**Transcript**

***Troy Ralph – Identification and functional analysis of the invasive mechanisms of cancer cells***

As cancer progresses the malignant tumour becomes dangerous as it acquires the ability to metastasis or spread. The, this process is reliant on the ability for these cancer cells to degrade tissues or invade into blood and lymphatic vessels which facilitate the transport of these malignant cells. Within our laboratory we research the structures involved in the invasion process at the molecular level. And we do this with melanoma and breast cancer cell lines as they’re quite aggressive and invasive. The molecular pathways controlling invasion are not completely understood and we’ve hypothesised that there are other molecules and other pathways occurring which have not yet been identified.

So far with the work I’ve carried out in my PhD at LIMS I’ve identified several candidates which may be involved in this invasive process. As I continue my research I would like to determine if these are essential or important for these invasive processes and how the cancer cells are regulating these molecules.

Approximately 90% of cancer mortality is a result of invasion or metastasis of the primary tumour to other tissues and organs. My work could, would help characterise the molecular pathways of this invasive process and which would hopefully identify new drug targets which could block this process and if successful it could open the avenue of new treatments for cancer patients.