

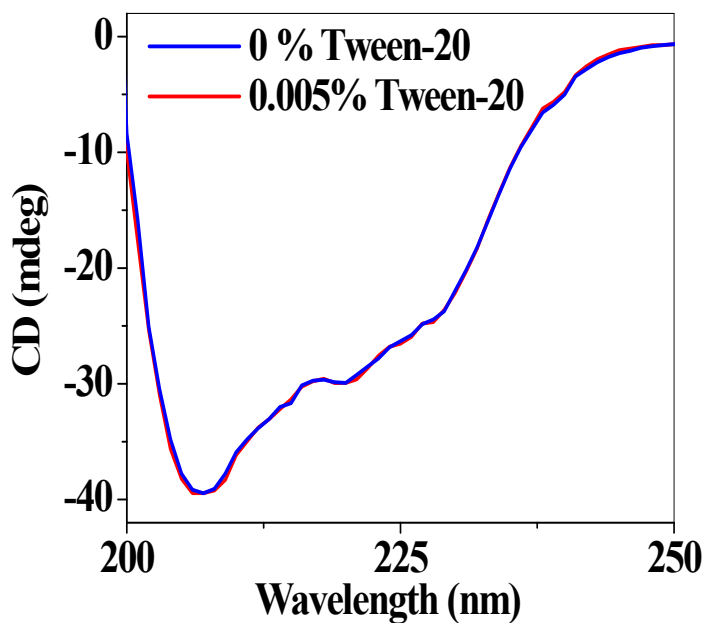
Supporting information for

**Structure and Dynamics of Lysozyme in DMSO-Water Binary Mixture:  
Fluorescence Correlation Spectroscopy**

Shirsendu Ghosh, Shyamtanu Chattoraj, Rajdeep Chowdhury and Kankan Bhattacharyya\*

Department of Physical Chemistry, Indian Association for the Cultivation of Science, Jadavpur,  
Kolkata 700032, India

\*E-mail: [pckb@iacs.res.in](mailto:pckb@iacs.res.in)



**Figure S1: CD spectra of lysozyme in phosphate buffer in 0% and 0.005% (w/w) Tween-20.**

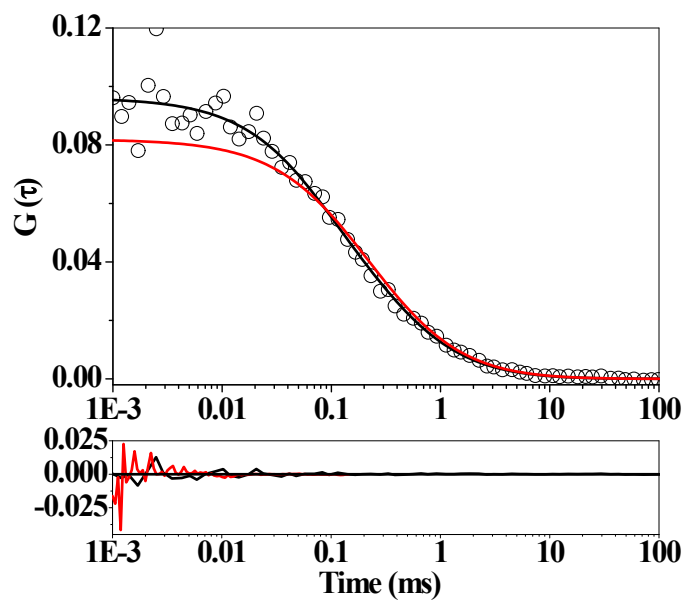


Figure S2: FCS trace of alexa-488 labeled lysozyme in phosphate buffer. Comparisons of fit to (a) free diffusion (red) and (b) one component diffusion and one component relaxation (black).

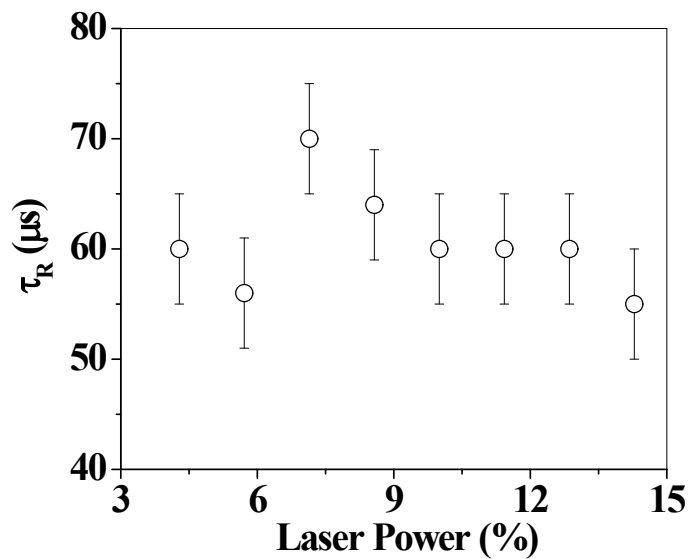


Figure S3: Variation of relaxation time ( $\tau_R$ ) of lysozyme with laser power.

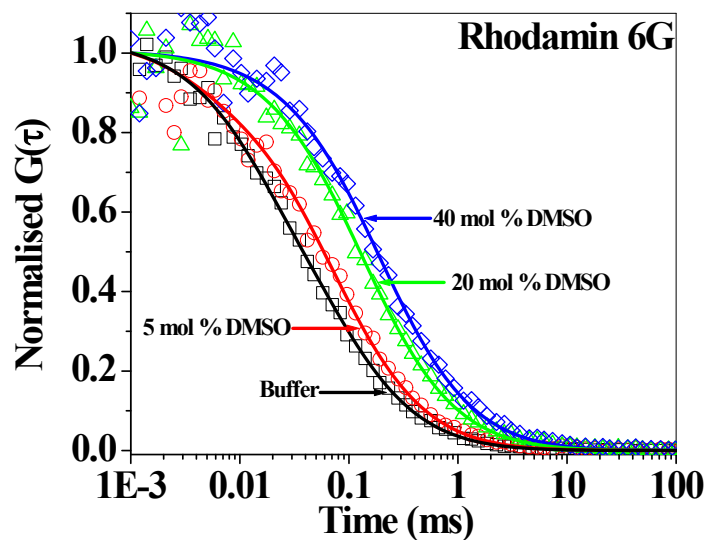


Figure S4. FCS traces of Rhodamin 6G in different mol % of DMSO-water mixture

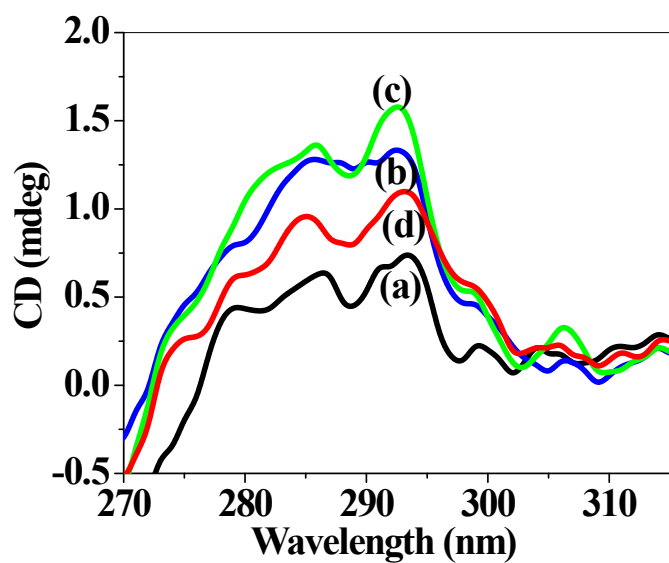


Figure S5: CD spectra of lysozyme in DMSO-water: (a) 0; (b) 5; (c) 20; and (d) 40 mol % DMSO.

**Table S1. pH and FCS data of lysozyme: Different mol % of DMSO**

<b>Mol % DMSO</b>	<b>pH<sup>a</sup></b>	<b><math>\tau_D</math> (<math>\mu</math>s)<sup>b</sup></b>	<b><math>\tau_r</math> (<math>\mu</math>s)<sup>b</sup></b>	<b>F (%)</b>	<b><math>\tau_{R6G}</math> (<math>\mu</math>s)</b>	<b><math>r_H</math> (<math>\text{\AA}</math>)<sup>c</sup></b>
<b>0</b>	<b>7.00</b>	<b>220</b>	<b>65</b>	<b>19</b>	<b>60</b>	<b>18</b>
<b>1.31</b>	<b>7.1</b>	<b>265</b>	<b>85</b>	<b>24</b>	<b>61</b>	<b>22</b>
<b>2.74</b>	<b>7.2</b>	<b>350</b>	<b>105</b>	<b>34</b>	<b>66</b>	<b>27</b>
<b>5</b>	<b>7.2</b>	<b>465</b>	<b>150</b>	<b>34</b>	<b>70</b>	<b>33</b>
<b>10</b>	<b>7.4</b>	<b>480</b>	<b>125</b>	<b>32</b>	<b>98</b>	<b>25</b>
<b>15</b>	<b>7.4</b>	<b>470</b>	<b>105</b>	<b>20</b>	<b>114</b>	<b>21</b>
<b>20</b>	<b>7.4</b>	<b>510</b>	<b>60</b>	<b>19.5</b>	<b>132</b>	<b>20</b>
<b>30</b>	<b>7.7</b>	<b>620</b>	<b>40</b>	<b>16</b>	<b>177</b>	<b>18</b>
<b>40</b>	<b>8.0</b>	<b>770</b>	<b>60</b>	<b>19</b>	<b>190</b>	<b>20</b>

<sup>a</sup> $\pm 0.1$ , <sup>b</sup> $\pm 10 \mu$ s, <sup>c</sup> $\pm 2 \text{\AA}$ .