Engineering receptor interactions for cancer therapy

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Abstract
This talk describes the design and purification of a novel bivalent Neuregulin protein, a ligand of the ErbB receptor family, which is dysregulated in numerous cancers. By biasing ErbB receptor interactions, critical survival signaling pathways in cancer cells can be inhibited and the cells can be killed. Moreover, this same ligand can be used to protect against the cardiotoxic side effects of the chemotherapeutic drug doxorubicin. This work is a general reflection of the theme of our lab, which it to utilize molecular engineering to generate novel therapeutics.

Keywords: Cancer therapy, Neuregulin protein, ErbB receptor interactions

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