

Abstract Submitted  
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**Stabilization of EphA2 dimers as a novel anti-cancer strategy** DEO SINGH, FOZIA AHMED, MATT SALLOTO, KALINA HRISTOVA, Johns Hopkins University — We have recently shown that EphA2 receptors exist in a monomer-dimer equilibrium in the absence of ligand. The monomers promote tumorigenic activity and thus a therapeutic strategy that minimizes the monomer population may be beneficial in the clinic. The YSA peptide is an EphA2-targeting peptide that effectively delivers anticancer agents to cancer tumors. The quantitative measurements of the dimerization of EphA2 receptors in the presence of these peptides using quantitative spectral Forster resonance transfer (QS-FRET) methodology in conjunction with two-photon microscopy that has been developed recently in our lab suggests that this peptide stabilizes the EphA2 dimers. Thus, such peptides that stabilize the EphA2 dimers may be used for the treatment of some cancers that overexpress EphA2.

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