Supplementary data for:

Protein-Protein Förster Resonance Energy Transfer Analysis of Nucleosome Core Particles Containing H2A and H2A.Z

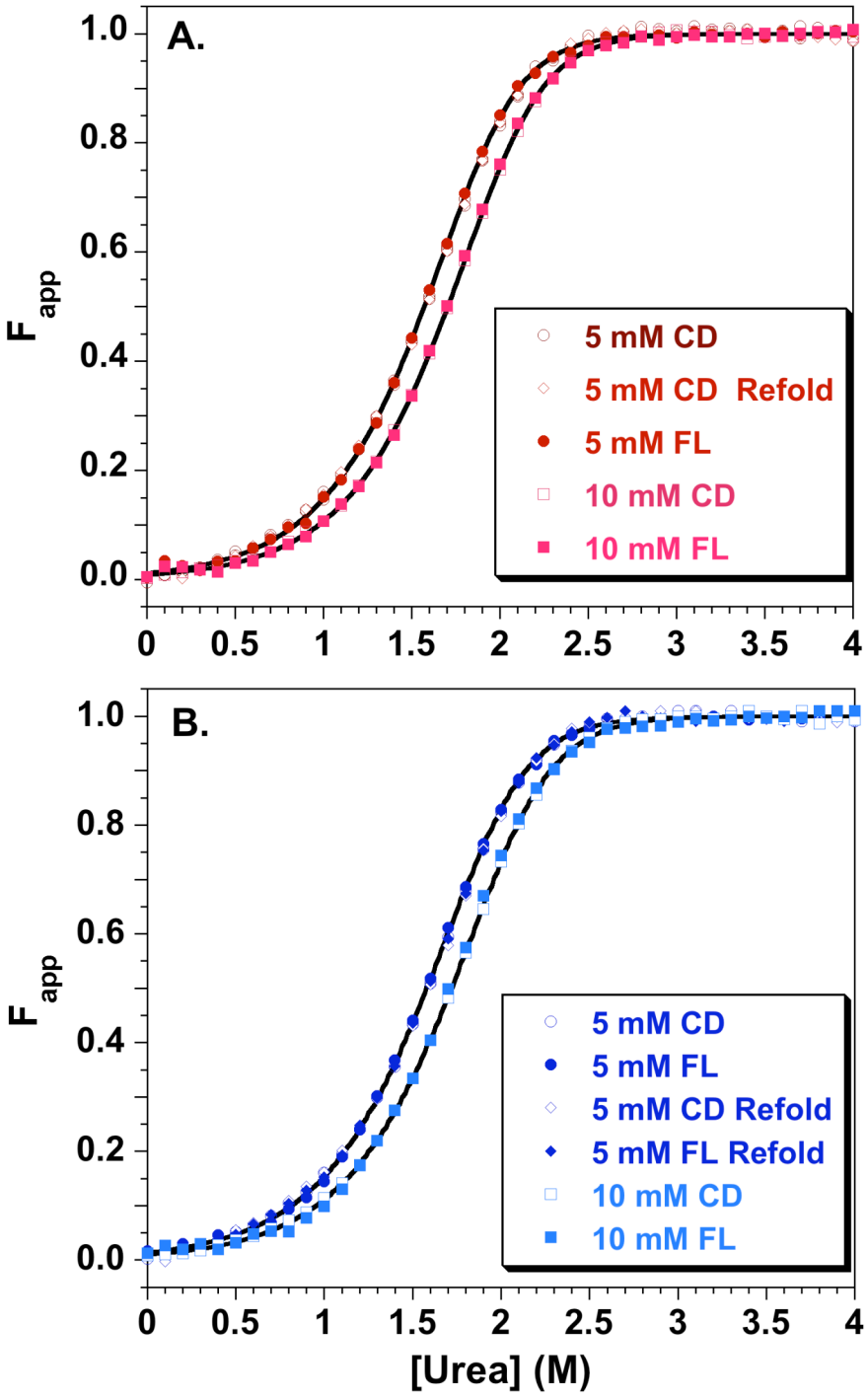
Duane A. Hoch, Jessica J. Stratton and Lisa M. Gloss*

School of Molecular Biosciences

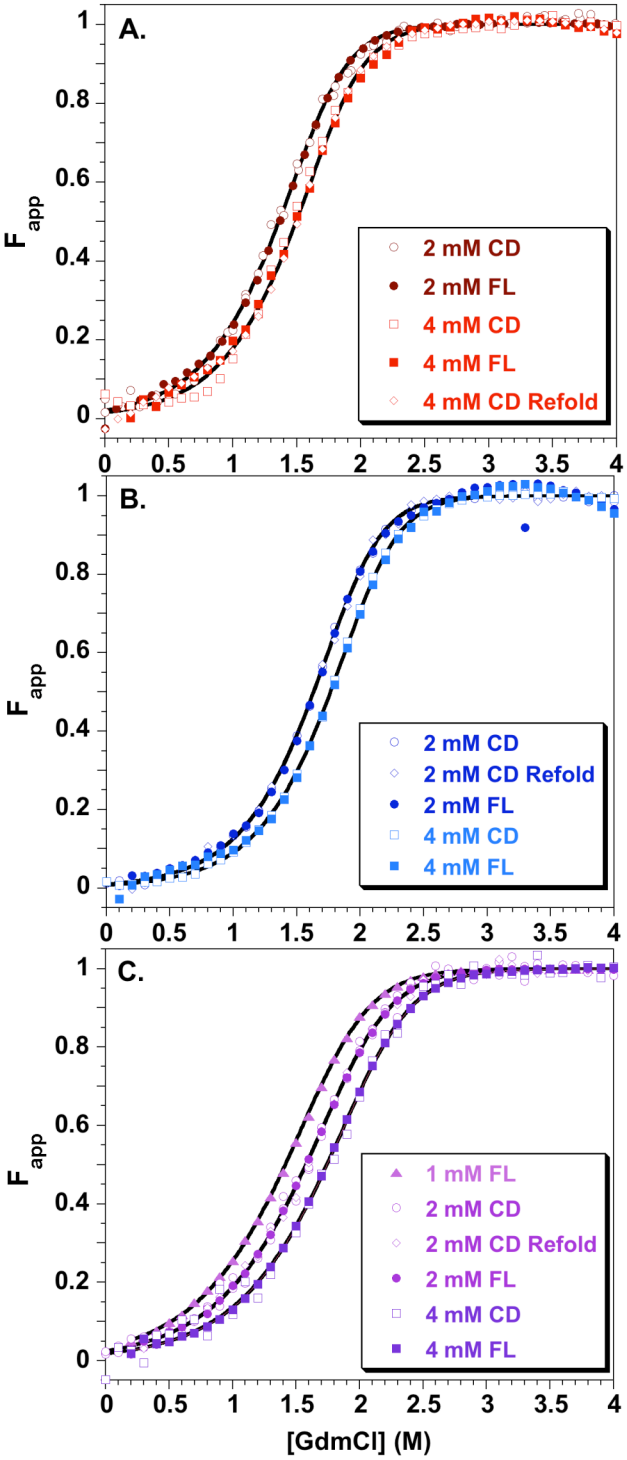
Washington State University, Pullman, WA 99164-4660

The supplementary materials provide additional details on two experiments in the manuscript: 1) the equilibrium unfolding data for the FRET-engineered histone oligomers; 2) the salt-dependence of the ΔG values associated with H2A-H2B dissociation.

Supplementary Figure 1. F_{app} plots of the urea equilibrium titrations of the Cys-AEDANS H2A-H2B dimers. CD, open symbols; FL, closed symbols. Unfolding data at 5 µM and 10 µM dimer, circles and squares, respectively. Refolding data, diamonds. The lines represent global fits of the data set to a two-state dimer unfolding model. **A.** H2A-108Cys-AEDANS•WT H2B **B.** WT H2A•H2B-109Cys-AEDANS Conditions: 200 mM KCl, 0.1 mM EDTA, 20 mM KPi pH 7.2, 25°C.



Supplementary Figure 2. F_{app} plots of the GdmCl equilibrium titrations of the H3-H4 Trp variants. CD, open symbols; FL, closed symbols. Unfolding data at 1, 2 and 4 μM monomer, triangles, circles and squares, respectively. Refolding data, diamonds. The lines represent global fits of the data set to a two-state dimer unfolding model (see text). **A.** H3-78W•H4. **B.** H3•H4-49W. **C.** H3•H4-60W. Conditions: 1 M TMAO, 200 mM KCl, 0.1 mM EDTA, 20 mM KPi pH 7.2, 25°C.



Supplementary Figure 3. Representative ΔG data for H2A-H2B dissociation from the NCP plotted as a function of the square root of the ionic strength. Data points overlap significantly, so some data sets must be omitted for clarity. The solid lines are drawn to guide the eye. A) H2A-108Cys-AEDANS acceptor NCPs with H3-78W (350 nm, ●) and H4-60W (350 nm, ■; 490 nm, ❑). B) H2B-109Cys-AEDANS acceptor NCPs with H3-78W (350 nm, ●) and H4-60W (350 nm, ■). Conditions are described in the legend of Figure 5 of the paper.