

Abstract Submitted  
for the MAR08 Meeting of  
The American Physical Society

**Macromolecular crowding effects on Brownian motion of protein GB1** ANTONIOS SAMIOTAKIS, MARGARET CHEUNG, University of Houston  
— The effect of macromolecular crowding in the interior of a cell plays an important role in protein folding dynamics and its stability. In the present work the dependence of diffusion coefficients of the macromolecule on various crowding conditions is studied using a coarse-grained representation of protein G B1 domain that includes Go-like interactions. Using Brownian dynamics simulations, diffusion coefficients are computed as a function of the volume fraction of crowders  $\phi_c$  and the ratio  $\lambda$  of the sizes of the crowder over that of protein. Deviation from linear Stokes-Einstein relation will be discussed.

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Date submitted: 27 Dec 2007

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