



### Supplementary Figure

Magnetisation transfer data at 308K demonstrating the interconversion of the GTA 13-mer d(GCTACGTAGTCGC) between the two conformational states (see inset schematic) following the inversion of A4 H8 (top) and T7 H6 (bottom). Open symbols represent the recovery of the inverted peak (duplex) and closed symbols the intensity of the signal for the hairpin conformer. The data show in each case the best fit to a double exponential with good agreement between relaxation constants for each curve.