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| Journal Name: | [**Chemical Science International Journal**](https://journalcsij.com/index.php/CSIJ) |
| Manuscript Number: | **Ms\_CSIJ\_132427** |
| Title of the Manuscript: | **Synthesis, spectrometrical characterization and pharmacological properties of six substituted hydrazones with carbonyl compounds** |
| Type of the Article | **Original Research Article** |

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| PART 1: Comments | | |
|  | Reviewer’s comment **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | **The challenge and need of today’s scientific world is to develop alternative drugs because of large tolerance of conventional / Existing drugs.**  **The Manuscript entitled Synthesis, spectrometriccal characterization and pharmacological properties of six substituted hydrazones with carbonyl compounds study Cytotoxicity tests again the human noncancer fibroblast cell line (WI38) carried out with selected synthesized compounds and it showed that the most compounds were active against *Trypanosoma brucei brucei*. As a result of these findings, hydrazones could be a promising route in the treatment of trypanosomiasis which one of the burning issue of the world.** | Ok |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **Yes, it is reflecting the purpose of the study clearly.** | ok |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | **Hydrazones are molecules that prevent the growth of several microbial and parasitic strains by inhibited the replication of DNA sequences due to their chelating properties of metal ions. They are well recognized for Antiparasitic, Antimicrobial, Antibacterial, Antiviral, Antitumoral, Antimalarial and Anticonvulsive activities . The aim of the current study is to synthesized novel substituted hydrazones of ketones and aromatic aldehydes and to study their antiparasitic activities against *Trypanosoma brucei brucei* parasite. Synthesized hydrazone derivatives have been confirmed by elemental analysis and HPLC method, SMHR, 1H and 13C NMR spectroscopy. Three hydrazones derivatives have been synthesized namely phenylhydrazones, 2,4-dinitrophenyl hydrazones and benzohydrazones. The antiparasitic properties of these molecules were evaluated on *Trypanosoma brucei brucei*. The derivatives from phenylhydrazones and benzohydrazones were showing more antiparasitic activity like benzophenone benzohydrazone (D3) and salicylaldehyde phenylhydrazone (B1) compounds, which exhibited moderate activity on *Trypanosoma brucei brucei* (IC50 = 19.49 μM; IC50 = 20.01 μM respectively). Cytotoxicity tests again the human noncancer fibroblast cell line (WI38) were carried out with selected synthesized compounds and it showed that the most compounds were active against *Trypanosoma brucei brucei*. As a result of these findings, hydrazones could be a promising route in the treatment of trypanosomiasis.** | It is directly taken into account in the manuscript |
| Is the manuscript scientifically, correct? Please write here. | **Manuscript significantly correct** | ok |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | Yes | ok |
| Is the language/English quality of the article suitable for scholarly communications? | Suitable language but manuscript should arrange in proper paragraphs and minor corrections in grammar communicating sentences. | It is directly taken into account in the manuscript |
| Optional/General comments | **Manuscript is suitable for publication after minor corrections.** | The corrections are made in the manuscript |

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| **PART 2:** | | |
|  | Reviewer’s comment | Author’s comment *(if agreed with the 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?** | *(If yes, Kindly please write down the ethical issues here in detail)* | no |