

STRONG CHILDREN'S RESEARCH CENTER

Summer 2018 Research Scholar developed for the last decade, understanding of

Mesenchymal stem cells (MSCs) are nonhematopoietic multipotent stromal cells that reside in the bone marrow (BM) niche and, importantly, are dysfunctional in MDS. We hypothesize that MSCs are enriched during aging and disease, therefore serving as a potential target for therapy.

Objective: To develop a novel flow-cytometry panel to characterize the immunophenotype of MSCs and progenitor cell populations in a murine model of MDS, and for CD51, SCA1, CD271, CD146, and CD106 were used to define subpopulations of interest. Cells were analyzed by flow-cytometry. Biparametric analysis and gating strategies of p were used to characterize subpopulations of MSCs.

Results: Murine MSCs are characterized by SCA1 and CD51 expression within the non-hematopoietic