**METAvivor Early Career Investigator Award**

**Final Progress Report**

**PI Name:** Lucia Borriello, PhD

**Grant title:** Targeting the Mechanism of Re-Dissemination and Metastasis in Stage IV Breast Cancer

Metastatic disease is the main reason why cancer patients pass away, but we still don't fully grasp how it happens. Metastases, which are cancer cells spreading to other parts of the body, occur through a series of steps involving cancer cells entering blood vessels, traveling to distant organs, and forming new colonies there. With the generous support from METAvivor, our research revealed something new: breast cancer cells don't just spread from the main tumor and lymph nodes, but also from lung metastases. This suggests that even after removing the main tumor, cancer cells may keep spreading. If these re-spread cells start growing again in new places, it could lead to more metastases and worse outcomes for patients. So, finding ways to stop cancer cells from re-spreading could be crucial for helping patients live longer with metastatic cancer.

This work was published in the following article:

**Borriello L**, Condeelis JS, Entenberg D, Oktay M. Breast Cancer Cell Re-Dissemination From Lung Metastases - a Mechanism for Enhancing Metastatic Burden. *Journal of Clinical Medicine, 2021*. 27;10(11):2340. PMID: 34071839.