

Abstract

Cells coordinate their metabolism based on various factors, for example nitrogen availability. The TOR pathway is an important regulator of nitrogen metabolism, it has a role in sensing intracellular amino acids status, and it controls especially cell growth, protein synthesis, proliferation and cell survival. However, it has been shown that the TOR pathway also controls lipid biosynthesis and lipid accumulation through various mechanisms in response to nitrogen availability. Although the TOR pathway is well conserved among the eukaryotic organisms, its outcomes differ diametrically when it comes to the lipid accumulation. This essay provides some insides into the mechanisms of regulation of the lipid metabolism by the TOR pathway.