**METAvivor Progress Report 2022**

**Lay Description of Important Outcomes**

We are studying how breast cancers metastasize and grow in the brain. Our preclinical work shows that a receptor (RET) for a brain specific ligand is active in breast cancer cells and can be blocked by an FDA approved inhibitor. RET enhances breast cancer cell attachment to brain and this can again be blocked by inhibition of RET. This work lay the groundwork for testing RET inhibitors against breast cancer brain metastasis in clinical trials. We have submitted a review on RET in breast cancer to Breast Cancer Research and have a publication detailing the work noted above in preparation.