SUMMARY & MISSION STATEMENT

The main field of our research activity is the elucidation of the molecular mechanisms underlying development of paediatric sarcomas with special emphasis on the role of oncogenic fusion proteins generated by chromosomal translocations. Novel insights into these mechanisms are used in translational approaches to advance diagnosis and treatment in paediatric patients, carried out in close collaboration with clinical studies.

OVERVIEW

We use mainly two tumour models in our laboratory, namely, the paediatric soft tissue sarcoma rhabdomyosarcoma as well as a paediatric bone tumour, Ewing's sarcoma, which are both characterized by specific chromosomal translocations. In Ewing sarcoma (ES) we address possible regulatory mechanisms to modulate the activity of the specific oncogenic event, EWS/FLI1. In the focus of our projects are tumour-specific oncogenic transcription factors which we regard as very important novel therapeutic targets. We characterize the biochemistry of the fusion protein and the post transcriptional mechanisms regulating the activity of the fusion protein. We aim to characterize early tumorigenic events by developing a novel ES tumour model based on reprogramming of engineered fibroblast.

SELECTED CANCER RELATED PUBLICATIONS


