

## Summary of the Research Plan

Many patients transplanted with hematopoietic stem cells receive prophylactic donor lymphocyte infusions (DLI) to lower the risk of relapse and restore immunity. This life-saving therapy is not available to patients transplanted with grafts from highly incompatible donors, because the risk of graft-versus-host disease (GvHD) would be too high. Our project is a phase I study (12 patients) to test feasibility and safety of infusing escalating doses of DLI from which the bulk of alloreactive T cells that reside mainly in the CD45RA-positive (naïve) T cell population has been removed through CliniMACS® technology. Our cohort of patients will be compared prospectively with the control group of patients transplanted at the University Hospitals of Basel and Zurich with the same transplant protocol, but without infusion of CD45RA-negative DLI.