List of abbreviations

HSPC hematopoietic stem and progenitor cells

MDS myelodysplastic syndrome

MPN myeloproliferative neoplasms

CMML chronic myelomonocytic leukemia

AML acute myeloid leukemia

OPN osteopontin

CXCL12 C-X-C motif chemokine 12

CAR cells CXCL12 abundant reticular cells

MSC mesenchymal stromal cells

VEGFR vascular endothelial growth factor receptor

VEGF vascular endothelial growth factor

VCAM-1 vascular cell adhesion molecule-1

PDGF platelet-derived growth factors

SCF stem cell factor

SNS sympathetic nervous system

TNF transforming growth factor 

BMAT bone marrow adipose tissue

TNF tumor necrosis factor 

IGFBP2 IGF-binding protein

LIF leukemia inhibitory factor

SBDS Shwachman-Bodian-Diamond Syndrome protein

MPD myeloproliferative diseases

CML chronic myelogenous leukemia

ET essential thrombocythemia

PV polycythemia vera

MF myelofibrosis

JAK janus kinase 2

CALR calreticulin

MPL thrombopoietin receptor

LIC leukemia-initiating cells

BMP bone morphogenetic protein

EC endothelial cell

PD-1 programmed death-1

PD-L1 programmed death-1 ligand

VLA-4 very late antigen 4

SDF-1 stromal-cell derived factor 1

CXCR4 C-X-C chemokine receptor 4

TKI tyrosine kinase inhibitors

Ang1 angiopoietin-1

BiTE bispecific T-cell engager

DART Dual-Affinity Re-Targeting

CAR chimeric antigen receptors

ALL acute lymphoblastic leukemia

ROS reactive oxygen species

HAP hypoxia-activated prodrug

DLL4 delta-like ligand 4