

Abstract (lay version) of project

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Identifying targets for therapy in a novel genetic *Xenopus* model for desmoid tumor formation

This project aims to provide a fast and cheap animal model for identifying and/or characterizing promising drug targets for treating desmoid tumors. In addition the platform allows pre-clinical assessment of novel candidate therapeutic compounds. The project builds on the recent introduction of efficient methods for mutating specific genes in the genome. These methods are used in the frog *Xenopus tropicalis*, which is an aquatic vertebrate. Since the embryos of frogs grow outside the mother, in contrast to mammals that develop in a womb, the embryos are very easy to manipulate experimentally. When introducing mutations that are also found in human patients suffering from desmoid tumors, the *Xenopus* tadpoles rapidly develop cancer, including desmoid tumors. This model presents a unique and novel experimental platform that (i) allows the rapid screening and evaluation of genes that contribute to the growth of the tumor, (ii) could serve to assess the clinical relevance of novel drug targets for treating desmoid tumors and (iii) can be used as a preclinical drug screening/assessment. We believe that our model offers a unique opportunity that can be easily plugged into the research lines of several groups active in the field of desmoid tumor research and hence can contribute to the development of a cure.