## Adsorption and Unfolding of Lysozyme at a Polarized

## **Aqueous-Organic Liquid Interface**

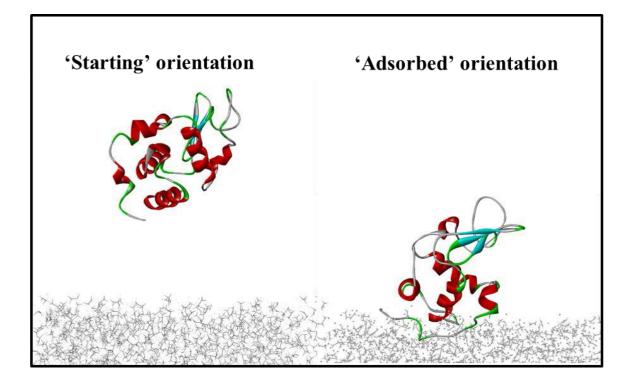
Supporting Information

Mahreen Arooj,<sup>1</sup> Neha S. Gandhi,<sup>1</sup> Cara A. Kreck,<sup>1</sup> Damien W.M. Arrigan<sup>2</sup> and Ricardo L. Mancera<sup>1\*</sup>

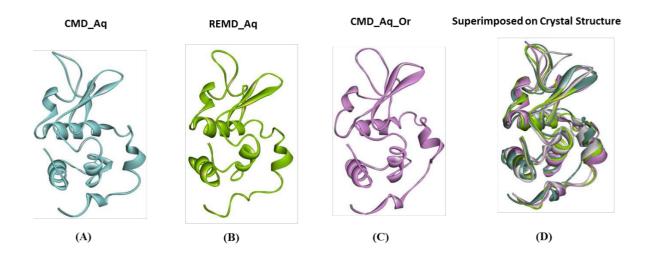
<sup>1</sup>School of Biomedical Sciences, CHIRI Biosciences and Curtin Institute for Computation, and <sup>2</sup>Department of Chemistry and Nanochemistry Research Institute, Curtin University, GPO Box U1987, Perth WA 6845, Australia.

\* Author for correspondence: <u>R.Mancera@curtin.edu.au</u> Tel. +618 9266 1017

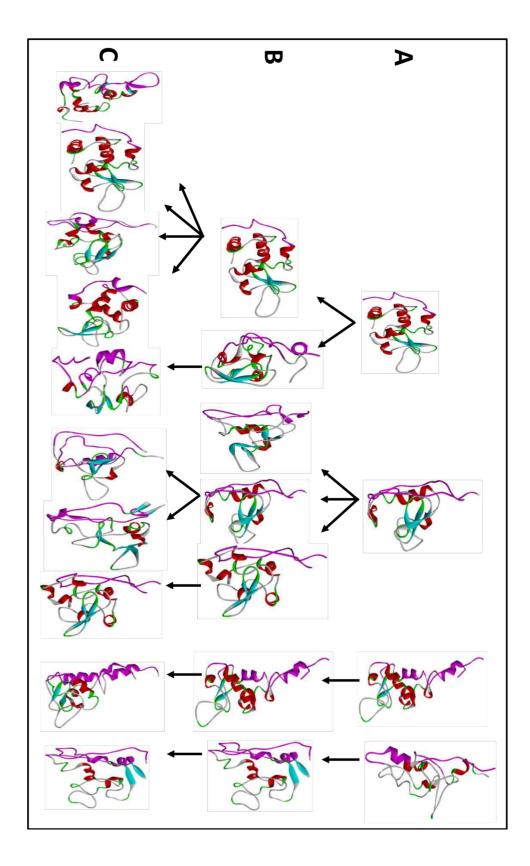
Fax. +618 9266 2342



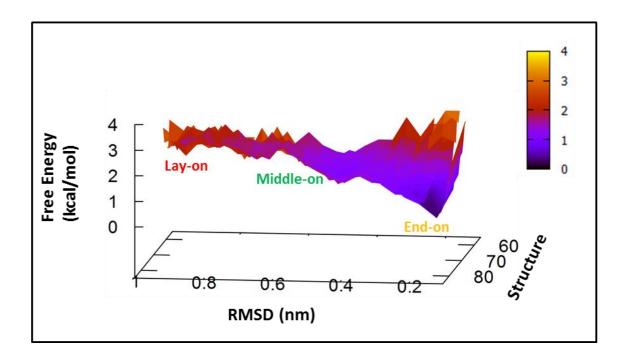
**Figure S1:** Orientation of HEWL at the start of the simulation and after adsorption at the water/DCE interface.



**Figure S2:** Representative structures of HEWL from cluster analysis of (A) CMD\_Aq, (B) REMD\_Aq, and (C) CMD\_Aq\_Org simulations. Superimposition of these representative structures onto the crystal structure of HEWL is shown in D.



**Figure S3:** Representative structures of top clusters of HEWL adsorbed at the water/DCE interface (REMD\_Aq\_Org simulation) obtained with clustering cut-off values of 0.8 nm (**A**), 0.7 nm (**B**), and 0.6 nm (**C**).



**Figure S4:** Free energy landscape for the unfolding of HEWL as a function of RMSD and secondary structure content for conformations belonging to the dominant three orientations of the protein at the water/DCE interface.