

Review Form 1.6

Journal Name:	Asian Journal of Chemical Sciences
Manuscript Number:	Ms_AJOCS_79419
Title of the Manuscript:	METAL COMPLEXES OF GATIFLOXACINE: SYNTHESIS, CHARACTERIZATION AND EVALUATION OF BIOLOGICAL ACTIVITY
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	<p>This manuscript by these authors describes the synthesis and biological activity of Ni(II), Cu(II), Co(II), Mn(II) and Mg(II) complexes of gatifloxacin. The structure of complexes has been investigated using spectral and physiochemical properties. They were also evaluated for their in vitro antibacterial and antifungal activity. Some of the compounds displayed promising anti-bacterial and antifungal activity compared to standard drugs.</p> <p>The theme of this study is relevant to the readership of Asian Journal of Chemical Sciences, and could be of interest for a range inorganic chemist working in the fields of metal but also antimicrobial properties of organometallic reagents, which are interesting and active research topics. The synthetic logic is easy to follow and the experimental work is for most part carried out properly. However, the scholar presentation of results can be improved and the discussion of the present results with respect of literature data is unsatisfactory. Therefore, in my opinion, the paper would merit acceptance to Asian Journal of Chemical Sciences only after addressing the following specific items. Major issues:</p> <p>1) The introduction section does not sufficiently state plainly and unambiguously what are the hypotheses and objectives of this work, especially regarding the targeted reactivity. It is important to clarify this point and better highlight what is the originality of the present study both in introduction and conclusion. Furthermore, the analysis of literature provided in the introduction section is lacking major contributions closely related to this work in the field of Gatifloxacin. The authors should describe the results from these studies in the introduction section, and the performances of the present complexes should be compared more carefully with those of state-of-the-art systems in the discussion section.</p> <p>2) It has been brought to our attention that there is a significant amount of textual overlap in your manuscript from the previously published work which is totally unethical and not suitable to be published. You are requested to rewrite these paragraphs.</p>	

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	<p>3. Introduction: A paragraph highlighting the recent use of gatifloxacin should be included.</p> <p>4. Novelty of the present work with regard to other state-of- METAL COMPLEXES OF GATIFLOXACINE: SYNTHESIS, CHARACTERIZATION AND EVALUATION OF BIOLOGICAL ACTIVITY should be highlighted in the introduction.</p> <p>5) The antimicrobial activity tests were not determined by which methods? well, method or disc diffusion? How bacteria counts were determined?</p> <p>6) It is not clear how the initial bacterial count (CFU/ml) was adjusted from stock bacterial cultures</p> <p>7) How and by what control groups were created?</p> <p>8) The experiments on antibacterial activity are insufficient. The technique used is only qualitative and it does not allow the authors to classify the compounds tested according to their power. As the authors did not mention the reference used in the test, these should be explained in more detail, including, for example, the culture medium used and how the bacterial inoculum was prepared.</p> <p>9) The authors must include in the methodology the name and the origin of the microorganism tested. For example - Staphylococcus aureus NTCTC 7447 (National Collection of Type Cultures) - this information is misplaced in the Results section, and should appear in Experimental Section.</p> <p>10) authors are requested to add the mechanism of the synthesis of compounds 1g</p> <p>11) Authors should explain how they use Nystatin and Griseofulvin as reference, why not tetracycline?</p> <p>11). No single crystal X-ray diffraction data is reported at least for one complex. This would have given thorough insights on the structure elucidation.</p> <p>12) Clearly, all the references should be updated. More representative and recent examples should be included.</p> <p>13) Author should discuss in the results and discussion the spectra of one product at least.</p> <p>14) part Synthesis of 1e (Ligand): Materials: Please correct: Pipiridine, O-Phenylin diamine</p>	
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	15) Authors are requested to add the characteristic spectra of the complexes 16) regarding compound ND1, signals which appeared approximately at 9 and 13 are for which protons? 17) The reaction schemes are not well presented. For example why the carbonyl group of coumarin is very long in the complex 1g (page 7)	
Minor REVISION comments		
Optional/General comments		

PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p> <p>The theme of this study is relevant to the readership of Asian Journal of Chemical Sciences, and could be of interest for a range inorganic chemist working in the fields of metal but also antimicrobial properties of organometallic reagents, which are interesting and active research topics. The synthetic logic is easy to follow and the experimental work is for most part carried out properly. However, the scholar presentation of results can be improved and the discussion of the present results with respect of literature data is unsatisfactory.</p>	

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