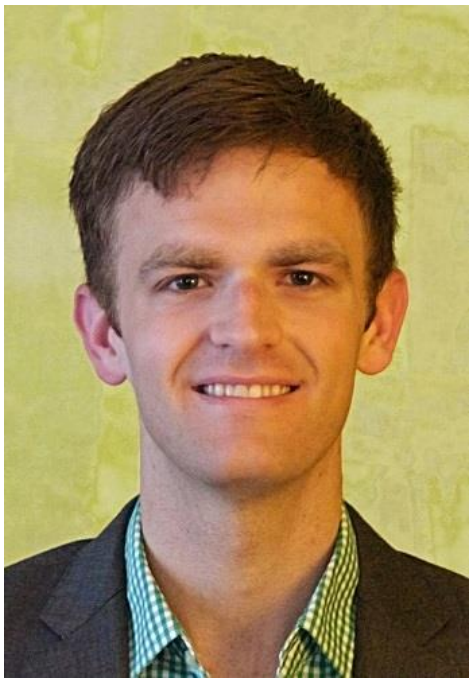
Koch Institute for Integrative Cancer Research at the Massachusetts Institute of Technology

Aaron Meyer, PhD



Metastatic spread drives the majority of breast cancer mortality and, to do so, requires tumor cells to both disseminate and avoid clearance by the immune system. Inhibiting TAM receptors has shown promising results in models of breast cancer by blocking tumor cell dissemination, preventing resistance to existing therapies, and relieving immune suppression. Based on these results, the first therapies targeting these receptors are now in early clinical studies. However, a better understanding of when and where these receptors drive breast cancer progression is needed to identify which patients will benefit from these therapies.

As a Terri Brodeur Fellow, Dr. Meyer will use a computational model to direct design of new inhibitors for the TAM receptors. Using these well-characterized compounds, he will examine the in vivo effects of inhibiting different TAM receptor complements. By measuring the cellular and molecular consequences of each treatment, and which changes correspond to a therapeutic benefit, he hopes to both develop a clearer picture of when and where these receptors drive breast cancer progression. This information will, in turn, help to address which patients will benefit from these therapies.

Dr. Meyer obtained his Ph.D. in Biological Engineering at the Massachusetts Institute of Technology, where he worked under the supervision of Profs. Doug Lauffenburger and Frank Gertler. During his doctoral studies, Dr. Meyer investigated the molecular regulation underlying cancer cell invasion. Shortly after defending his thesis he was awarded an NIH Director's Early Independence Award, which has enabled him to establish his independent research program at the Koch Institute for Integrative Cancer Research at MIT.