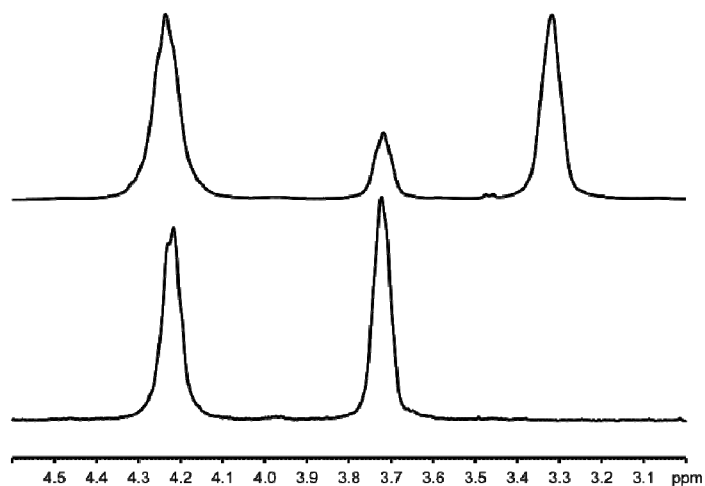


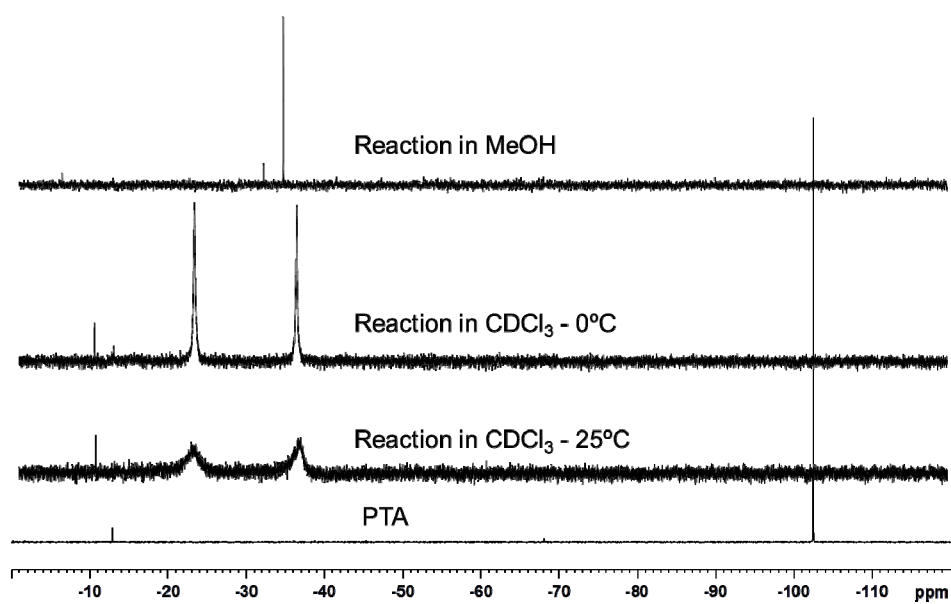
## Supporting Information

### Macromolecular Ruthenium Complexes as Anti-Cancer Agents

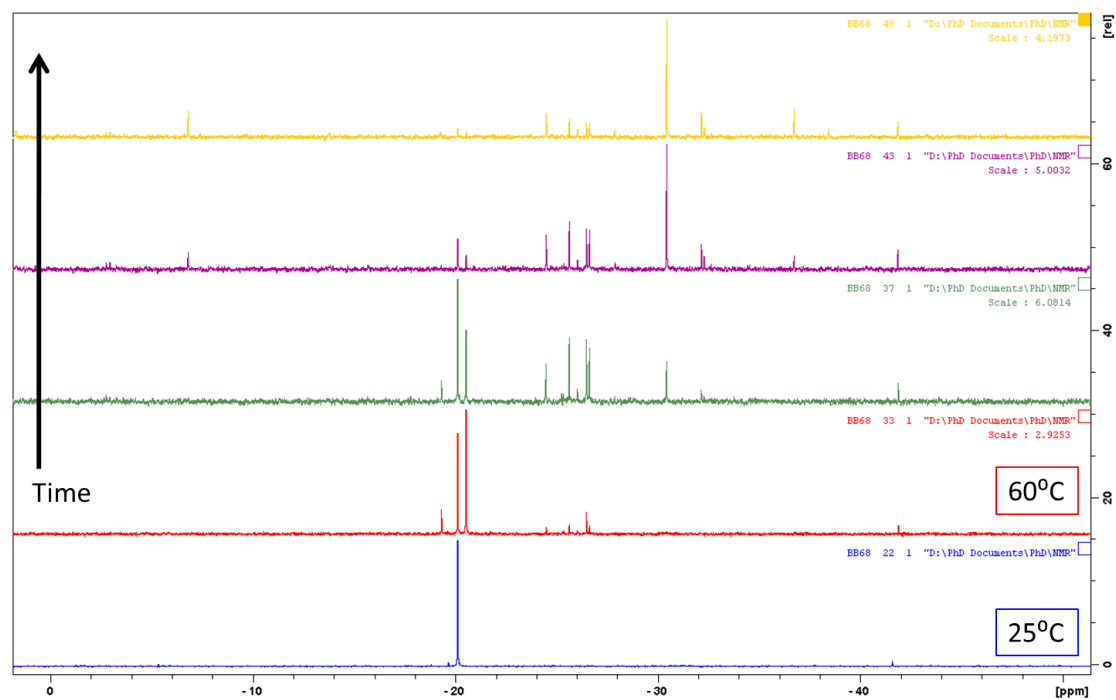
*Bianca M. Blunden, Donald S. Thomas, and Martina H. Stenzel*



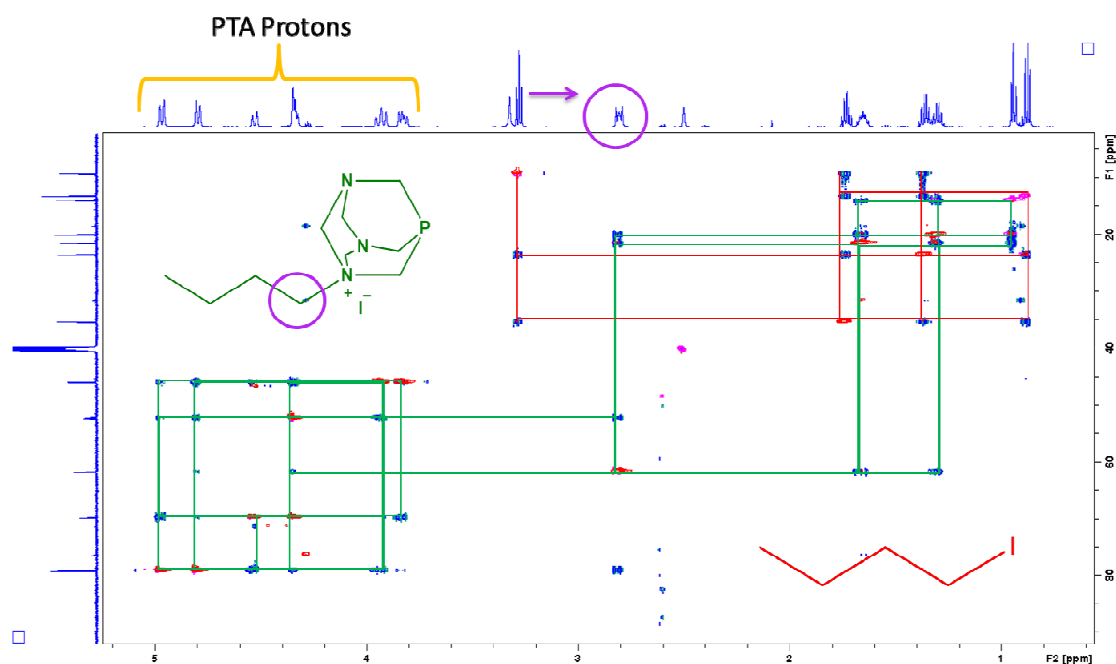
**Figure S1:**  $^1\text{H}$  NMR spectra of PCEMA (bottom) and PIEMA (top) showing the shift in the chloroalkyl peak at 3.73 to the iodoalkyl peak at 3.33.



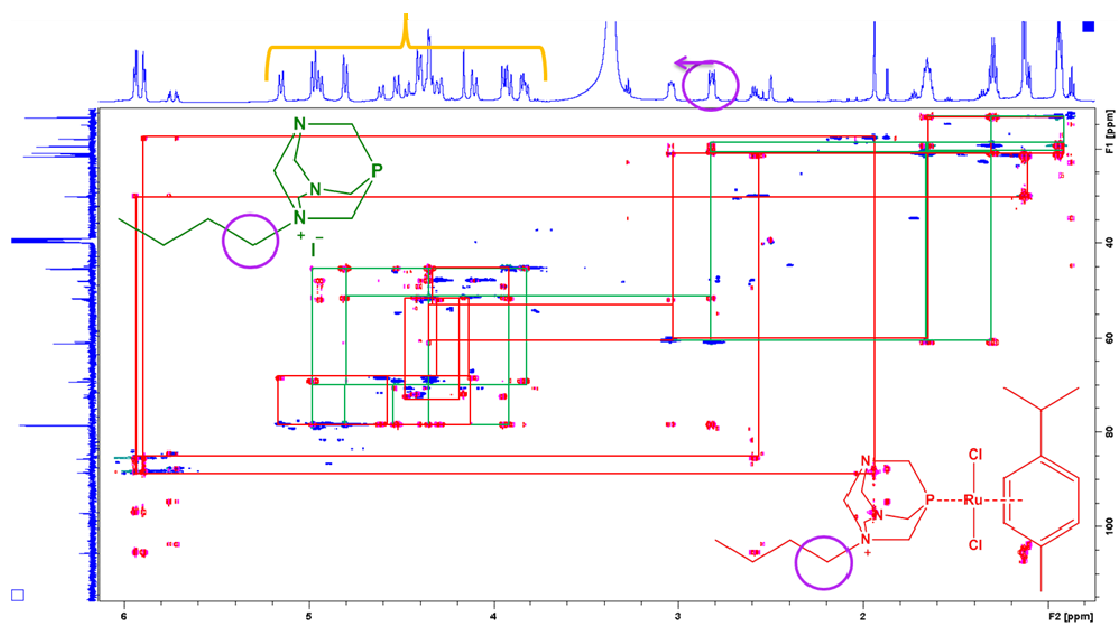
**Figure S2:** Synthesis of RAPTA-C in MeOH and  $\text{CDCl}_3$ . The reaction in  $\text{CDCl}_3$  produced two products that were not identified.



**Figure S3:** IBu-RAPTA-C synthesised via Route 2 at 25°C in DMSO- $d_6$  was subsequently heated to 60°C and monitored over time. Multiple side-products were observed.



**Figure S4:** Overlaid HMBC( $^1\text{H}$ - $^{13}\text{C}$ ) & HSQC( $^1\text{H}$ - $^{13}\text{C}$ ) NMR Spectrum of Butyl Iodide + PTA in DMSO- $d_6$  at 25°C. Both the  $^1\text{H}$  and  $^{13}\text{C}$  spectra are external projections.



**Figure S5:** Overlaid HMBC( $^1\text{H}$ - $^{13}\text{C}$ ) & HSQC( $^1\text{H}$ - $^{13}\text{C}$ ) NMR Spectrum of Butylated PTA +  $\text{RuCl}_2(\text{p-cymene})$  Dimer in  $\text{DMSO-d}_6$  at  $25^\circ\text{C}$ . Both the  $^1\text{H}$  and  $^{13}\text{C}$  spectra are external projections.

## MASS SPECTROMETRY

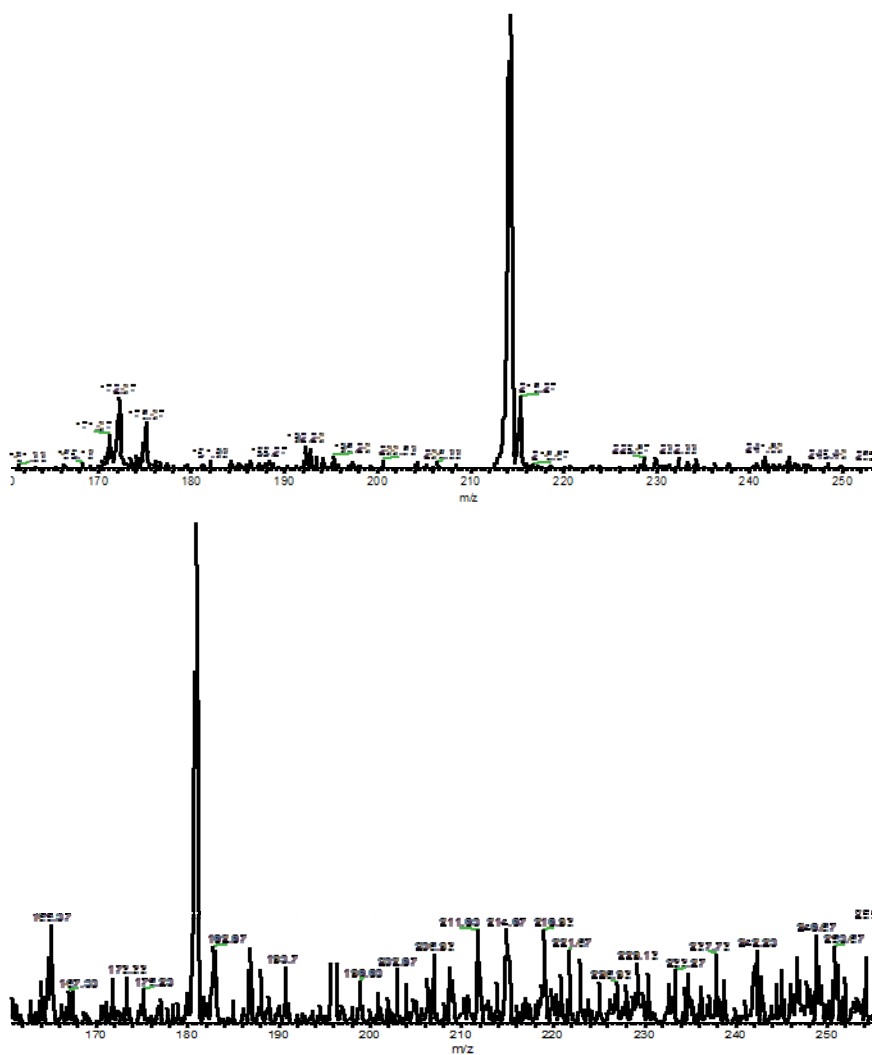


Figure S6: Initial PTA at 180.9 (bottom) shifted to Alkylated IBu-PTA at 214.13 (top).

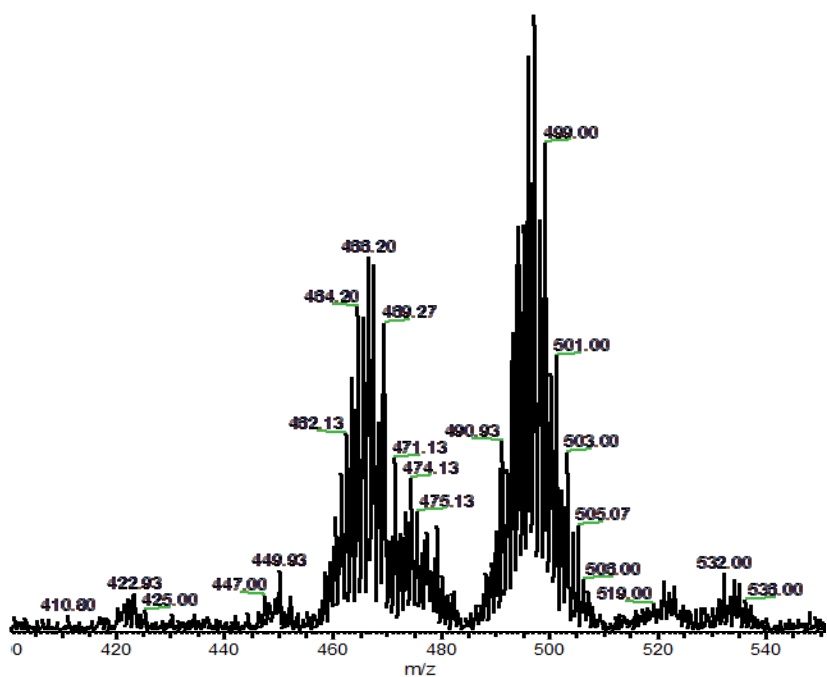
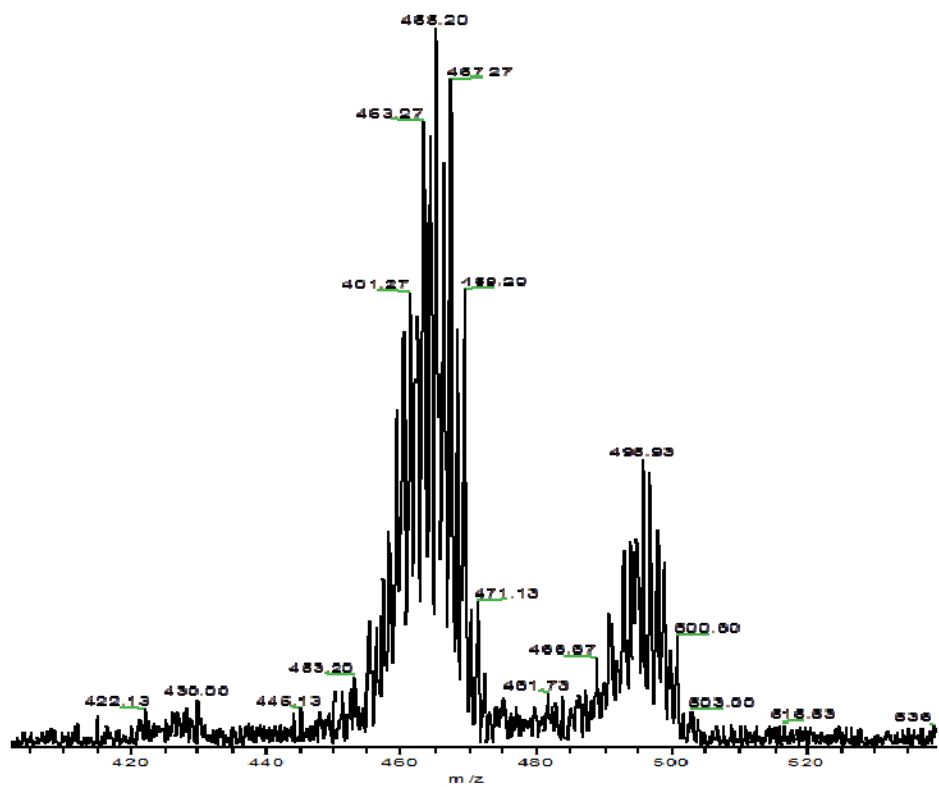


Figure S7: Initial RAPTA-C at 465 (top) shifted to Alkylated IBu-RAPTA-C at 497 (bottom).