Title:	Structural and dynamical insights into the molten-globule form of ovalbumin.
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Abstract:	Ovalbumin is a 45 kDa egg-white glycoprotein which belongs to the class of serpin superfamily. We have studied the structural properties of both native and partially unfolded molten-globule forms of ovalbumin using a diverse array of spectroscopic tools. Time-resolved fluorescence measurements provided important structural and dynamical insights into the native and molten-globule states. Fluorescence anisotropy decay analysis indicated that there is a conformational swelling from the native to the molten-globule form of ovalbumin. We have also carried out red-edge excitation shift measurements to probe the dipolar relaxation dynamics around the intrinsic tryptophan residues. Additionally, stopped-flow fluorescence experiments revealed that the conformational transition from the native to the molten-globule form proceeds in a stepwise manner involving a burst-phase with a submillisecond conformational change followed by biphasic slower conformational reorganizations on the millisecond time scale leading to the final molten-globule state.
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