Supporting Information

GAME OF LIGANDS: TUNING PHOTODYNAMIC ACTIVITY OF P(V) PORPHYRINS IN AQUEOUS MEDIA

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Figure S1. Normalized UV-Vis spectrum of complex **1b-3b, 1c-3c, 2d** in EtOH. 2

Figure S2. ^{1}H NMR spectrum ($CDCl_3$, 600 MHz) of **2d**. 2

Figure S3. ^{13}C NMR spectrum ($CDCl_3$, 151 MHz) of **2d**. 3

Figure S4. ^{31}P NMR spectrum ($CDCl_3$, 162 MHz) of **2d**. 3

Figure S5. ESI HRMS spectra of **2d**: experimental *(top)*, calculated *(bottom)*.....4

Figure S6. ^{1}H NMR spectrum ($CDCl_3$, 600 MHz) of **3c**. 4

Figure S7. ^{13}C NMR spectrum ($CDCl_3$, 151 MHz) of **3c.** 5

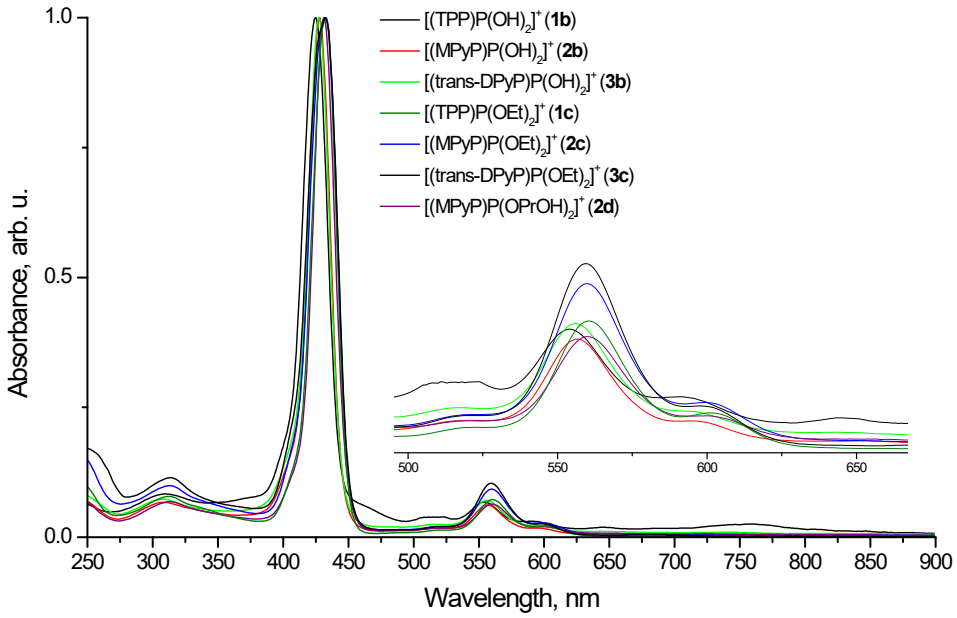
Figure S8. ^{31}P NMR spectrum ($CDCl_3$, 162 MHz) of **3c**. 5

Figure S9. ESI HRMS spectra of **3c**: experimental *(top)*, calculated *(bottom)*. 6

Figure S10. Emission spectra of complexes **1b-3b, 1c-3c, 2d** in PBS (black) and A-549 cell lysate (after incubation this complexes in cells medium) without FBS (light red) and in presence FBS (dark red). 6

Figure S11. Cell viability of human breast adenocarcinoma MCF-7 cells in dark and light (450 nm, 3.5 J/cm2) conditions, 72 h, MTT assay. Non-treated cells were taken as controls (100%).....7

Table S1. Fluorescence images of human lung adenocarcinoma A-549 cells incubated with 20 μM of tested compounds, 1 h incubation, excitation with 405 nm, 488 nm, 543 nm, and 640 nm. 8



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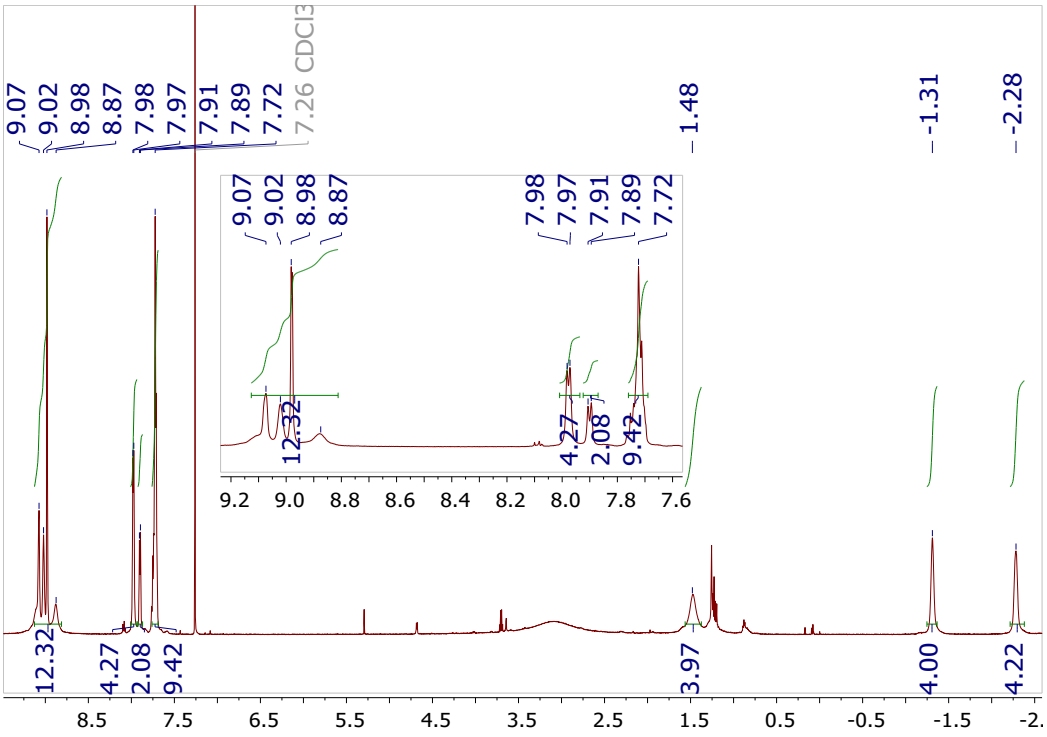


Figure S2. ^{1}H NMR spectrum ($CDCl_3$, 600 MHz) of **2d**.

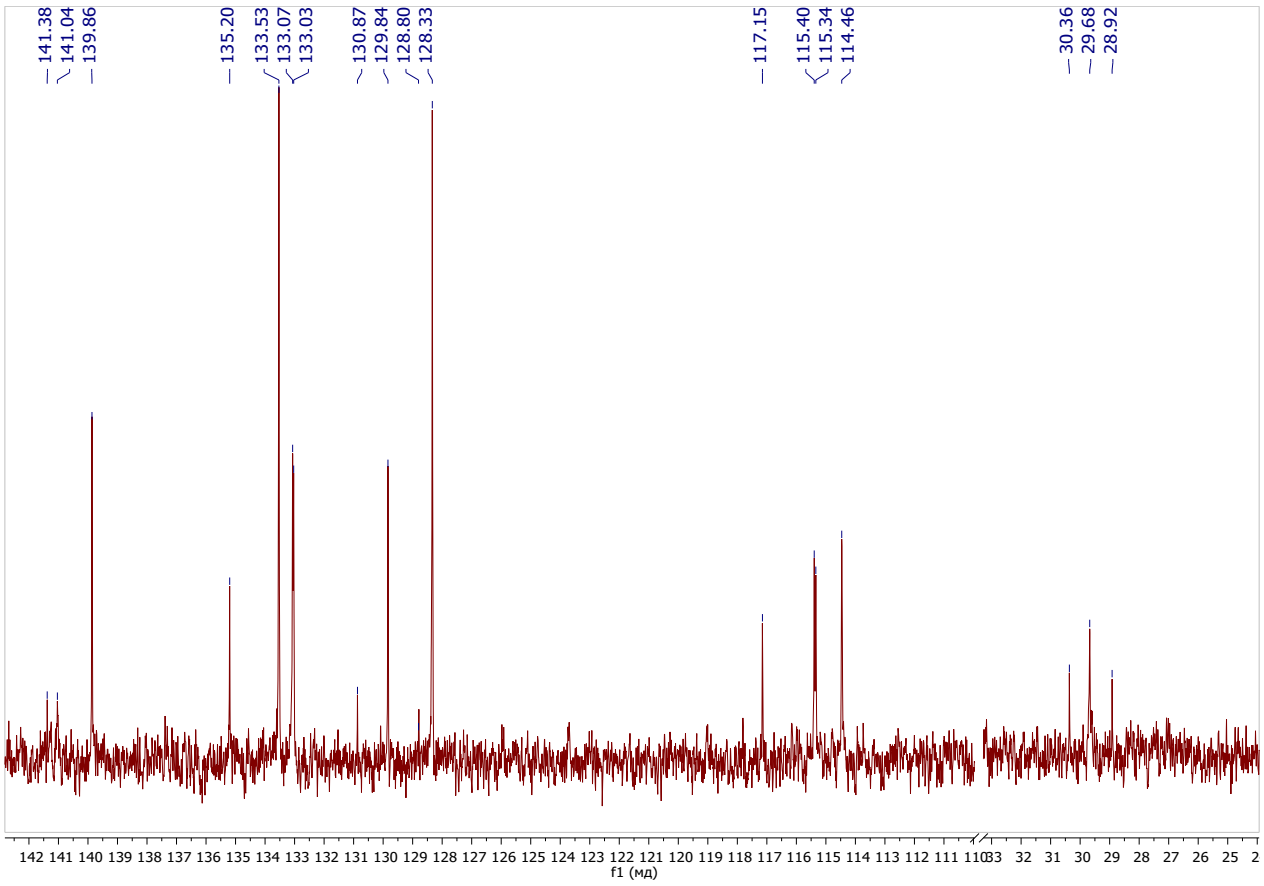


Figure S3. ^{13}C NMR spectrum ($CDCl_3$, 151 MHz) of **2d**.

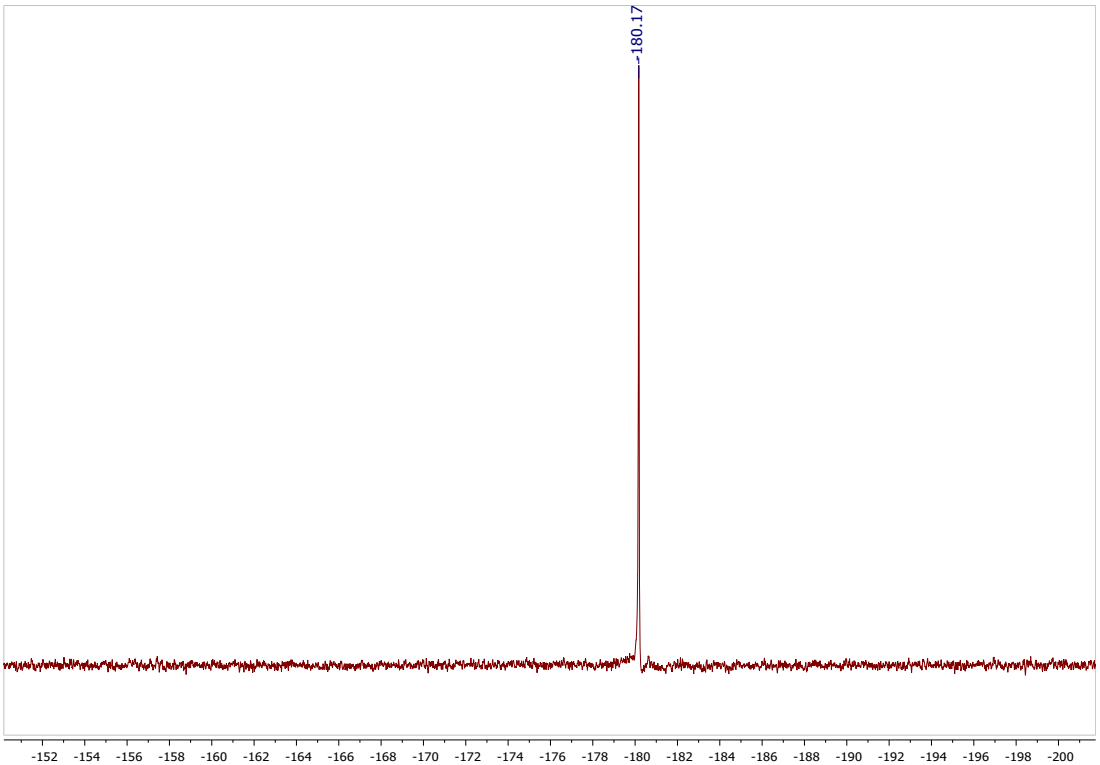


Figure S4. ^{31}P NMR spectrum ($CDCl_3$, 162 MHz) of **2d**.

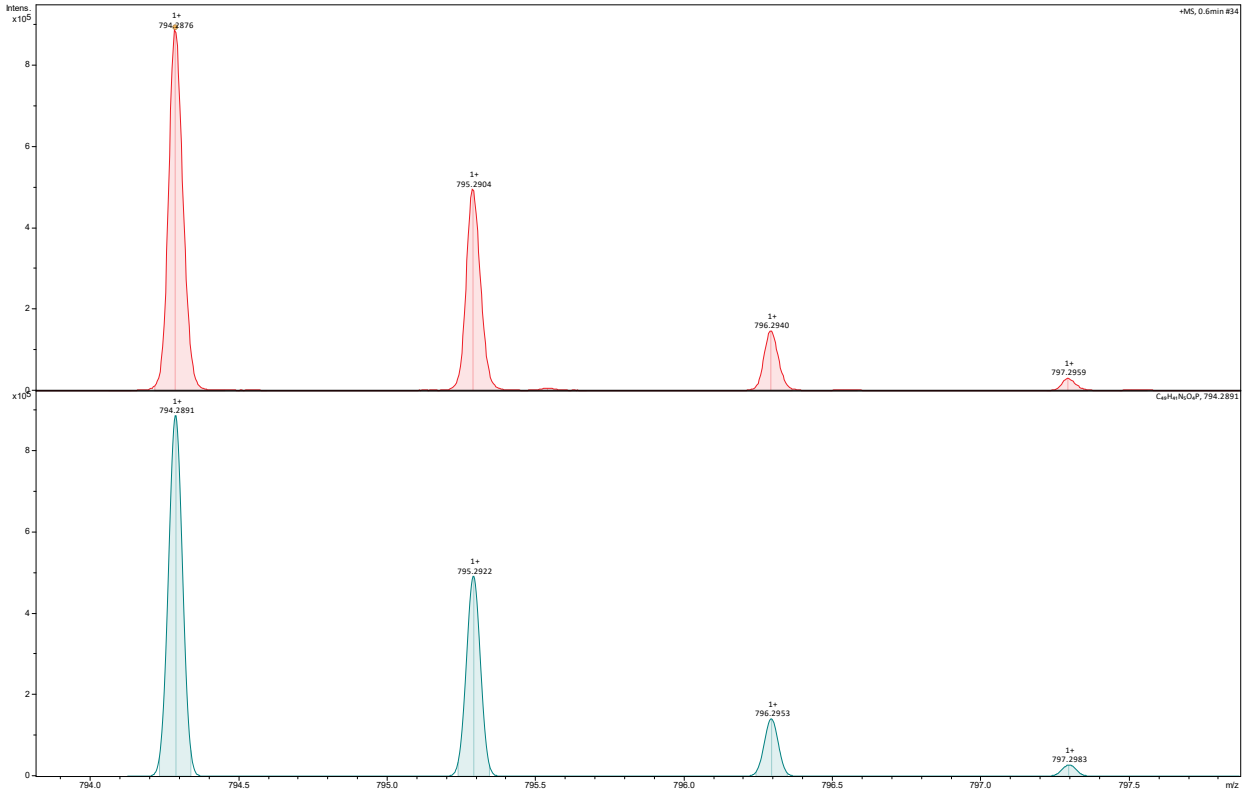


Figure S5. ESI HRMS spectra of **2d**: experimental *(top)*, calculated *(bottom)*.

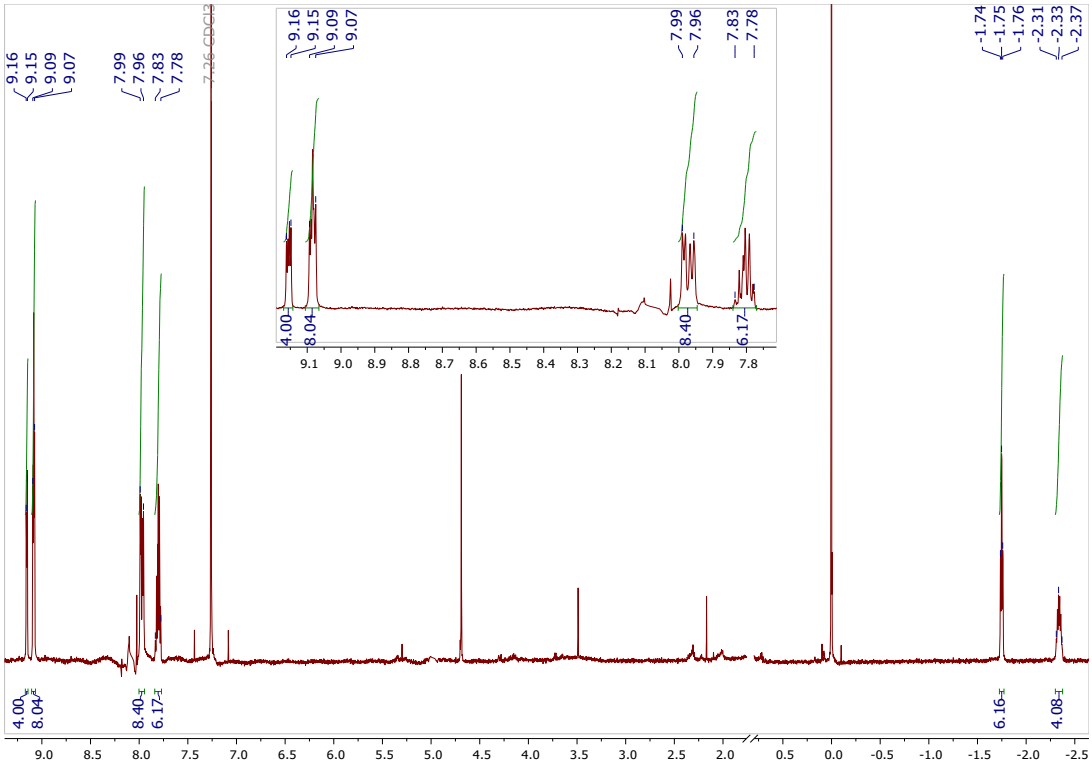


Figure S6. ^{1}H NMR spectrum ($CDCl_3$, 600 MHz) of **3c**.

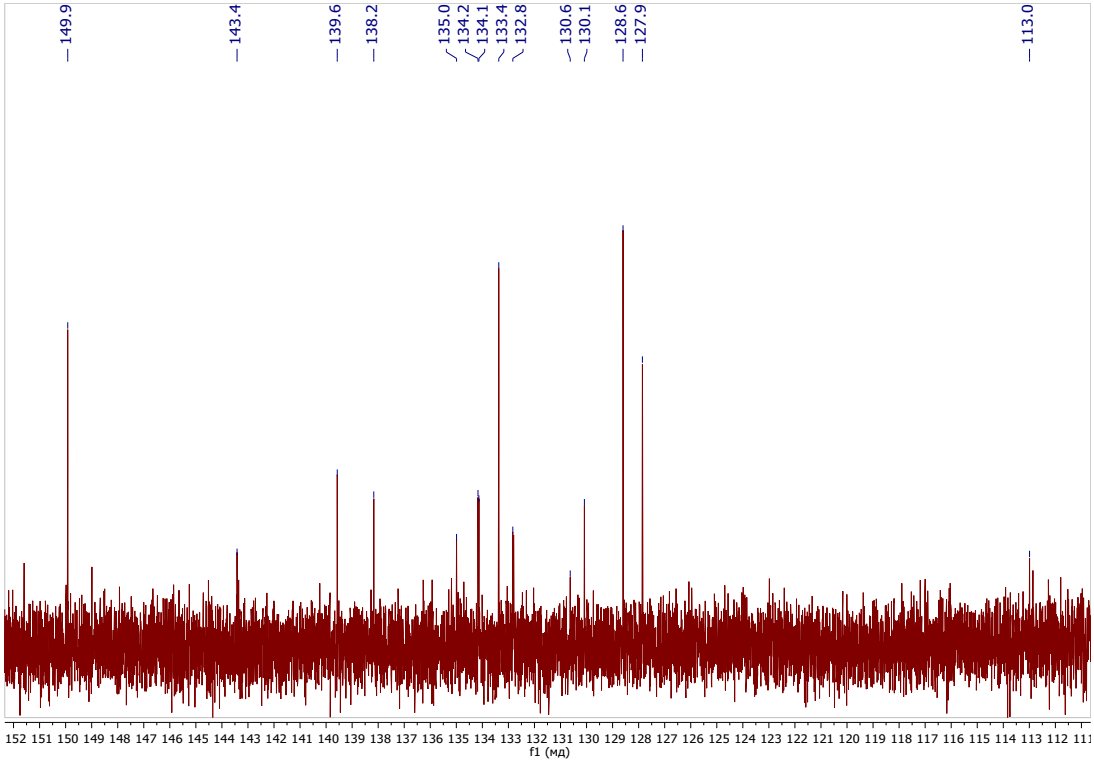


Figure S7. ^{13}C NMR spectrum ($CDCl_3$, 151 MHz) of **3c.**

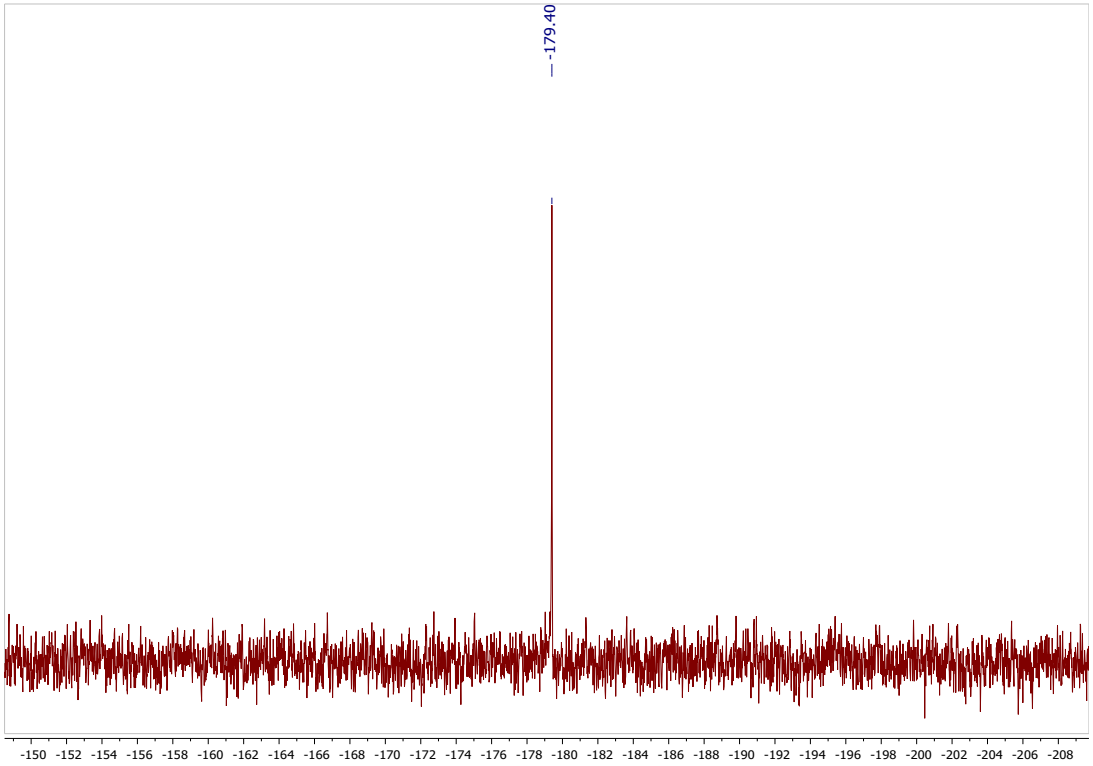


Figure S8. ^{31}P NMR spectrum ($CDCl_3$, 162 MHz) of **3c**.

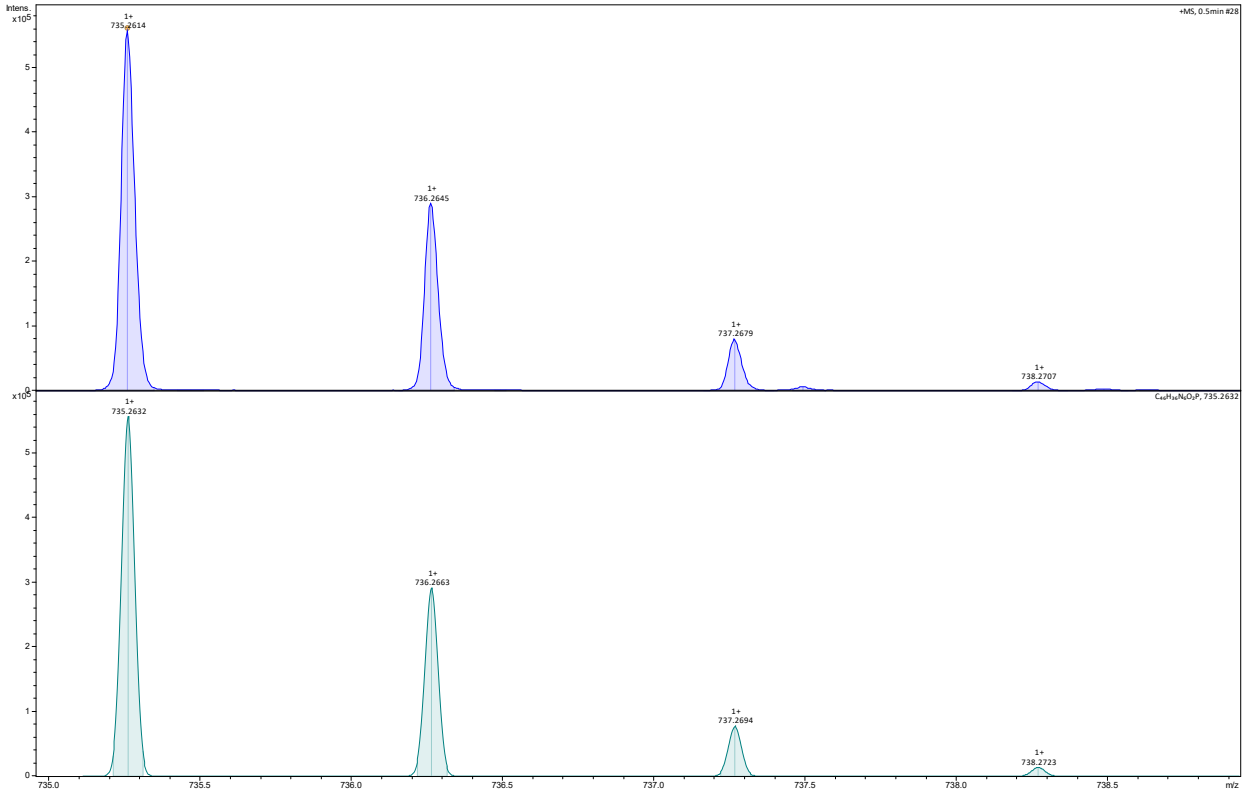
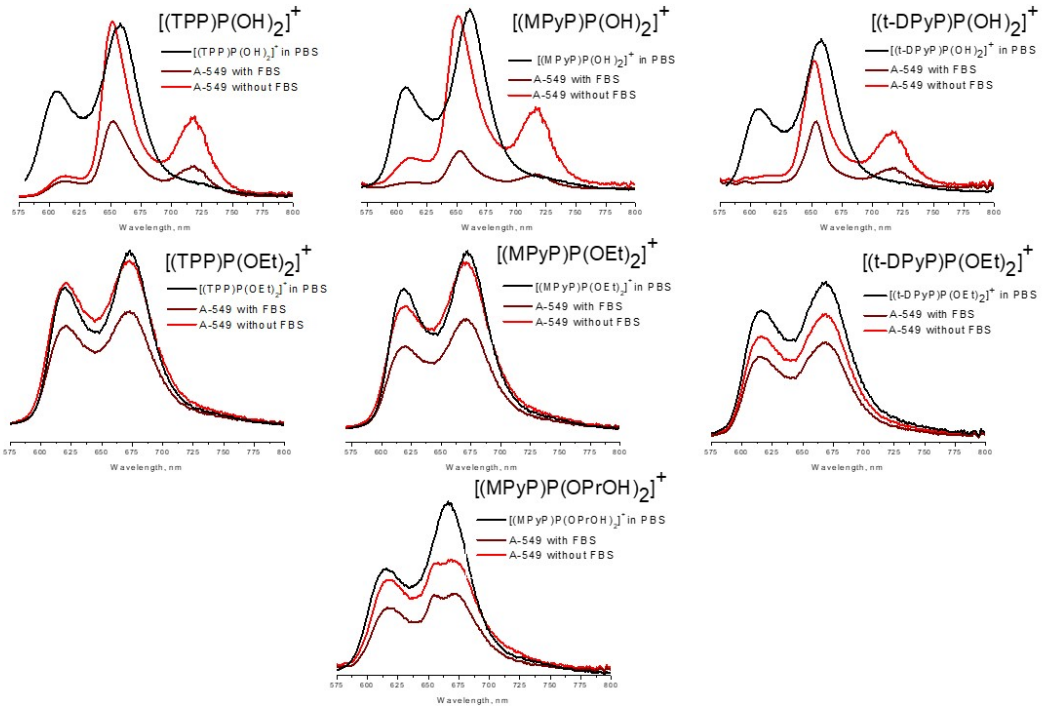


Figure S9. ESI HRMS spectra of **3c**: experimental *(top)*, calculated *(bottom)*.



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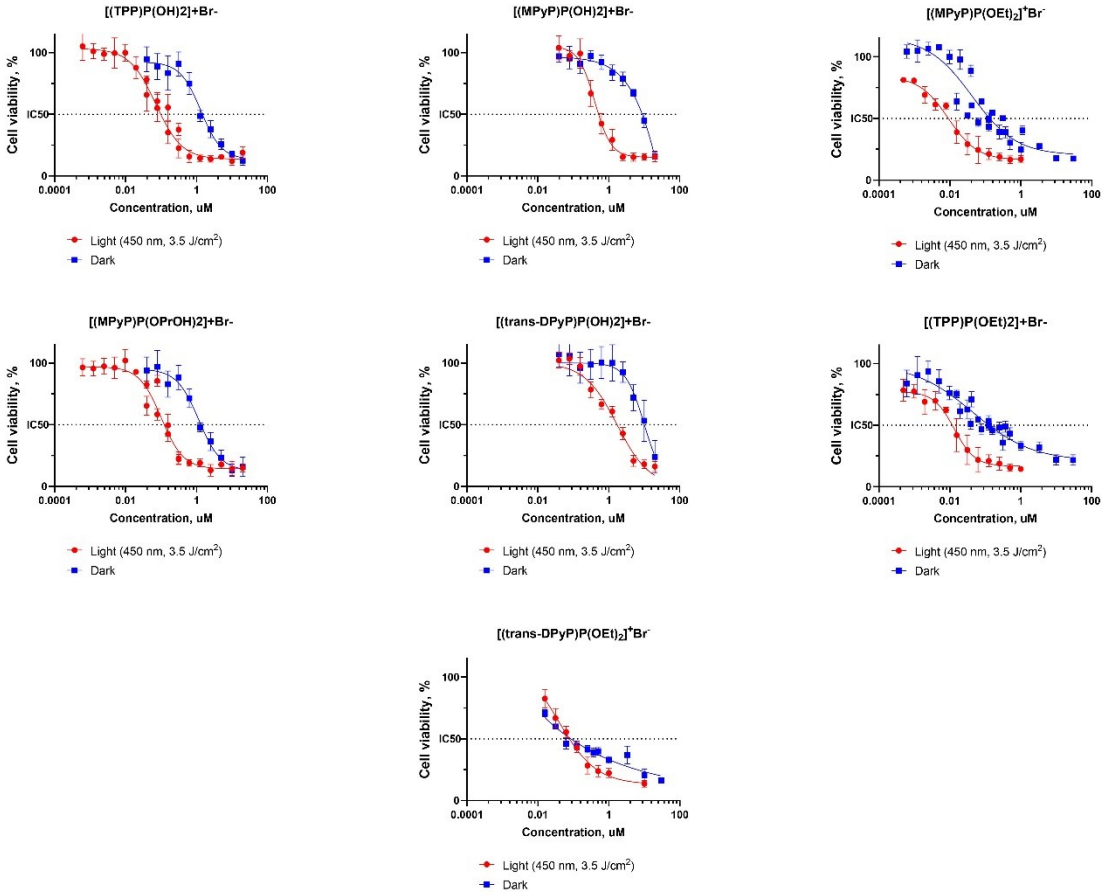

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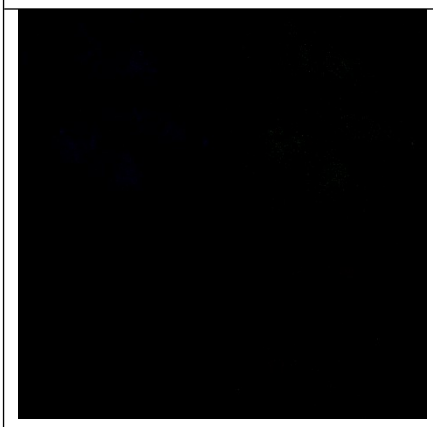
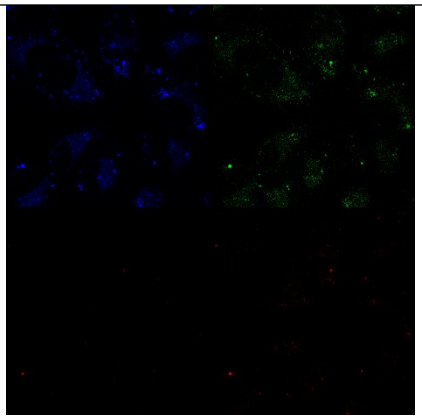
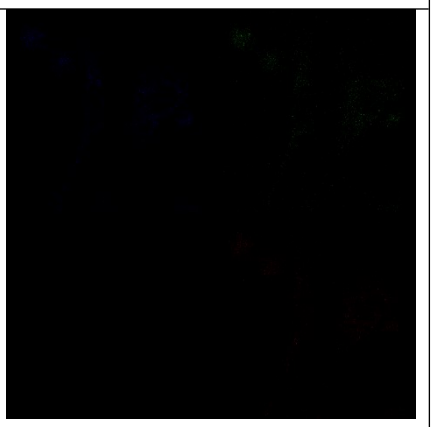
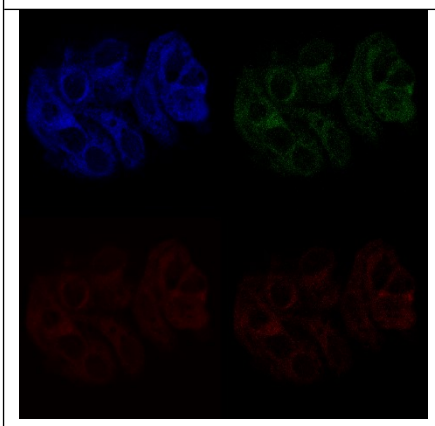
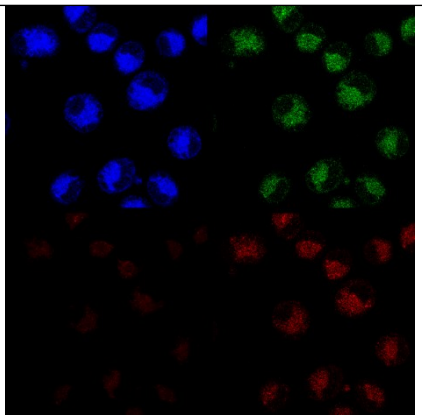
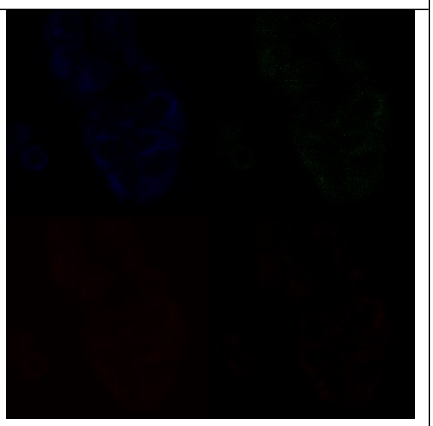
Table S1. Fluorescence images of human lung adenocarcinoma A-549 cells incubated with 20 μM of tested compounds, 1 h incubation, excitation with 405 nm, 488 nm, 543 nm, and 640 nm.

[(TPP)P(OH)$_2$]$^+$ (**1b**)	[(MPyP)P(OH)$_2$]$^+$ (**2b**)	[(t-DPyP)P(OH)$_2$]$^+$ (**3b**)
		
[(TPP)P(OEt)$_2$]$^+$ (**1c**)	**[(**MPyP)P(OEt)$_2$]$^+$ (**2c**)	[(t-DPyP)P(OEt)$_2$]$^+$ (**3c**)
		
	[(MPyP)P(OPrOH)$_2$]$^+$ (**2d**)	**Control (unstained cells)**