

Abstract (lay version) of project

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Collaboration for a Cure: Identifying new therapeutic targets for desmoid tumors

Desmoid tumors are difficult to treat using treatments we have presently. One way to identify new drugs is to screen “libraries” of drugs on cell cultures from tumors to see which ones kill the tumor cells. In the two years of this project, we screened tens of thousands of compounds and identified 45 that inhibited growth in desmoid cell cultures. We testing these in additional cell cultures, and in transgenic mice that have been engineered to develop desmoid tumors. To date, we identified five agents that target desmoid tumor viability and inhibit tumor growth in the mice (Dasatinib; A multi-target PI3K inhibitor; an FAK inhibitor; Letrozole; and a gamma secretase inhibitor). We are currently testing an additional nine agents in mice, and will be re-testing the five agents we already found work in the mice for agents that act synergistically to target tumor cell viability. This work will thus identify novel treatment approaches for desmoid tumors, which can be rapidly investigated in clinical trials. The work is planned to identify an effective multi-drug therapy for desmoid tumors using agents that are already approved for use in patients. The program does not include the time needed for clinical trials in patients.