

Abstract Submitted
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Fusion between a content labelled liposome and an enveloped virus particle LAURA WESSELS, KEITH WENINGER, NCSU — Membrane fusion is critical during enveloped virus entry into cells for release of the viral genome to the cell. We have developed a fluorescence assay to observe individual virus particles fusing with immobilized liposomes. Dye encapsulated inside a liposome will be released into the virus particle's interior through a fusion pore that is created between the liposome's bilayer and the viral envelope. We used Total Internal Reflection Microscopy (TIRFM) to observe fusion between a liposome with calcein in the intravesicular buffer and an influenza particle. A sudden buffer exchange to acidic pH is used to trigger the fusion event. TIRFM allows a time resolution of ~ 100 ms. We plan to use confocal microscopy to improve the time resolution of our measurements of the opening of the fusion pore.

Laura Wessels
NCSU

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