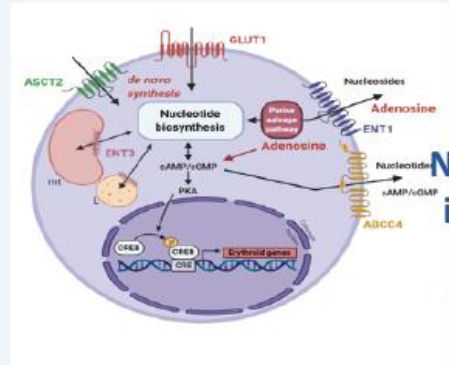
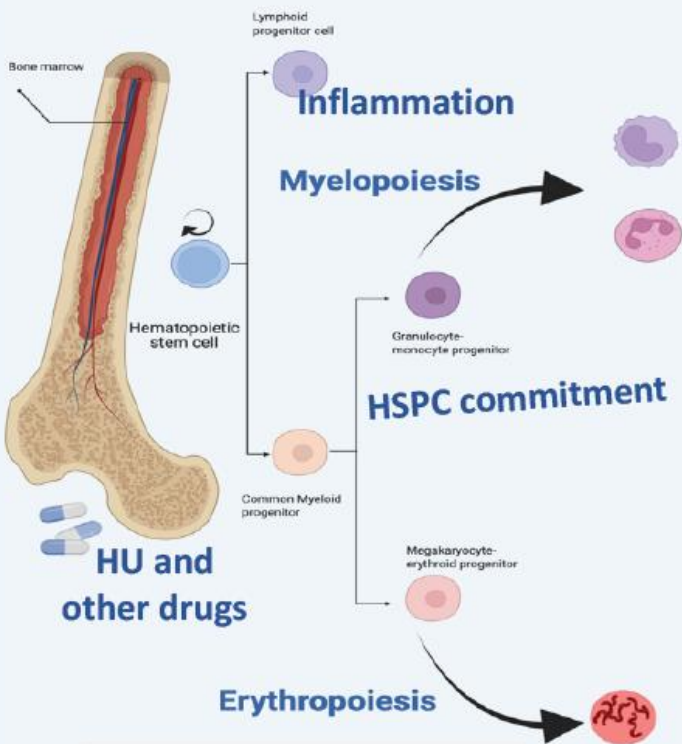


The diagram illustrates the process of myelopoiesis and HSPC commitment. It begins with a bone marrow structure on the left, containing a hematopoietic stem cell (HSC) and a lymphoid progenitor cell. The HSC is shown with a self-renewal arrow. The lymphoid progenitor cell leads to 'Inflammation'. The HSC leads to 'Myelopoiesis', which then leads to 'HSPC commitment'. This commitment results in three types of progenitors: Granulocyte-monocyte progenitor, Common Myeloid progenitor, and Megakaryocyte-erythroid progenitor. The diagram also shows the final differentiated cells: neutrophils, monocytes, and erythrocytes. A red box highlights the 'HSPC commitment' stage, and a red arrow points to the 'Common Myeloid progenitor' cell. A red box at the bottom left contains the text 'HU and other drugs'.



VOC process (MPs, PLTs, and PMNs)

Role of new blood antigens in SCD transfusion events

Inflammatory cytokines

Endothelium activation by MPs

Enhanced erythrophagocytosis

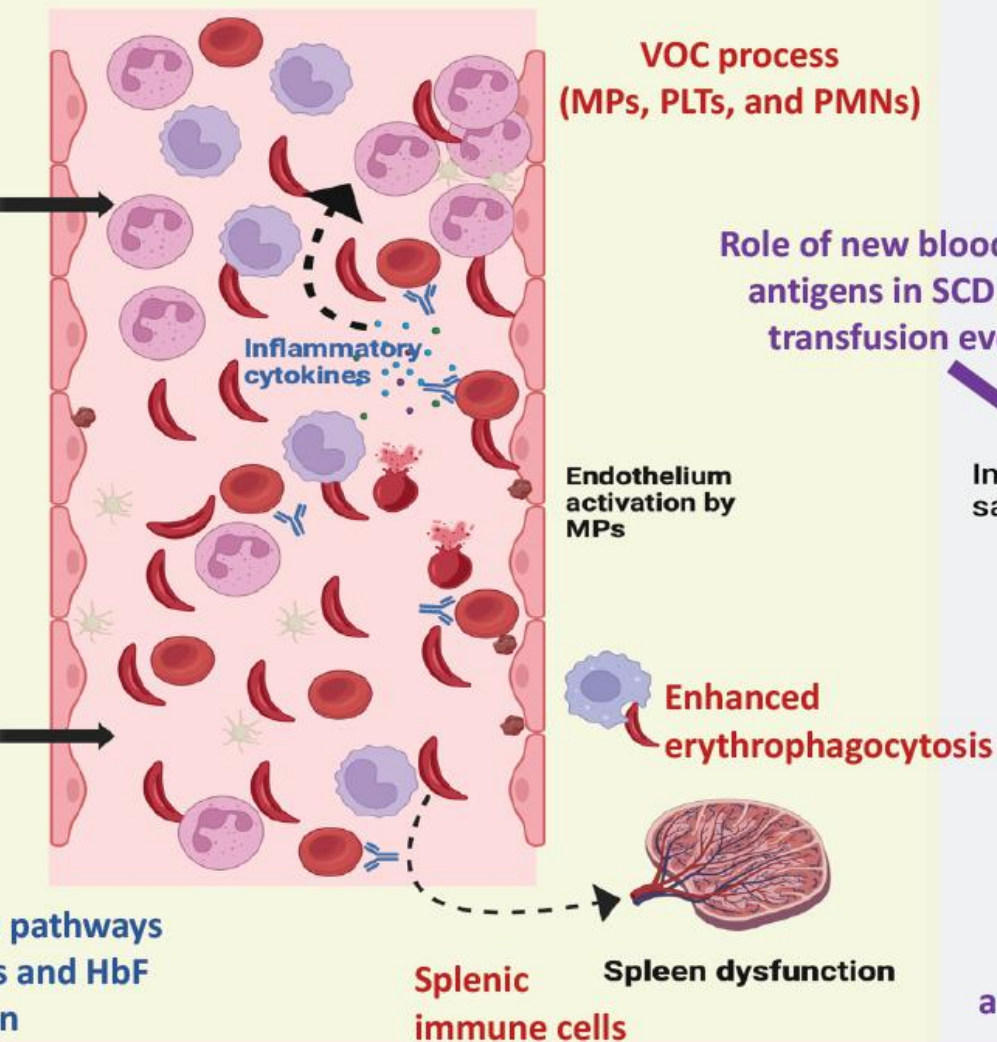
Splenic immune cells

Spleen dysfunction

pathways and HbF

In

a



The diagram illustrates a cycle of discovery and clinical application in blood group research:

- Top:** A cross-section of a cell membrane showing various **blood group antigens** (represented by different colored proteins and carbohydrates).
- Left:** A purple arrow points from the antigens to the text **Immunohematologic safety of transfusion**.
- Right:** A purple arrow points from the antigens to the text **New blood group antigens/systems**.
- Bottom Right:** A purple arrow points from the text **Novel genomic screening approach** towards the center.
- Center:** A stylized illustration of a **Patient with rare blood phenotype** receiving a blood transfusion from a bag.
- Bottom Left:** A purple arrow points from the patient towards the text **Blood group antigen function**.

