**Supporting information**

**Exploration of novel TOSMIC tethered imidazo[1,2-a]pyridine compounds for the development of potential antifungal drug candidate.**

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**Experimental details**

**General considerations**

All the chemicals used in the study were purchased from commercial suppliers. Thin Layer Chromatography (TLC) was performed using Merk F254 aluminum sheets as stationary phase and Ethyl acetate and methanol (70:30) as mobile phase to monitor the reactions. The TLC plate spots were detected by dipping in the Dragendorff’s reagent and by viewing under UV light. The synthesized compounds were purified using column chromatography. 1HNMR and 13CNMR spectra were obtained using JEOL-400 NMR spectrophotometer at room temperature (RT) using deuterated chloroform (CDCl3 ) as solvent and Tetramethylsilane (TMS) as an internal standard. The chemical shifts in NMR spectra are reported as ᵟ (ppm), coupling constants were reported in Hertz (Hz) and splitting patterns are described as s (singlet), d (doublet), t (triplet), q (quartet), m (multiplet), and dd (doublet of doublet).

**General reaction procedure:**



**Figure 1: Model Reaction**

The title compounds were synthesized as outlined in **Figure 1.** 2-Aminopyidine (1mmol, 1equiv.), TOSMIC (1mmol, 1equiv.) and the corresponding aldehydes (1mmol, 1equiv.) and L-Proline (20 mol %) were placed in a 50 ml sealed flask equipped with magnetic stirring bar in Ethanol [1mmol= 3ml of ethanol]. Then the mixture was stirred at room temperature (RT) for 6h. Completion of the reaction was observed by TLC using Hexane: Ethyl acetate (1:1) which clearly indicated the disappearance of starting materials and the spot was stained in dragendorff’s reagent which confirmed the formation of new ring system. The solvent was removed by rotary evaporation; complete content was washed with water for the removal of non reacted L- Proline and dried over anhydrous Na2SO4 to remove aqueous traces. Finally the product was washed with chloroform: ethanol (8:2) v/v to obtained pure compound. Residue was purified by column chromatography using mixtures of Hexane – EtOAc (v/v) in different proportions to afford the different imidazo[1, 2-a] pyridine derivatives.

**Spectra’s of the most promising compounds [12 and 15]**

**12. 2-(2, 3-dimethoxynaphthalen-1-yl)-N-(tosylmethyl)imidazo[1,2-a]pyridin-3-amine.**

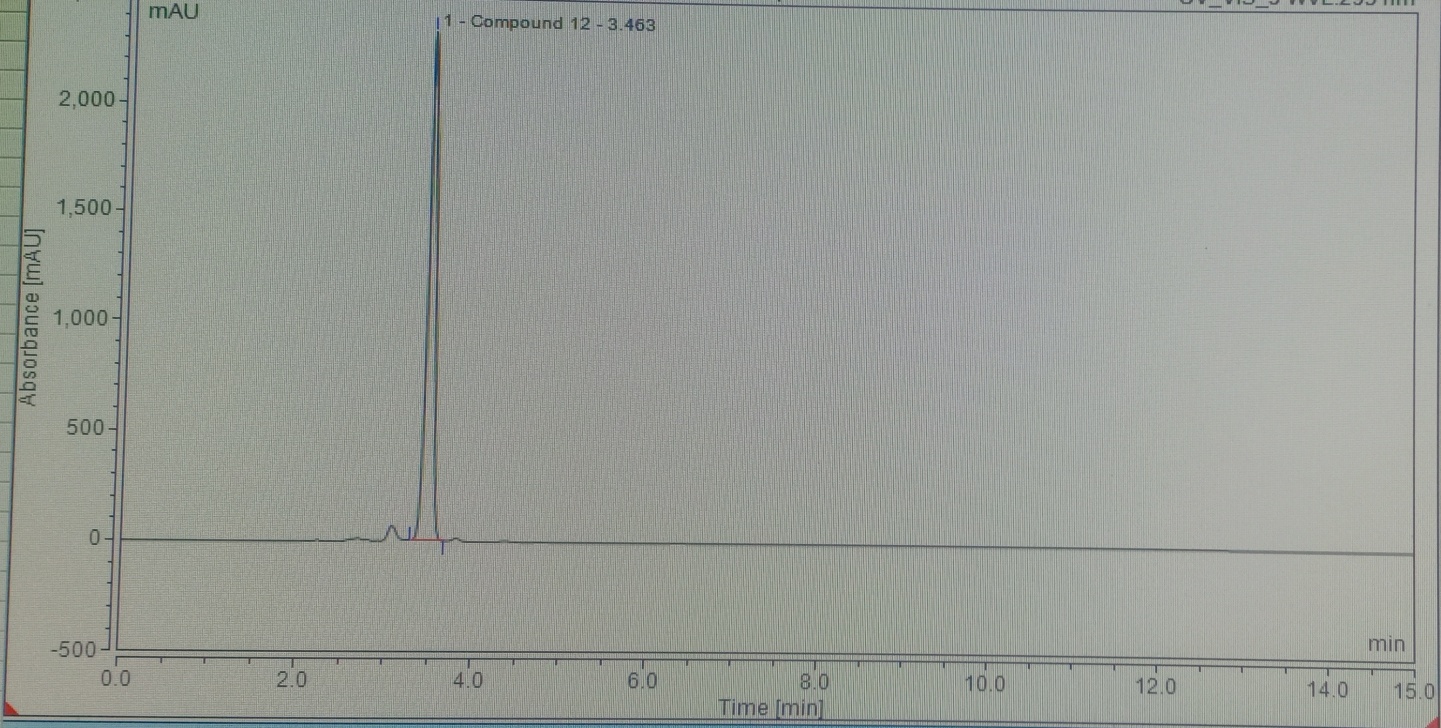


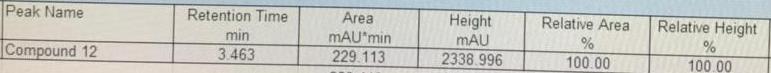
Yield **82%**; 1H NMR (400 MHz, Chloroform-*d*) δ 8.00 (1 H, dt, *J =*  6.3, 3.5 Hz), 7.62 (1 H, dt, *J* = 7.0, 3.5 Hz), 7.32 (2 H, dq, *J* = 7.0, 3.6 Hz), 7.19 (2 H, s), 7.08 (1 H, s), 4.91 (1 H, s) 3.88 (6 H, d, *J* = 27.5 Hz), 3.50 (2 H, t, *J* = 6.6 Hz), 2.24 (3 H, m), 1.16 ( 1 H, s). 13C NMR (101 MHz, Chloroform -*d*)δ 151.85, 150.75,144.42, 143.21, 141.57, 131.56, 130.49, 130.17, 128.94, 128.54, 126.94, 125.93, 125.38, 124.58, 124.36, 120.16, 119.31, 115.03, 113.17, 107.67, 77.43, 63.56, 62.14, 55.71, 29.80. LC-MS : *m/z* calculated [M+H]+ = 488.1644, found = 488.1646

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**Figure: 1H and 13C spectra of compound 12**

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**Figure: HPLC data of Compound 12.**

**15. 2-(1H-pyrrol-2-yl)-N-(tosylmethyl)imidazo[1,2-a]pyridin-3-amine.**

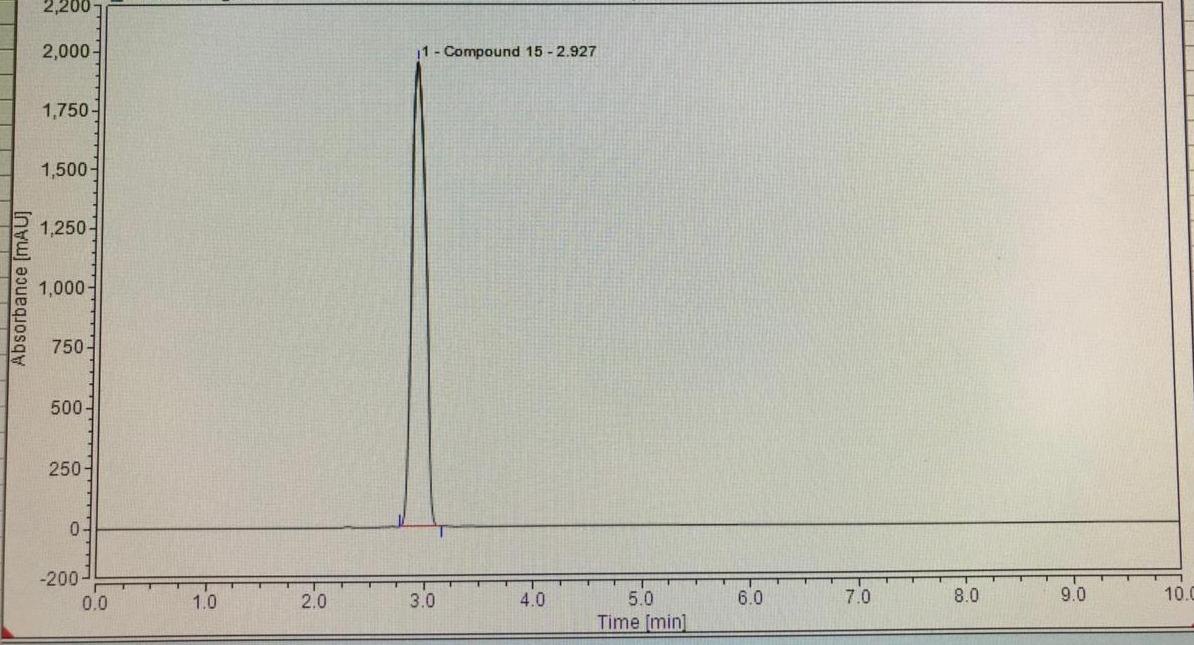


Yield **94%**; 1H NMR (400 MHz, Chloroform-*d*) 8.23 (1 H, s), 7.96 – 7.88 (2 H, m), 7.48 (1 H, d, *J* = 2.8 Hz), 7.34 – 7.23 (2 H, m), 7.00 (`1 H, dd, *J =*  4.0, 2.8 Hz), 6.80 (1 H, dd, *J* = 3.8, 1.2 Hz), 4.91 (1 H, s), 2.39 (3 H, s), 1.23 (2 H, s).13C NMR (101 MHz, Chloroform -*d*)δ 148.59, 144.55, 141.16, 138.80, 136.59, 129.82, 128.69, 127.95, 123.76, 118.58, 115.44, 113.96, 106.28, 62.82, 21.74. LC-MS : *m/z* calculated [M+H]+ = 367.1228, found = 367.1235.

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**Figure: 1H and 13C spectra of compound 15.**

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**Figure: HPLC data of the Compound 15.**