

## Supplementary Material

### Interaction and inhibitory influence of the food colorant carmoisine on lysozyme amyloid fibrillogenesis

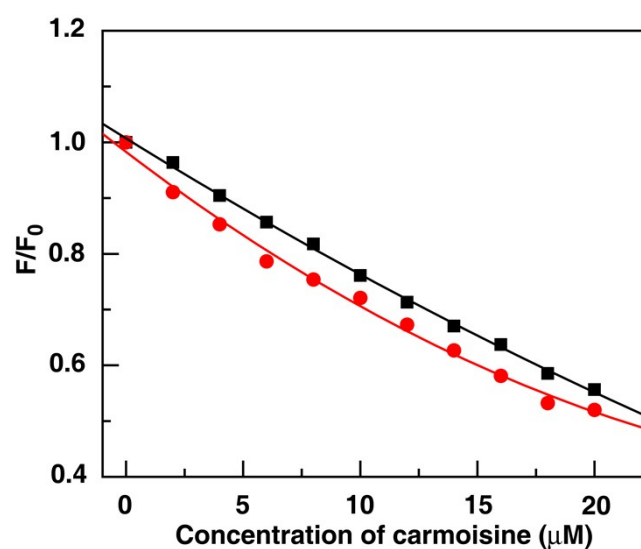
Anirban Basu\* and Gopinatha Suresh Kumar\*

Biophysical Chemistry Laboratory

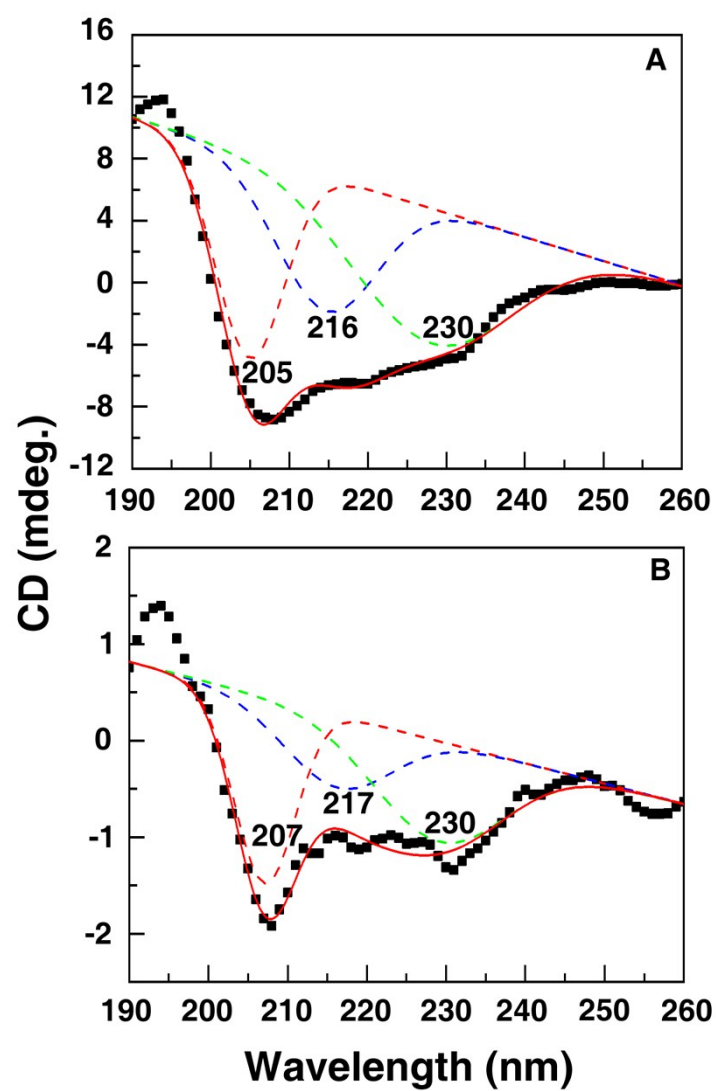
Organic & Medicinal Chemistry Division

CSIR-Indian Institute of Chemical Biology

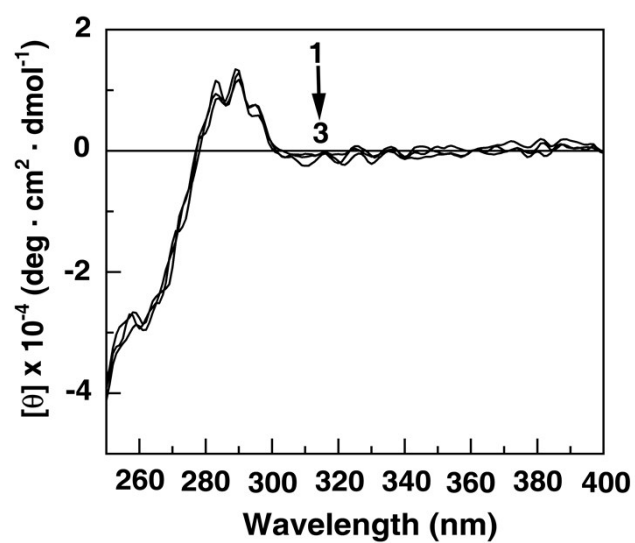
Kolkata 700 032, India



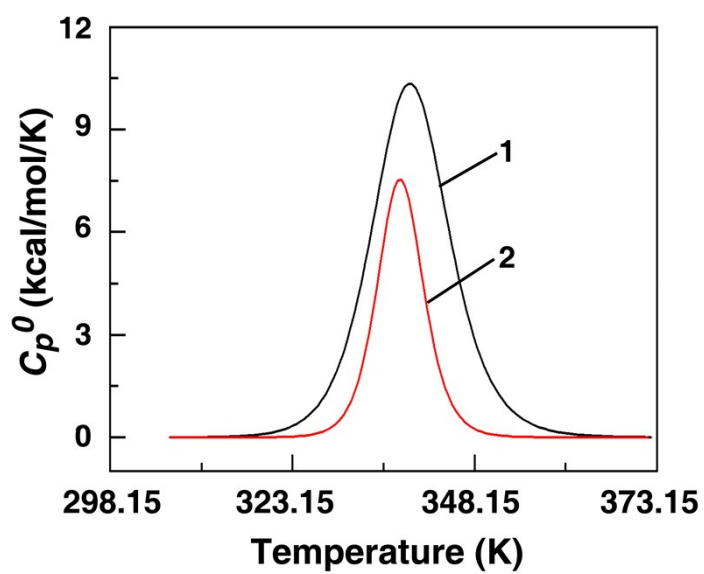
**Fig. S1.** Hydrophobic displacement assay for LSZ treated with increasing concentrations of carmoisine in the absence (■) and presence (●) of ANS.



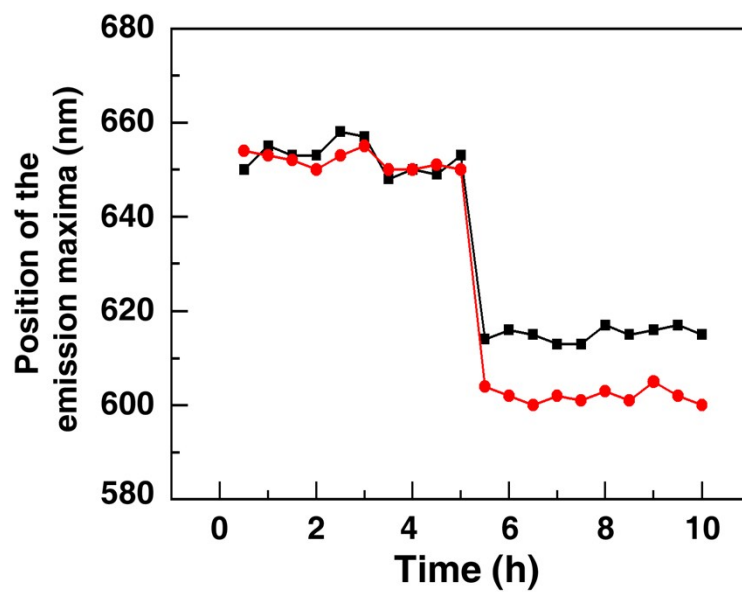
**Fig. S2.** Deconvoluted far-UV CD spectra of (A) LSZ and its complex with (B) carmoisine. The scatter plots represent the original spectra, the broken lines represent the deconvoluted spectra and the solid lines are the best fit of the spectral data.



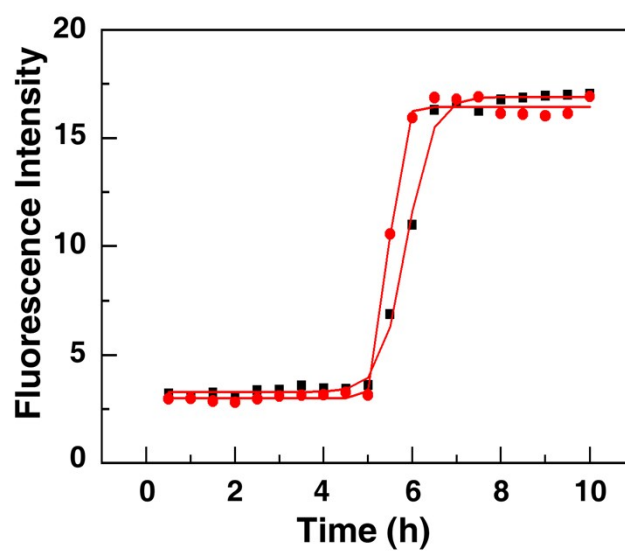
**Fig. S3.** Near-UV CD spectral changes of LSZ (curve 1, 30  $\mu\text{M}$ ) on treatment with 15 and 25  $\mu\text{M}$  of carmoisine (curves 2 and 3).



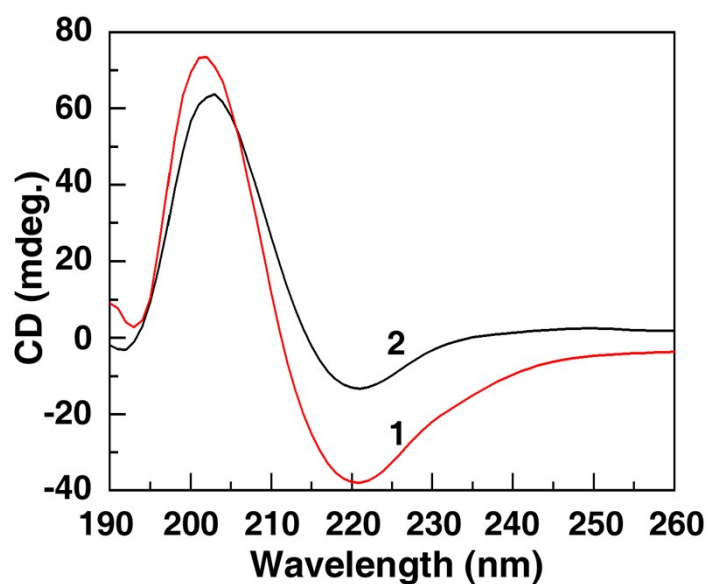
**Fig. S4.** DSC thermogram of LSZ (curve 1) and LSZ-carmoisine (curve 2) complex at D/P = 25.



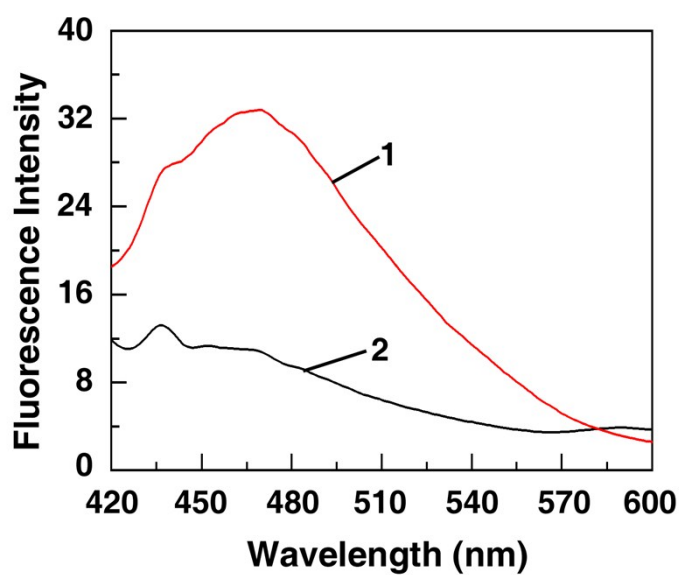
**Fig. S5.** Variation of the emission maxima of NR with time for LSZ samples in the absence (■) and presence of carmoisine (•).



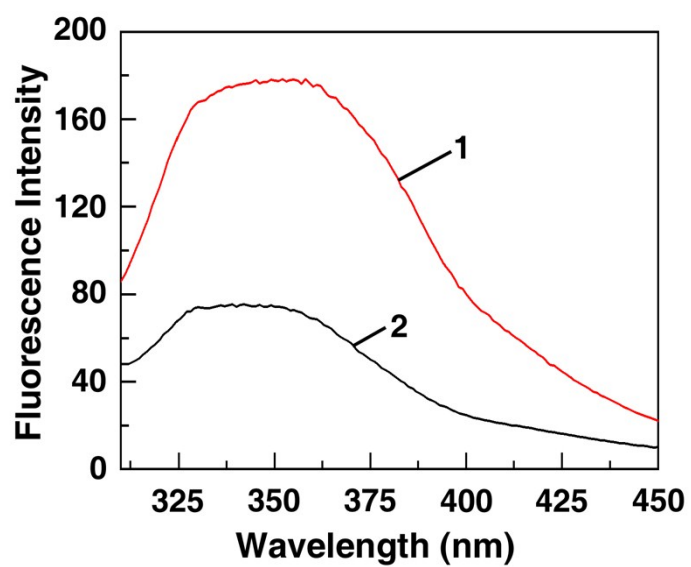
**Fig. S6.** Variation of the fluorescence intensity of NR at the emission maxima with time for LSZ samples in the absence (■) and presence of carmoisine (•).



**Fig. S7.** Far-UV CD spectra of LSZ samples in the absence (curve 1) and presence (curve 2) of carmoisine after 10 h.



**Fig. S8.** ANS fluorescence spectra of LSZ samples collected at 8 h (curve 1) and 24 h (curve 2) time intervals to study the defibrillating ability of carmoisine on LSZ fibrils.



**Fig. S9.** Intrinsic fluorescence spectra of LSZ samples collected at 8 h (curve 1) and 24 h (curve 2) time intervals to study the defibrillating ability of carmoisine on LSZ fibrils.