Supporting information

Targeting curcumin to specific tumour cell environments: the influence of ancillary ligands

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Figure S1: Monolayer DLD-1 cells treated with **1** for 24 h (top), **2** for 24 h (middle) and untreated control cells (bottom)Left: cobalt distribution, right: overlay of cobalt (red) and zinc (green) distributions. Scale bar = 10μ m.



Figure S2a: DLD-1 spheroids treated with **1** for 2 (top) and 24 hours (bottom). Left: cobalt distribution, right: overlay of cobalt (red), potassium (green), and zinc (blue) distributions. Scale bar = 100μ m.



Figure S2b: DLD-1 spheroids treated with **2** for 2 (top) and 24 hours (middle) and an untreated control (bottom). Left: cobalt distribution, right: overlay of cobalt (red), potassium (green), and zinc (blue) distributions. Scale bar = 100μ m.



Figure S3: Confocal fluorescence images of DLD-1 spheroids treated with 1 (left) and 2 (right) for 24 hours. Scale bar = $50 \mu m$.



Figure S4: Cobalt concentrations in DLD-1 spheroids treated with **1** or **2** for 2, 6 or 24 h. Elemental concentrations were determined using GeoPIXE and are reported as a ratio of Co/Zn to account for differences in spheroid size. The cobalt levels in the control sample and spheroid treated with **1** for 2 hours were below the detection limit.



Figure S5: XANES spectra of complex **2** and possible metabolites.