

DR. J. CHUCK HARRELL (2015 AWARD)

Genomic Dissection of Patient-Derived Xenograft Breast Cancer Liver Metastasis Models

Our goals for this project were to develop new models, and then test them to identify genetic drivers of metastatic progression. The METAvivor funds were hugely beneficial for this project and our broader understanding of liver metastasis progression.

Our accomplishments include:

- Manuscript published in Breast Cancer Research and Treatment (<https://link.springer.com/article/10.1007%2Fs10549-018-4748-4>), and second manuscript in preparation
- Development of a PhD thesis project based on inhibition of growth of metastases in the liver. We expect this project to result in a third publication where METAvivor funds were essential to the project's success. In total, we expect at least 5 or 6 publications will be attributed to METAvivor funding.
- Development of collaborations with seven independent research laboratories at VCU, including Dr. Bos, another METAvivor grant recipient. We expect numerous advancements in knowledge and publications to result from these studies.
- Submission to numerous funding agencies for further liver metastasis studies. This includes applications to the American Cancer Society, Komen Foundation, National Institutes of Health, and several at VCU. Given our exciting preliminary data, we are optimistic that in the coming year these studies will be extended via these grants.
- Presentations of this research at collaborating institutions (University of North Carolina at Chapel Hill) and at VCU. Larger scale international meeting presentation of this work will occur in late 2018.
- Models of metastasis developed with this grant funding are supporting ongoing studies for identifying and targeting mechanism through which metastatic expansion occurs. 14 new patient-derived study lines were created from this grant.