

TITLE: FLT3 ITD Dysregulation of Signaling Pathways in Acute Myeloid Leukemia

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FACULTY MENTOR DEPARTMENT

Pathology, Immunology, and Laboratory medicine

RESEARCH PROJECT DESCRIPTION

The aim of the project is to discover genes dysregulated by the FLT3 ITD mutation in acute myeloid leukemia, one of the most frequent mutations in that disease. We transduced lentiviral vectors carrying the FLT3 ITD mutant into several cell lines and determined their transcriptional signature using expression microarrays and RNASeq. The student project would be a part of this overall project and the aim of it would be to knock in the FLT3 ITD using available CRISPR reagents in the haploid cell line eHAP. Transcription signatures of the parent and mutant cell lines are analyzed subsequently by RNASeq and genes dysregulated by the FLT3 ITD introduction are determined.