

Abstract Submitted  
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**Investigation of Use of Calcein Dye for the Purpose of Studying Membrane Fusion** MATTHEW TENORIO, LAURA WESSELS, University of NE-Kearney — Calcein dye was to be used as the detection fluorophore while fusing an enveloped virus particle with a liposome. Dye was encapsulated into the liposome and membrane dye was incorporated into a virion. Calcein dye is quenched and water soluble making it easy to encapsulate into liposomes. There are several lipid dyes that will incorporate directly into a lipid bilayer that are also quenched. The properties, specifically the osmolality, of calcein dye was studied in order to determine the feasibility of this dye for membrane fusion experiments that require different signals to distinguish between a hemifusion state and fusion pore creation. Attempts to balance the osmolality of calcein dye included using high salt and high sucrose buffers, as well as trying different lipid compositions.

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