

DR. BONNIE KING AND DR. CHRISTOPHER CONTAG (2015 AWARD)

Modeling Therapeutic Strategies for Breast Cancer Metastasis to Bone

With METAvivor funds we have successfully developed assays that are now allowing us to investigate the biology of the “vicious cycle” of breast cancer to bone metastasis within the human bone microenvironment. We are using these assays to measure the osteolytic process as we evaluate new therapeutic strategies, including anti-estrogen therapies. So far, we have confirmed the direct anti-neoplastic effect of zoledronic acid (ZA) on three commonly used breast cancer cell lines, MCF-7, MDA-MB-231, and SKBR-3.

Publications from the METAvivor-funded work:

- <https://www.ncbi.nlm.nih.gov/pubmed/?term=Local+estrogen+axis+in+the+human+bone+microenvironment+regulates>
- Book chapter: Lie, W-R, Amanatullah DF, King BL. Luminex-based immunoassay analysis of bone turnover biomarkers in human bone tissue culture supernatants. In: Metabolic Signaling: Methods and Protocols, invited chapter, submitted.