

Abstract:

Peroxisomes are eukaryotic cellular organelles of a spherical shape surrounded by a single membrane. Peroxisomes contain no DNA nor ribosomes and all the peroxisomal proteins are encoded in the nucleus. Peroxisomal proteins are posttranslationally imported into peroxisomes via group of peroxisomal biogenetic factors called peroxins. The most common functions include peroxisomal beta oxidation of fatty acids, detoxification of reactive oxygen species metabolism of purines and synthesis of ether lipids. Some specialized functions are found in derived peroxisomes - glycosomes, glyoxysomes and Woronin bodies. Glycosomes, occurring in group Kinetoplastida, contains a substantial part of glycolysis, Woronin bodies, found in filamentous fungi, have a mechanical function and plant glyoxysomes contain the glyoxylate cycle. Previously, peroxisomes together with glyoxysomes and glycosomes were called microspheres or microbodies.

Key words: peroxisome, Pex proteins, glycosomes, Trypanosoma, Leishmania