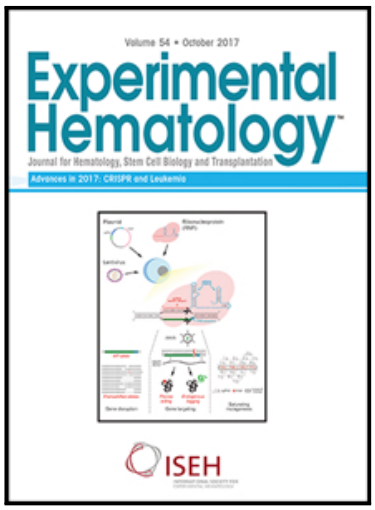

Branched-chain amino acid depletion conditions bone marrow for hematopoietic stem cell transplantation avoiding amino acid imbalance-associated toxicity

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Title:

Branched-chain amino acid depletion conditions bone marrow for hematopoietic stem cell transplantation avoiding amino acid imbalance-associated toxicity

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Category:

Stem Cells; Transplantation

Keywords:

Hematopoietic stem cell; hematopoietic stem cell transplantation; bone marrow; bone marrow transplantation; branched-chain amino acids; BCAA

Highlights:

- BCAA imbalance (low Val and high Ile/Leu) inhibits HSC proliferation and survival
- Low BCAA culture does not block HSC growth, but poorly supports HSC maintenance
- Dietary BCAA depletion conditions the mouse BM for HSC transplantation
- BCAA conditioning has improved survival and RBC counts vs. valine conditioning