



CANCER PREVENTION & RESEARCH INSTITUTE OF TEXAS

Award ID:
RP110187

Project Title:
Neuroblastoma-Derived Secretory Protein Receptor, a New Target for
Neuroblastoma Therapy

Award Mechanism:
Individual Investigator

Principal Investigator:
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Entity:
Baylor College of Medicine

Lay Summary:

Neuroblastoma is the most common solid tumor in children and despite intensive treatment regimens the 10-year survival rate for high-risk patients is approximately 15%. Thus, there is a need for new approaches to treating this tumor. Our laboratory has recently identified a new protein, neuroblastoma-derived secretory protein (NDSP) which is found in high risk neuroblastoma patients. NDSP is a small protein that acts like a growth factor for neuroblastoma cells and is most highly expressed in tumors from children with high risk neuroblastoma. However, the receptor on the neuroblastoma cell which NDSP binds to is not known. Receptors are like the lock which the NDSP key fits into to function. For other types of cancer, for example breast cancer, highly effective cancer treatments have been developed by designing drugs or antibodies that block receptors on the outside of the cancer cell. Thus, we expect that the NDSP receptor can serve as an important new target for developing a drug to treat high-risk neuroblastoma. In this proposal, our goal is to clone the NDSP receptor and we describe several different state-of-the-art laboratory methods to accomplish this goal. Once the NDSP receptor is identified, we will perform the initial studies necessary to determine the effectiveness of targeting the NDSP receptor in treating neuroblastoma including generating a panel of antibodies that target the NDSP receptor. Completion of this project will provide the preclinical information needed in order to partner with biotechnology companies in the State of Texas to develop an effective new treatment for this deadly childhood tumor.