Electronic Supplementary Material (ESI) for RSC Advances.

Supplementary Information

Induction of self-structure in polyriboadenylic acid by the benzophenanthridine plant alkaloid chelerythrine: A spectroscopic approach

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Table S1 Summary of the optical properties of free and poly-A bound CHL[a]

Absorbance	
$\lambda_{max,\ free}$ (nm)	316
$\lambda_{max,\ bound}$ (nm)	321
λ_{iso} (nm)	467
ε_{free} (at λ_{max}, $M^{-1}cm^{-1}$)	37037 (316)
ε_{bound} (at λ_{max}, $M^{-1}cm^{-1}$)	19207 (316)
$^{*}\varepsilon$ (at λ_{iso}, $M^{-1}cm^{-1}$)	2948 (467)
Fluorescence	
$\lambda_{excitation}$ (nm)	400
$\lambda_{max,\ emission}$ (nm)	564
$^{\#}F_b/F_o$	11.73

[*]Wavelength at isosbestic point. [#] F_o and F_b are the fluorescence intensities of the free and completely bound CHL respectively at 564 nm.

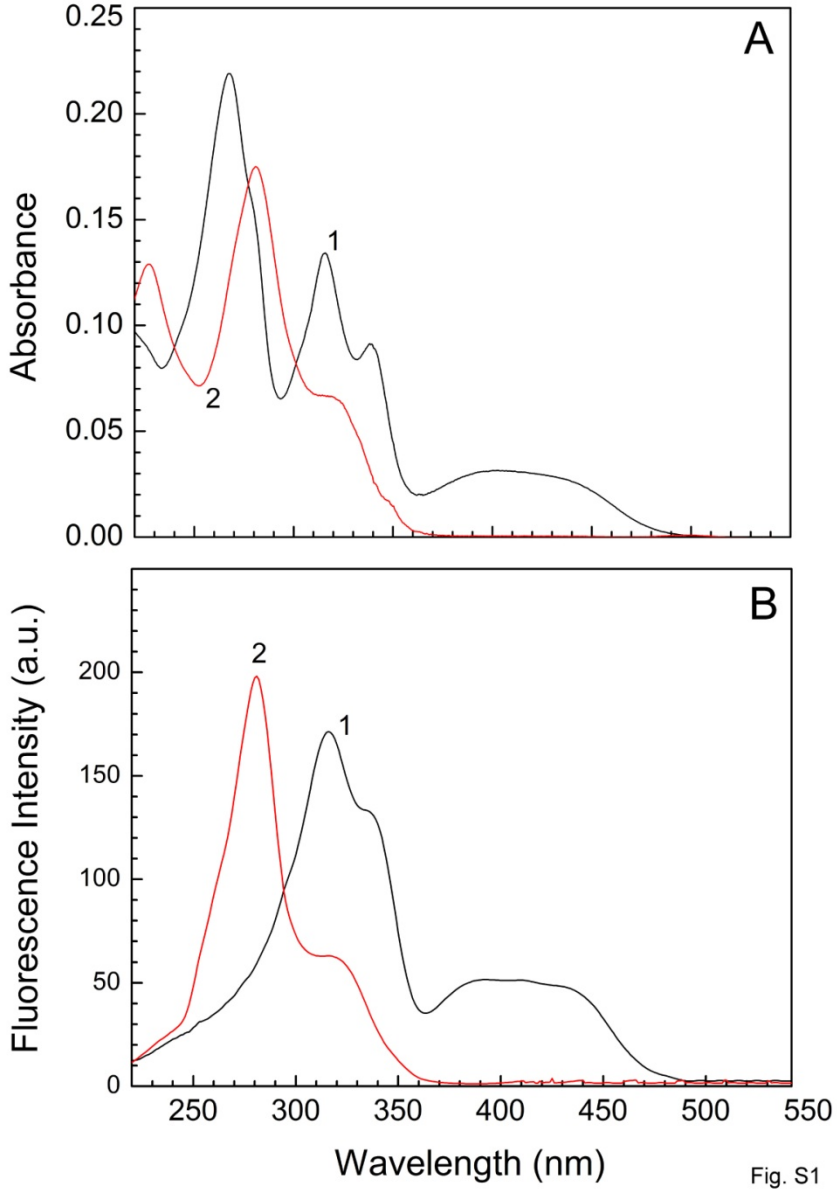

Fig. S1. Absorption (Panel A) and fluorescence excitation (Panel B) spectra of iminium (curve 1) and alkanolamine (curve 2) form of CHL (2.56 μM) at 25 °C. Spectrum of iminium form was taken in CPB buffer (pH 6.5) and spectrum of alkanolamine form was taken in 10 mM carbonate-bicarbonate buffer containing 25 mM NaCl (pH 10.1). Excitation and emission bandwidth were 5 and 5 nm, respectively.

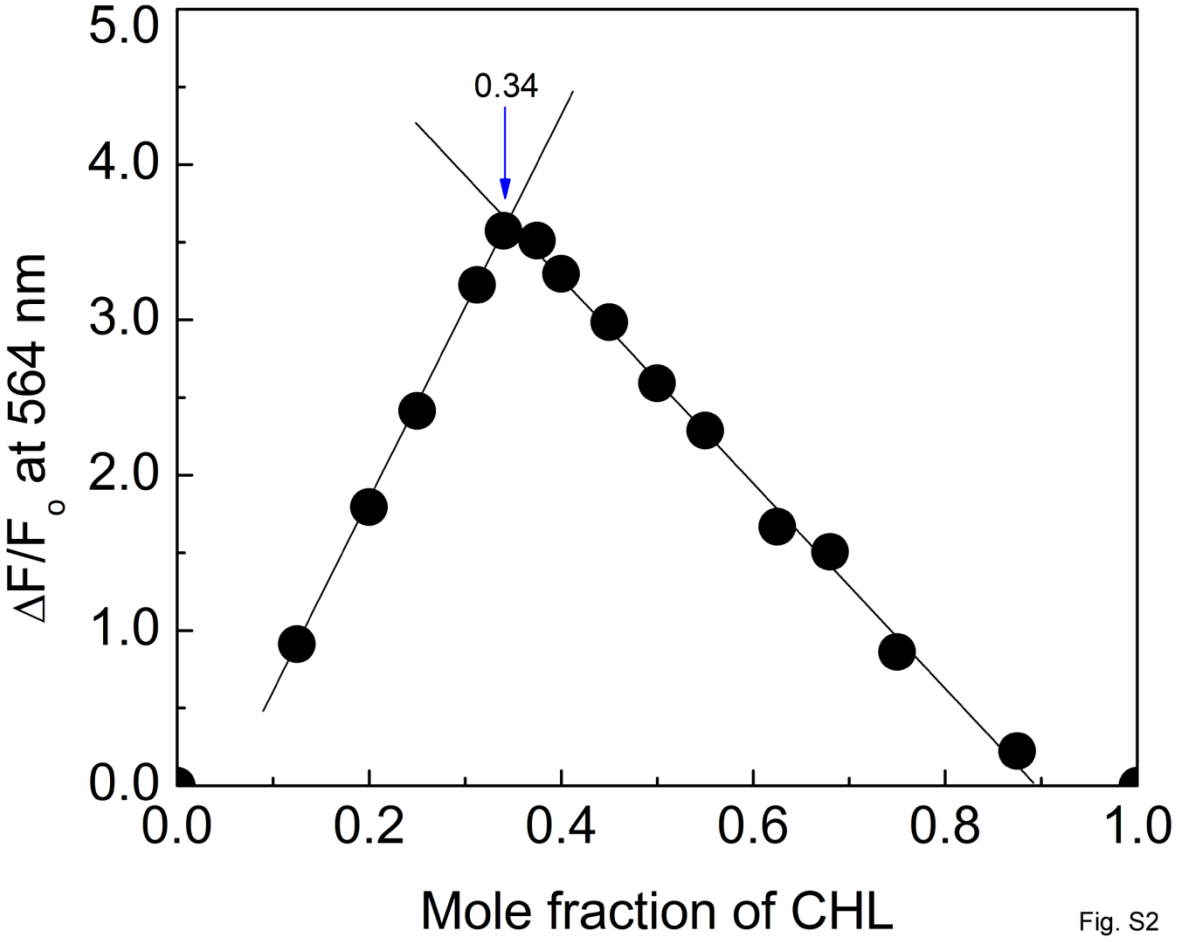

Fig. S2. Job's plot for the binding of CHL poly-A in CPB buffer at 25 ˚C. The relative difference in fluorescence intensity at 564 nm was plotted against the mole fraction of CHL added.

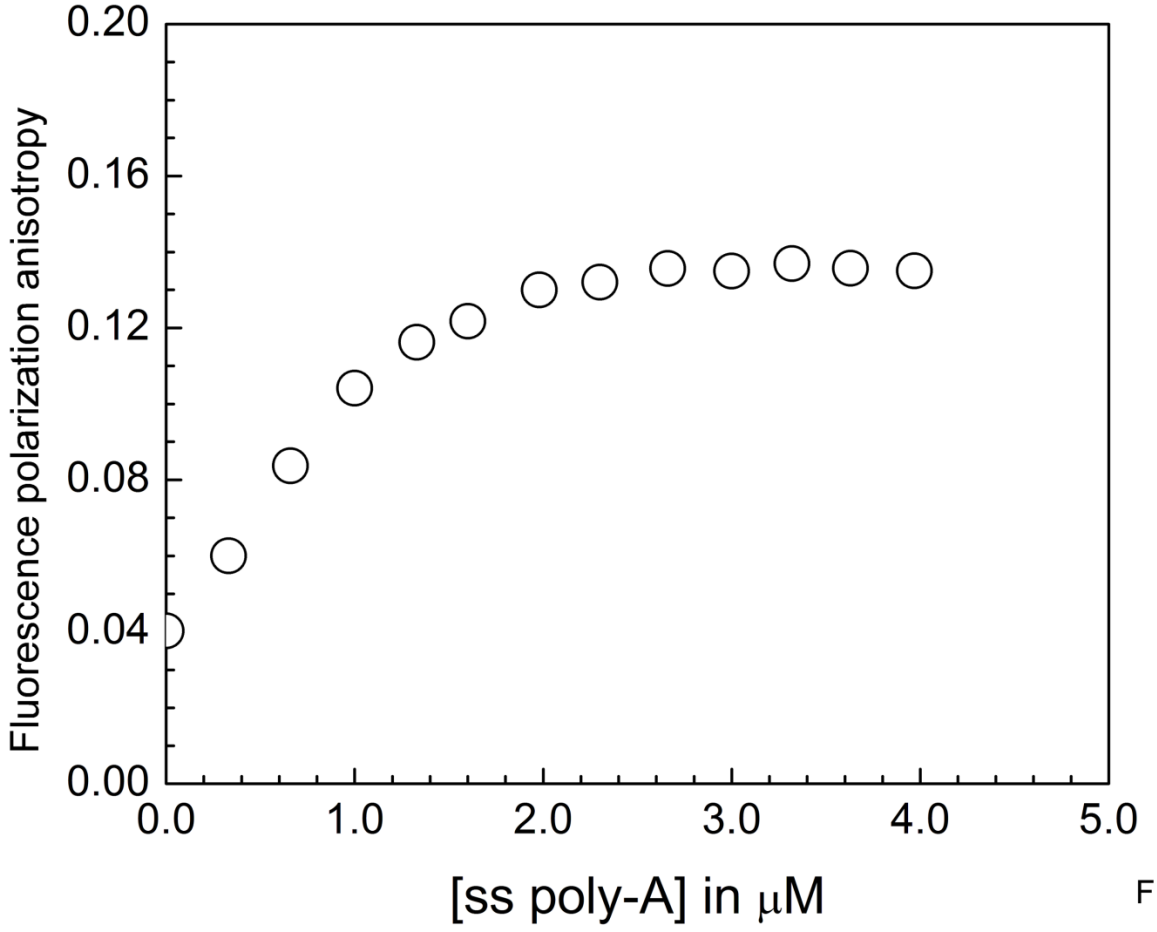

Fig. S3. Variation of the anisotropy of CHL fluorescence as a function of concentration of poly-A. λ_{ex} and λ_{em} for CHL was 400 nm and 564 nm respectively.

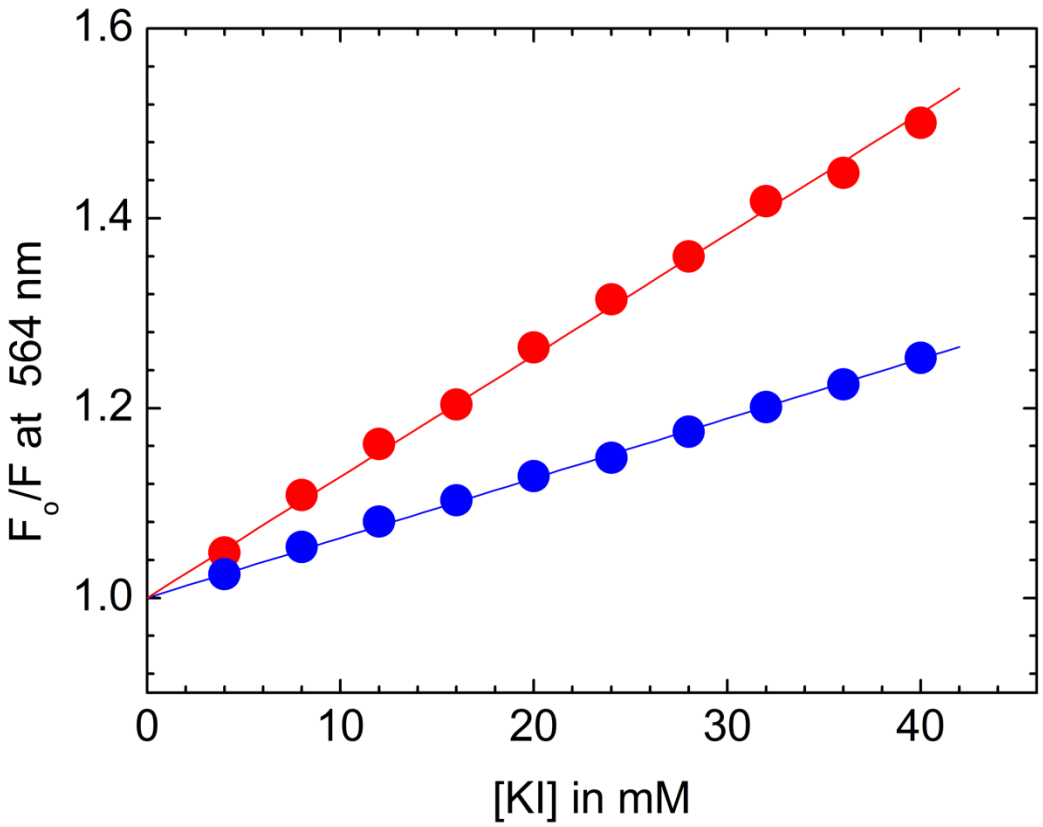

Fig. S4. Stern-Volmer plots for the quenching of CHL fluorescence by KI in the absence (●) and in presence (●) of poly-A in CPB buffer at 25 ˚C.

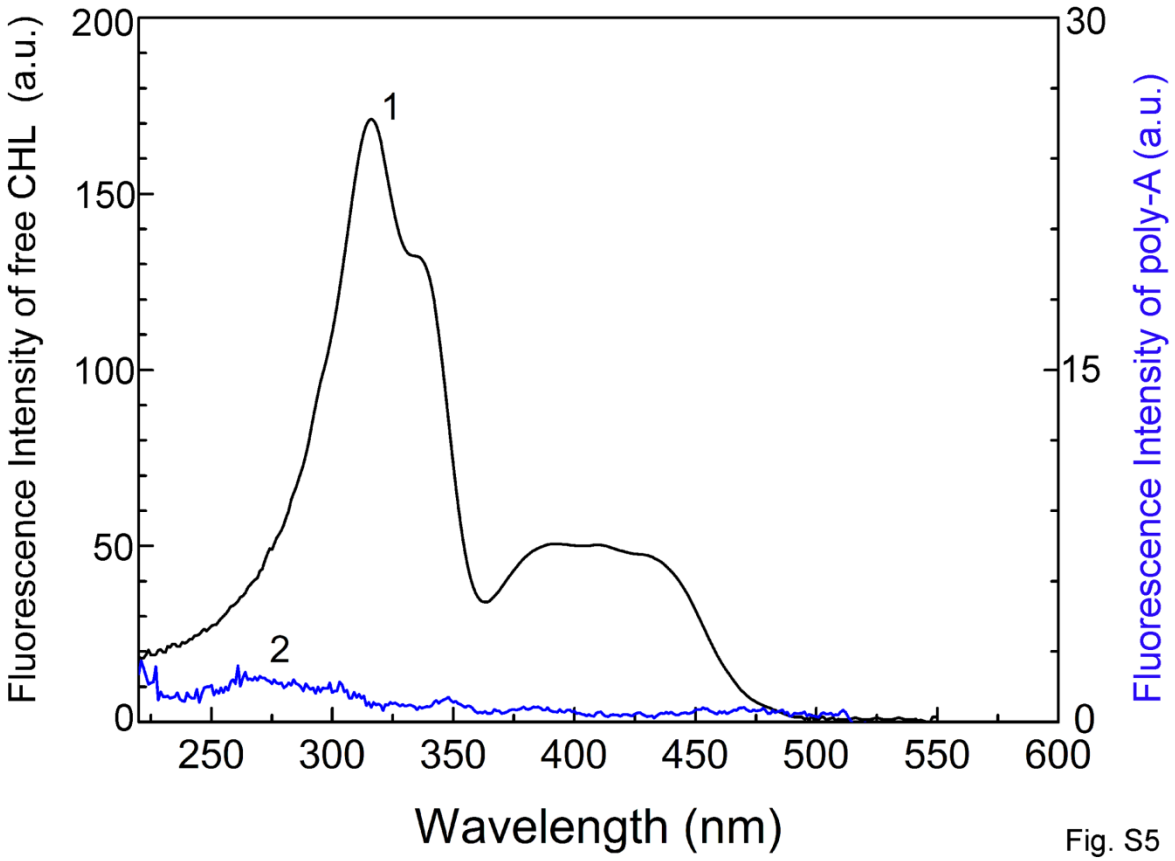

Fig. S5. Fluorescence excitation spectra of free CHL (2.56 μM, curve 1) and poly-A (25.6 μM, curve 2) in CPB buffer at 25 °C. Excitation and emission bandwidth were fixed at 5 and 5 nm respectively.