

ABSTRACT

This work reviews recent studies on the biogenesis of tail-anchored proteins. These proteins form a distinct class of integral membrane proteins which are intensively studied nowadays. Although this class of proteins is defined by the structure and membrane topology, individual proteins do not share any functional similarities. The basic cellular functions, structure and localisation are reviewed there. The work is focused mainly on the unique transport mechanisms and the determination of the target cellular compartments – endomembrane system and mitochondrial outer membrane. A separate part of the work also summarizes existing knowledge about VAP protein family which belongs to the class of tail-anchored proteins and which is conserved across all eukaryotic species. The last chapter presents results and goals of the research of these proteins in the human parasite *Giardia intestinalis* in the laboratory of organellar biogenesis.