity towards the growing of *spirulina platensis* together with a modification of the proportions of biological components inside the cells. These findings reveal promising bioactivity of the bridged binuclear $\text{Mo}^{(\text{+V})}$ cores inside complexes and encourage further research for new highly active yet non-toxic molecules for biological and biomedical applications.