Abstract

The synthesis of sulfa drugs has received much attention due to their effective application as chemotherapeutic agents employed for the prevention and curingof infectious diseases in human. The synthesis of some novel aromatic sulfonamides derived from L-Asparagine, a non-essential amino acid, theirsingle crystal X-ray diffractive characterization and their biological roles, are still not being reported in the literature.Keeping in view the current scenario, present work, reports the design, synthesis, characterization and biological screening of some newly synthesized aromatic sulfonamides of amino acid derivatives.The green Chemistry is used to synthesize all the target compounds with the slightly modified reaction conditions to get the maximum yield and purity of the targetcompounds.All the newly synthesized compounds were characterized by IR and ^{1}H NMR spectroscopy. Characterization was further supported by single crystal X-ray diffractive crystallographic analysis in order to establish the exact geometry and enantiomeric purity of the target compounds. All synthesized compounds were tested for their ability to act as carbonic anhydrase inhibitors against bovine cytosolic CA containing CA-I and CA-II isozymes. The target compounds were found active and showed moderate carbonic anhydrase inhibition.