

### hematology

hematology: study of blood and blood-forming tissues

includes: bone marrow, blood, spleen, and lymph system

hematologic system: supports ability to o<sub>2</sub>, carbon dioxide co<sub>2</sub>, nutrients, waste, and electrolytes

hematologic functions: maintain intravascular volume, coagulate blood, and combat infections

blood: type of connective tissue; mainly consisting of plasma and blood cells

### functions of blood

protection: homeostasis of blood coagulation, and combats invasion of pathogens and foreign substances

regulation: fluid and electrolyte balance, acid-base balance, body temperature, and oncotic pressure

transportation: o<sub>2</sub> from lungs, nutrients from gi tract, hormones from endocrine glands, and metabolic waste from cells

### blood production

bone marrow + hematopoiesis

hematopoiesis: blood cell production

blood cell occurs within bone

production: marrow

bone marrow: soft material filling central core of bones; uses a negative feedback system

bone marrow types: adipose (yellow) + hematopoietic (red)

red marrow: actively makes blood cells; found mainly in flat and irregular bones

