SUPPLEMENTARY INFORMATION

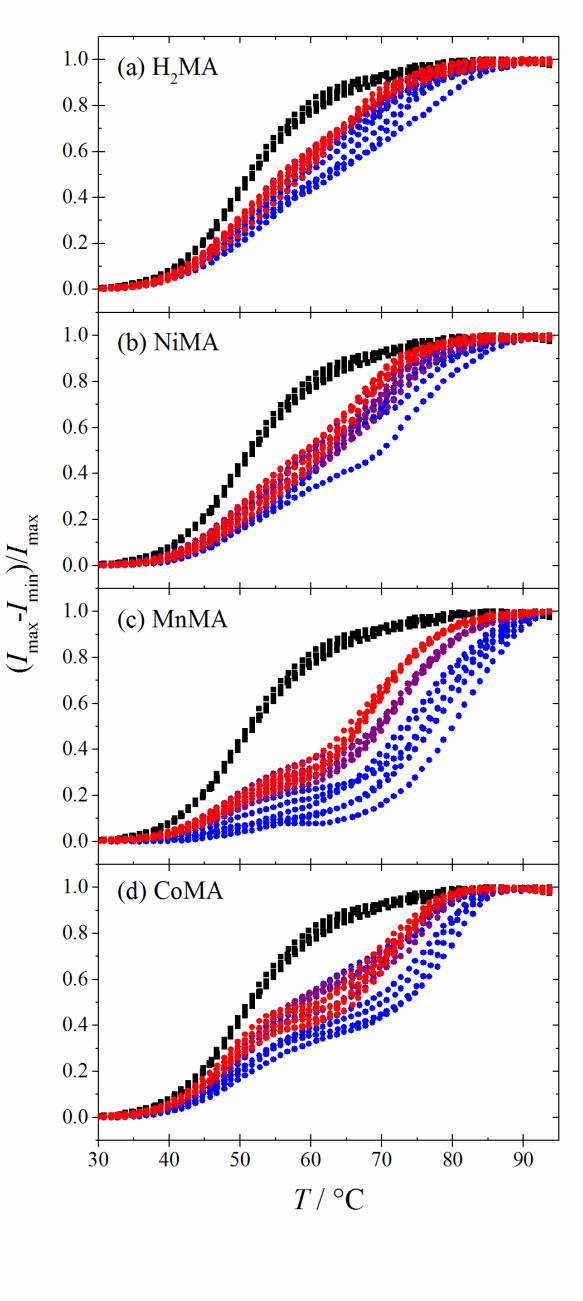


Figure S1. **G-quadruplex FRET-melting assay.** Melting profiles of the human telomeric F21T sequence (0.2 µM) in the absence (black squares) or presence (blue circles) of 0.5 µM of the synthesized porphyrins in 10 mM lithium cacodylate pH 7.2 containing 10 mM K^+ (+90 mM Li^+). The profiles obtained with the ligand and 3 or 10 µM of duplex competitor (ds26) are represented with purple or red circles respectively.

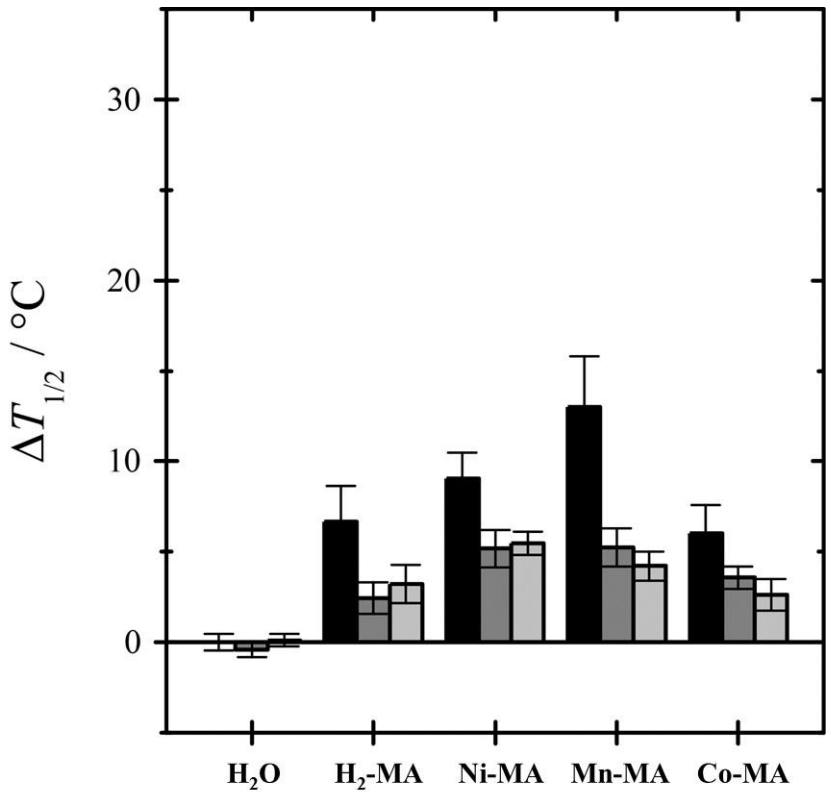
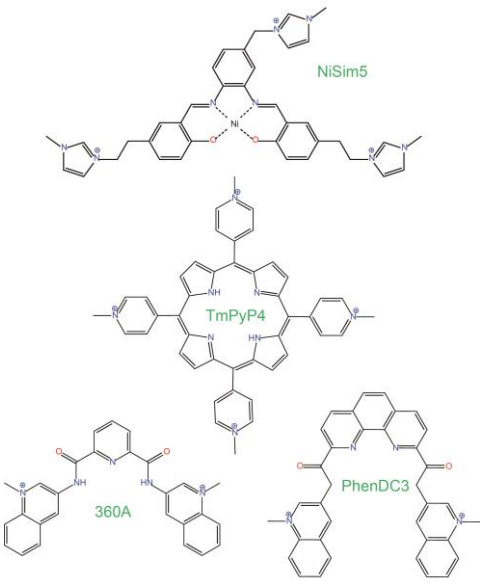


Figure S2. **FRET-melting competition assay.** Thermal stabilization induced by the synthesized porphyrins (0.5 μM) on the human telomeric quadruplex F21T (0.2 μM) in 10 mM lithium cacodylate pH 7.2 containing 100 mM NaCl. The duplex competitor (ds26) strand concentrations are 0 (black), 3 (dark grey) and 10 μM (light grey).



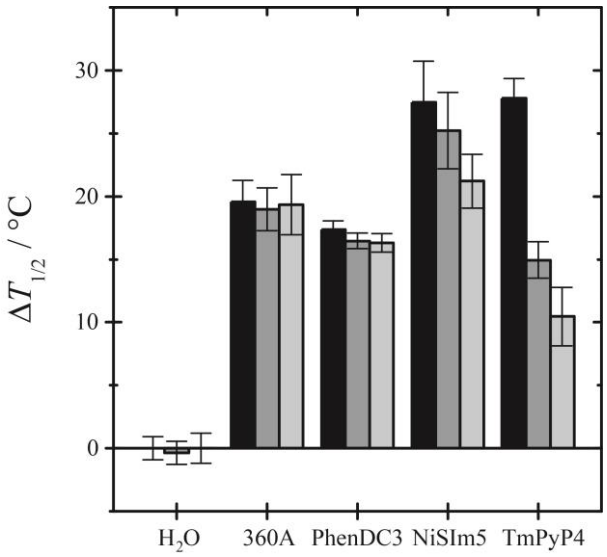


Figure S3. **FRET-melting competition assay.** Thermal stabilization induced by known G-quadruplex ligands (0.5 μM) on the human telomeric quadruplex F21T (0.2 μM) in 10 mM lithium cacodylate pH 7.2 containing 10 mM KCl and 90 mM LiCl. The duplex competitor (ds26) strand concentrations are 0 (black), 3 (dark grey) and 10 μM (light grey).

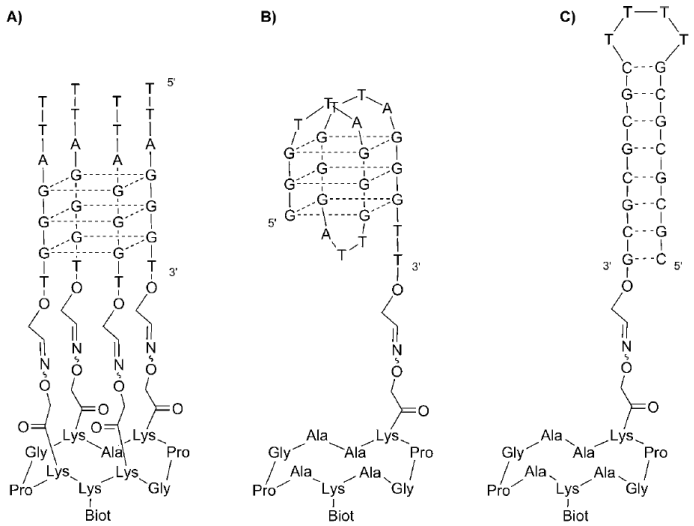


Figure S4. Biomolecular systems containing different DNA structures: A) parallel-stranded quadruplex (intermolecular like G-quadruplex) B) intermolecular folded quadruplex (intramolecular like-G-quadruplex) and C) duplex (hairpin)

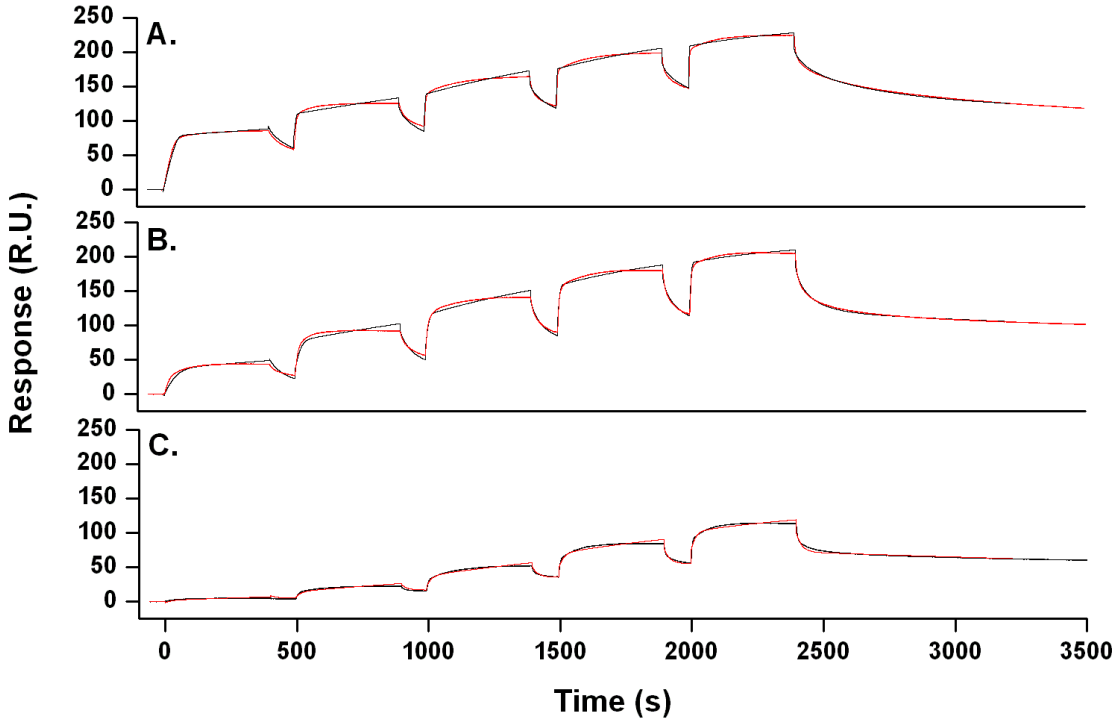


Figure S5. Kinetic titration analysis for the **Co-MA** interaction with A) the intermolecular-like quadruplex, B) the intramolecular-like quadruplex and C) the hairpin duplex. The interaction of **Co-MA** with the different DNA structures was tested at concentrations of 100 nM, 250, 500, 750 and 1000 nM. Sensorgrams corresponded to double subtracted data (blank and reference subtraction).

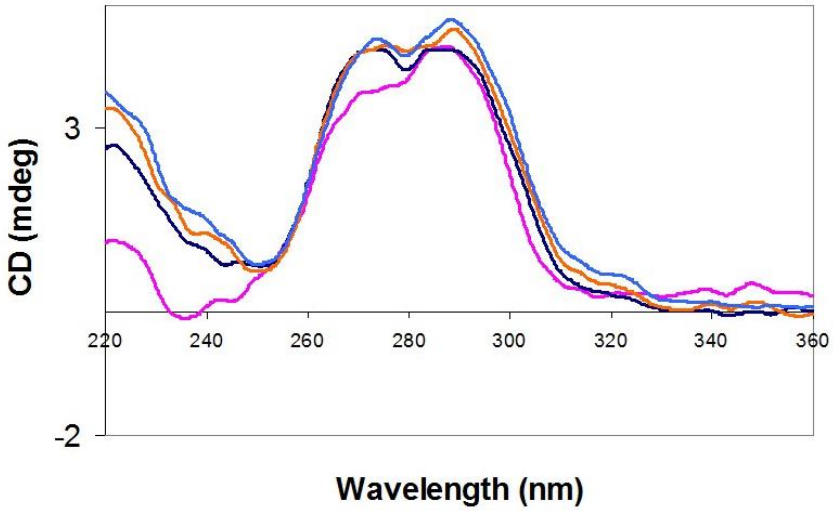


Figure S6. CD spectra of DNA model oligonucleotide 5'-TT(GGGTTA)$_3$GGGA (1 µM) in the absence (pink) and in the presence of **Co-MA** 1, 3 and 5 µM (black, orange, and blue, respectively) in 20 mM phosphate buffer pH 7.0, KCl 70 mM.

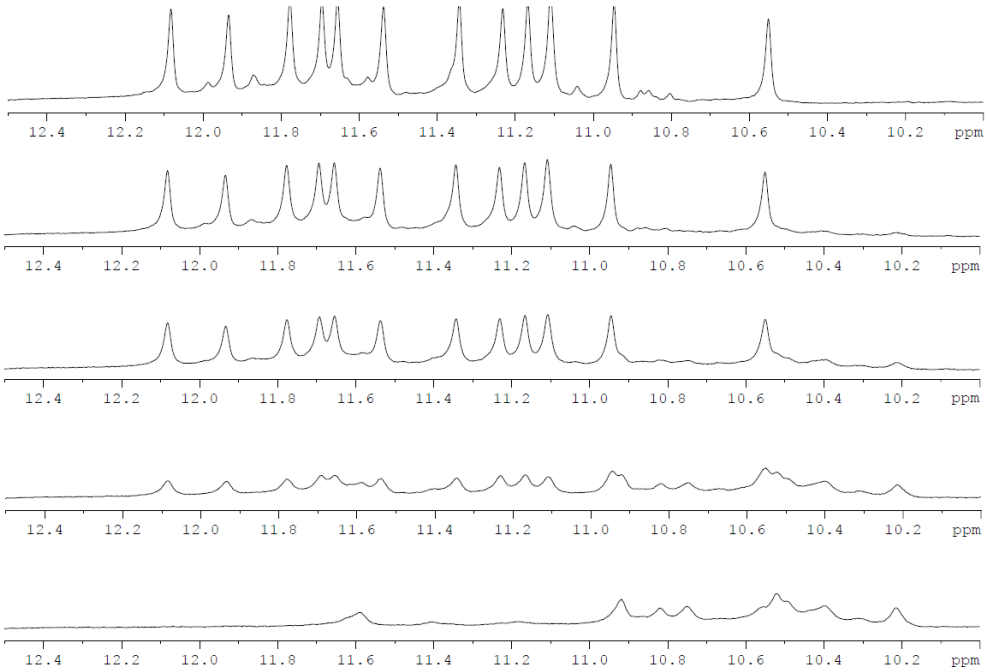


Fig. S7. 1D ^{1}H NMR titration of **Co-MA** and 5'-TT(GGGTTA)$_3$GGGA quadruplex DNA in 16 mM phosphate buffer pH 7.0, KCl 100 mM. Top spectrum corresponds to only DNA. Then, from top to bottom DNA:**Co-MA** ratio is 4:1, 2:1, 1:1, and 1:1.5.