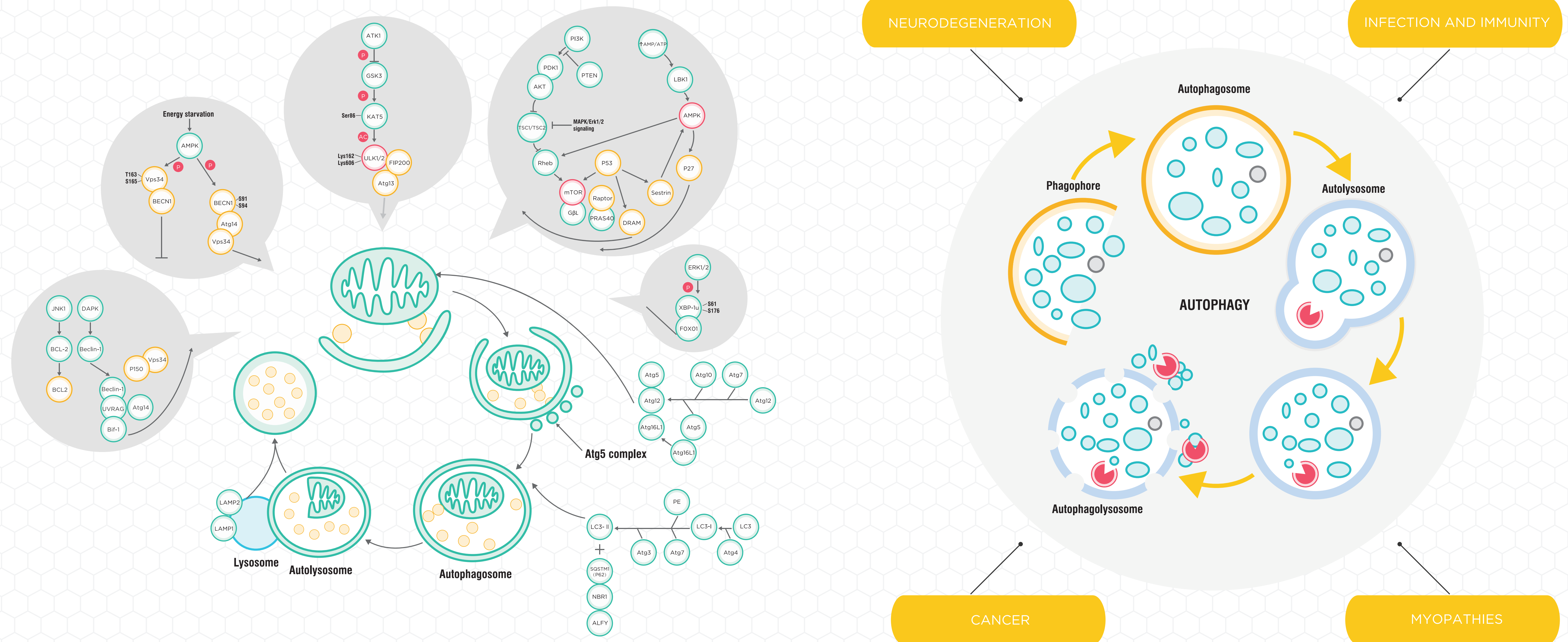


AUTOPHAGY PATHWAY



Autophagy, which is highly conserved in eukaryotes, is a catabolic process tightly regulated by several proteins, including ATG proteins, mTOR, Beclin 1, and FoxO proteins. It plays an important role in maintaining cellular homeostasis in response to a broad spectrum of cellular stresses, such as infection, nutrient starvation, damaged organelles, and protein aggregation. The organisms are able to obtain energy and essential nutrients, such as free amino acids, by autophagy. However, autophagy is rarely persistently activated in response to stress, but is activated in a dynamic manner to avoid autophagy-induced cell death.