This abstract was submitted to the DTRF Research Workshop in September, 2017.

Therapeutic target identification in a *Xenopus* model for desmoid tumor formation – an update

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We recently established a genetic desmoid tumor (DT) model in the aquatic frog *Xenopus tropicalis* using CRISPR/Cas9 mediated targeting of the tumor suppressor gene *apc*. By employing a negative-selection screen via multiplexing of gRNAs we used the model for identification of novel targets for therapy. The underlying idea is that desmoid tumor formation can only occur when the putative therapeutic target (PTT) gene product is present. In other words, if bi-allelic inactivating mutations in a particular PTT gene are never detected in the induced tumors, its gene product may be required for DT formation and hence could serve as a target for therapy. More than 20 genes have been tested meanwhile and the vast majority were found to be non-essential for DT formation, including genes previously proposed as therapeutic targets. However, 2 genes were never found to be inactivated and are currently being further investigated to explore their therapeutic opportunities for treating DT. Our results with the Wnt-pathway inhibiting compound BC-2095 (Tegatrabetan - BetaCat) will also be presented in the meeting.