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Altering F-Actin Structure of C17.2 Cells using Single-Walled Carbon Nanotubes JAY MAGERS[1], NATHAN L. D. GILLETTE[2], Susquehanna University, SLAVA V. ROTKIN, SABRINA JEDLICKA, Lehigh University, MASSOOMA PIRBHAI, Susquehanna University, LEHIGH UNIVESITY COLLABORATION, SUSQUEHANNA UNIVERSITY COLLABORATION — Advancements in nanotechnology have become fundamental to the delivery of drugs to treat various diseases. One such advancement is that of carbon nanotubes and their possible implications on drug delivery. Single-walled carbon nanotubes (SWCNTs) have great potential in the biomedical field as a means to deliver materials such as drugs and genes into the human body due to their size and chemistry. However, the effects of the nanotubes on cells they interact with are still unknown. Previous studies have shown that a low dosage of SWCNTs can affect differentiation of C17.2 neural stem cells. In this experiment, we investigate how the tubes affect the structure of the cells. Specifically, we determined the impact on the cell by examining the actin filament length, protrusions along the edge of the cells, and actin distribution.

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