**ABSTRACT**

The ligands bis-(benzimidazolyl) pyridine (BBIP) and bis-(benzimidazolyl)benzene (BBIB) have been used to synthesize Copper(II) complexes [Cu(BBIP)2]Cl2 and [Cu(BBIB)2]Cl2 respectively. The complexes are characterized by analytical and spectral (FTIR, 1H NMR and electronic) techniques. IR spectra of complexes show that the tertiary nitrogens in the ligand are involved in the co-ordination to the metal ion. An octahedral geometry has been suggested for the complexes and the molar conductance values reveal them to be 1:2 electrolytes. The TGA curves of the complexes[Cu(BBIP)2]Cl2 and [Cu(BBIB)2]Cl2 show no mass loss upto 200°C which indicates the absence of lattice as well as co-ordinated water. The ligand BBIP and [Cu(BBIP)2]Cl2complex exhibit good antifungal and antibacterial activity against *Candida albicans* and *Staphylococcus aureus* (gram positive), *Escherichia coli* (gram negative) respectively, by using modified Kirby-Bauer disc diffusion method. The screening results for anti-proliferative activity for the MCF 7 breast cancerous cells show promising activity. The [Cu(BBIP)2]Cl2 complex has enhanced growth inhibition in a dose-dependent manner