Growth Protocol for CD34+ peripheral blood stem cells

Human CD34+ peripheral blood stem cells were harvested from G-CSF-treated normal adults undergoing apheresis as stem cell transplant donors and obtained from the Yale Center for Excellence in Molecular Hematology (Dr. Diane Krause, director) as de-identified samples. The CD34+ cells were selected using the ISOLEX 300i Magnetic Cell Selection System (Baxter) and cultured in StemSpan Expansion Medium (Stem Cell Technologies) with 1X Stem Span CC100 recombinant human cytokine cocktail containing 100 ng/mL Flt3 ligand, 100 ng/mL stem cell factor, 20 ng/mL IL-3, and 20 ng/mL IL-6. After seven days of expansion in culture, the cell number increased over 40 fold.