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Supporting Information

Ruthenium(II) Polypyridyl Complexes Containing Simple Dioxo Ligands: a Structure-Activity Relationship Study Shows the Importance of the Charge

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Figure S1. Time-dependent UV-Vis spectra of complexes **3 – 8** (1 mM) in DMSO.

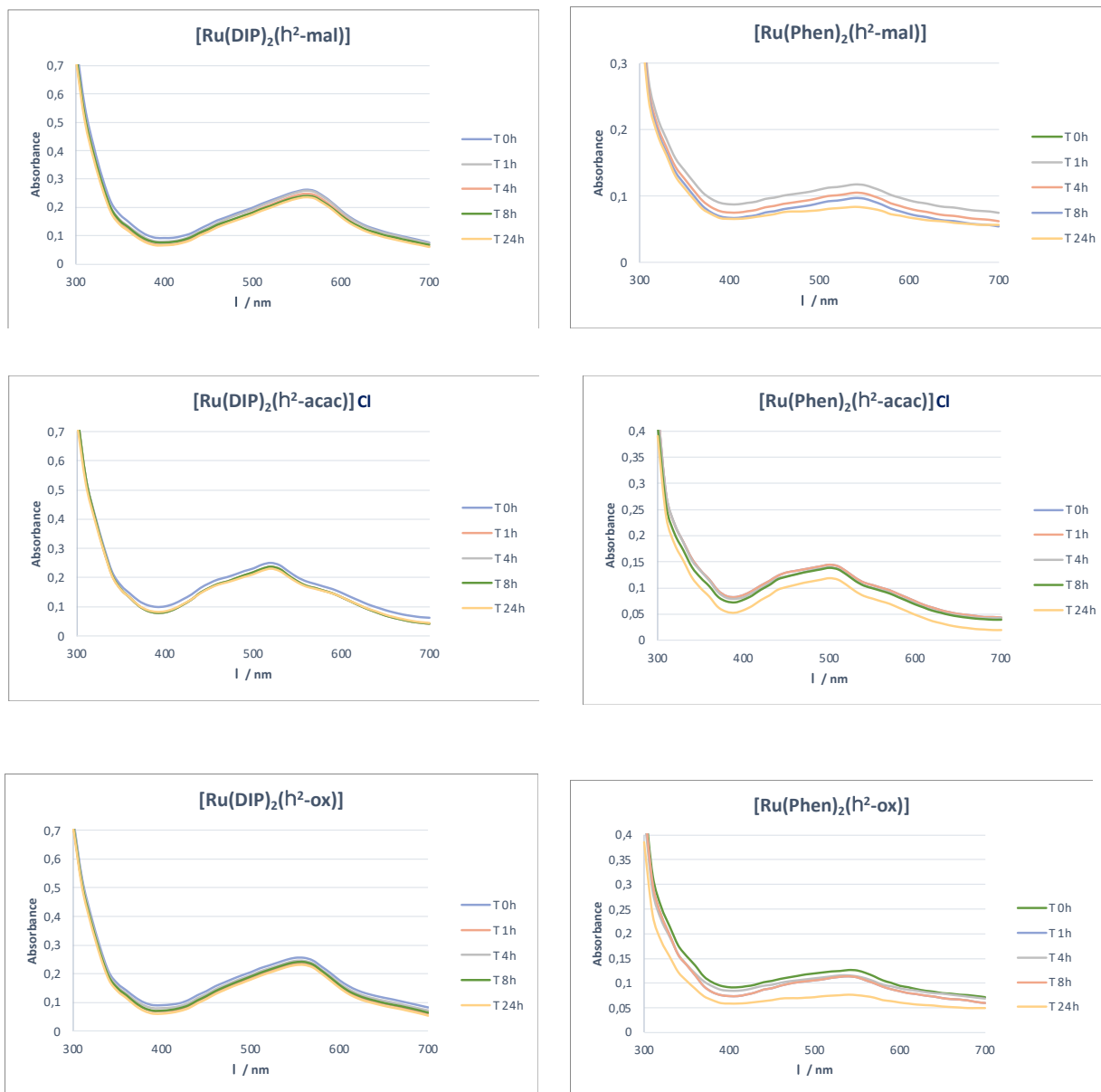


Figure S2. Time-dependent UV-Vis spectra of complexes **3 – 8** (1 mM) in DMEM cell culture medium.

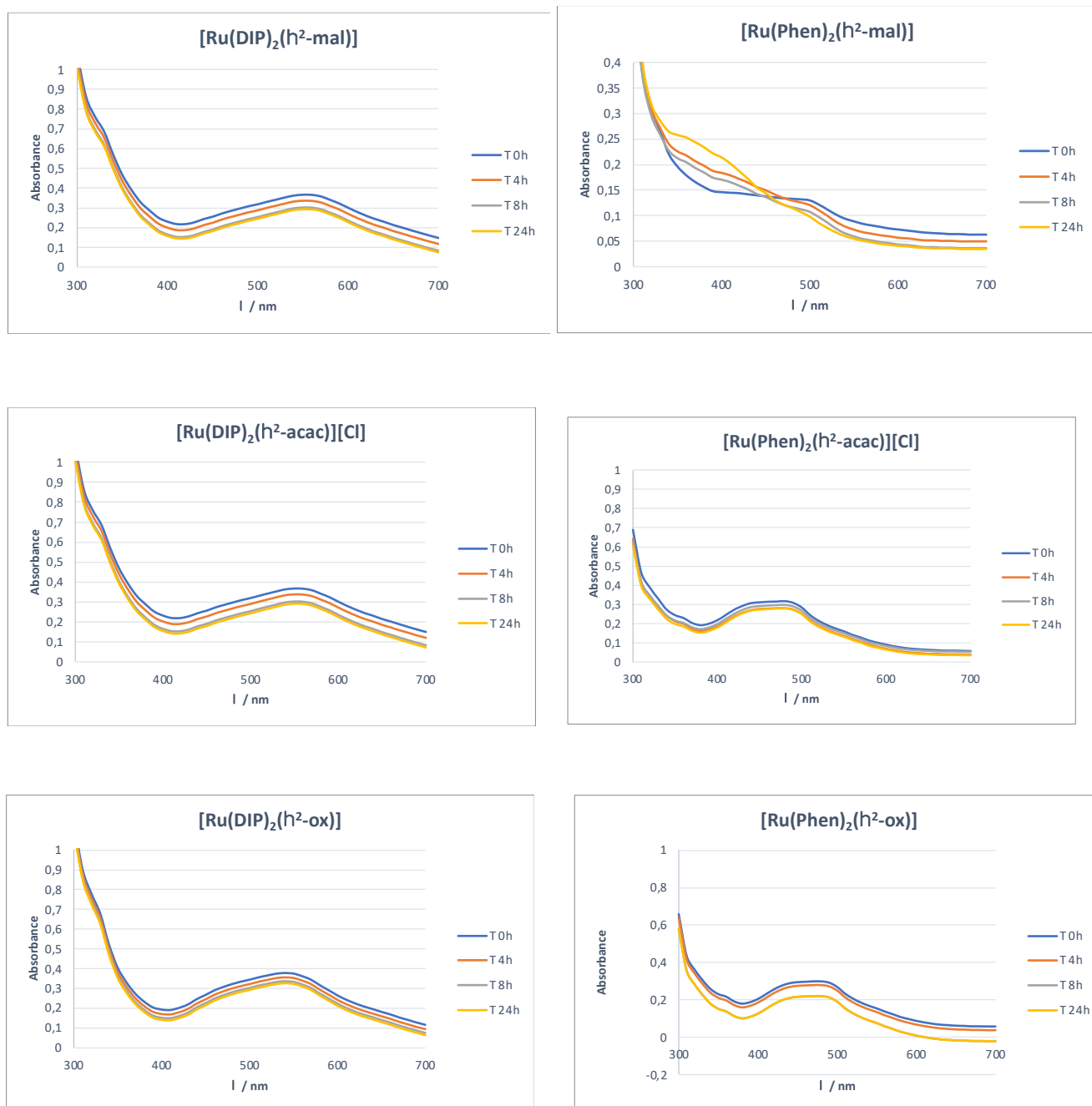


Figure S3. Time-dependent UV-Vis spectra of complexes **3 – 8** (1 mM) in Human Plasma.

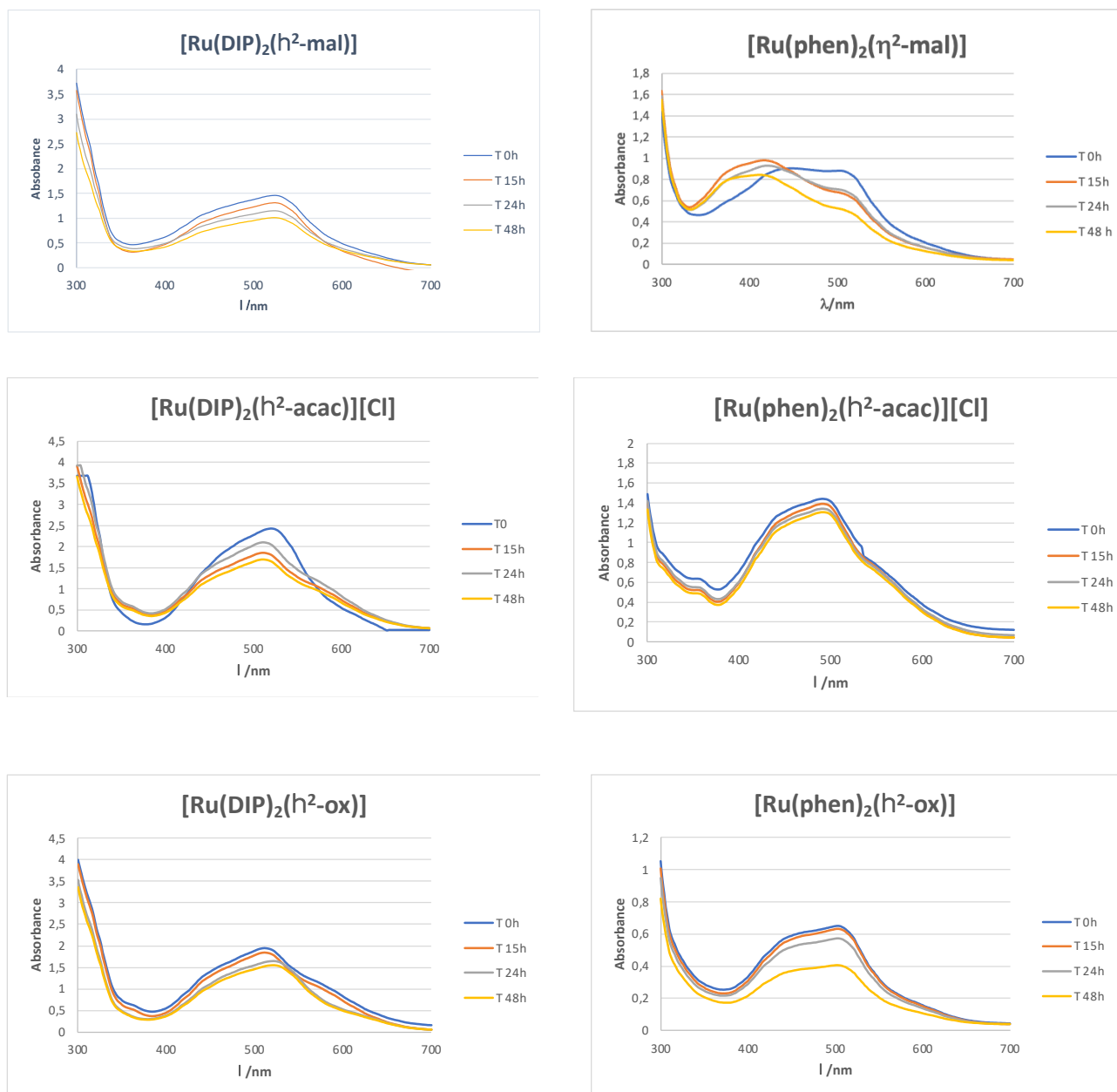
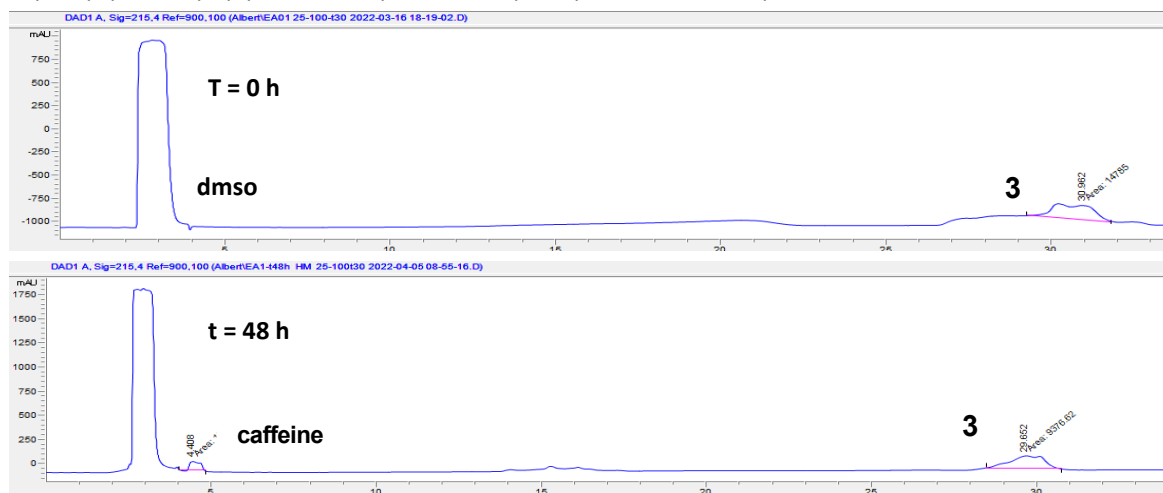
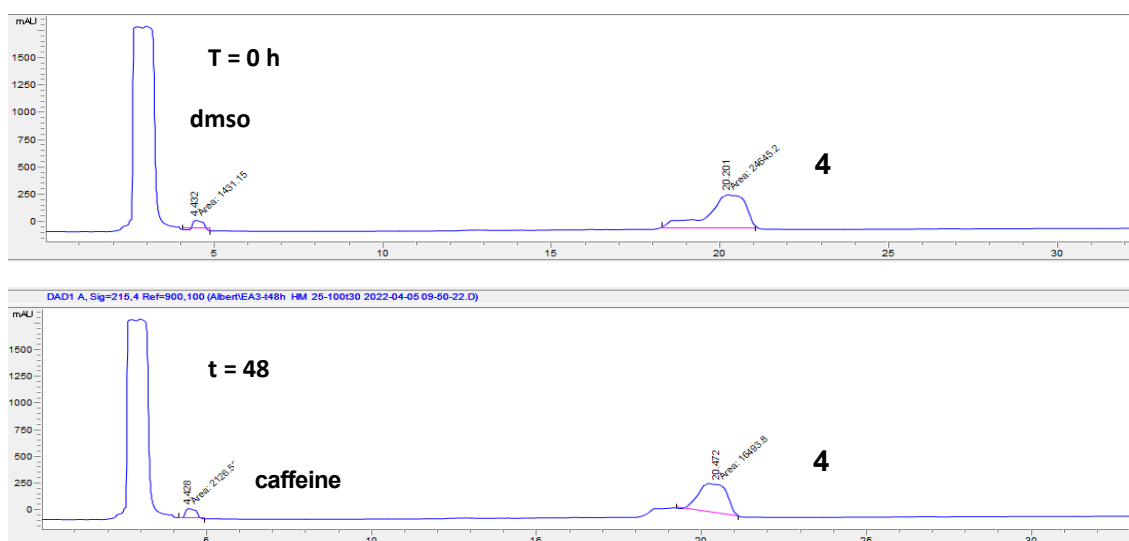


Figure S4. Reversed-phase HPLC traces at 215nm for the stability experiments in Human Plasma of complexes **3** – **5** in the presence of Caffeine (internal standard). Gradient: 25% ACN in H₂O to 100% ACN in 30 min.

[Ru(DIP)₂(η²-mal)] (**3**) Caffeine (Rt = 4 min) , **3** (Rt = 30.96 min),



[Ru(DIP)₂(η²-acac)][Cl] (**4**) Caffeine (Rt = 4 min) , **4** (Rt = 20.20 min)



[Ru(DIP)₂(η²-ox)] (**5**) Caffeine (Rt = 4 min) , **5** (Rt = 29.10 min)

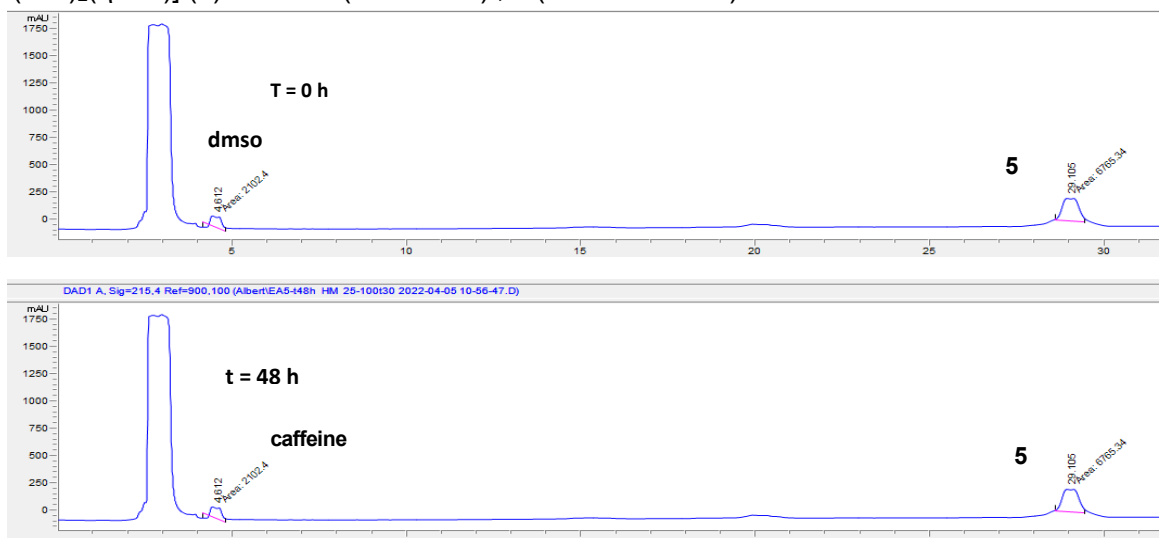
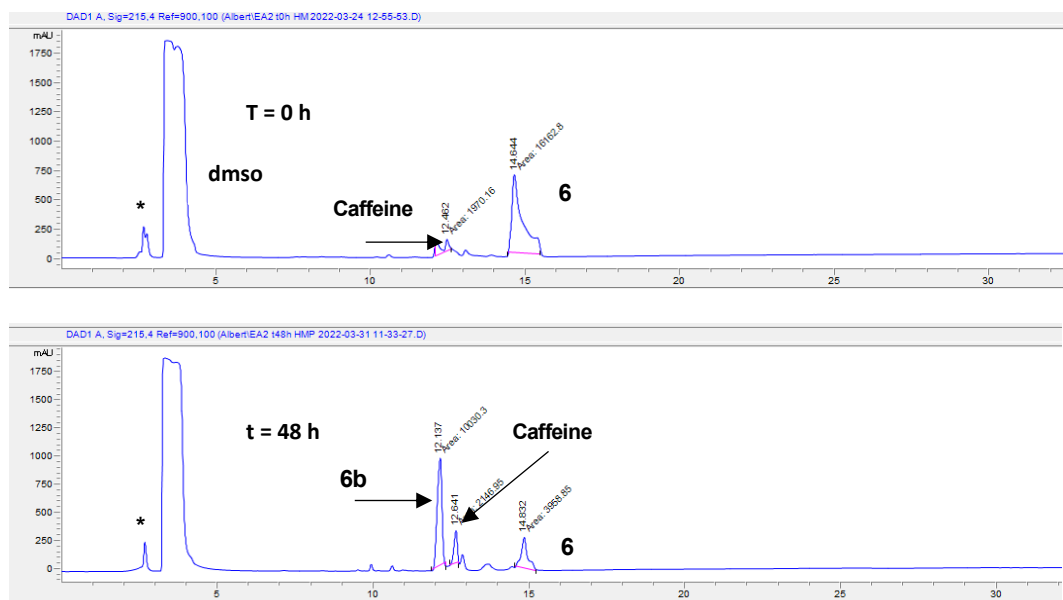
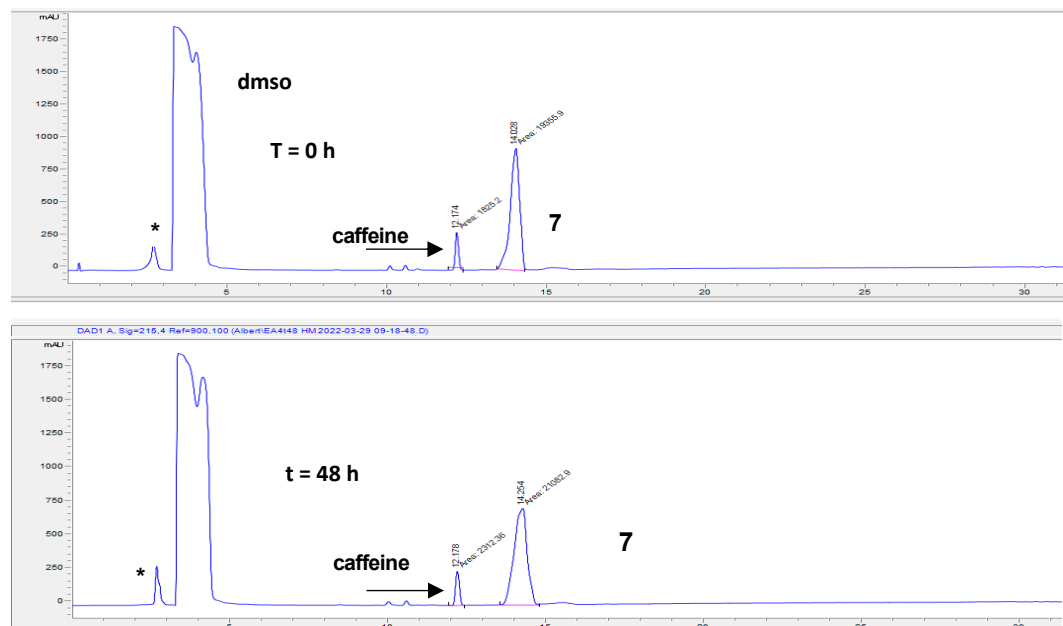


Figure S5. Reversed-phase HPLC traces at 215nm for the stability experiments in Human Plasma of complexes **6** – **8** in the presence of caffeine (internal standard). Gradient: 5% ACN in H₂O to 100% ACN in 30 min.

[Ru(phen)₂(η²-mal)] (**6**) *injection peak ; Caffeine (Rt = 12.4 min) , **6** (Rt = 14.64 min), **6b** (Rt = 12.1 min)



[Ru(phxen)₂(η²-acac)][Cl] (**7**) : *injection peak ; Caffeine (Rt = 12.17 min) , **7** (Rt = 14.02 min)



[Ru(phen)₂(η²-ox)] (**8**) : *injection peak ; ^ intrinsic of **8** , Caffeine (Rt = 12.18 min) , **8** (Rt = 15.08 min)

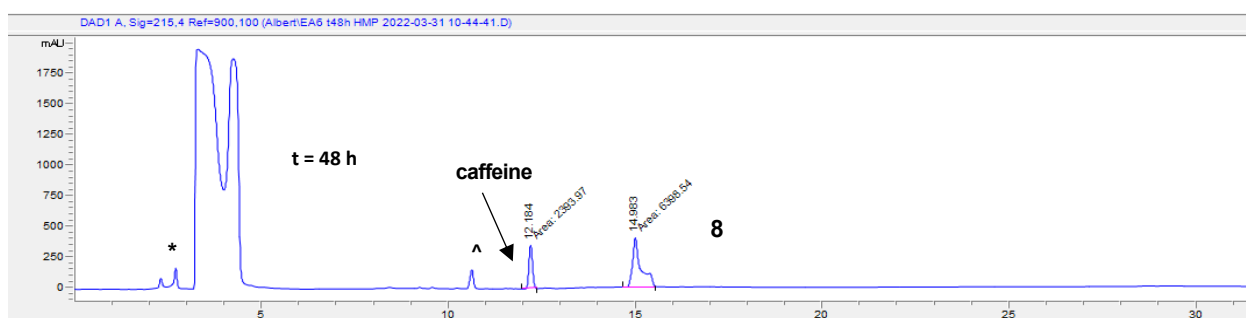
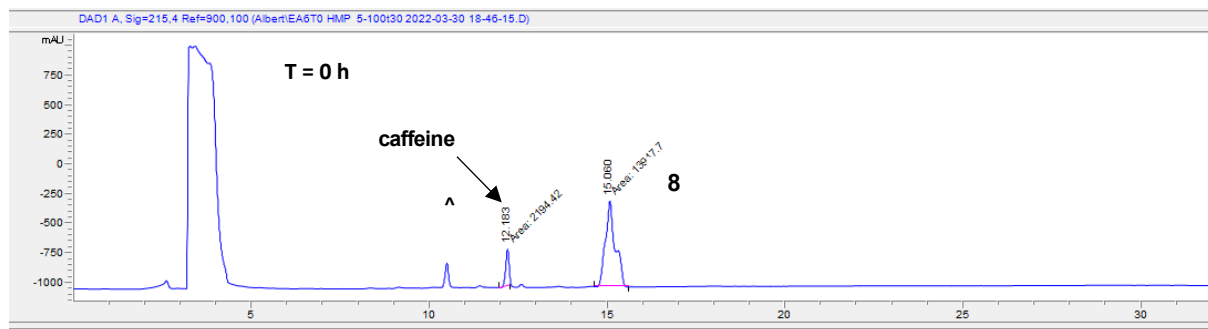


Figure S6. Fluorometric cell viability assay of compounds 3 – 5 and 7 in CT26 cell line.

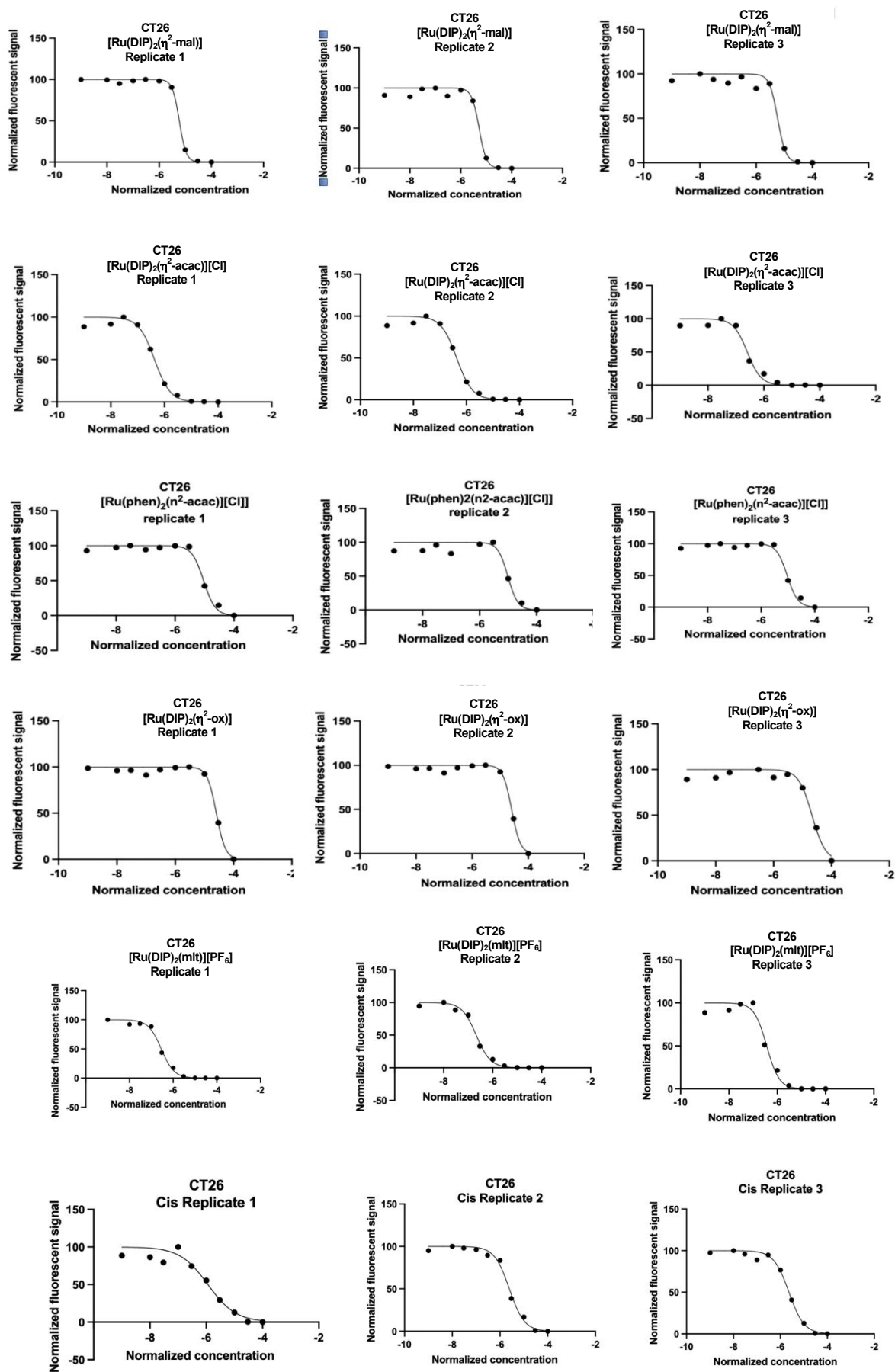


Figure S7. Fluorometric cell viability assay of compounds **3** – **5** (plus **1** and cisplatin) in PC3 cell line.

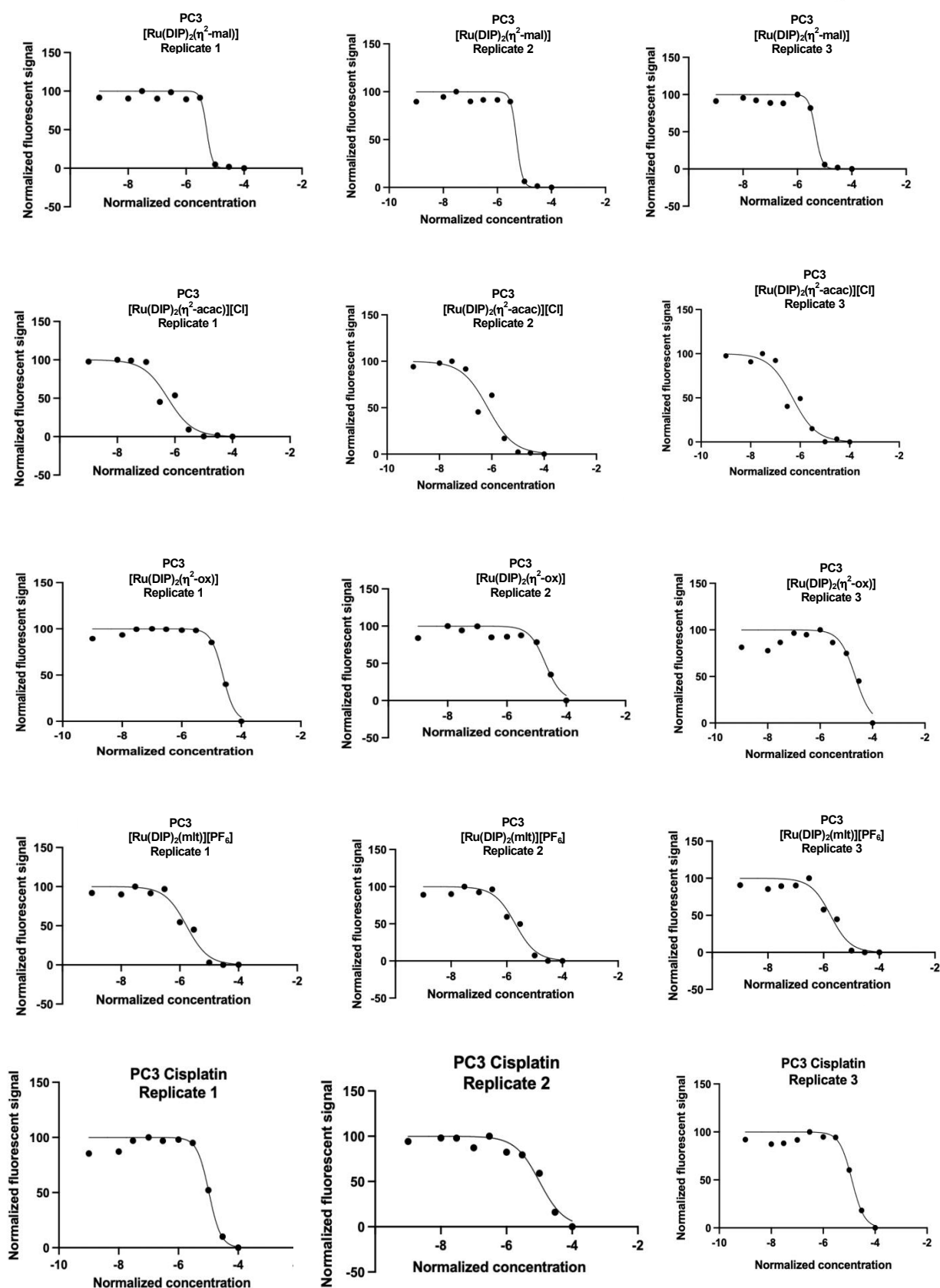


Figure S8. Fluorometric cell viability assay 3 – 5 (plus 1 and cisplatin) in RPE-1 cell line.

