

Proposed corrections are with "blue" letters, what I think should be added, and in "green" letters, what I think should be said on another way.

Aims: The presented research paper is aimed to prevalence of apoptosis for the first time by...

.....to positive controls

Study design: Molecular docking analysis was performed by using.....

.....Their antioxidant activity was tested by.....

the active-site gorge, where they were well positioned.

Results: in the tested protein-ligand interaction.....

.....Their antioxidant activity revealed.....

Conclusions:.....have been confirmed to inhibit.....

....., and eventually could be tested.....

13. 1. INTRODUCTION

15.....protein substrates.....

16.....as inactive pro-enzymes, able to undergo

17.....(large and small),.....

18.....of caspases,.....

20.....for treatment of

22, in exhibition of caspase-dependent apoptosis in the normal cell, in cancer cells a death by

23caspase-independent apoptosis is possible during protection of normal tissues by caspase

24 inhibitors [2].....

29 Caspase-3 is a protein, encoded.....

30.....as complete genome data available. It is a member.....

32....., while Cys-285 attacks the peptide bond during its cleavage.

37.....would be fully active in.....
38.....that binds and suppresses the action of caspase-9.....

40 cleavage of caspase-9....., preventing in this way XIAP.....

42.....zinc is one of the metals with the lowest toxicity. It is involved

46 effectiveness [23],.....[24]. Zinc-containing proteins have recently
47 been proved as

50.....and it is also co-localized.....

54.....Furthermore, Zn^{2+} has been found to inhibited.....
55.....[30]. Zn^{2+} has also been demonstrated to suppress.....
56.....Moreover, Zn^{2+} has been characterized as a potent inhibitor.....

59 The main goal of the current research manuscript is connected with the reveal of.....

71 Chemicals and reagents:.....

75 2.1 General method for complex preparation

110 The enzyme coordinates were deposited in.....

132.....on a dark.....

140..... on a dark.....

147.....gives a rise to.....
148.....were consistent with.....

151.....Complexes possessed.....

153.....with those of the presented substances. Two reported
154 complexes of nickel(II) perchlorate were revealed, with.....

161.....at 4000-400.....
162.....in the experimental part.....
163....., except of some.....
164.....have similar
165 structure to each other. However, some significant differences between the structure of
166 zinc(II)bromide complex and that of zinc(II)azide complex were also revealed, as expected.

169 this specter was observed at a region.....to zinc in the azide metal bond [46].....

173.....of all complexes.....

181 Chemical shifts in the regions....., were observed.....

186....., respectively [54].....Similarly, aromatic.....
187....., respectively [49].

191 The compound tested is.....

194 the presented structure is....., with the τ -value 0.35.....

220 The residues that were found to be involved in this.....

225.....as well positioned in this place (Fig. 2).

226.....indicated the presence of five inter-molecular.....

228....., with a distance of....., respectively (Table 2). A hydrogen
229 bond between GLN283:NE2 and SER339:O with a distance of 3.0722 Å was also observed.

237 zymogen, and 3D-representations of....., respectively.....

238.....dark-grey sticks, and the hydrogen bonds – as green dashed lines

242.....that were proved to be involved in the protein-ligand interaction of.....

248.....(Fig. 3) indicated an inter-molecular hydrogen bonding.....

254....., and 3D-representation of.....

255.....dark-grey sticks, and hydrogen bonds – as green dashed lines

259 For further confirmation of the inhibition of caspase-3 activity by zinc complex, potential
260 molecular mechanisms involved.....

267.....For this goal, the color change

274 as an accurate method.....

278.....in FRAP assay, the highest values can be

280 causes ferric ion change to ferrous [59].

282 **Table 3. Anti-oxidant activities of the tested compounds**

286 New zinc(II) metal complexes of some.....

287.....were confirmed to inhibit.....

288....., and they could be tested for.....