

Abstract Submitted  
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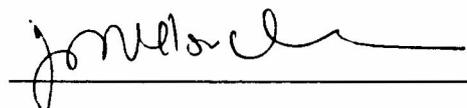
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Biophysics  
Sorting category  
1(b)

Kinetics of Structural Transition Induced by Hydration on Hemoglobin and Myoglobin\* M.F.COLOMBO-UNESP, R.SANCHES-IFQSC/USP - Human aquo-methemoglobin(Hb) and sperm whale aquo-metmyoglobin(Mb) when subjected to dehydration undergo a structural transition in order to form hemichromes. As it is shown in the present work, it is possible to follow this and the reverse transitions by visible absorption spectroscopy and to get informations about the heme pocket flexibility. The visible absorption spectrum and change in absorbance at a fixed wavelength ( $\Delta A$ ) were obtained as a function of time while the water vapor pressure in the sample holder was varied. For both proteins, four isosbestic points were evident in the spectra indicating that the met/hemichrome transition involves only these two states. It was observed also that Mb, in contrast to Hb, presented an incomplete conversion to hemichrome when the two proteins were dehydrated in the same conditions. The logarithmic plot of  $\Delta A$  as a function of time showed that: i) the kinetics of the met/hemichrome transition is biphasic for Hb and monophasic for Mb; ii) the hemichrome  $\rightarrow$  met transition rate is much slower than the reverse kinetics. These results suggest that i) the heme pocket region in the met state, is more flexible than in hemichrome; ii) two distinct populations exist in Hb with different transition rates.

Prefer Standard Session

submitted by:



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P.S. I have already submitted an abstract, but I am not an author of this one.

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****	Documento 1 de 1
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