



Laura Kelley, PhD

Cancer Cell Biology Graduate Program

Advisor: Scott Weed

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My graduate research focused on how head and neck cancer cells become invasive leading to local-regional metastasis and poor patient prognosis. These cells form invasive structures termed invadopodia which allow them to chew through surrounding tissues to leave the primary tumor site and enter the lymphatic system. We found that invadopodia are regulated by elevated expression of wild-type Src tyrosine kinase. In addition, we found that Src phosphorylates cortactin to regulate the actin-based machinery at invadopodia sites leading to the discovery that spatial and temporal activation of Src and cortactin is necessary for efficient invadopodia formation and extra-cellular matrix degradation.

After completion of my dissertation studied in Elena Pugacheva's laboratory to complete a collaboration started during my graduate work. We examined how the Aurora kinase A-activating protein NEDD9 regulates invadopodia in breast cancer cells. Starting in July 2011, I will be a post doc in David Sherwood laboratory at Duke University. There I will continue work on invadopodia and cell invasion using *C. elegans* as a model system.

While at WVU I became a cycling enthusiast and started the MoTown Women's Cycling Club and was successful in competing in the state mountain biking and road race series.