Abstract Submitted
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In vivo **Studies of VEGFR2 Interactions in the Presence and Absence of VEGF**[1] CHRISTOPHER KING, DR. KALINA HRISTOVA, Johns Hopkins Univ — Vascular Endothelial Growth Factor Receptor 2 (VEGFR2) is a receptor tyrosine kinase (RTK) that is critical for vasculogenesis and angiogenesis. Enhanced VEGFR2 signaling is often correlated with malignancy. Recently, it was shown that full-length VEGFR2 exists in a monomer-dimer equilibrium in the absence of bound VEGF. Thus, the canonical model of RTK activation does not seem to adequately describe the behavior of VEGFR2 in the cell membrane. In order to understand the role that VEGFR2 extracellular domain plays in unliganded dimerization in live cells, we utilize **F**ully Quantified **S**pectral **I**maging (FSI) to probe the interactions of VEGFR2 mutant constructs with rationally truncated EC domains. In addition, we investigate the stoichiometry of ligand binding to VEGFR2 EC domain as a function of VEGF concentration and total receptor expression.

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