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Advancing Model Development in Soft Tissue Sarcoma: Translating Mechanisms into Therapeutic Potential

Rhabdomyosarcoma (RMS) is a common pediatric cancer that is usually treated with chemotherapy, radiation and/or surgery, however 5-year survival rates are only 30% in high-risk groups and have not improved in the last decade. Even if children are cured, they face lifelong challenges including cognitive and growth delay and the development of secondary malignancy. Our laboratory is working on understanding RMS biology because it is unknown which targets should be shut down by drug therapy to eliminate this tumor. The overall goal of our project is:
1. to determine if RMS models can be generated to resemble human cancer as closely as possible
2. to use these models to better understand how the cancer is being formed and
3. by understanding how the cancer arises, to develop more effective drug therapy that can be tested in our models and ultimately used to successfully treat RMS in children.