

[Review Form2](#)

Book Name:	Recent Developments in Chemistry and Biochemistry Research
Manuscript Number:	Ms_BPR_2429
Title of the Manuscript:	Synthesis, HOMO-LUMO Analysis and Antioxidant Activity of Novel Tetrazole Hybrids
Type of the Article	Book Chapter

PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	The study on "Synthesis, HOMO-LUMO Analysis, and Antioxidant Activity of Novel Tetrazole Hybrids" is important as it provides insights into the electronic properties and antioxidant potential of these novel compounds. Understanding the HOMO-LUMO gap helps predict reactivity, while the antioxidant activity evaluation could lead to potential applications in preventing oxidative stress-related diseases.	
Is the title of the article suitable? (If not please suggest an alternative title)	yes	
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.	(Next, to study the chemical reactivity, the HOMOLUMO energies and their energy gap, hardness, softness, chemical potential of the synthesized chemical compounds 7a-j were calculated by B3LYP/6-31g(d, p) method) Please correct the synthesized chemical compounds 7a-j to 7a-l .	
Are subsections and structure of the manuscript appropriate?	yes	
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.	Manuscript requires some more work such as in silico studies and in vivo studies to validate the result.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	yes	

[Review Form2](#)

Minor REVISION comments Is the language/English quality of the article suitable for scholarly communications?	Comments 1. It is better if you make a table of acid chlorides 6a-l separately. 2. Please mention scheme a separate figure number. 3. You have mentioned that the 5-amino tetrazole underwent regioselective N-arylation [42] upon reaction with 1,2-difluoro-4- iodobenzene in presence of Cu(OAc)2·H2O as Cu catalyst, Cs2CO3 as base and 1,10-phenanthroline as ligand at 85 oC for 18 h , to obtain the intermediate but in the scheme it is showing 16h 4. In result and discussion you have mentioned “the intermediate (5) by the reaction with different acid chlorides 6a-l in CH2Cl2 and DIPEA at room temperature for about 10 h yielded the target tetrazole motifs 7a-l in 72-91 % of yields.” But actually there is difference in the reaction time as mentioned in the table 1. 5. Please mention the figures as there is no NMR spectrum. Further, upon characterization of target compound 7e, the 1H NMR spectrum (Fig. 2). The author explained the characterization part without any spectra in the manuscript. 6. You have mentioned that the Theoretical study showed that compounds 7d, 7e and 7j are more reactive than other obtained tetrazole derivatives but actually you had performed it for 7d, 7e and 7k . 7. You have mentioned that the All the remaining compounds except 7a and 7b , exhibited more than 45 % level of antioxidant property at 200 µg concentration.but there is one more compound 7i showing 42.65% of activity better not to write this type of calculation. 8. Please correct the following sentence “Then Cs2CO3 (1 mmol, 325 mg) and Cu(OAc)2·H2O (10 mol %, 20 mg), 1,10-phenanthroline (20 mol %, 36 mg) were added consecutively for several min and the reaction mixture was stirred for 18 h at 85 °C.” 9. Please correct the following sentence “The transparent solution was concentrated by using rotary evaporator and the crude mixture was purified by silica gel (60–120 mesh) column chromatography using 30 % ethylacetate in hexane as eluent to obtain a phenyl tetrazole amine to afford 1-(3-fluoro-4- morpholinophenyl)-1H-tetrazol-5-amine (3) as pale yellowish solid. ” 10. Please correct the grammatical errors throughout the manuscript.	
Optional/General comments	----	

PART 2:

	Reviewer’s comment	Author’s comment <i>(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)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

Name:	Qazi Yasar Qaiser Ahmed
Department, University & Country	YBCCP, India