

**Electronic Supplementary Information**

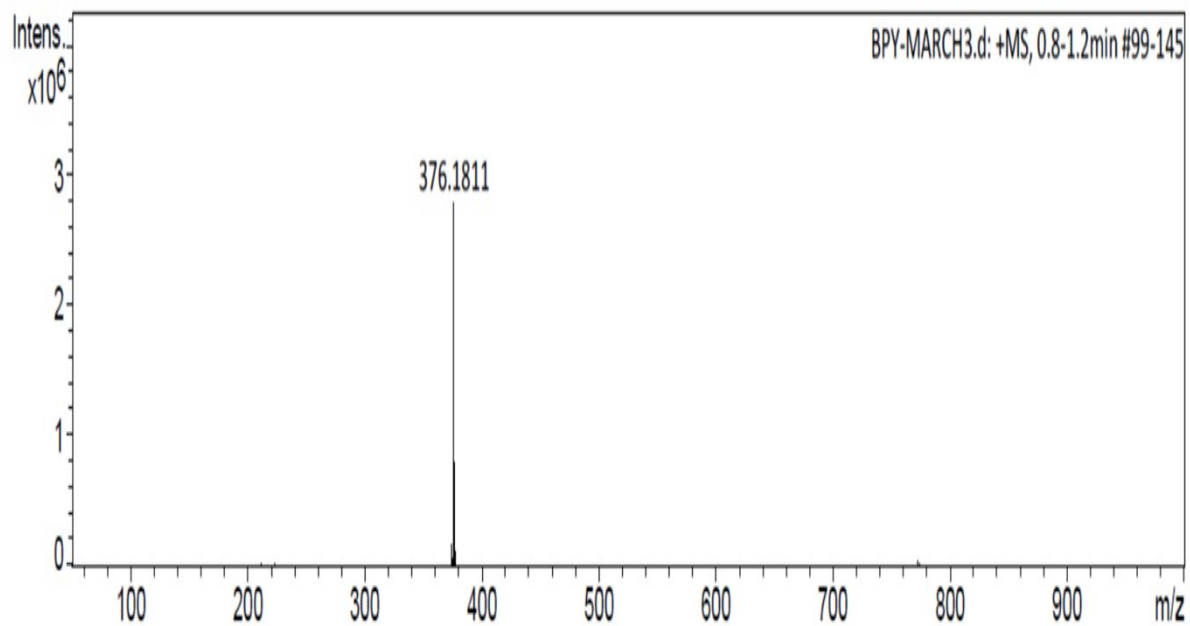
**Synthesis, Characterization, and Anticancer Activity of Ru(*p*-cymene) Complexes Bearing Pyrazolyl-pyridine Type Ligands**

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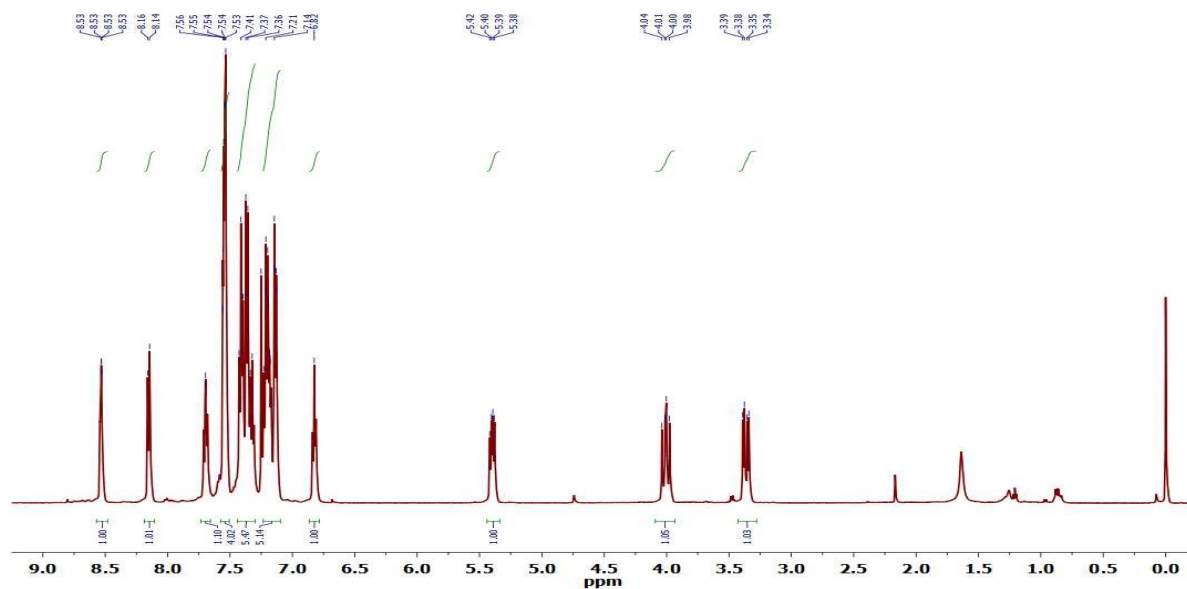
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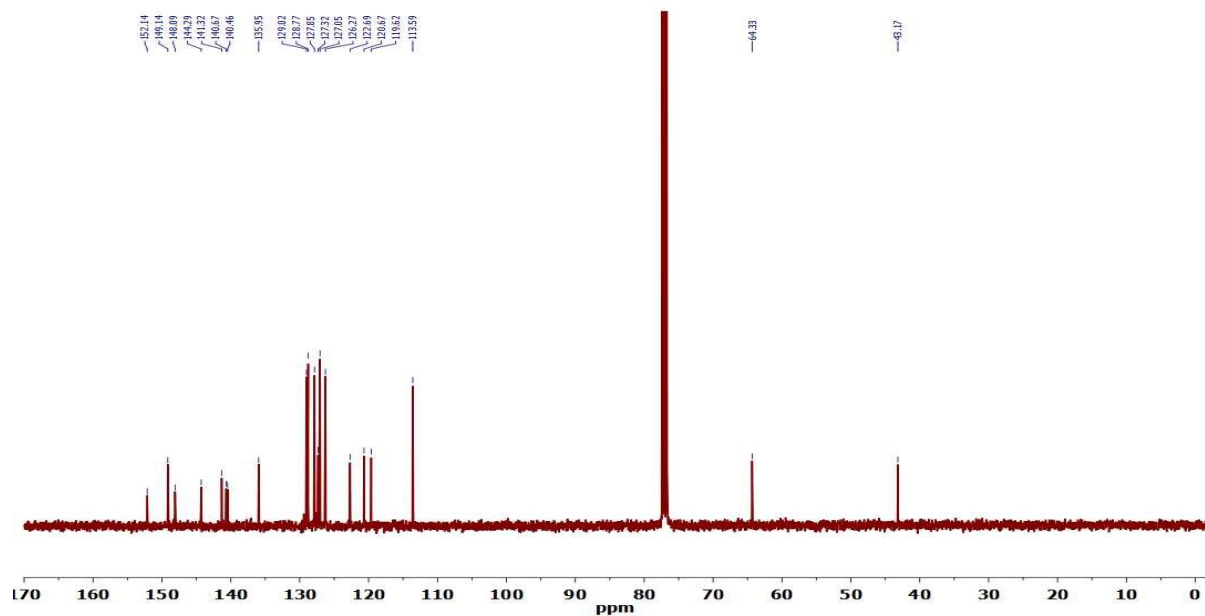
<sup>c</sup>*X-ray Diffraction Lab, Department of Chemistry, Texas A&M University, College Station, TX 77842, USA.*



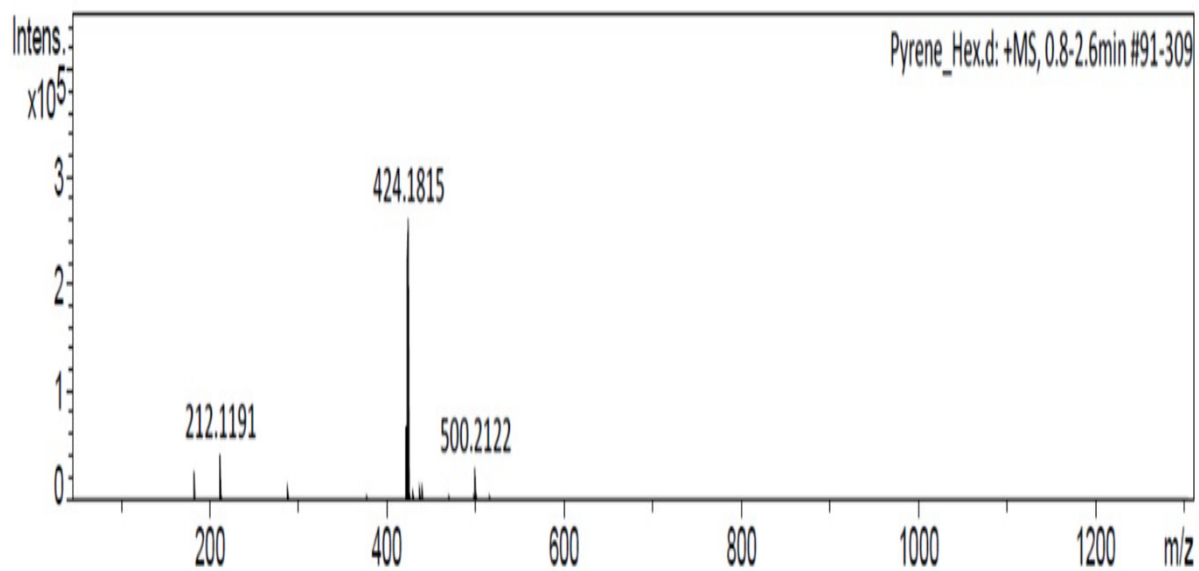
**Figure S1.** HR-Mass spectrum of bpy ligand in methanol.



**Figure S2.**  $^1\text{H}$  NMR spectrum of bpy ligand in  $\text{CDCl}_3$

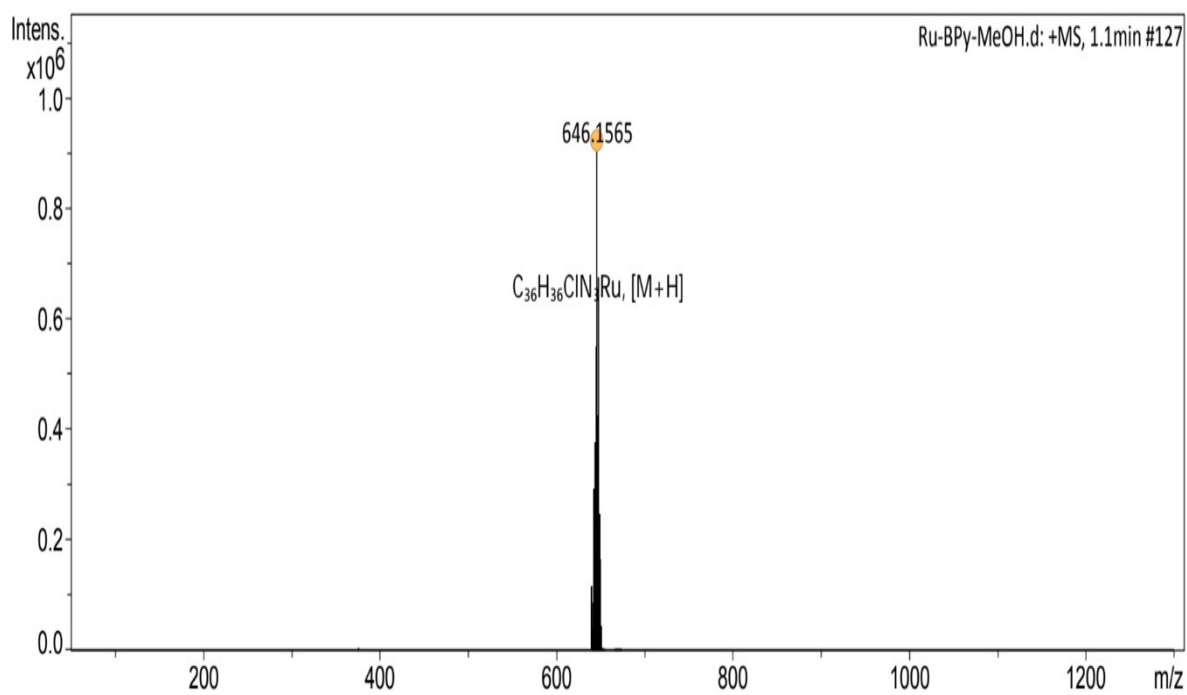


**Figure S3.**  $^{13}\text{C}$  NMR spectrum of bpy ligand in  $\text{CDCl}_3$ .



**Figure S4.** HR-Mass spectrum of pyn in acetonitrile.





**Figure S7.** HR-Mass spectrum of Ru-bpy(1) complex in methanol.

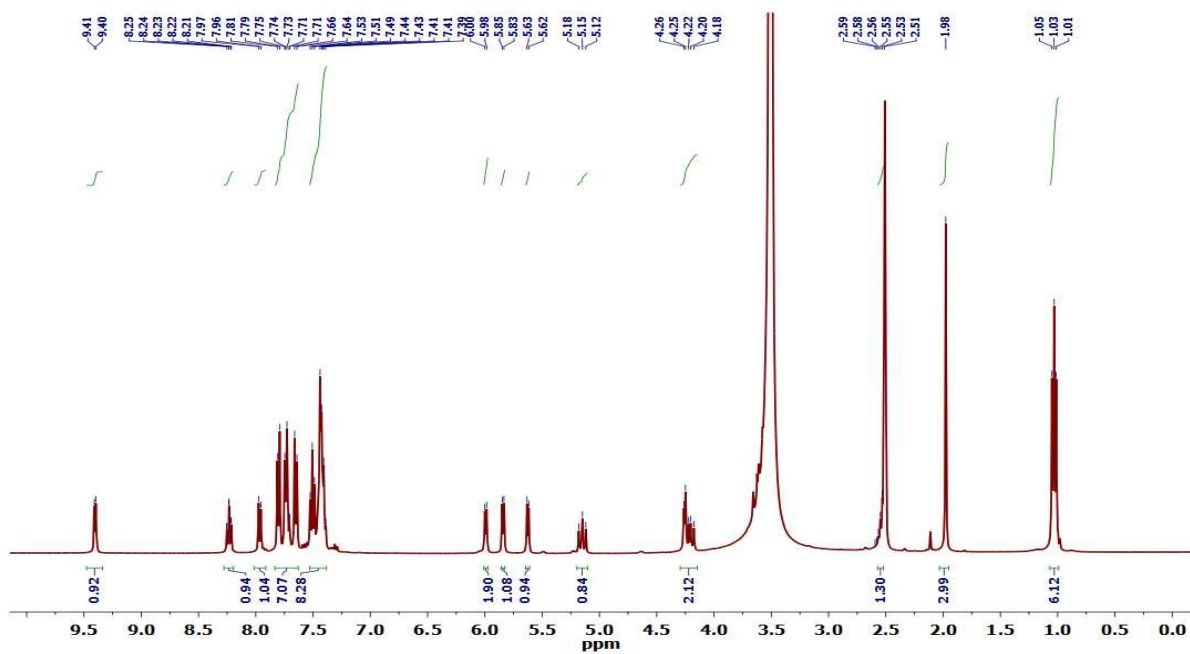
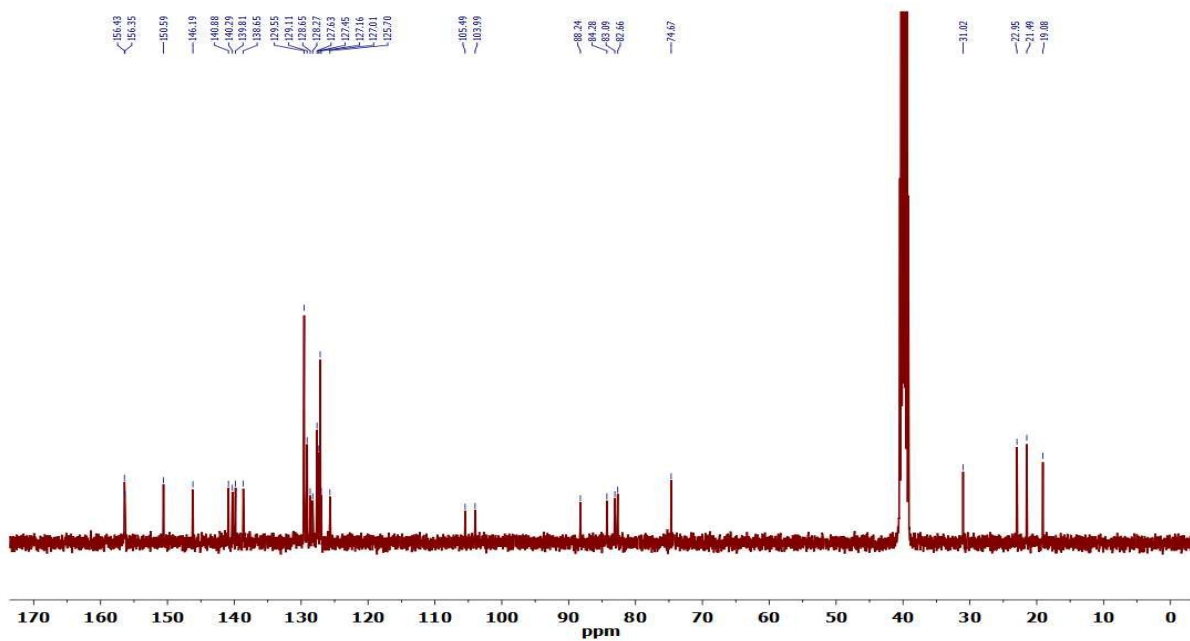
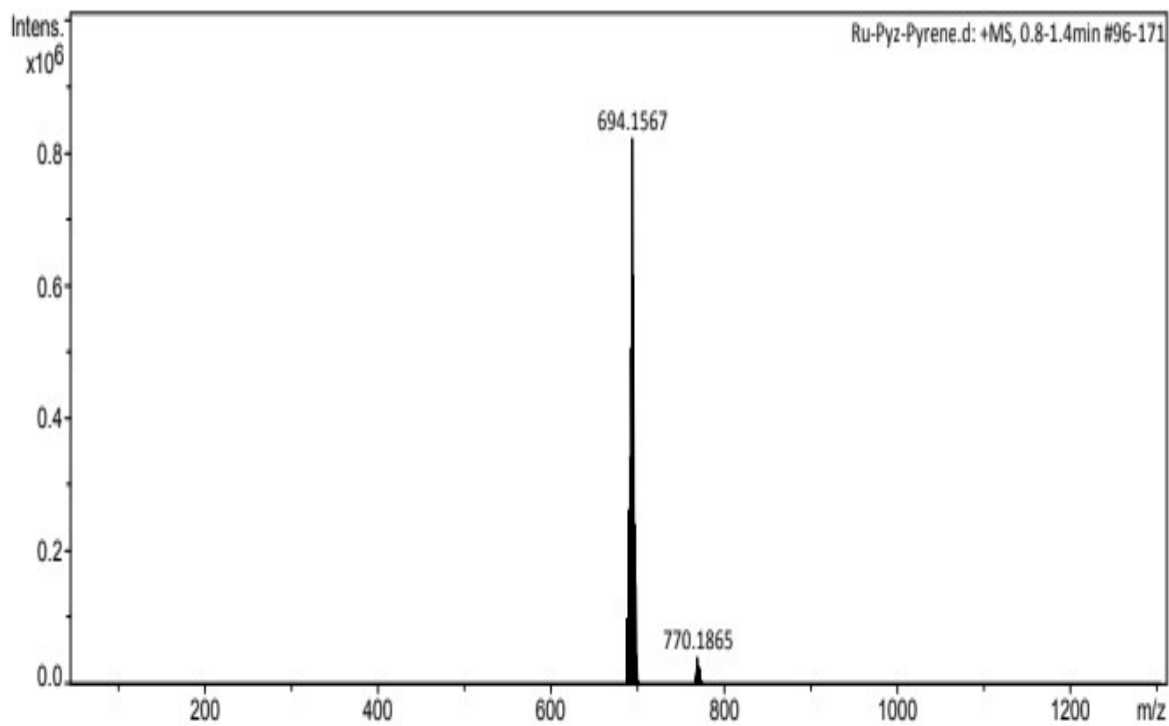


Figure S8.  $^1\text{H}$  NMR spectrum of Ru-bpy(1) complex in  $\text{DMSO-d}_6$ .



**Figure S9.**  $^{13}\text{C}$  NMR spectrum of Ru-bpy(1) complex in DMSO- $\text{d}_6$ .



**Figure S10.** HR-Mass spectrum of Ru-pyn(2) complex in acetonitrile.



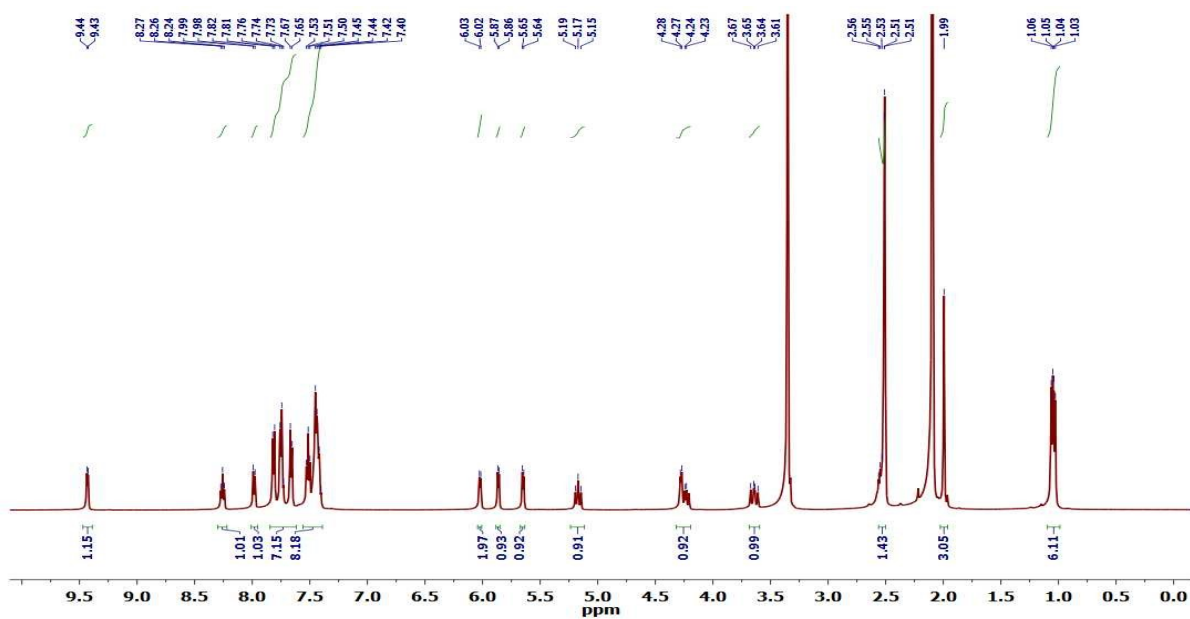


Figure S11.  $^1\text{H}$  NMR spectrum of Ru-pyn(2) complex in  $\text{DMSO-d}_6$ .

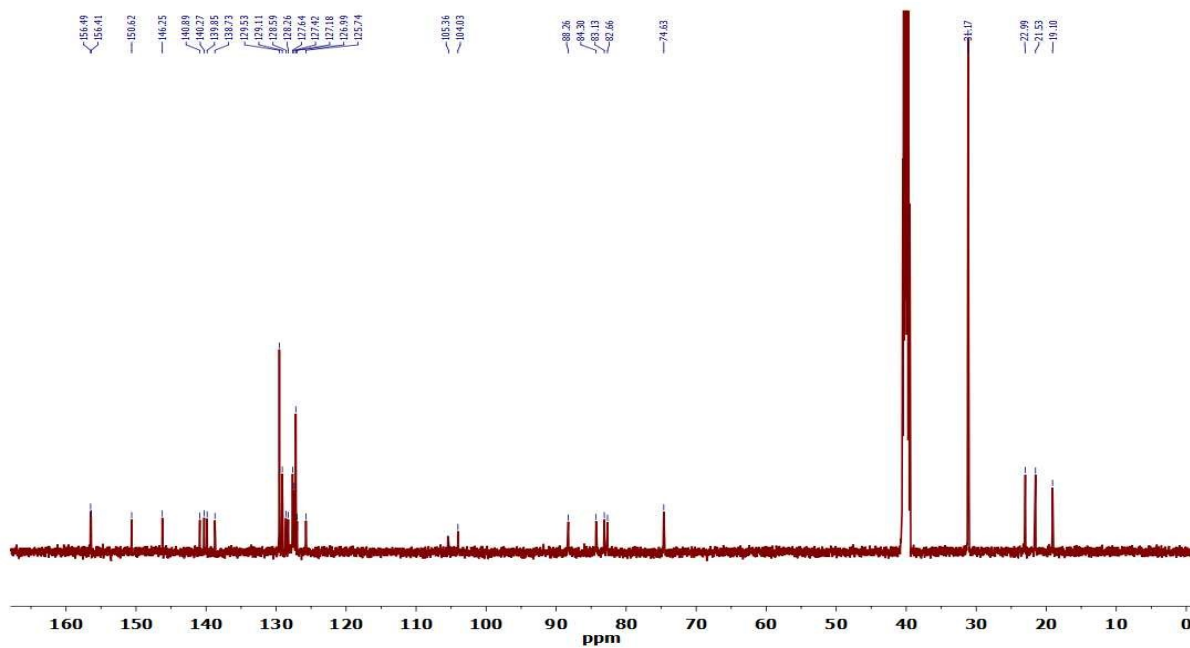
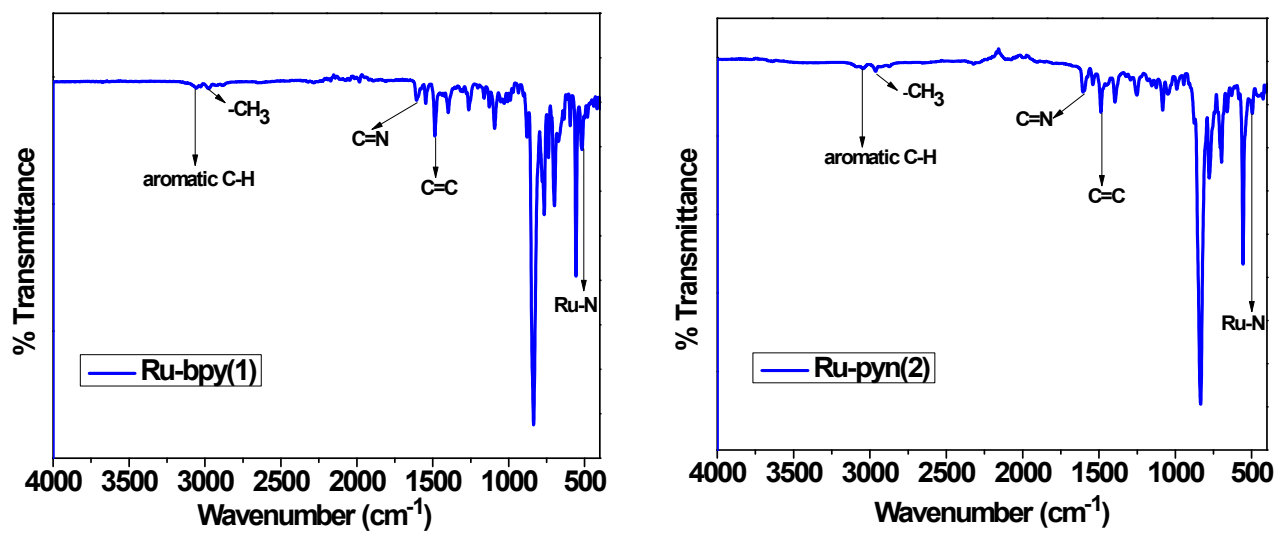
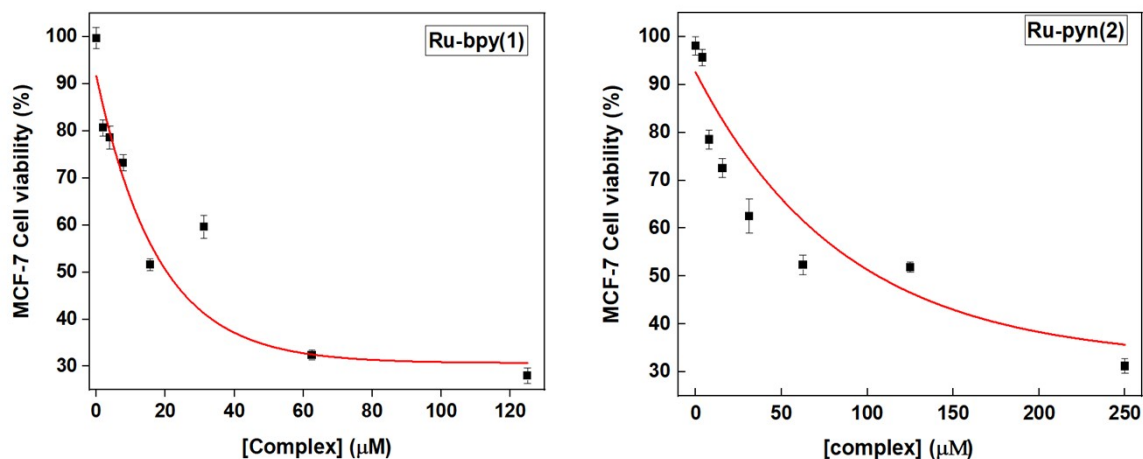


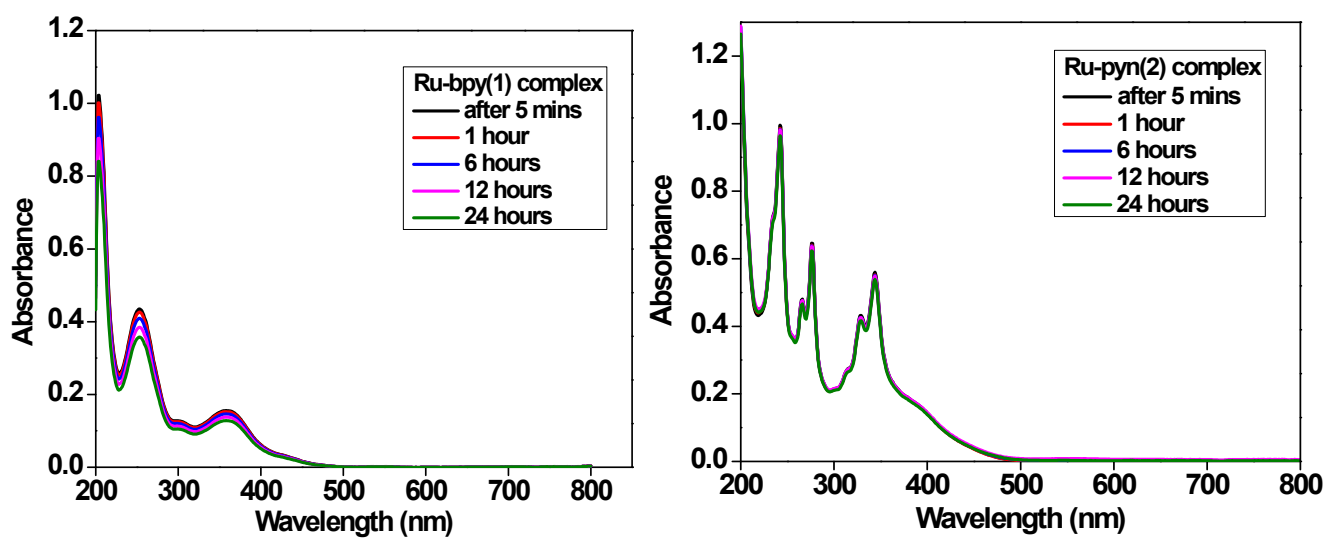
Figure S12.  $^{13}\text{C}$  NMR spectrum of Ru-pyn(2) complex in  $\text{DMSO d}_6$ .



**Figure S13.** FT-IR spectra of Ru-bpy(1) and Ru-pyn(2) complexes.



**Figure S14.** Dose responsive curves for cytotoxicity of Ru-bpy(1) and Ru-pyn(2) complexes against MCF-7 breast cancer cell lines after 24 h incubation.



**Figure S15.** Stability studies of the Ru-bpy(1) and Ru-pyn(2) complex in 1% DMSO/10 mM PBS (pH = 7.2) solution at various time intervals up to 24 h.