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CORRECTION

To the article "Biochemical Evaluation of Copper Compounds Derived from O- and N-/O- Donor Ligands," by Muhammad Nadeem Akhtar, Muhammad Shahid, Masaaki Sadakiyo, Muhammad Ikram, Sadia Rehman, and Irshad Ahmed, Vol. 51, No. 4, pp. 272 – 276, July, 2017

The title should read: BIOLOGICAL EVALUATION OF COPPER COMPLEXES DERIVED FROM O- AND N-, O-DONOR LIGANDS

The article submission date should read: *Original article submitted May 15, 2016.*

The abstract should read:

The complexes $[Cu^{II}_2(benz)_4(Hbenz)_2]$ (**1**) and $[Cu^{II}(ppa)_2(H_2O)_2]_n$ (**2**), where benz = benzoate and ppa = 3-pyridinepropionic acid, were synthesized and studied for their 2,2-diphenyl-1-picrylhydrazyl (DPPH) radical scavenging activity and inhibition of enzymes such as acetylcholinesterase (AChE), butyrylcholinesterase (BChE), lipoxygenase (LOX), urease, chymotrypsin, and α-glucosidase. The synthesized complexes were also studied by the hemolytic method for their cytotoxicity and found to be low-toxicity substances. For AChE inhibition, complex **2** showed $IC_{50} = 31.22 \pm 0.45$ μM compared to **1** with $IC_{50} = 36.52 \pm 0.44$ μM. Both compounds showed comparably low activity against BChE and were also active against urease, but complex 1 exhibited selective anti-urease activity. The anti-α-glucosidase activity of both complexes was comparable to that of the standard drug used.

On pages 274 – 275, the crystal structure part should read:

"Single-crystal x-ray diffraction reveals that complex **1** [17(b)] (Fig. 1) is a binuclear copper complex that is coordinated with six benzoates. Of these six benzoates, four act as a bridging ligand between two coppers and the remaining two benzoates are coordinated in monodentate fashion. Each copper has a coordination number of 5, and the geometry can be best described as distorted square pyramidal. The crystal structure of **2** is also similar to that reported by Borkowski and Cahill [17(b)]; each Cu atom is coordinated with two water molecules and two nitrogens of the pyridine- propionic acid ligand, and the remaining carboxylate groups of the ligands are connected in monodentate fashion to the next Cu to form three-dimensional (3D) networks (Fig. 2). Each Cu atom bears a coordination number of 6, and the geometry can be best described as distorted octahedral.

On page 274, Fig. 2 is revised and updated as follows:

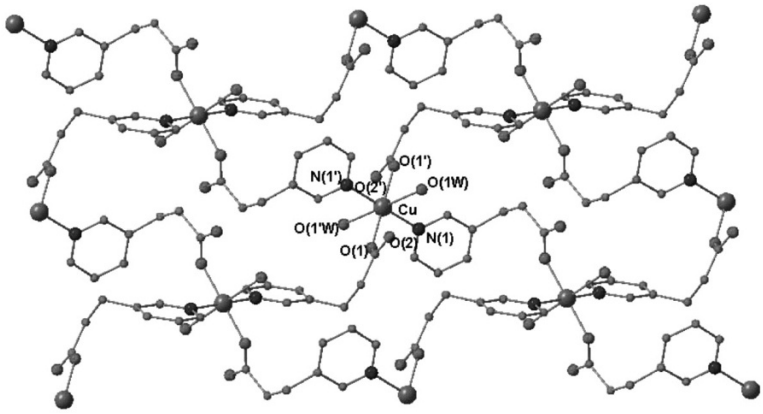

Fig. 2. 3D network of $[Cu^{II}(ppa)_2(H_2O)_2]_n$ [17b] (**2**).

The Conclusion was inadvertently omitted and should read as follows:

In this paper we have evaluated two copper complexes for their antioxidant, hemolytic, and enzyme inhibition activity, including anti-α-glucosidase activity. In **1**, each copper bears a distorted square pyramidal geometry, while **2** exhibits a distorted octahedral geometry. Both complexes are less toxic, with weak antioxidant potentials. Furthermore, complexes **1** and **2** show

valuable α-glucosidase, AChE, and BChE inhibition, which indicates that these compounds can be potential candidates in drug development. In summary, we conclude that part of the current study can provide valuable leads in the treatment of AD. In addition, the present study paves the way for further investigations into copper complexes for effective treatment options in medicine and as therapeutic pharmaceuticals, etc.

In the **REFERENCE** section:

Reference 17(b) should read L. A. Borkowski and C. L. Cahill, *Acta Crystallogr.*, E59, m1127-m1128 (2003).

References 32 and 33 were inadvertently omitted and should read as follows:

32. L. Zhang, S. B. Mulrooney, A. F. Leung, Y. Zeng, B. B. Ko, R. P. Hausinger, and H. Sun, *Biometals*, **19**(5), 503 – 511 (2006).

33. M. Ikram, S. Rehman, Faridoon, R. J. Baker, H. U. Rehman, A. Khan, M. I. Choudhary, and S.-Ur-Rehman, *Thermochim. Acta*, **555**, 72 – 80 (2013).