

Abstract

Environmental stress is a daily bread for organisms across many different branches of life. Very complex response mechanisms have evolved to tackle such insults. Yeast *Saccharomyces cerevisiae* is adapted especially well for counteracting oxidative and osmotic stress. These unfavorable conditions usually lead to inhibition of protein synthesis. The GCN2 kinase is thought to be responsible for this phenomenon. General inhibition of protein synthesis is accompanied by an increase in expression of proteins engaging in stress response. Production of these proteins is often preceded by specialized regulatory processes, that operate on various stages of expression. This thesis will try to present the diversity and complexity of the individual regulatory layers.