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**Dynamics of ubiquitin in the confining environment of a reverse micelle**

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We study the hydration and dynamics of a protein (ubiquitin) in the interior of a reverse micelle (RM) that mimics a confining environment. The protein/RM system self assembles starting from a homogeneous system containing water, isooctane a surfactant (AOT) and ions. We find that the hydration of the protein surface and interior are changed, when compared to the protein in water, but the dynamics is only slightly changed. The protein prefers to be located away from the center of the RM and near the AOT charged headgroups. This preference appears to be entropically driven and occurs even when the AOT headgroups are uncharged. Similar behavior was found in alpha helical peptides.

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