



**DR. KOLJA EPPERT**

Leukemia Stem Cells, Cancer,  
MUHC Pediatric Hematology-Oncology - Glen site, Room EM0.3211  
Room EM12248 - Extension 23876  
Kolja.eppert@mcgill.ca

**TITLE:** Novel therapeutics to target stem cells in acute myeloid leukemia

**ABSTRACT:** Pediatric acute myeloid leukemia (AML) accounts for approximately half of leukemic deaths in children. The extreme nature of current care means that there is little room for more aggressive therapy for refractory or relapsed patients. The chemotherapies used for AML have essentially stayed the same for the last 30 years and have severe associated toxicity and long-term side effects. Thus, there is an urgent need for novel approaches to develop more effective and less toxic treatments for pediatric, and adolescent and young adult AML, especially for refractory and relapsed cases. Leukemic stem cells (LSCs) are responsible for the production of all leukemic cells in the patient and therefore they represent the optimal target of any novel therapies. We have developed human LSC gene expression signatures that are tightly correlated with low event-free survival and failure of therapy. I will discuss our approaches towards using these signatures and existing data on drug-gene interactions to identify new anti-LSC therapies for AML.