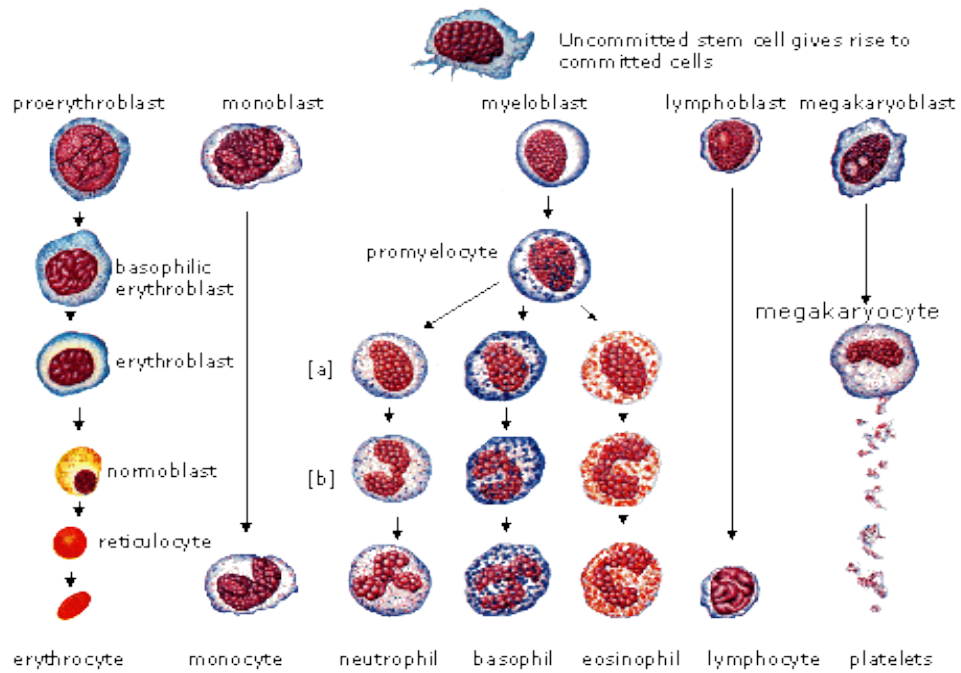
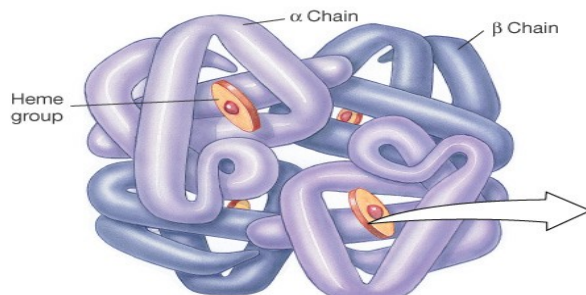


# Appendixes



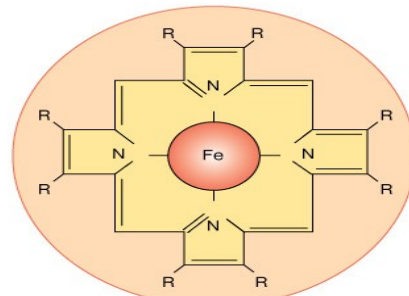
**Figure : hematopoiesis (erythropoiesis, leucopoiesis, and thrombopoiesis).**

**(a)** A hemoglobin molecule is composed of four protein globin chains, each centered around a heme group.



In most adult hemoglobin, there are two alpha chains and two beta chains as shown.

**(b)** Each heme group consists of a porphyrin ring with an iron atom in the center.

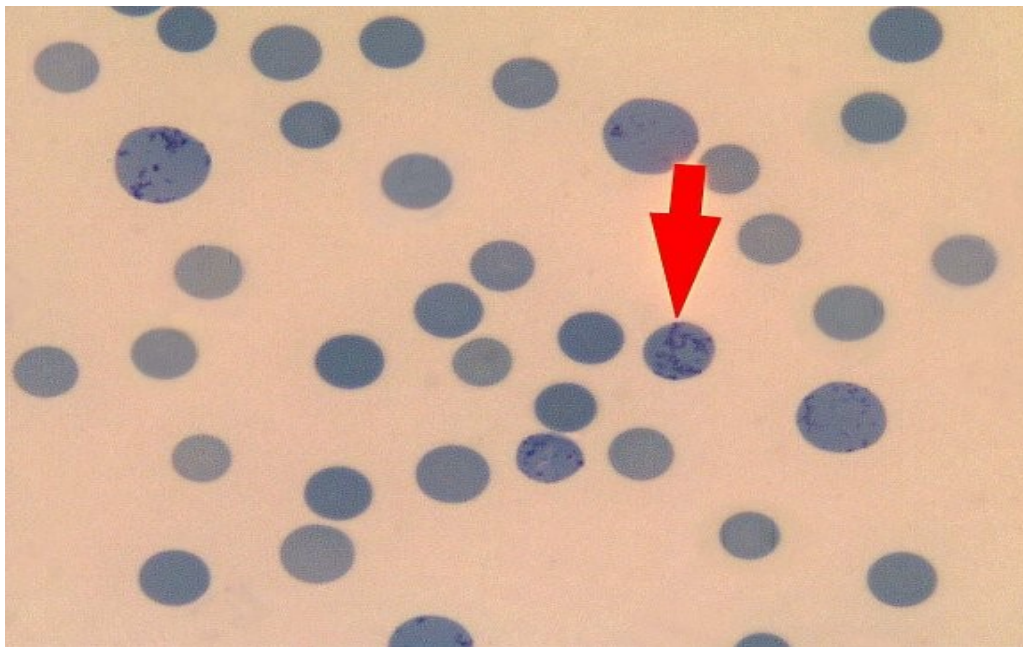


R = additional C, H, O groups

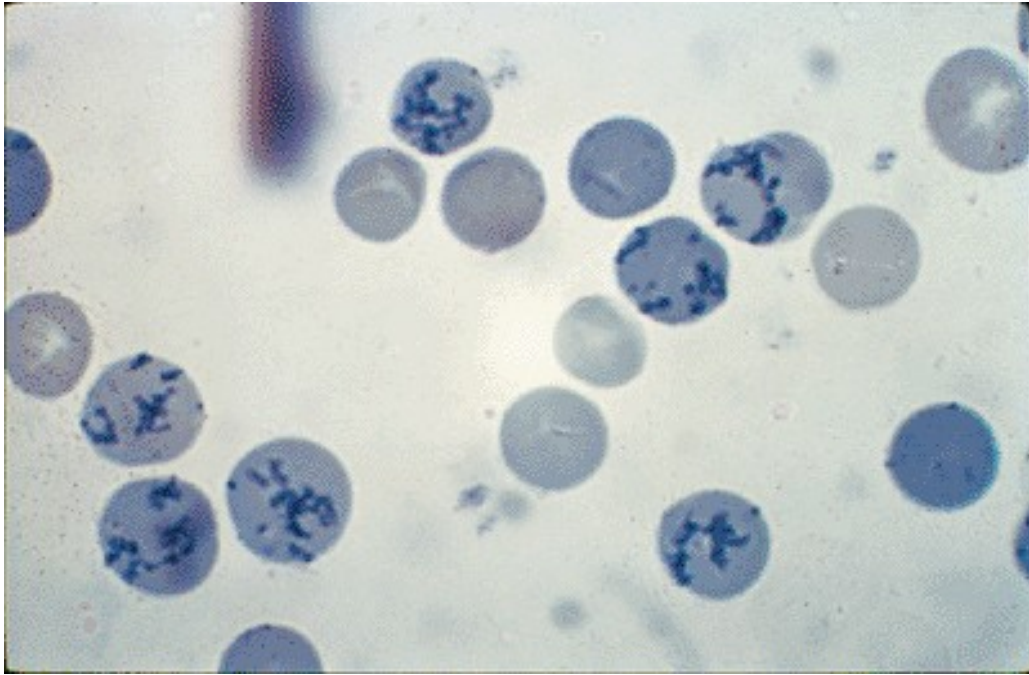
**Figure : hemoglobin molecule structure .**



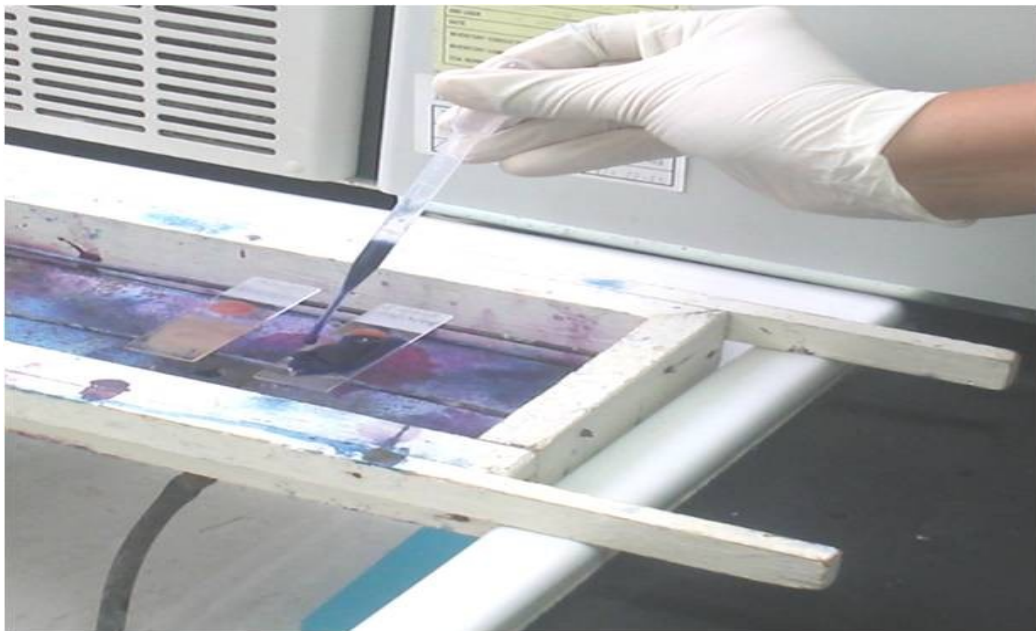
**Figure : Automated hematology analyzer (Sysmex KX-21N)**



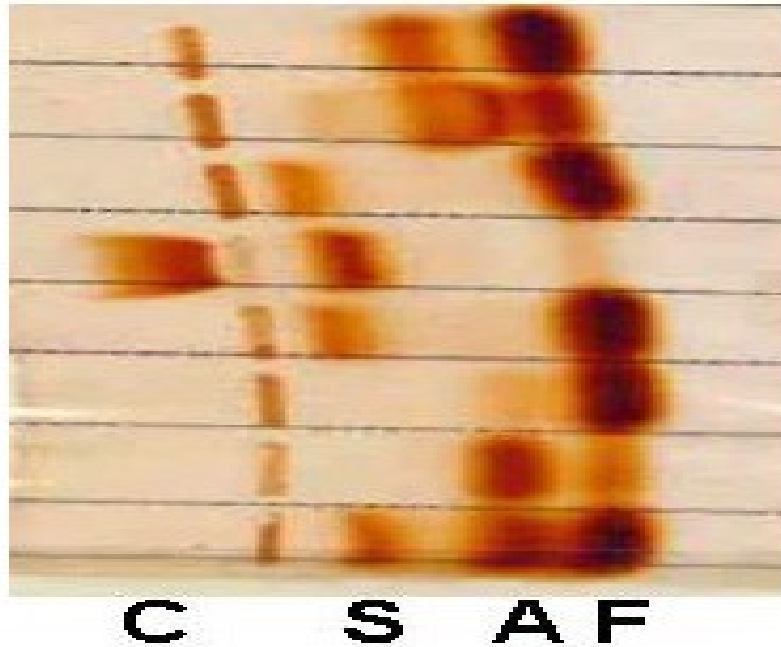
**Figure : supra-vital stained blood film 1% new methylene blue .**



**Figure : reticulocyte count using X100 oil immersion lens ,whole blood sampled stained with supra-vital stain 1% brilliant crecyl-blue**



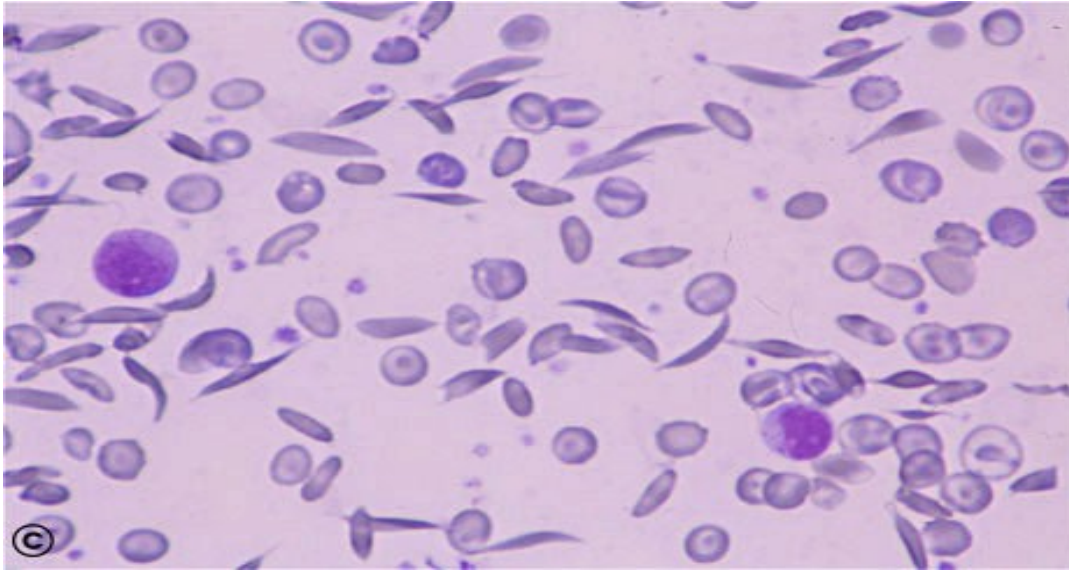
**Figure : staining procedure of blood film ; using ready to leishman's stain**



**Figure : Cellulose acetate electrophoresis at alkaline pH 8.6**



**Figure : normal red blood cell (right) versus sickle cell.**



**Figure: This is sickle cell anemia in sickle cell crisis. The abnormal hemoglobin SS is prone to crystallization when oxygen tension is low, and the RBC's change shape to long, thin sickle forms that sludge in capillaries, further decreasing blood flow and oxygen tension. Persons with sickle cell trait (Hemoglobin AS) are much less likely to have this happen**





**Figure : Sickle Cell Anemia crisis ; vaso-occlusive crisis (dactylitis)**



**Figure : Sickle Cell Anemia crisis ;gallbladder stones  
Sickle Cell Anemia crisis ; leg ulcer**



**Figure : Sickle**