

Molecular mechanism of nutrient transporter regulation in human cells

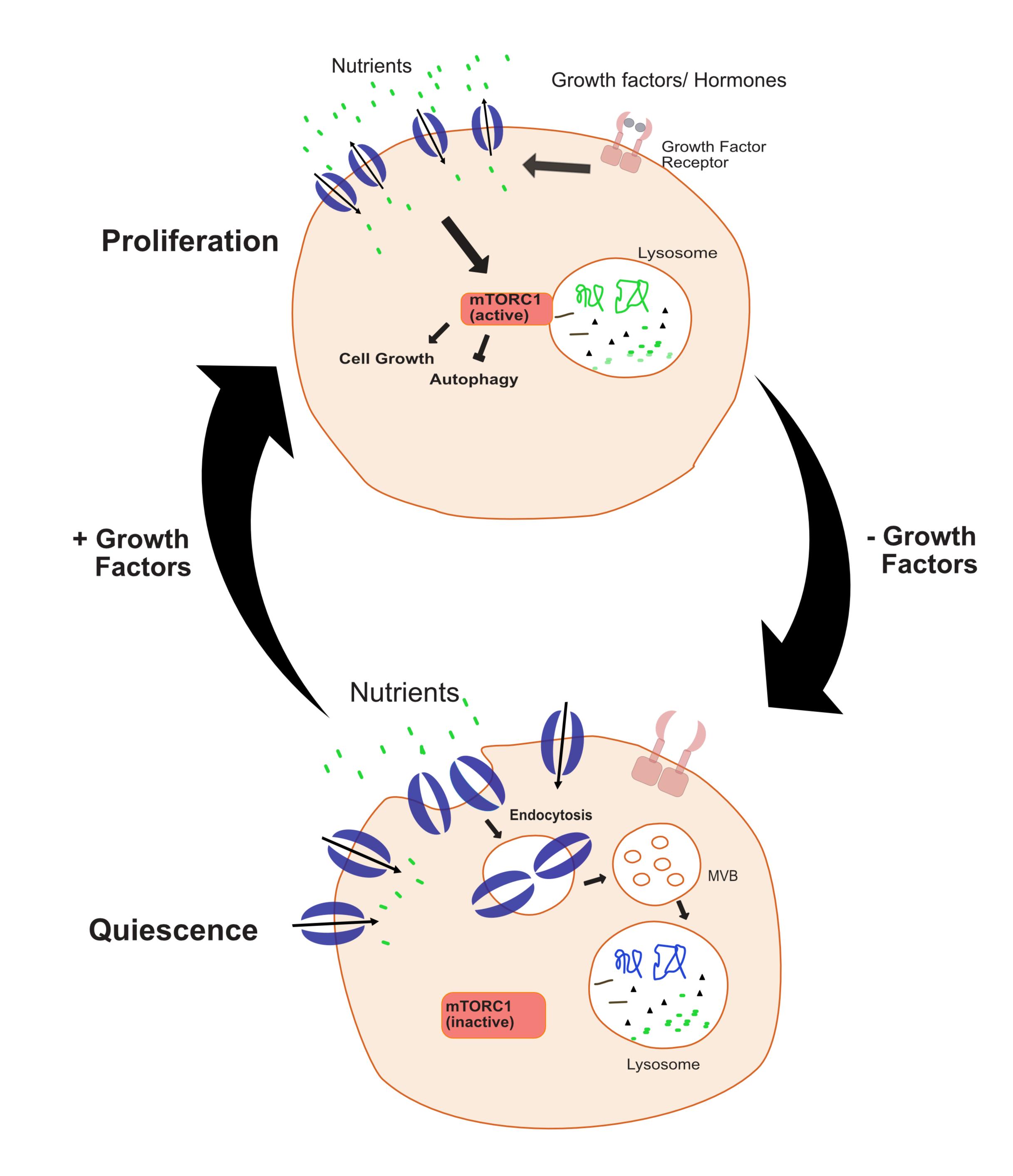


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Proliferating cells increase nutrient acquisition to fuel anabolic processes for biomass formation. Conversely, differentiated or quiescent cells adjust their nutrient uptake to maintain metabolic homeostasis for survival. A key strategy by which cells reconfigure nutrient uptake across the plasma membrane is by selectively adding or removing nutrient transporters. How cells control nutrient uptake to increase biomass or to preserve homeostasis is not understood. The goal of this project is to precisely define the molecular mechanisms that control nutrient transporter abundance at the plasma membrane during proliferation and upon entry into quiescence.

