



Supplementary Figure 1: Excitation and emission spectra of [Co(AQ2C)₂(cyclam)]Cl.

Fluorescence spectra of **A.** excitation (with emission at 490 nm) and **B.** emission (with excitation at 425 nm) of AQ2CH and [Co(AQ2C)₂(cyclam)]Cl.

Supplemental Experimental Procedures

Fluorescence measurement

Fluorescence measurements were performed using a Varian Cary Eclipse fluorescence spectrophotometer, with a 1 cm x 1 cm silica cuvette. All solutions were prepared immediately prior to analysis. The emission scans of AQ2CH were run between 445 and 775 nm, using an excitation wavelength of 425 nm on a 0.5 mM solution in DMA and a slit width of 20 nm. The emission scans for [Co(AQ2C)₂(cyclam)]Cl were run between 445 and 700 nm, using an excitation wavelength of 425 nm on a 0.25 mM solution in DMA and a slit width of 20 nm. Excitation scans were run on an identical solution with excitation wavelengths between 300 and 460 nm and detection at 490 nm.