**Lay Summary of Outcomes**

We have published our finding in high impact journals and identified key metabolic dependencies of brain metastatic cells. Current systemic therapies targeted towards HER2+ brain metastatic disease are not curative and patients with synchronous, latent residual or metachronous brain metastases are treated with the same regimens despite differences in clinical presentation. Our study suggests several potential approaches to limit residual disease and outgrowth of brain metastasis. We are currently working on a manuscript that aims to provide more insights into how Br.Mets overcome NK cell mediated immune surveillance and identify mechanisms to reactivate innate immune surveillance. Further validating these findings in patient derived xenografts and providing mechanistic insights is needed for proposing translational studies. We are also submitting research proposals to obtain additional funding from private and federal agencies.