

Synthesis, characterization and insulin-mimetic studies of zinc complexes of sulfadiazine and derivatives of dithiocarbamates

Odularu A. T and Ajibade P. A
University of Fort Hare, South Africa

The medicinal applications of zinc and its compounds have been justified so far in the results when applied most especially to human health and other areas in agricultural and industrial sectors. Ligands of sulfadiazine and dithiocarbamates are also useful in the medical field. The aim of this study was to test the potency and enhance the synergistic qualities of zinc(II) chloride to bring about a normoglycemia to patients of diabetes experiencing hyperglycemia. Zinc(II) chloride was made to react with ligands of sulfadiazine and derivatives of dithiocarbamates. The syntheses of the complexes of zinc were studied using characterization techniques of melting point, conductivity, elemental analysis, ultra-violet-visible spectrophotometry, infra-red spectrophotometry, magnetic susceptibility, nuclear magnetic resonance, and single crystal x-ray crystallography. The differences observed before coordination of the ligands and after coordination with the characterization techniques, will be tested using biological studies of *in vitro* and *in vivo* activities with rat models.

Keywords: Zinc, Sulfadiazine, Dithiocarbamate, Characterization techniques, Biological Studies.

Biography

Odularu A.T is a final year doctorate research student of Inorganic Medicinal Chemistry. He has published an article in a peer reviewed journal, while two are presently sent for publication in two reputable journals. He is member of many academic societies.

201106223@ufh.ac.za