

# New G-quadruplex-forming oligodeoxynucleotides incorporating a bifunctional Double-Ended Linker (DEL): effects of DEL size and ODNs orientation on the topology, stability and molecularity of DEL-G-quadruplexes

Maria Marzano <sup>1</sup>, Andrea Patrizia Falanga <sup>1</sup>, Stefano D'Errico <sup>1</sup>, Brunella Pinto <sup>2</sup>, Giovanni Nicola Roviello <sup>3</sup>, Gennaro Piccialli <sup>1</sup>, Giorgia Oliviero<sup>4,\*</sup> and Nicola Borbone <sup>1</sup>

<sup>1</sup>Dipartimento di Farmacia, Università degli Studi di Napoli Federico II, via Domenico Montesano, 49 - 80131 Napoli, Italy

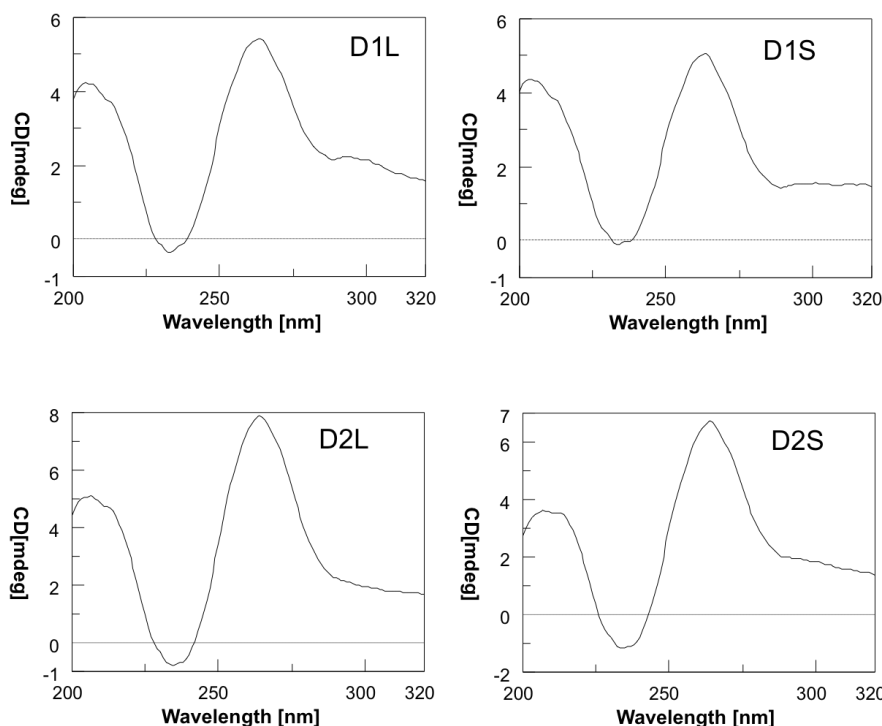
<sup>2</sup>Dipartimento di Chimica, Università degli Studi di Milano, via Camillo Golgi, 19 – 20133 Milano, Italy

<sup>3</sup>Istituto di Biostrutture e Bioimmagini, CNR, Via De Amicis, 95, 80145, Napoli, Italy

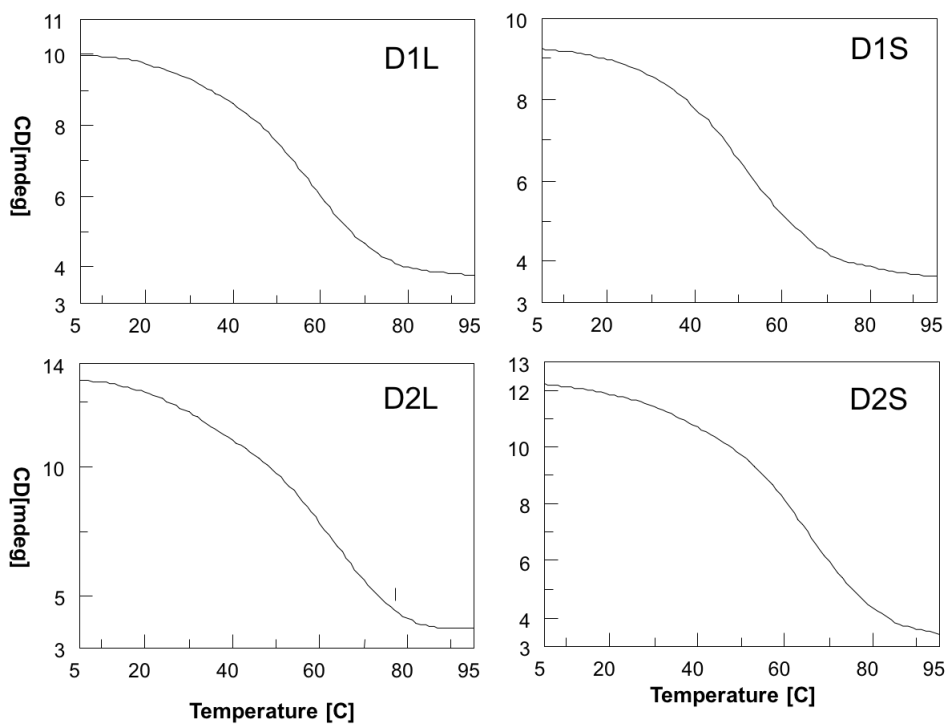
<sup>4</sup>Dipartimento di Medicina Molecolare e Biotecnologie Mediche, Università degli Studi di Napoli Federico II, via Sergio Pansini, 5 - 80131 Napoli, Italy

\* Correspondence: [golivier@unina.it](mailto:golivier@unina.it); Tel.: +39-081-679896

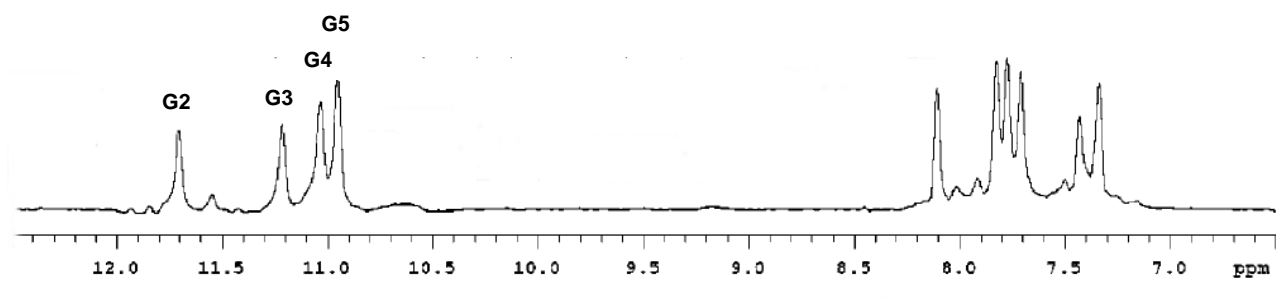
## SUPPLEMENTARY MATERIAL



**Figure S1:** CD spectra recorded at 5 °C of **D1L,S** and **D2L,S** annealed in 100 mM Na<sup>+</sup>-containing buffer.



**Figure S2:** CD value (mdeg) at 263 nm of **D1L,S** and **D2L,S** annealed in 100 mM Na<sup>+</sup> buffer. Temperature range 5–95 °C, heating rate 0.5 °C min<sup>-1</sup>.



**Figure S3.** <sup>1</sup>H-NMR (500 MHz) spectrum of [TG4T]<sub>4</sub> in K<sup>+</sup> buffer (100 mM KCl and 10 mM K<sub>2</sub>HPO<sub>4</sub>) recorded in H<sub>2</sub>O/D<sub>2</sub>O (9:1, v/v). Image taken from ref. 45 in the main text.

