Master Thesis in NPM-ALK driven tumour biology in the mouse

We have an open position for a master thesis student in the area of tumour biology in an oncogenic fusion protein driven (NPM-ALK) lymphoma mouse model. The NPM-ALK translocation is responsible for up to 50% of Anaplastic large cell lymphoma (ALCL) cases in humans. We have previously identified the platelet derived growth factor receptor beta (PDGFRB) as a crucial downstream signalling molecule in lymphoma development and dissemination. Chemical inhibition of PDGFRB in a mouse model of ALCL resulted in slower tumour growth and prolonged life span. Strikingly, a human patient refractory to conventional chemotherapy went into complete and sustained remission after administration of PDGFR inhibitors.

The Master thesis project aims to analyse the molecular signalling mechanisms of PDGFRB in lymphoma formation and the contribution of tumour stroma to a malignant phenotype.

Methods will encompass a wide variety of standard molecular biology techniques, Next generation sequencing, tissue culture, histopathological techniques and work with mouse as a model organism.
Applicants should ideally hold a bachelor degree in biomedical sciences (biology, genetics, biochemistry, biotechnology) or in a related field. We expect applicants to confidently use English in written and spoken forms, be highly motivated and to interact and collaborate with other staff and students. We offer the position for a duration of 9-12 months.
The Unit of Laboratory Animal Pathology is focusing on analysis and research of diseases of laboratory animal models. Laboratory animals represent a significant value in modern research of human diseases, such as cancer, neurological diseases, cardiovascular disease and infectious diseases. For these reasons, it is of the utmost importance to investigate pathological transformations in the animal model and compare them to the respective human diseases. Our multidisciplinary approach helps us to better understand molecular genetic mechanisms of diverse diseases and to develop customized therapies for human patients.

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