GENERAL REMARKS

- NMR spectra (\(^1\text{H}\) and \(^{13}\text{C}\)) were recorded on a Varian Gemini 2000 model 300/400 MHz at 25ºC in CDCl\(_3\), CD\(_3\)OD or DMSO-d\(_6\). The chemical shift values are reported on the δ scale in ppm, relative to TMS (δ =0.00) in \(^1\text{H}\) NMR spectra, relative to CDCl\(_3\) (δ=77.0ppm) and DMSO-d\(_6\) (δ=39.5 ppm) for the carbon spectra as internal standards and coupling constant were reported in Hz.

- Mass spectra were run on Single Quad Dual mode (APCI and ESI)-Agilent or Triple quad API 2000-Applied Biosystems with ionization electron beam energy of 70eV.

- HPLC particulars: Agilent 1100 series having PDA detector at \(\lambda\) = 210 nm, flow 1.0 mL/min, column: Zorbax-C18, pore size 5 \(\mu\)m, diameter × length = 4.6 × 150 mm; Method: gradient elution with (A) as 5 mM ammonium acetate and (B) acetonitrile: methanol (1:1) for 12 min with 30-100-30%.

- IR spectra were recorded on a Perkin-Elmer spectrum one FT-IR spectrophotometer with potassium bromide optics.

- Melting points were determined on a Stuart Scientific melting point apparatus and are uncorrected.

- All reactions are monitored by thin layer chromatography (TLC) carried out on E-Merck silica gel plates (60 F\(_{254}\)) with UV, I\(_2\) and dipping in potassium permanganate solution followed by heating at 120 ºC.

- All evaporations were carried out under reduced pressure on Buchi rotary evaporator.