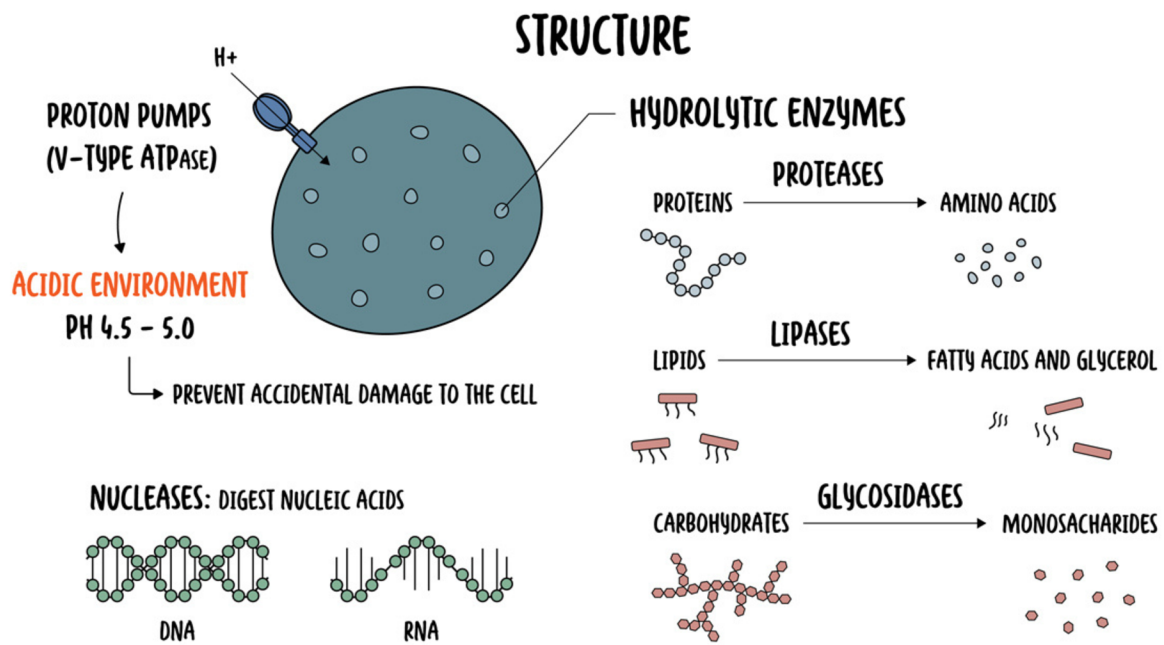
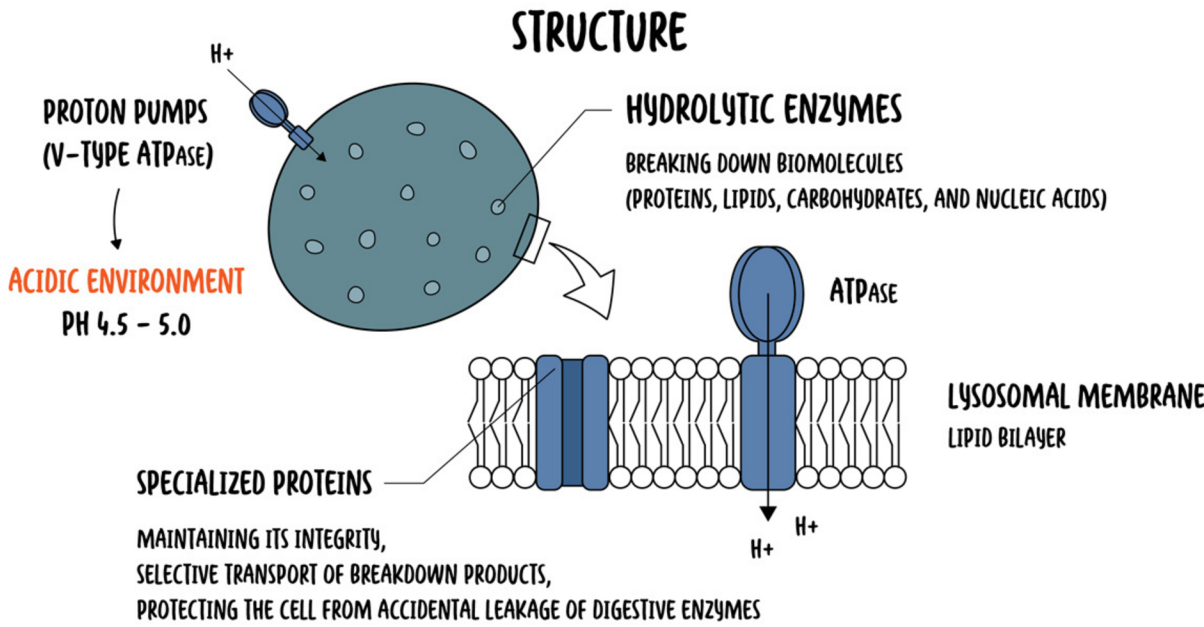
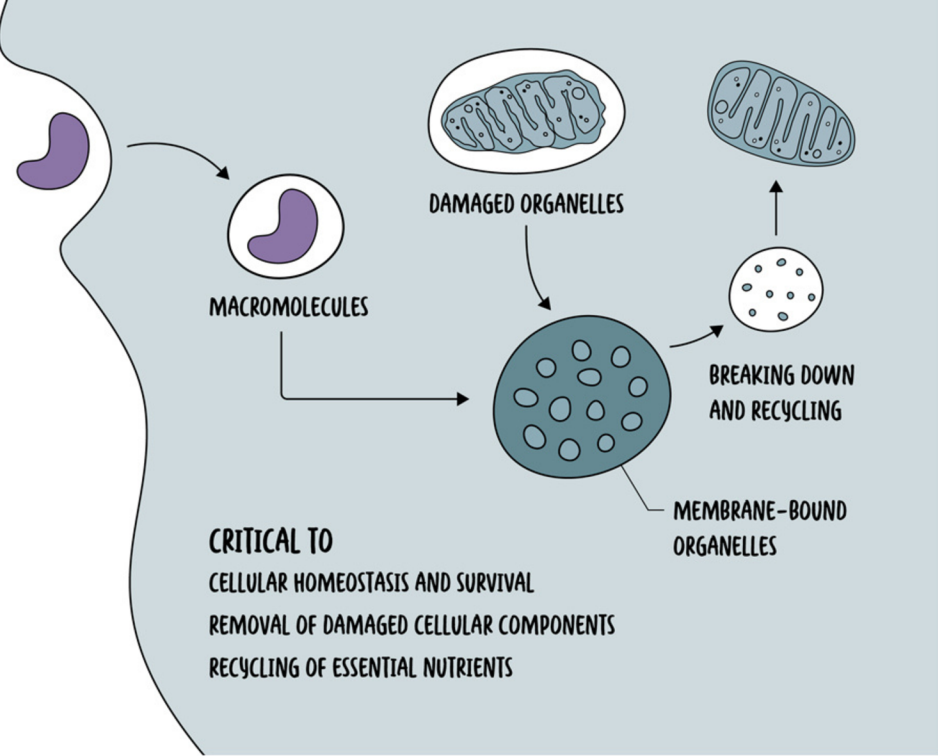


LYSOSOMES

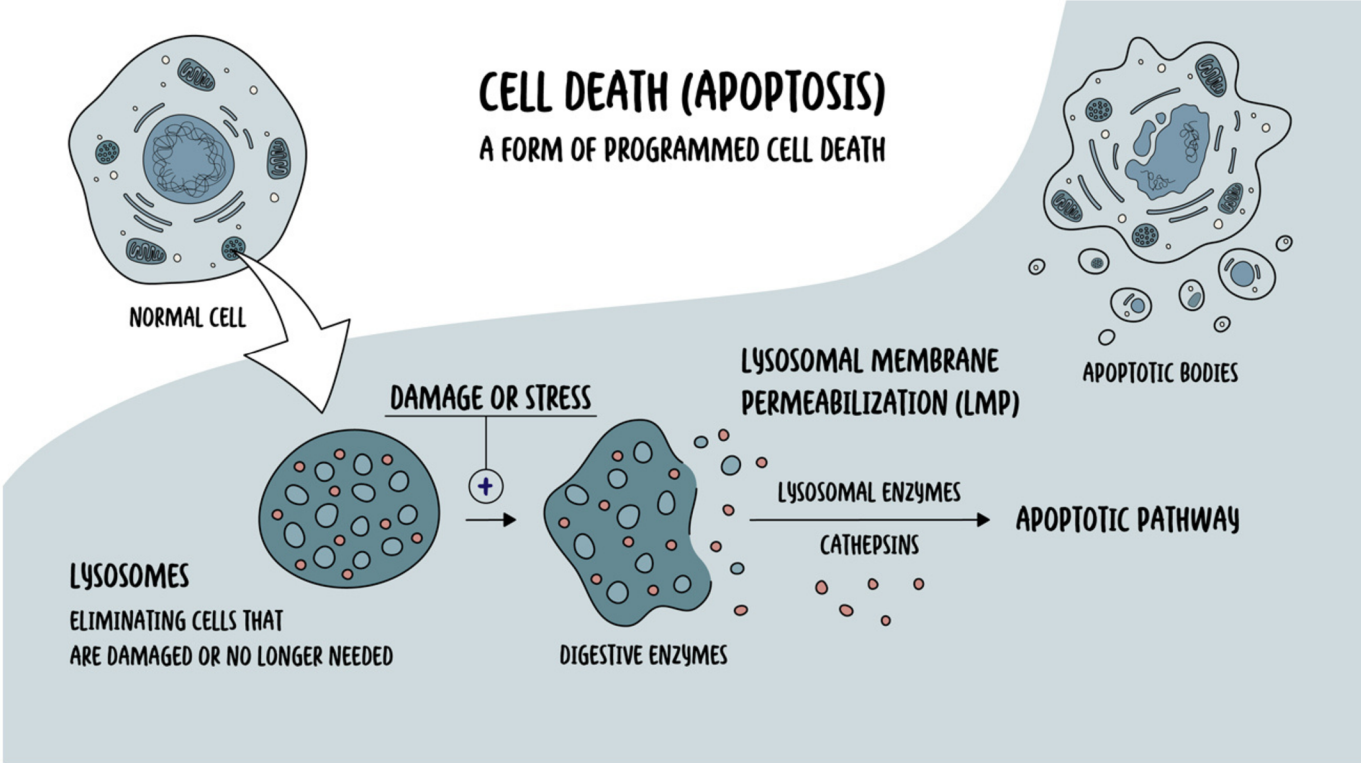
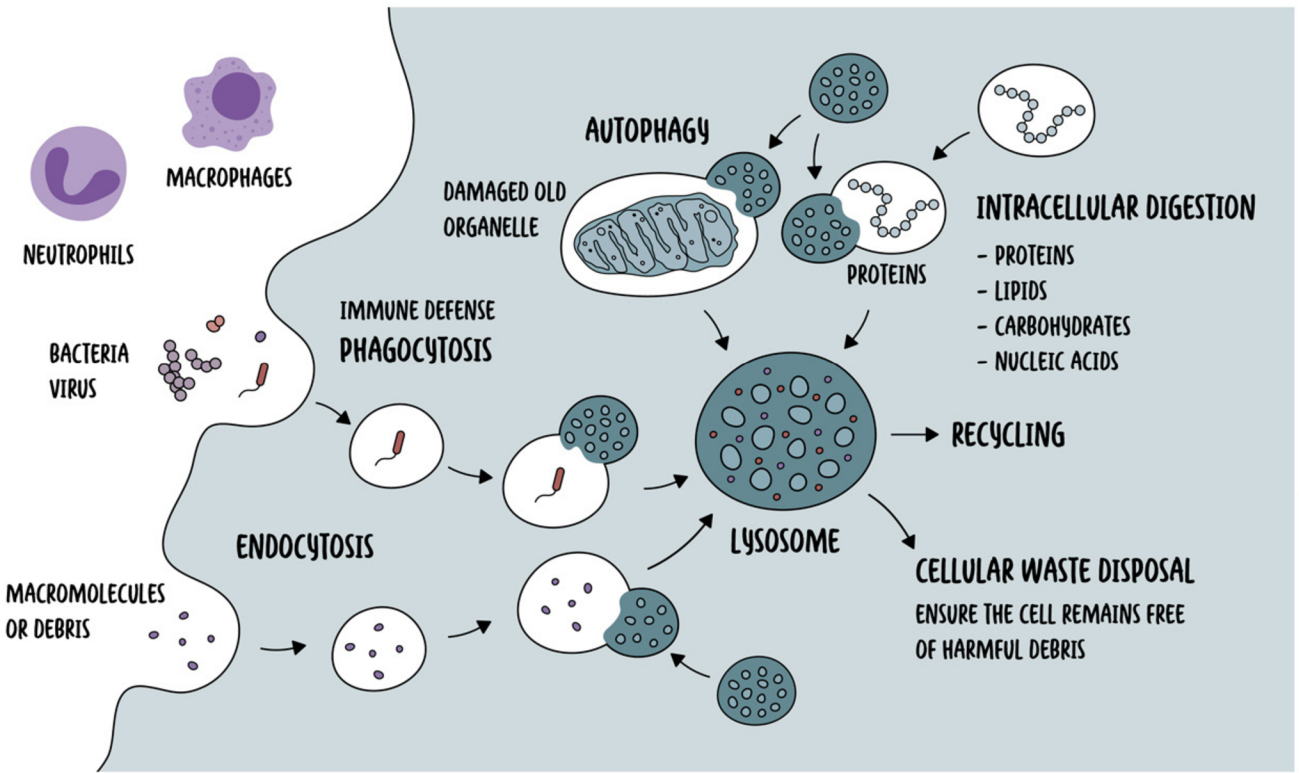
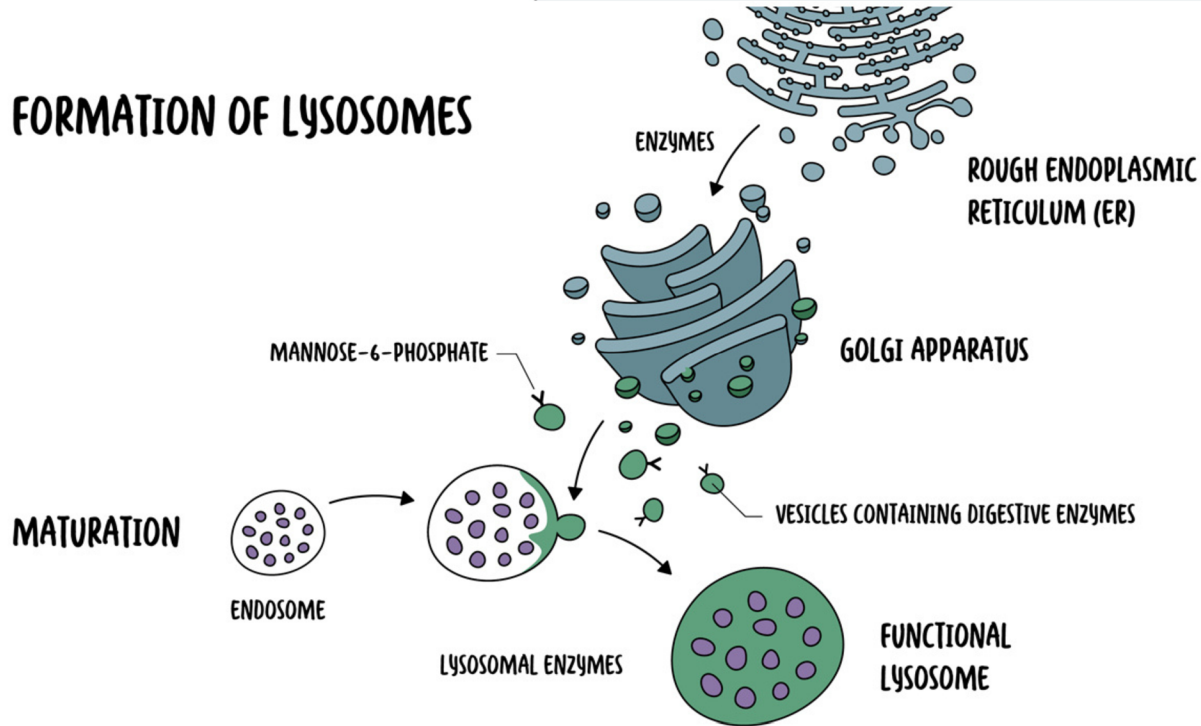
CELL'S DIGESTIVE SYSTEM



BELGIAN BIOCHEMIST
CHRISTIAN DE DUVE, 1955



FORMATION OF LYSOSOMES



LYSOSOMAL STORAGE DISEASES

Armando H. Faigl

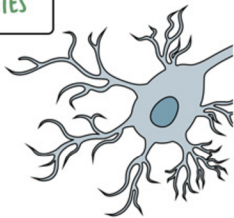
LYSOSOMAL ENZYMES DEFICIENT OR NON-FUNCTIONAL → ACCUMULATION OF UNDIGESTED SUBSTRATES

TAY-SACHS DISEASE

HEXOSAMINIDASE A
DEFICIENCY

GM2 GANGLIOSIDE
IN NEURON

NEURODEGENERATION



GAUCHER DISEASE

GLUCOCEREBROSIDASE
DEFICIENCY

GLUCOCEREBROSIDE
IN MACROPHAGES

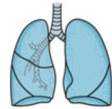
LIVER AND SPLEEN ENLARGEMENT,
BONE ABNORMALITIES, AND ANEMIA

POMPE DISEASE

ACID ALPHA-GLUCOSIDASE
DEFICIENCY

GLYCOGEN
IN LYSOSOME

MUSCLE WEAKNESS AND
RESPIRATORY ISSUES



NIEMANN-PICK DISEASE

SPHINGOMYELINASE
DEFICIENCY

SPHINGOMYELIN

NEUROLOGICAL AND VISCERAL SYMPTOMS