Electronic Supplementary Material (ESI) for Organic & Biomolecular Chemistry

Exploring the effect of aminoglycoside guanidinylation on ligands for Tau Exon 10 Splicing Regulatory Element RNA

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Supporting Information

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1. UV melting curves of RNA-ligand complexes

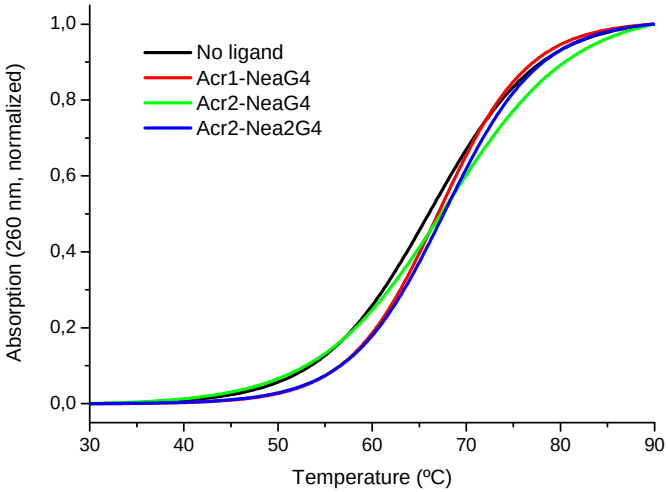


Fig. S1 UV melting profiles for the wt RNA oligonucleotide and its ligand complexes at a [ligand]/RNA ratio of 1.0.

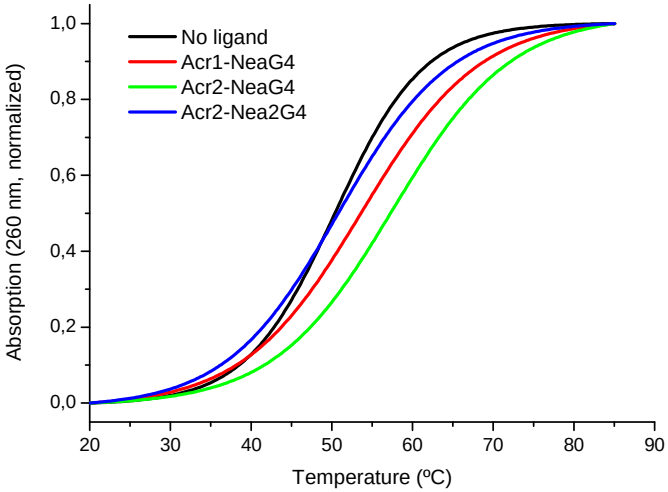


Fig. S2 UV melting profiles for the +3 mutated RNA oligonucleotide and its ligand complexes at a [ligand]/RNA ratio of 1.0.

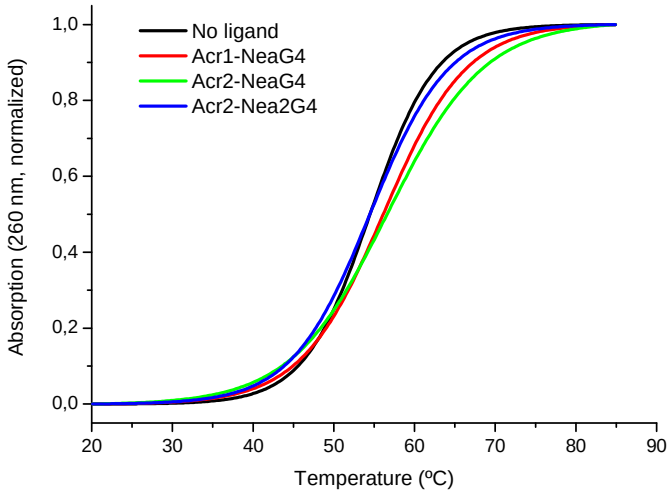


Fig. S3 UV melting profiles for the +14 mutated RNA oligonucleotide and its ligand complexes at a [ligand]/RNA ratio of 1.0.

2. NMR titration experiments

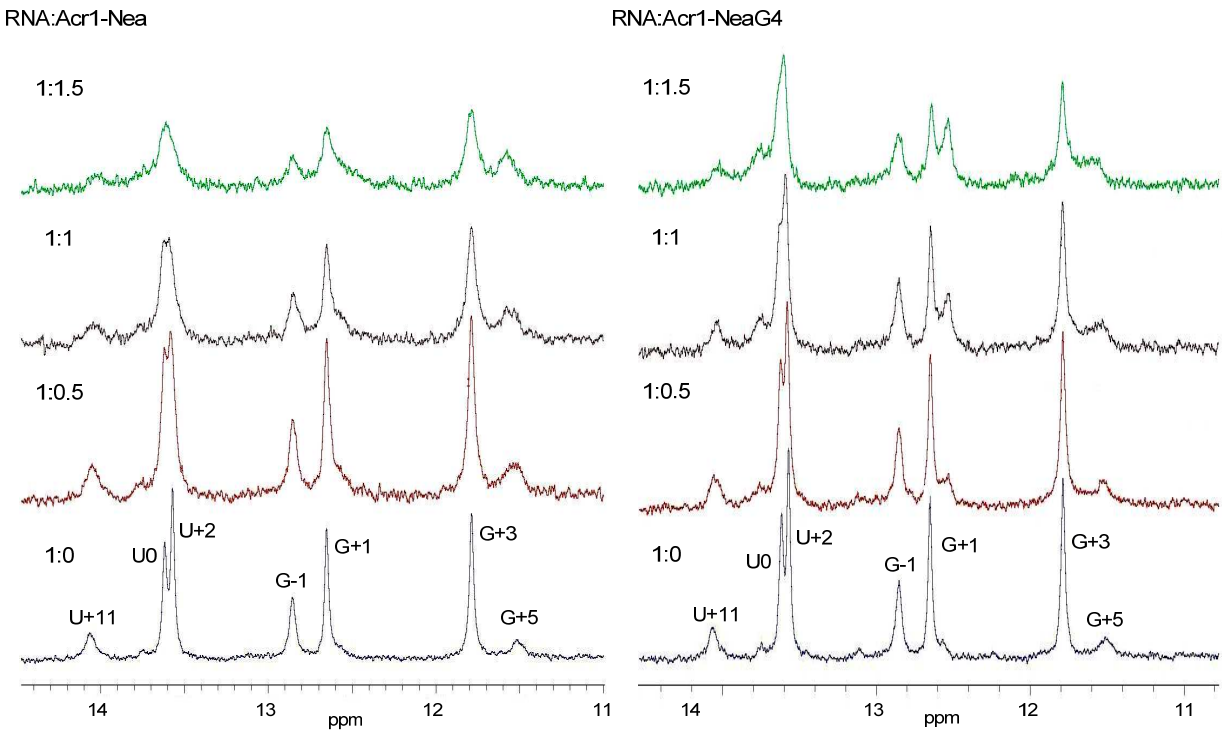


Fig. S4 Imino region of the NMR spectra of wt RNA alone and in the presence of increasing amounts of the ligands (left: **Acr1-Nea**, right: **Acr1-NeaG4**; from bottom to top, ratio ligand/RNA: 0.0, 0.5, 1.0, 2.0 and 4.0). Imino proton signals are labelled according to the numbering scheme shown in Scheme 1. Assignments were taken from Varani *et al*.[9a,10c] The RNA concentration was 70 μM in a 10 mM sodium phosphate buffer, pH 6.8, in a 90%/10% H_2O/D_2O mixture (T = 5ºC).

3. Synthesis of the guanidinylated ligands

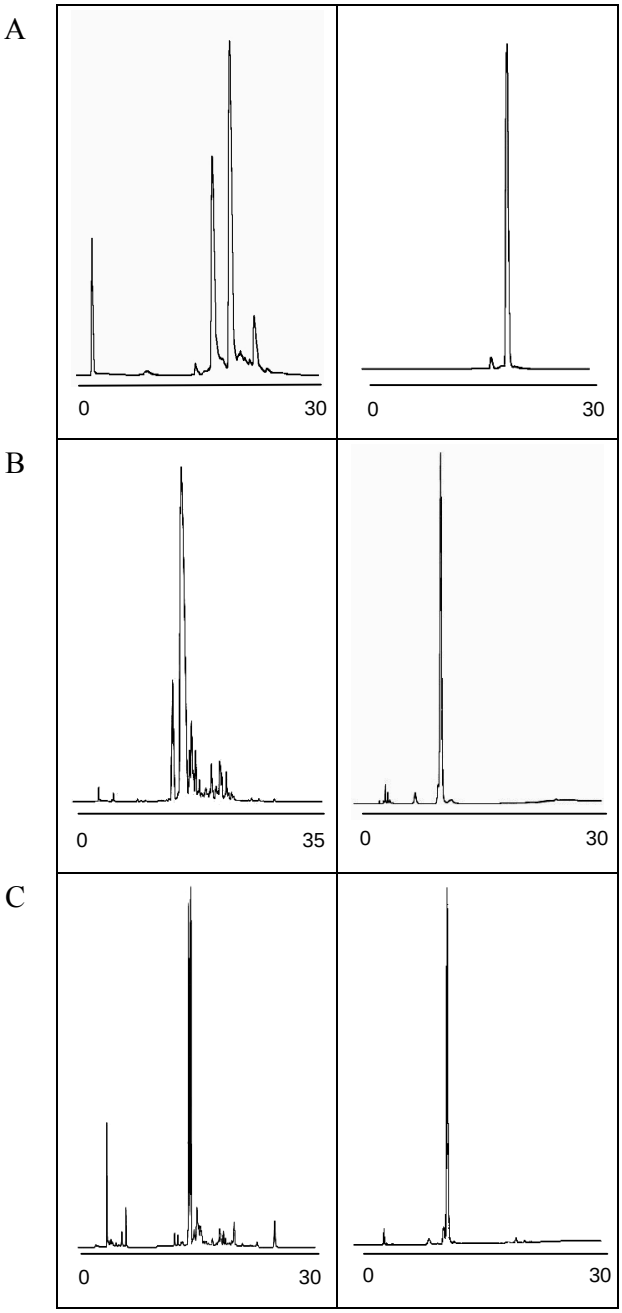
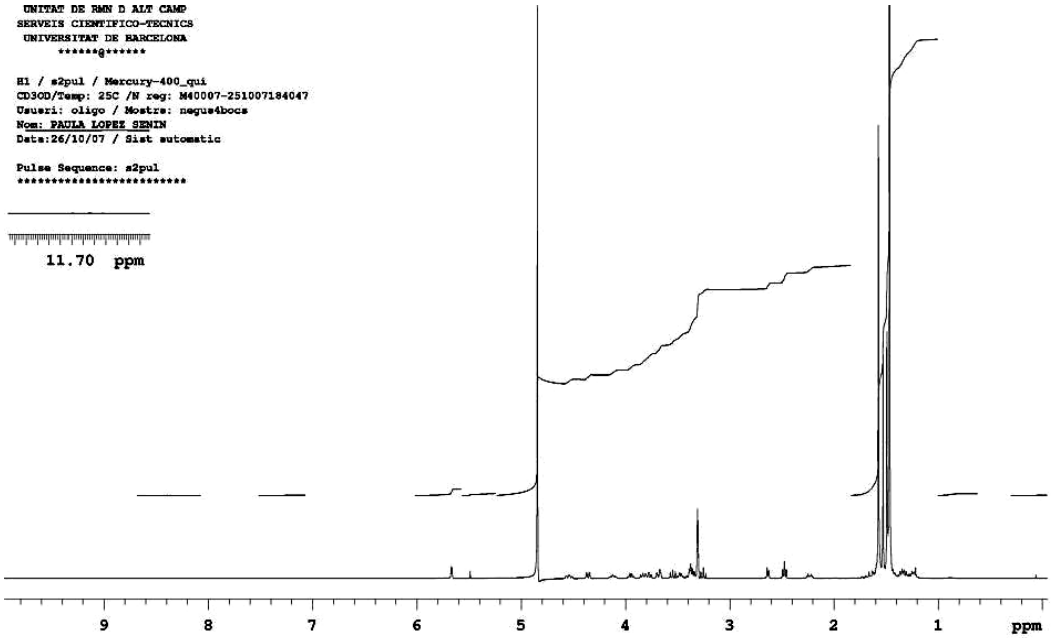


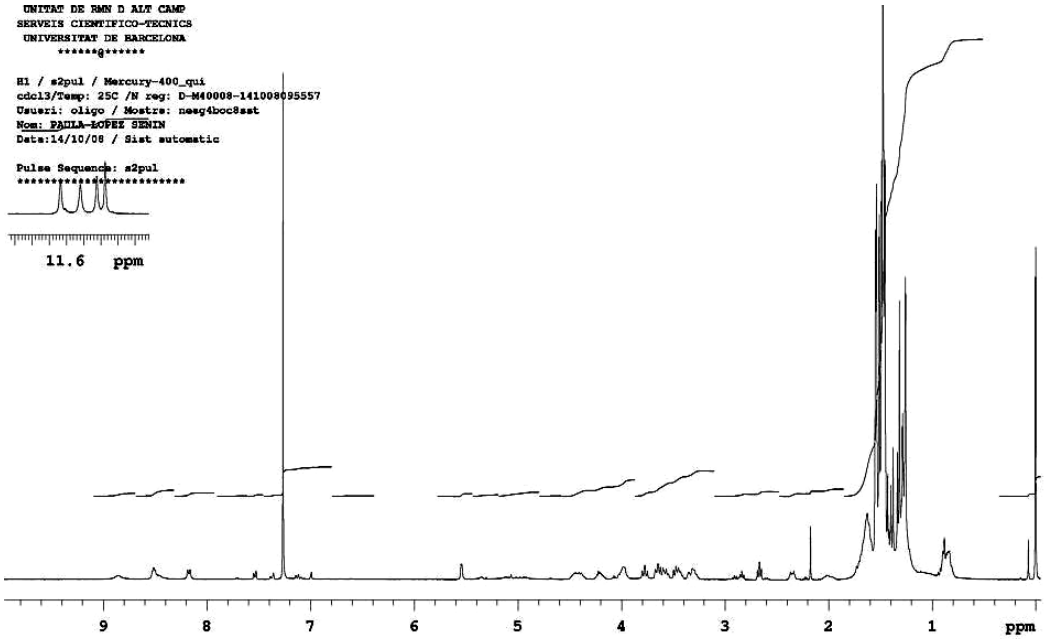
Fig. S5 Reversed-phase HPLC traces for the ligands Acr1-NeaG4 (A), Acr2-NeaG4 (B) and Acr2-Nea2G4 (C): reaction crude (left) and purified (right).

4. ^{1}H spectra of monomers and ligands

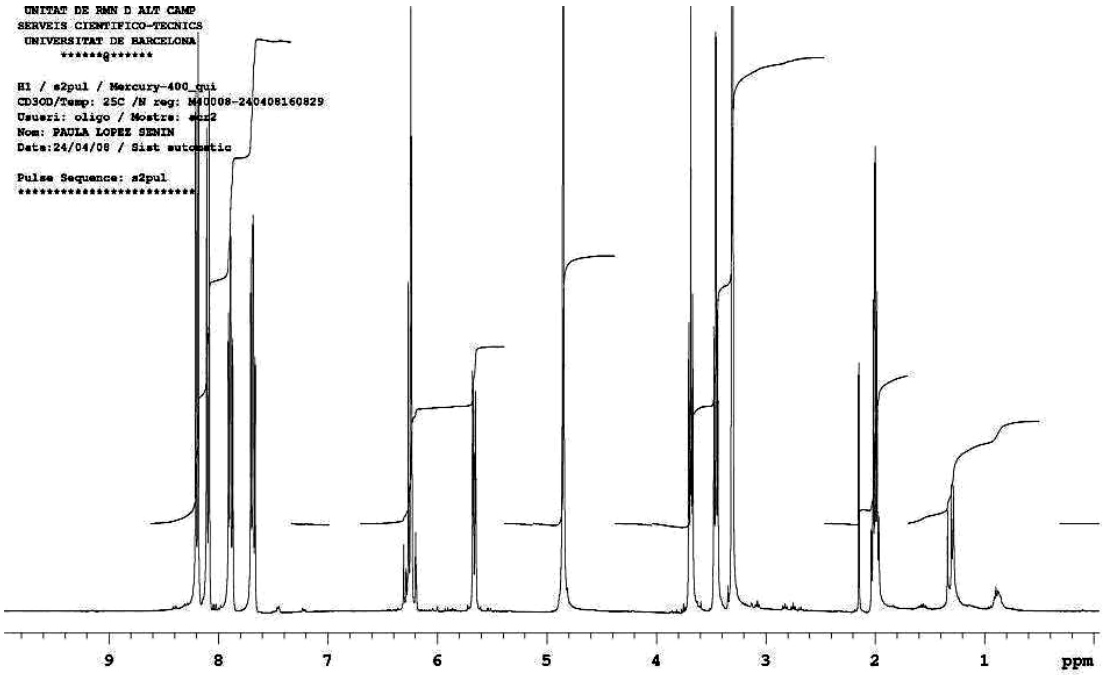
$(Boc)_8$NeaG4



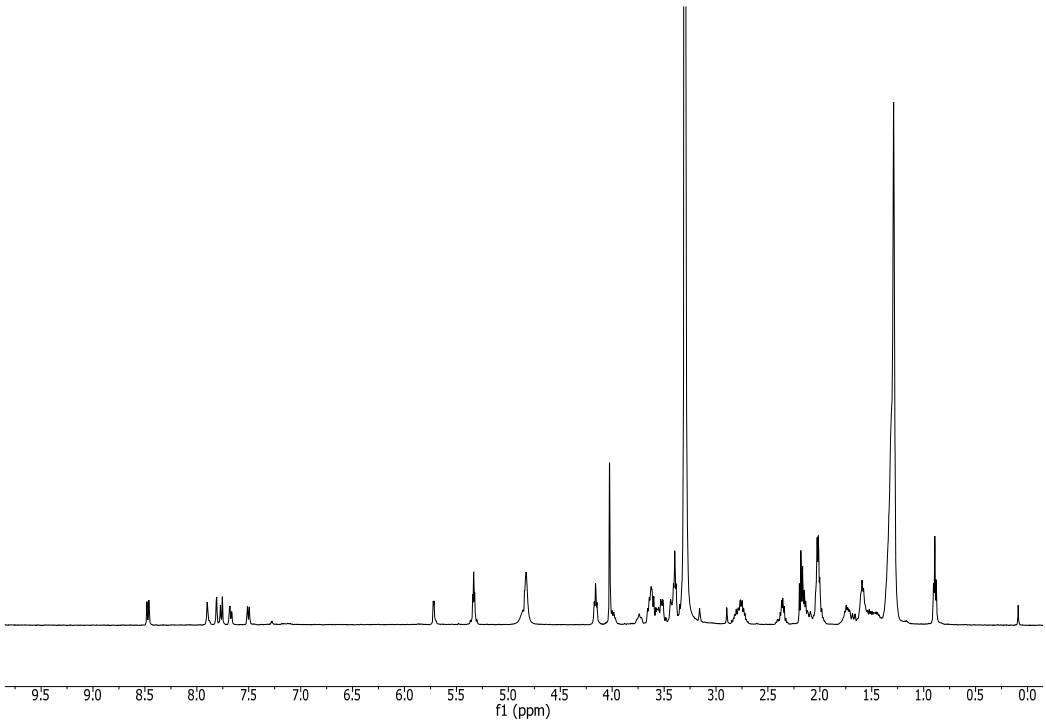
$(Boc)_8$NeaG4-SS^{t}Bu



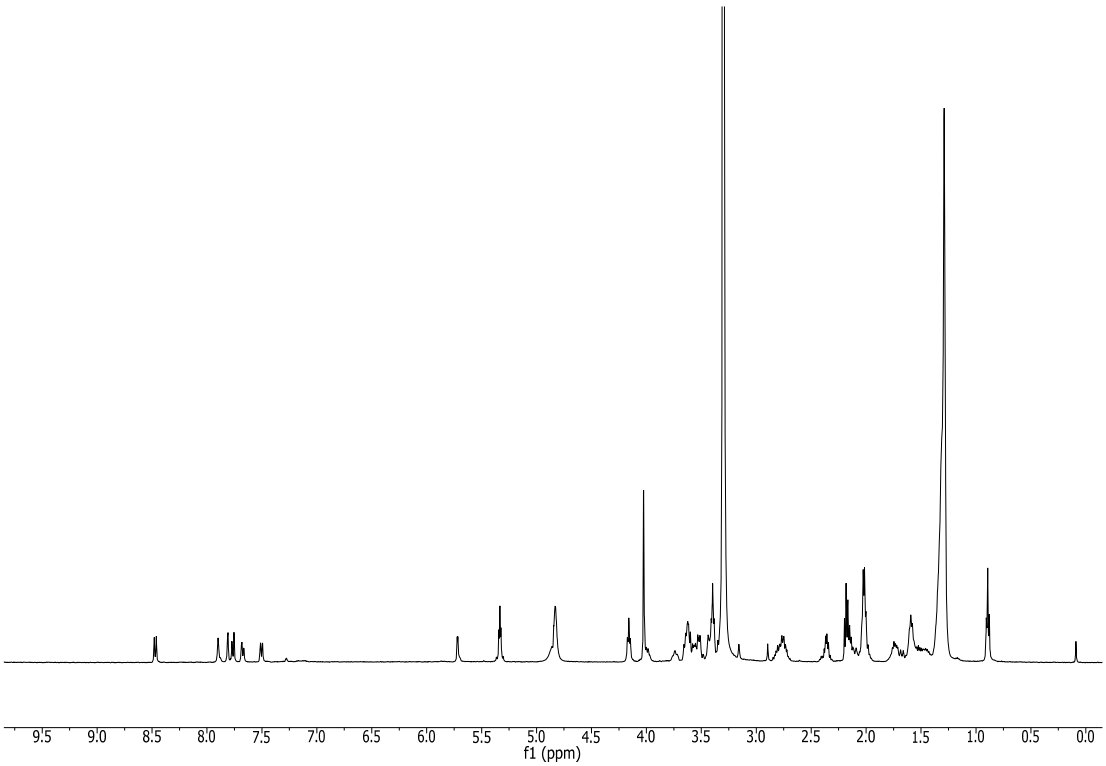
_N_-(3-Acrylamidopropyl)acridine-9-carboxamide



Acr1-NeaG4



Acr2-NeaG4



Acr2-Nea2G4