

Supplementary material

Synthesis, Chemical characterization, PARP Inhibition, DNA Binding and Cellular Uptake of Novel Ruthenium(II)-Arene Complexes Bearing Benzamide Derivatives in Human Breast Cancer Cells

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Figure S1 – S11 ¹H NMR and ¹³C NMR spectra of synthesized complexes recorded in DMSO-d₆ and CD₃OD-d₄

Figure S12. Representative cell survival curves of (A) HCC1937, (B) MDA-MB-231, (C) MDA-MB-453, (D) MCF-7, and (E) MDA-MB-361 cells after 72 h of treatment with ruthenium complexes (C1-C4), ruthenium(II)-arenes (C5, C6), and ligands (L1, L2).

Figure S13. Photomicrographs of (A) MCF-7 and (B) MDA-MB-231 control cells and cells exposed to 400 μM and 800 μM ruthenium complexes (C1-C4) for 72 h. Cells were observed under the bright field inverted microscope, using the 80x/0.2 objective.

Figure S14. Flow cytometric analysis of the HCC1937 cell cycle phase distribution in response to the 72 h treatment with 500 μM ruthenium complexes (C1-C4), ruthenium(II)-arenes (C5, C6), and ligands (L1, L2), or with 5 μM and 10 μM CDDP. Histograms presenting DNA content (x-axis: PI fluorescence) versus cell counts (y-axis) are representative of at least two independent experiments.

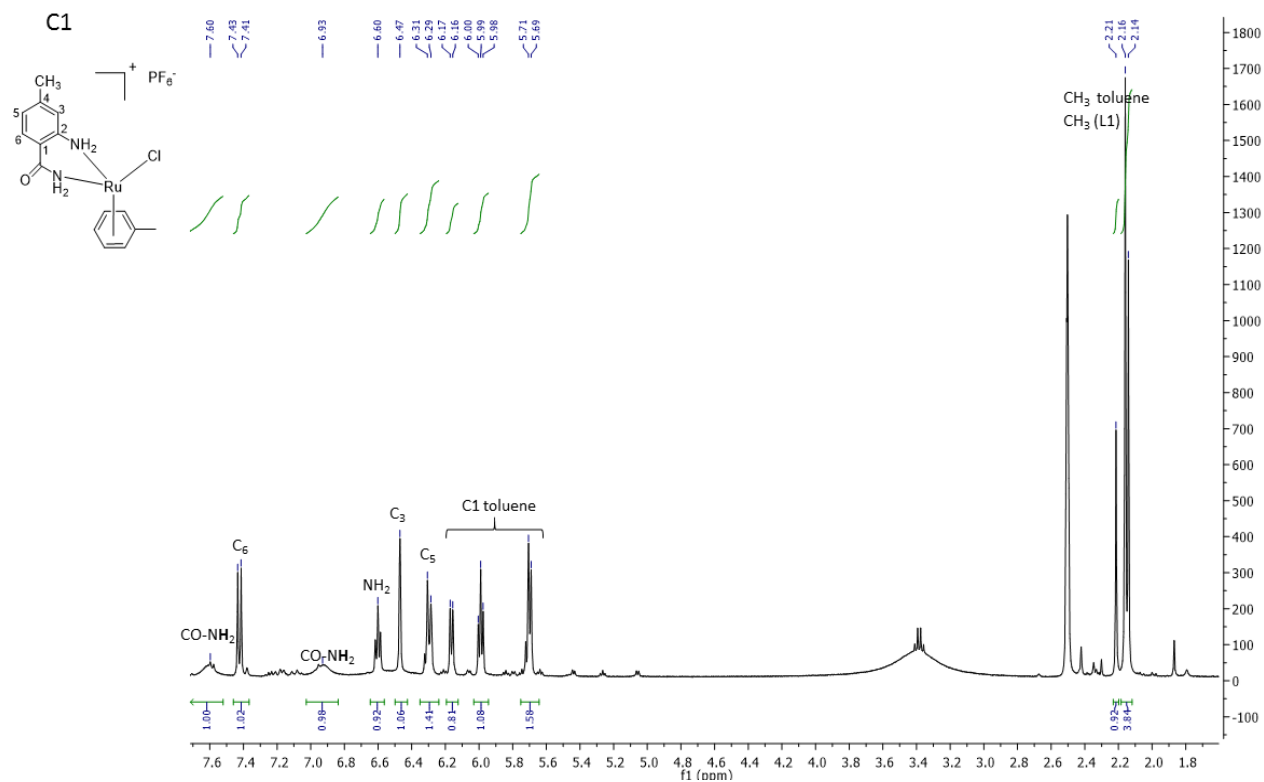


Figure S1. ¹H NMR spectrum of complex C1 recorded in DMSO-d₆

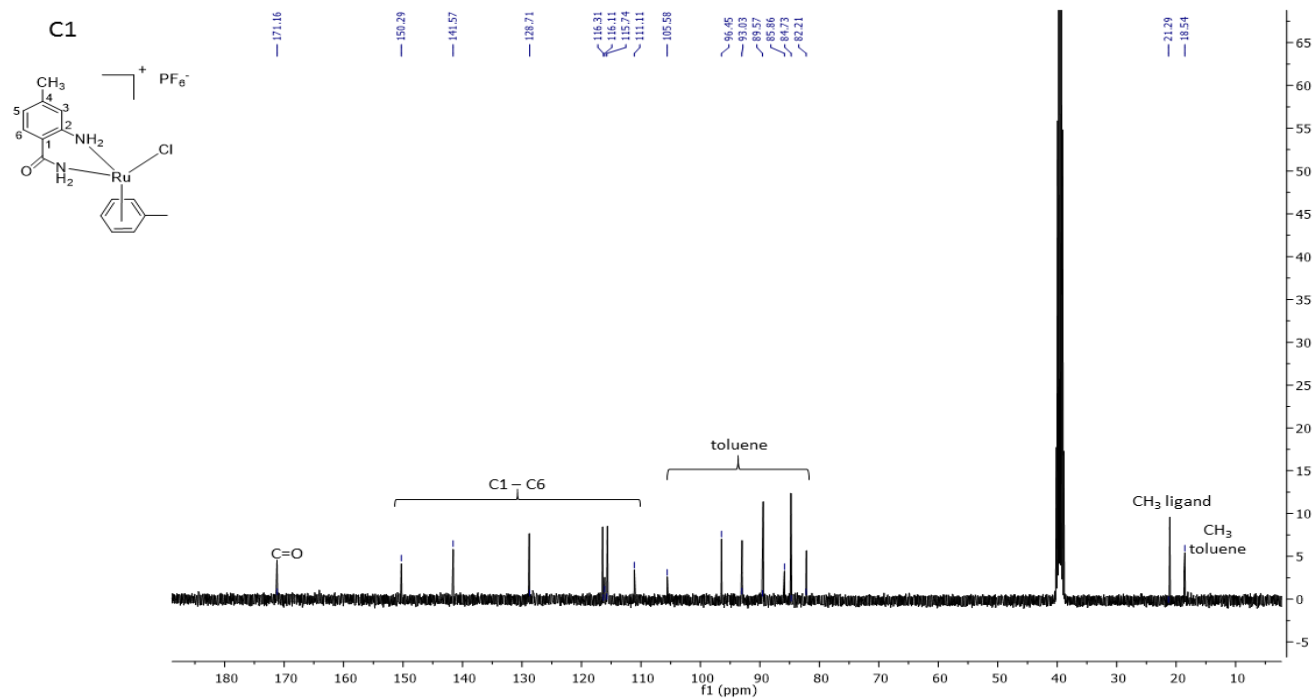


Figure S2. ¹³C NMR spectrum of complex C1 recorded in DMSO-d₆

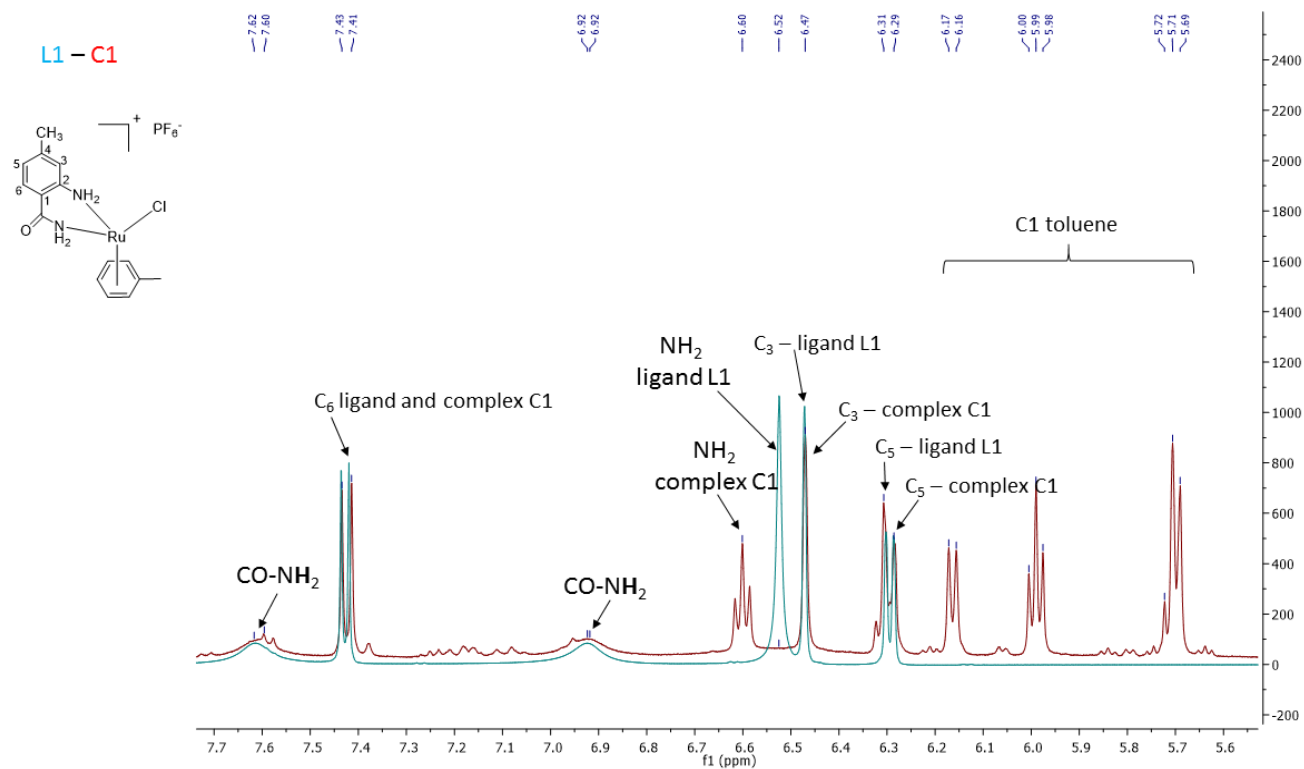


Figure S3. ^1H NMR spectra of aromatic part of C1 (red line) overlapped with the ligand L1 (blue line), recorded in DMSO-d_6 .

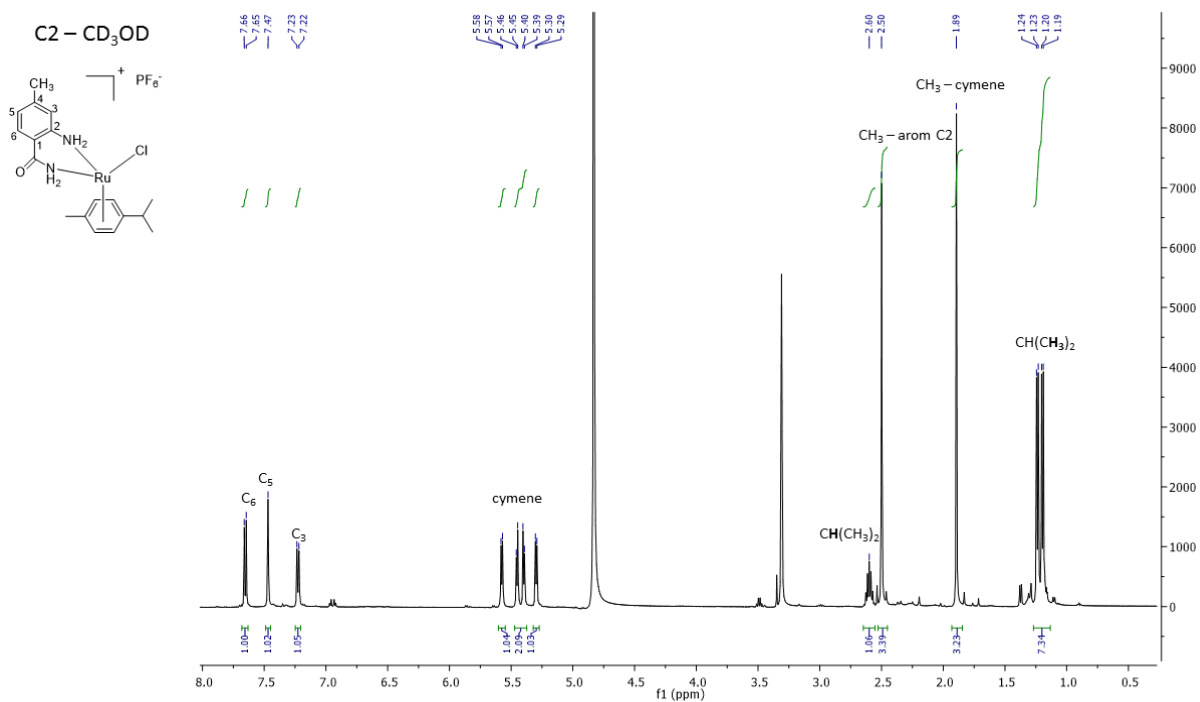


Figure S4. ^1H NMR spectrum of complex C2 recorded in $\text{CD}_3\text{OD-d}_4$.

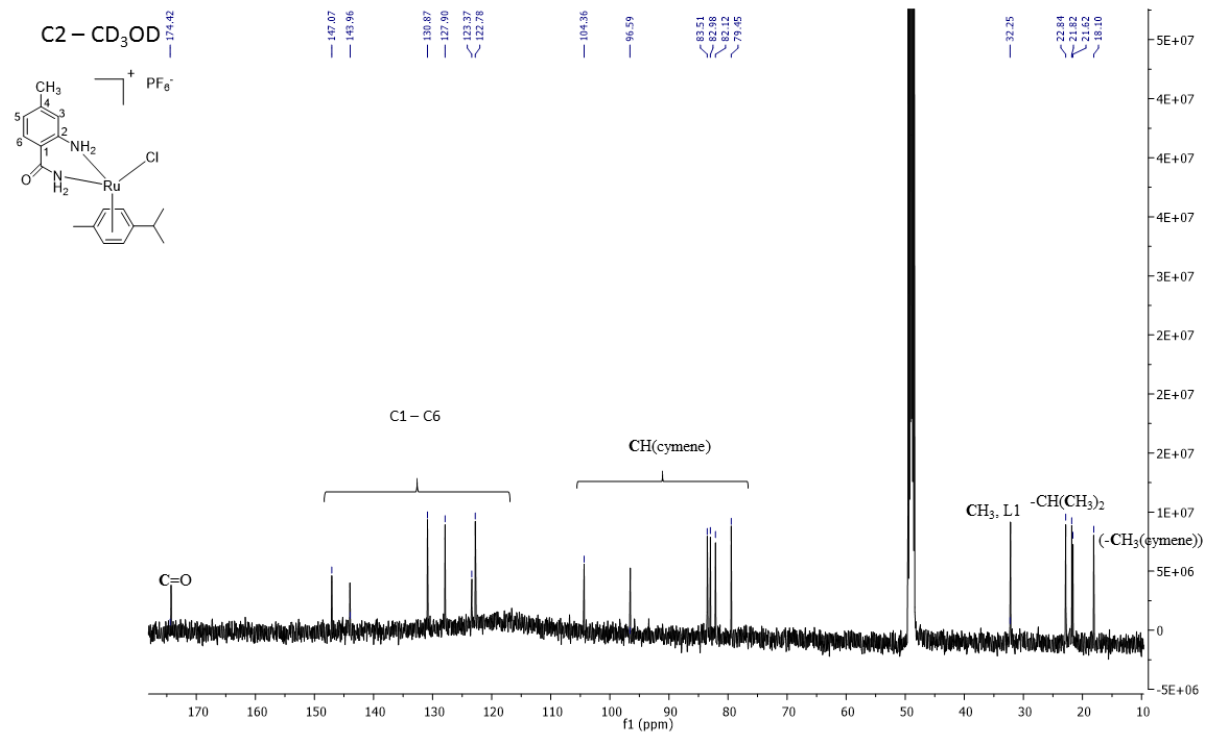


Figure S5. ¹³C NMR spectrum of complex C2 recorded in CD₃OD-d₄

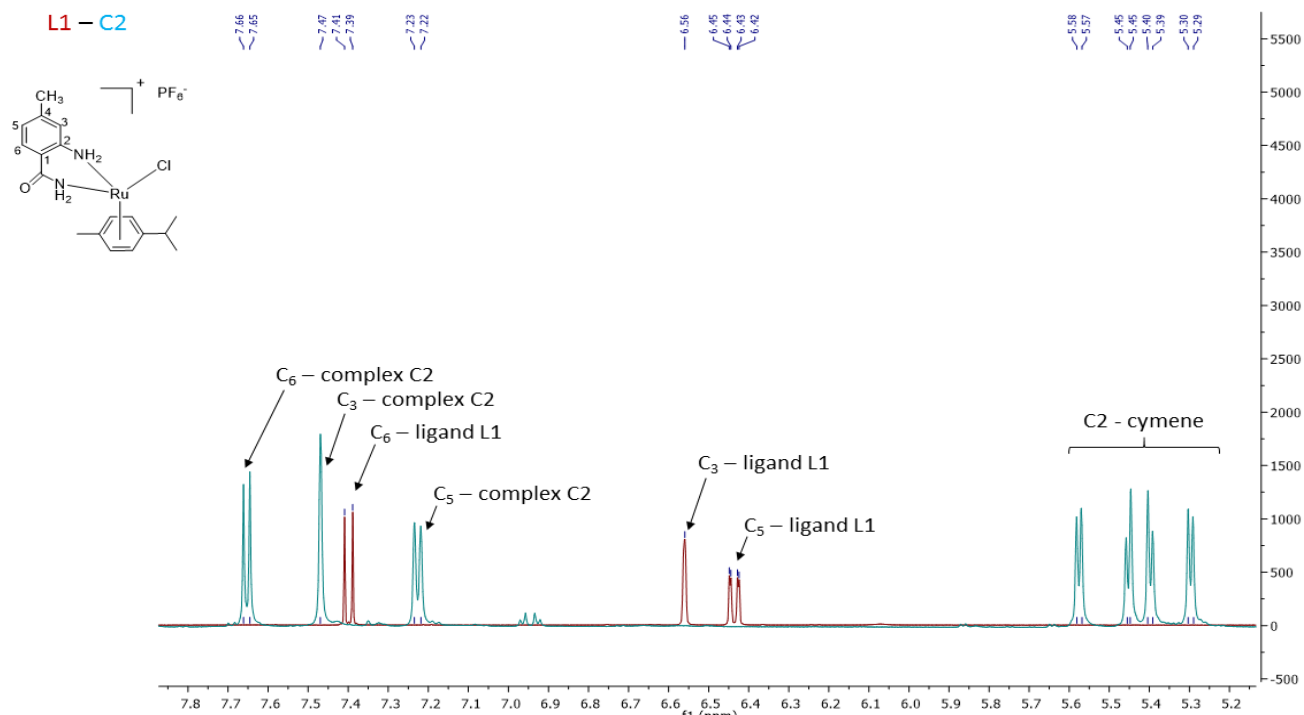
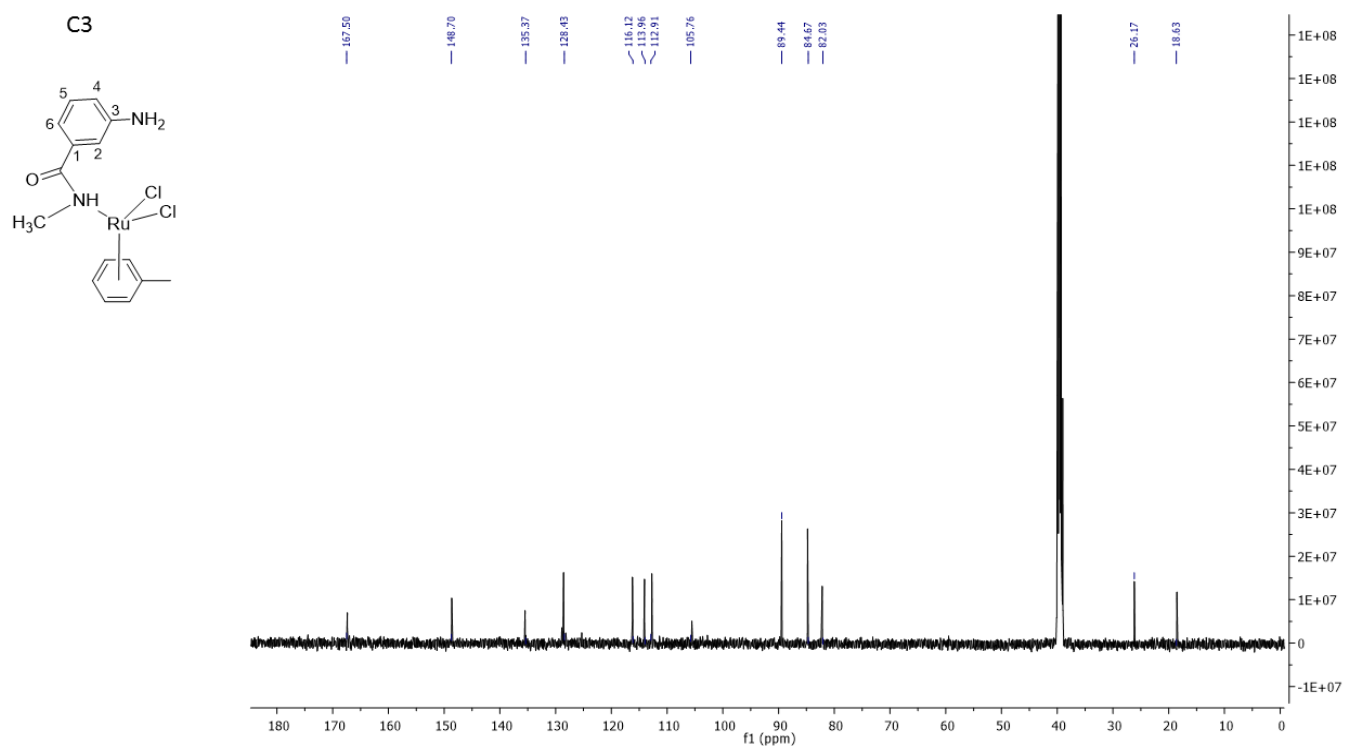
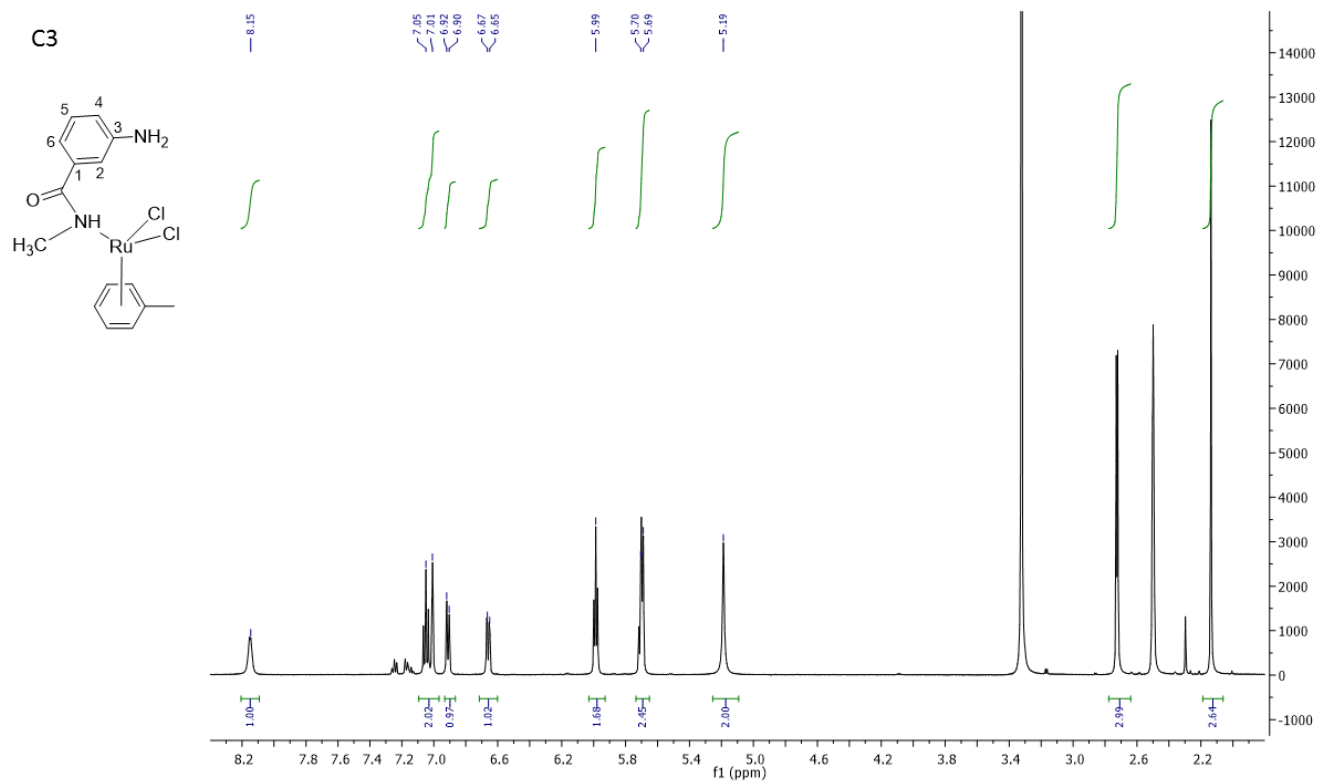


Figure S6. ¹H NMR spectra of aromatic part of C2 (blue line) overlapped with the ligand L1 (red line), recorded in CD₃OD-d₄.



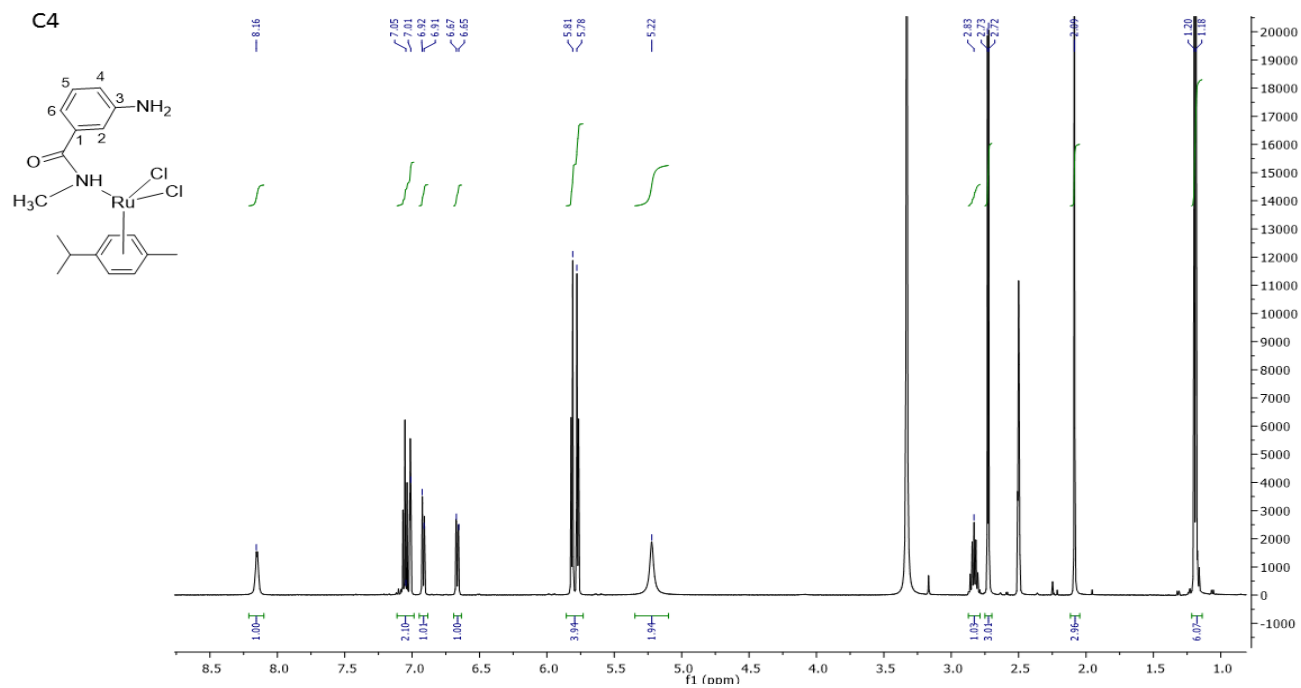


Figure S9. ^1H NMR spectrum of complex C4 recorded in DMSO-d_6

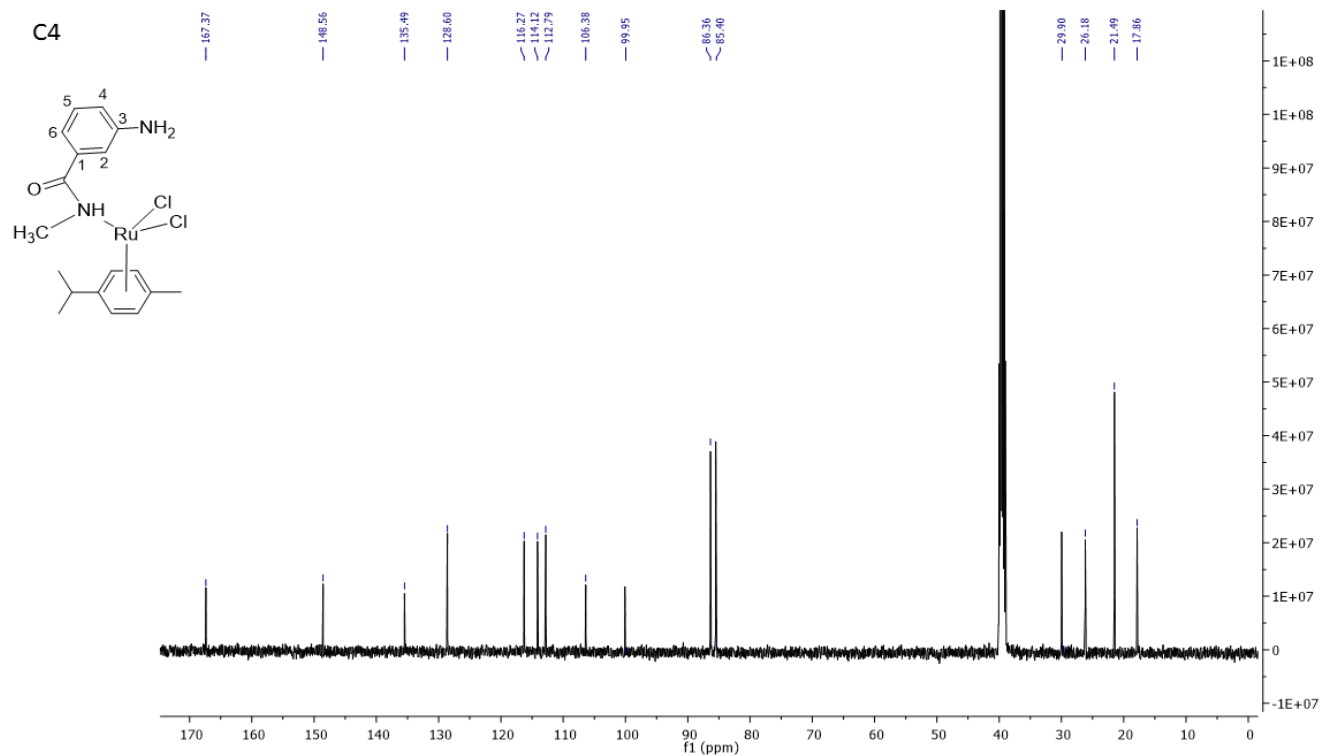


Figure S10. ^{13}C NMR spectrum of complex C4 recorded in DMSO-d_6

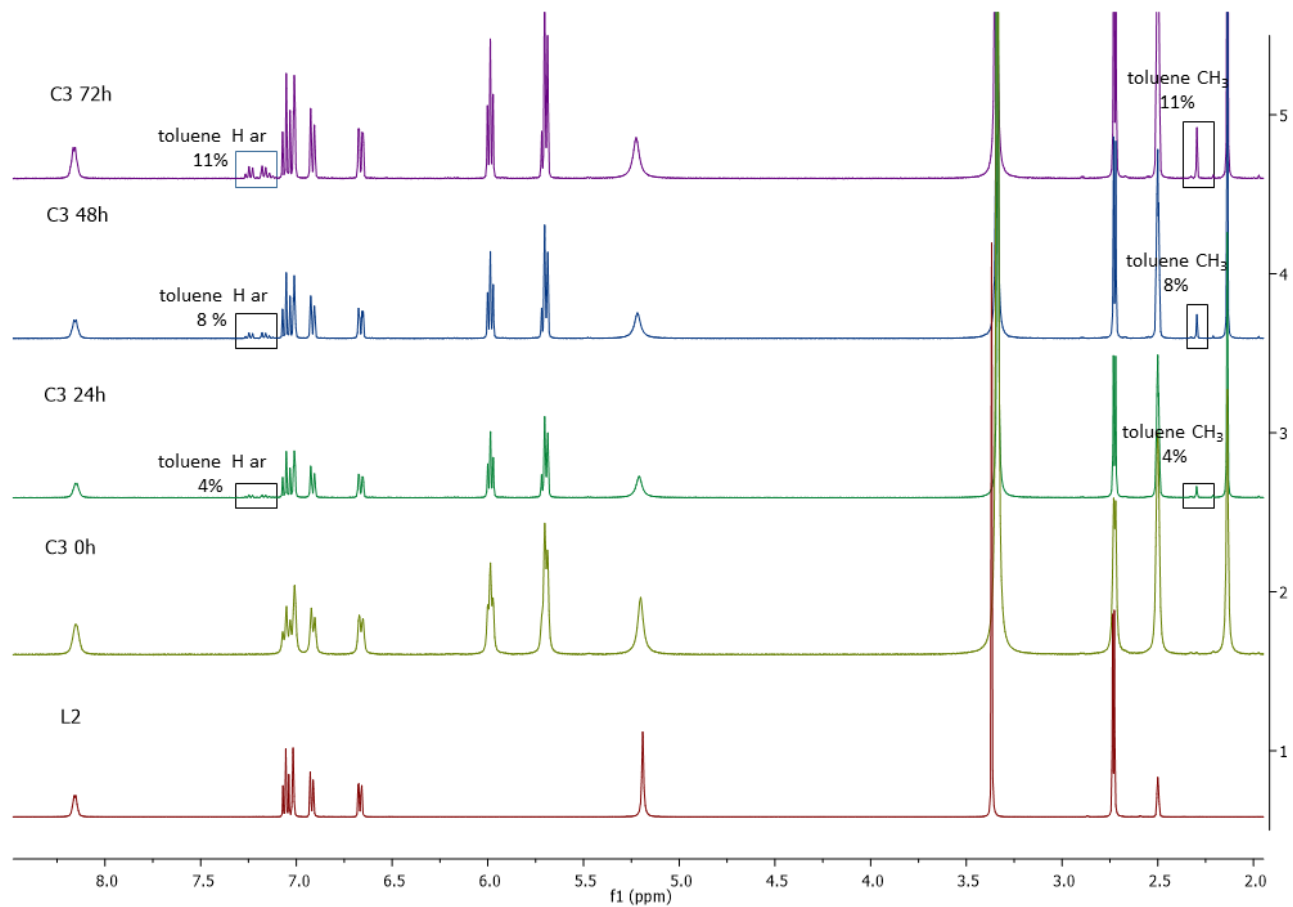


Figure S11. Time dependence ^1H NMR spectrum of complex C3 recorded in DMSO-d_6

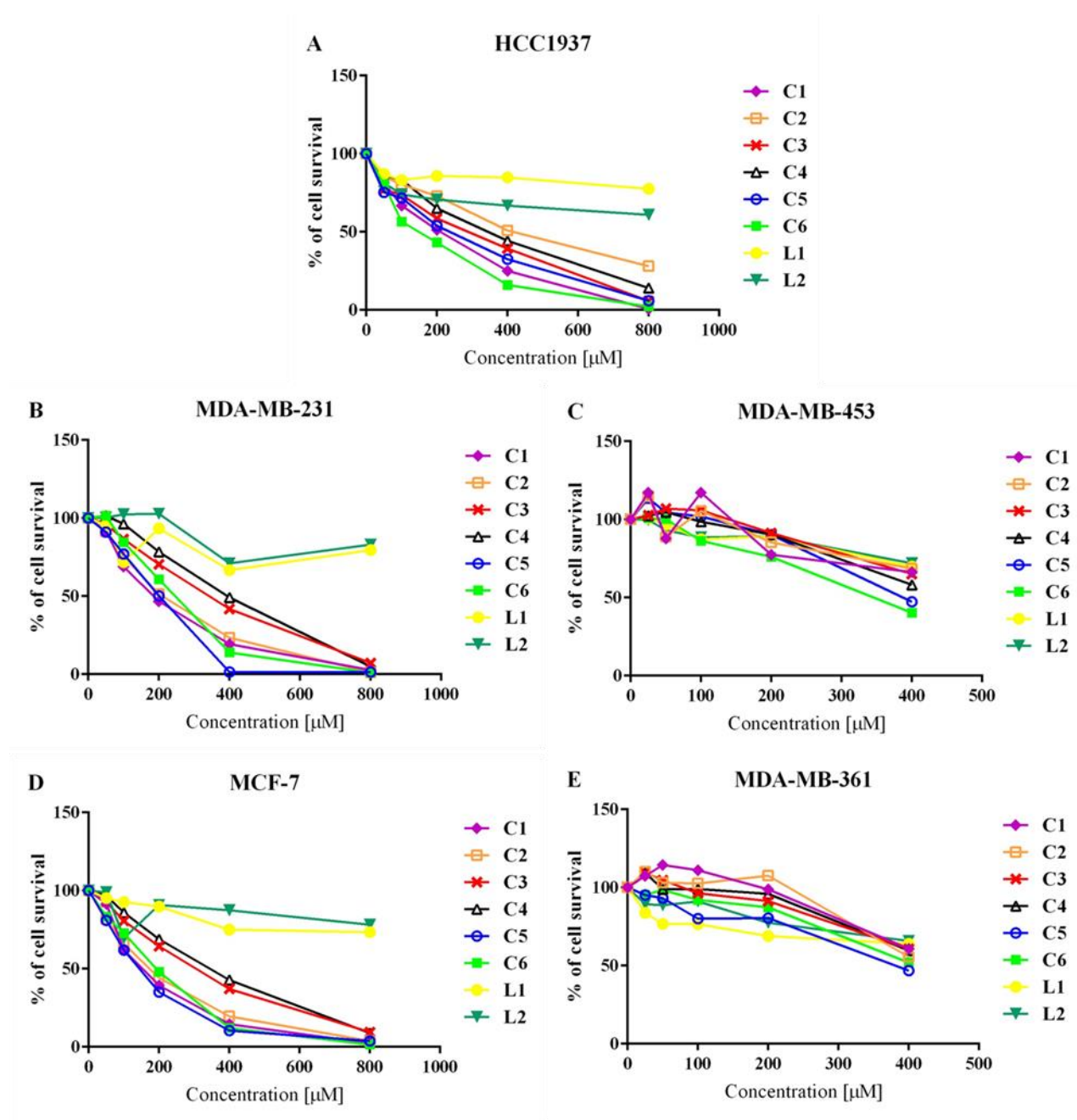


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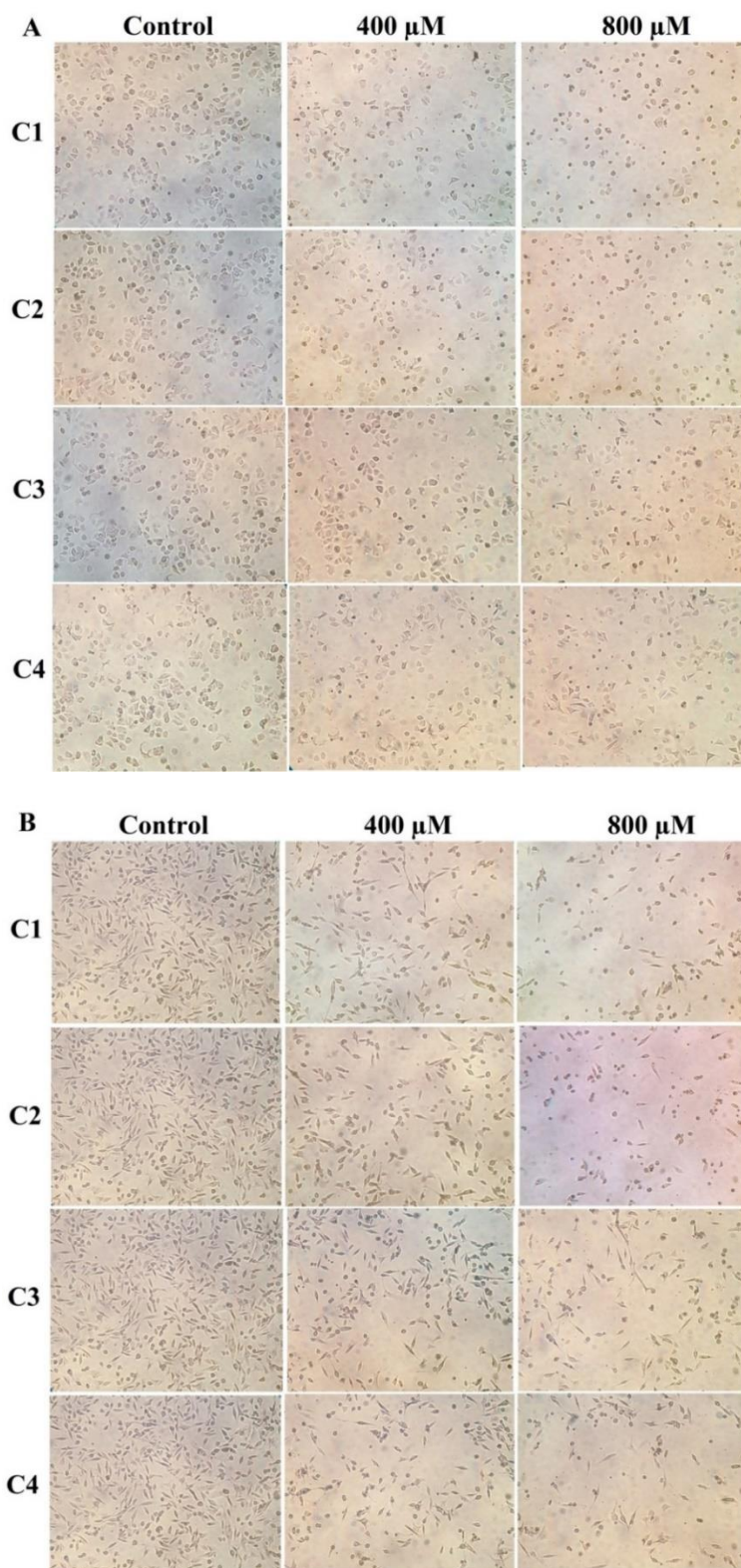


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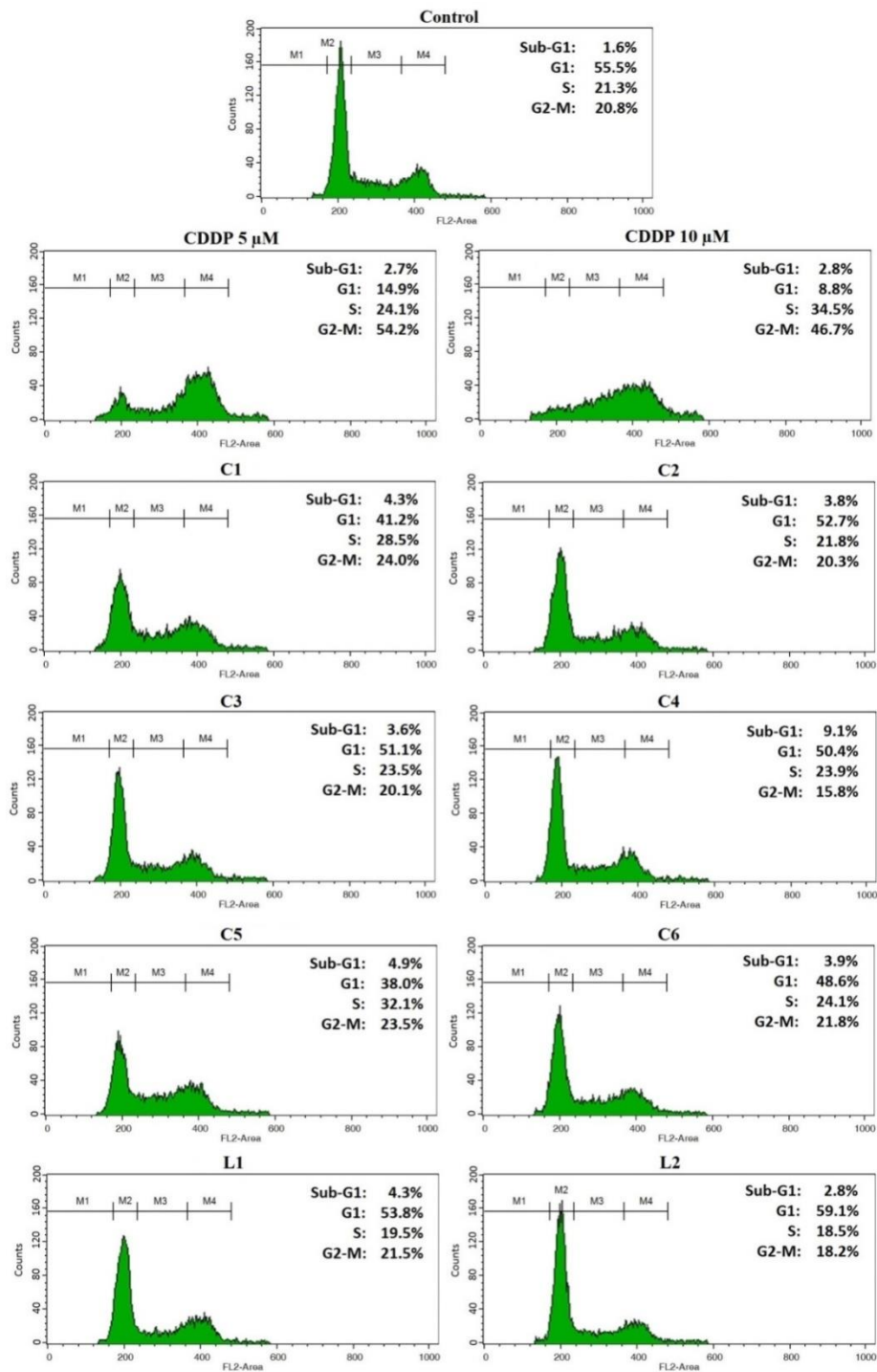


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