ABSTRACT

Derivatives of benzothiazoles were synthesized and evaluated for their anti-inflammatory activity and analgesic activity. 2-amino benzothiazole was first converted to 6 substituted derivatives of 2-amino benzothiazole by nitration and bromination reaction to yield 6-nitro-2-amino benzothiazole and 6-bromo-2-amino benzothiazole respectively. All the derivatives including 2-amino benzothiazole were further treated with chloroacetyl chloride to form chloroacetamido derivatives of benzothiazole. Further the product is treated with various heterocyclic and aromatic amines. The synthesized compounds were confirmed by IR, ^{1}H NMR and Mass spectral data. Synthesized substituted benzothiazole derivatives were investigated for their anti-inflammatory activity using carrageenan induced paw oedema method and analgesic activity using hot plate method. It was observed that the new synthesized compounds possessing electron withdrawing group like nitro group at 6^{th} position of benzothiazole nucleus and chloro, fluoro substituted at 3^{rd} position of aromatic amine exhibited higher anti-inflammatory and analgesic activity when compared to that of other synthesized compounds.

Key words: benzothiazole; anti-inflammatory; analgesic; chloroacetyl chloride; nitration; bromination.