Foretinib, a RTK inhibitor currently in clinical trial, inhibited phosphorylation of TAM receptors, with highest efficacy against MerTK, and blocked downstream activation of Akt and Erk in adult and pediatric glioblastoma cell lines, findings that are previously unreported. Survival, proliferation, migration, and collagen invasion were hindered in vitro. Foretinib treatment in vivo abolished MerTK phosphorylation and reduced tumor growth 3-4 fold in a subcutaneous mouse model. MerTK targeted shRNA completely prevented intracranial and subcutaneous glioma growth further delineating the impact of MerTK inhibition on glioblastoma. Our findings provide additional target validation for MerTK inhibition in glioblastoma and demonstrate that robust MerTK inhibition can be achieved with the multi-kinase inhibitor Foretinib as an innovative and translational therapeutic approach to glioblastoma [1)].

1)
Knubel KH, Pernu BM, Sufit A, Nelson S, Pierce AM, Keating AK. MerTK inhibition is a novel therapeutic approach for glioblastoma multiforme. Oncotarget. 2014 Mar 15;5(5):1338-51. PubMed PMID: 24658326; PubMed Central PMCID: PMC4012720.