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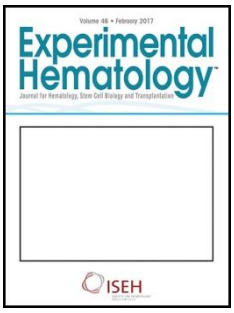

Title: Many layers of embryonic hematopoiesis: new insights into B cell ontogeny and the origin of hematopoietic stem cells

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TITLE

Many layers of embryonic hematopoiesis: new insights into B cell ontogeny and the origin of hematopoietic stem cells

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KEYWORDS

Embryonic hematopoiesis, B-1a cell, innate immunity, hematopoietic stem cell (HSC), pre-HSC, yolk sac, aorta-gonad-mesonephros region (AGM), para-aortic splanchnopleura (P-Sp)

HIGHLIGHTS

- During embryonic development, initial hematopoietic progenitors are generated from hemogenic endothelium in multiple waves independently of HSC.
- Recent studies highlight the contribution of embryonic waves of HSC-independent hematopoiesis to unique innate-like immune cells that can persist as self-maintaining hematopoietic populations in adult tissues.
- Recent studies suggest that distinct waves of hemogenic endothelium/HSC precursors may contribute to the production of heterogeneous populations of HSC in the fetal liver with distinct self-renewal properties and B cell lineage potentials.