ABSTRACT

A series of *O*-phenyl-*N*-aryl carbamates (**3a-i**) were synthesized by the reaction of phenyl chloroformate (**1**) with different aromatic amines (**2a-i**). The compounds were characterized by IR and ^{1}H-NMR and screened against acetyl cholinesterase, butyl cholinesterase and lipoxygenase enzymes. The results revealed that *O*-phenyl-*N*-phenyl carbamate (**3a**) and *O*-phenyl-*N*-(3-hydroxyphenyl) carbamate (**3e**) were active against acetyl cholinesterase with IC_{50} values 395±0.45 μ moles and 263±0.75 μ moles respectively while *O*-phenyl-*N*-benzyl carbamate (**3b**), *O*-phenyl-*N*-(4-hydroxyphenyl) carbamate (**3f**) and *O*-phenyl-*N*-(3-methoxyphenyl) carbamate (**3h**) exhibited inhibitory potential against lipoxygenase having IC_{50} values; 97±0.75, 246±0.67 and 251±0.59 μ moles respectively. All these carbamates were also assayed for their antimicrobial and hemolytic activities. *O*-phenyl-*N*-(2-hydroxyphenyl) carbamate (**3d**) and *O*-phenyl-*N*-(3-methoxy phenyl) carbamate (**3h**) showed good antimicrobial activity with MIC values ranges between 256.2 and 218.3 μg/ml for **3d** while these values were 287.6 to 255.8 μg/ml for **3h**. *O*-phenyl-*N*-(2-hydroxyphenyl) carbamate (**3d**) also showed the highest activity against *Candida albicans* with MIC value 218.3 μg/ml. *O*-phenyl-*N*-(4-hydroxyphenyl) carbamate (**3f**) showed highest hemolytic activity among all the carbamates.