**PROGRESS REPORT – ONE YEAR UPDATE**

**PI Name: Yusuke Shiozawa MD PhD**

**Grant title: An osteolytic bone lesion-targeted radiopharmaceutical for bone metastatic breast cancer.**

**Date: 3/31/23**

**Lay Description of Important Outcomes:**

Our lab has overcome the difficulties for conducting research works using radiopharmaceuticals, and is now fully prepared and trained for study trials involving combination treatments between bone targeting agents and radiopharmaceuticals. We currently have one preliminary study underway, with two more planned before July. In the grant period of year 2, we will complete the assessment of the treatment efficacy and analgesic effect of the bone targeting agent/radiopharmaceutical combination treatment using our breast cancer bone metastatic model. If successful, our findings can lay the foundation for a clinical trial of our proposed combination therapy. Ultimately this would Improve the survival rate and reduce bone pain of breast cancer patients with bone metastasis.