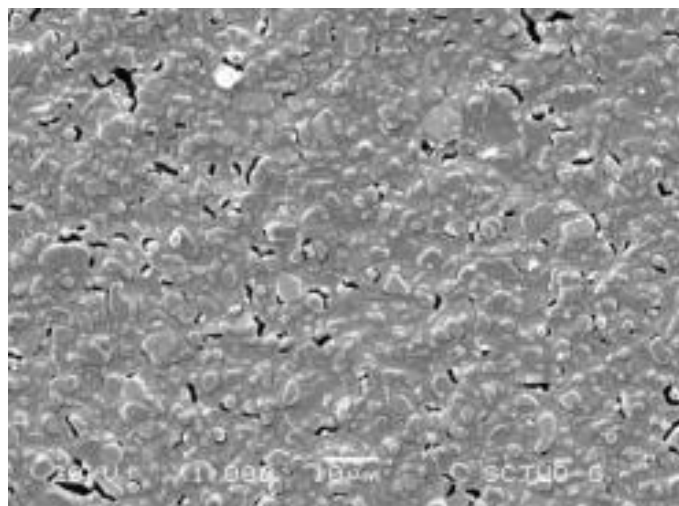


# Electrochemical aptasensor for the detection of the key virulence factor YadA of *Yersinia enterocolitica*

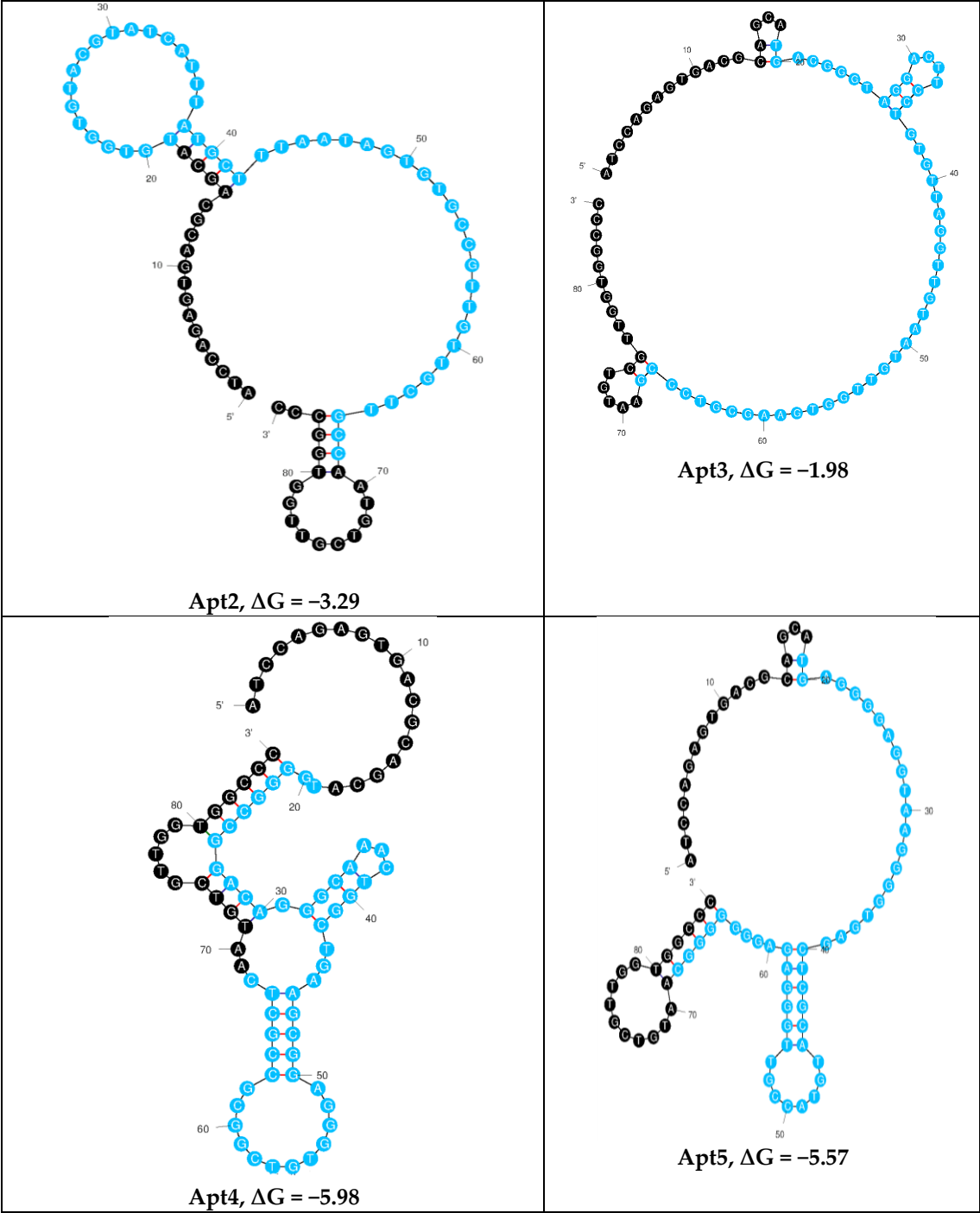
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Carla J. Silva <sup>4,5</sup>, Felismina T. C. Moreira <sup>1,2,6</sup>, M. Goreti F. Sales <sup>1,2,6</sup> and Ligia R. Rodrigues <sup>1,2,\*</sup>

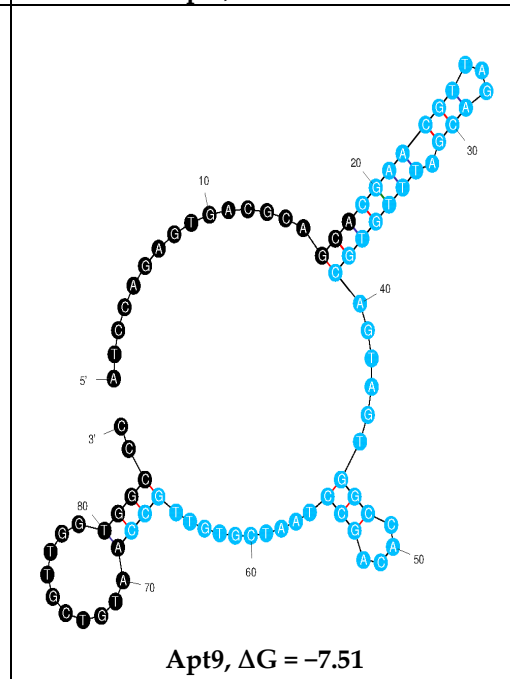
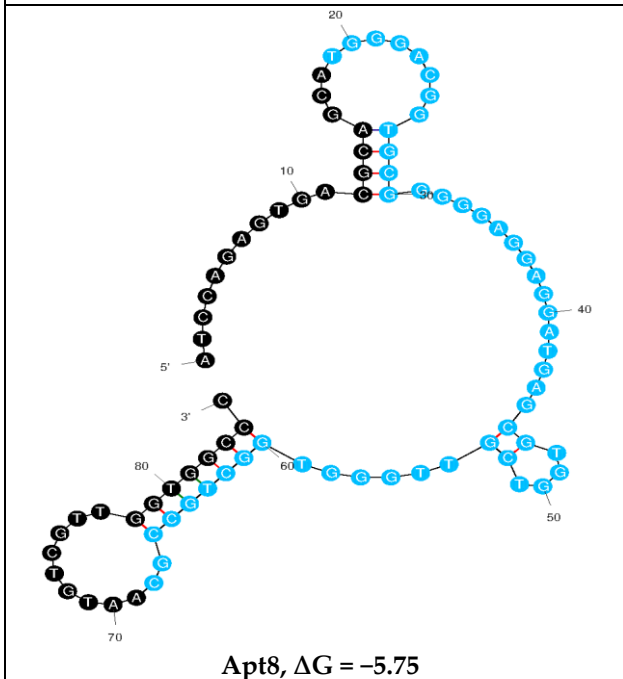
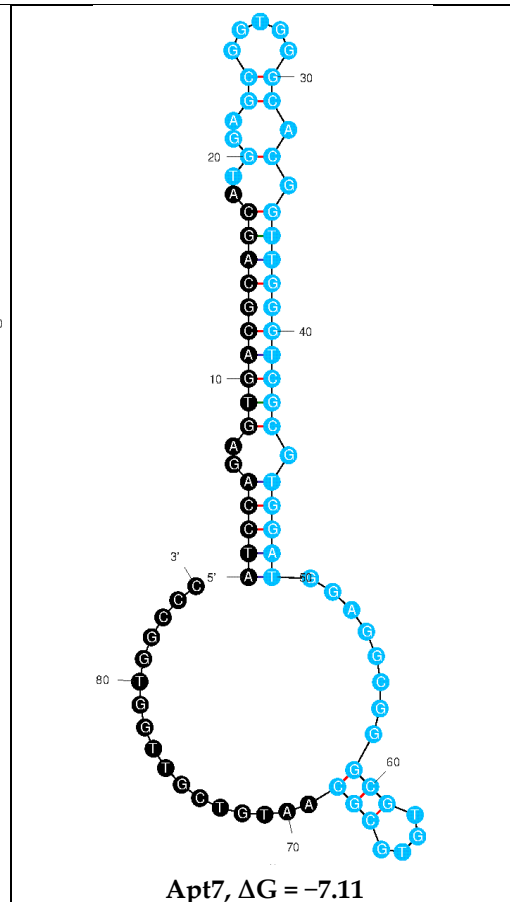
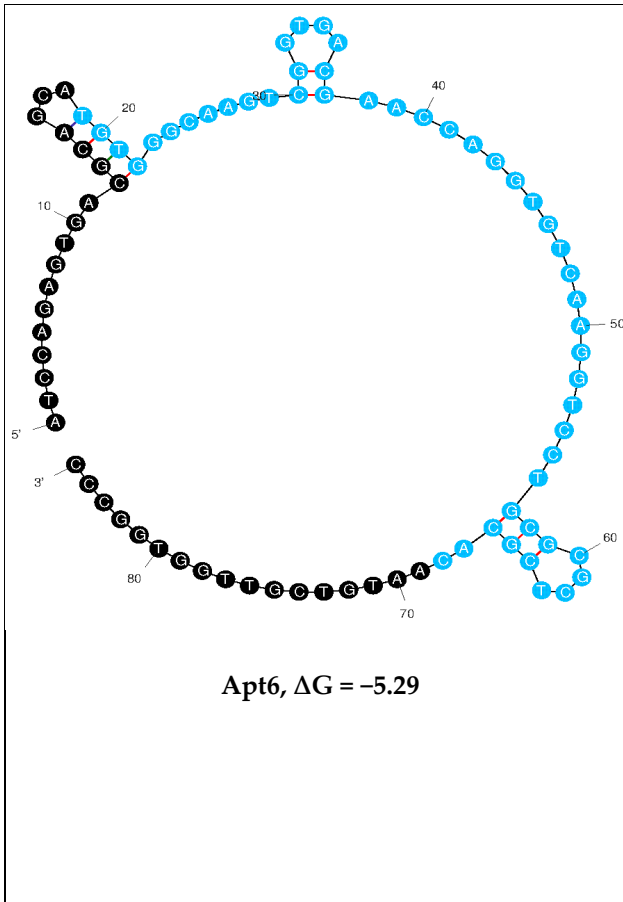
Corresponding author: Tel.: (+351) 253601978, Email: [lrmr@deb.uminho.pt](mailto:lrmr@deb.uminho.pt)

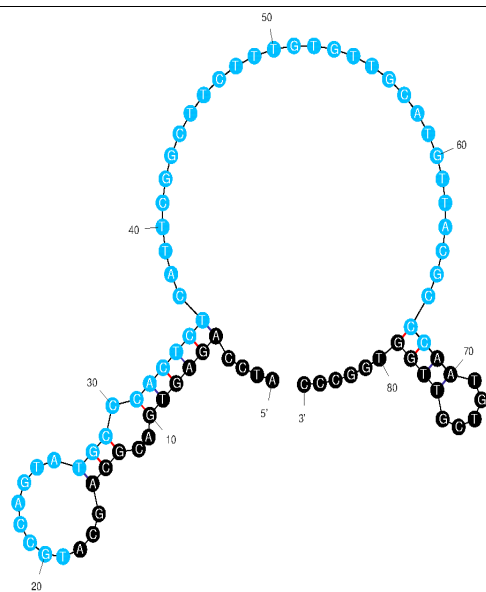


**Figure S1. Scanning electron microscope image of the bare gold (Au) working electrode surface.** (Image retrieved from Metrohm Dropsens [https://www.dropsens.com/en/pdfs\\_productos/new\\_brochures/gold\\_electrodes.pdf](https://www.dropsens.com/en/pdfs_productos/new_brochures/gold_electrodes.pdf))

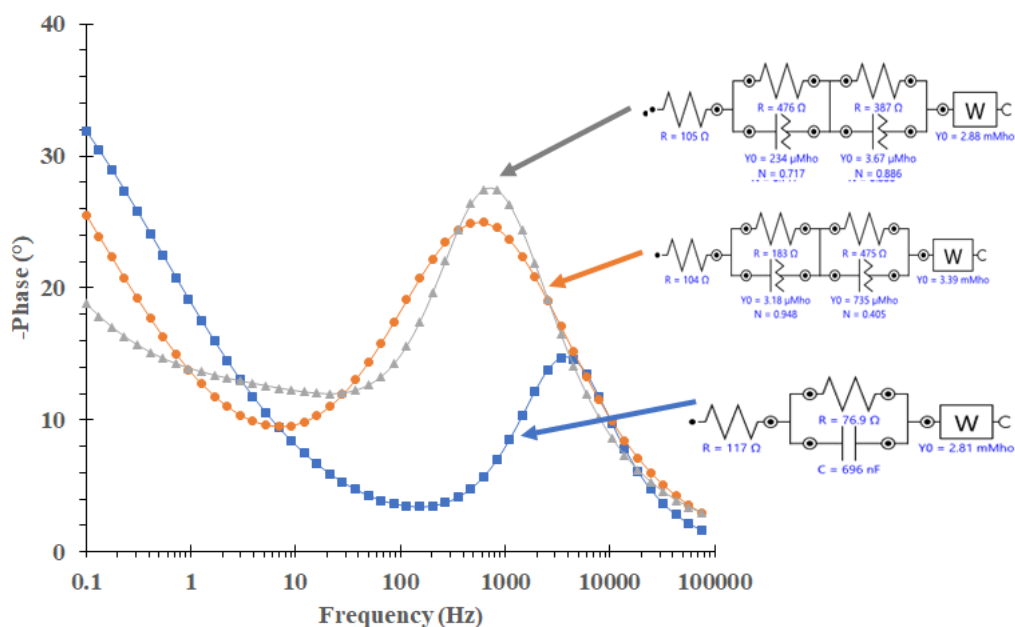
**Table S1. Predicted secondary structures of the other nine highest-copy aptamers.** The presented predicted secondary structures were the ones with lowest  $\Delta G$ , i.e., the highest stability using the temperature 37 °C, 137 mM Na<sup>+</sup> and 1.4 mM Mg<sup>2+</sup> (calculated using the mfold webserver). Random regions are presented in blue.







Apt10,  $\Delta G = -5.56$



**Figure S2. Bode phase plots and Randles' equivalent circuit at biosensor assembly.** Electrochemical assays for the construction of the biosensor by gold (Au) surface modification, in  $5.0 \times 10^{-3} \text{ M}$   $[\text{Fe}(\text{CN})_6]^{3-}$  and  $5.0 \times 10^{-3} \text{ M}$   $[\text{Fe}(\text{CN})_6]^{4-}$  solution, prepared in phosphate buffer, pH 7.4. Bode phase plot and the Randles' equivalent circuit were fitted to the EIS data of the Nyquist plot and are shown in Figure 5b.