

Abstract Submitted  
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**A structural study of F-actin - filamin networks** ASHLEY AHRENS-BRAUNSTEIN, University of California, Merced, LAM NGUYEN, Florida State University, LINDA HIRST, University of California, Merced — The cell's ability to move and contract is attributed to the semi-flexible filamentous protein, F - actin, one of the three filaments in the cytoskeleton. Actin bundling can be formed by a cross-linking actin binding protein (ABP) filamin. By examining filamin's cross-linking abilities at different concentrations and molar ratios, we can study the flexibility, structure and multiple network formations created when cross-linking F-actin with this protein. We have studied the phase diagram of this protein system using fluorescence microscopy, analyzing the network structures observed in the context of a coarse grained molecular dynamics simulation carried out by our group.

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