

Abstract

Phosphorylation – most common post-translational modification has an important role in many cellular processes of bacteria. Bacteria contain enzymes that are in charge of adding phosphoryl group (kinases) or enzymes with reciprocal activity (phosphatases). Reversible phosphorylation and dephosphorylation of proteins are fundamental for signal transduction from the environment to the cell. These modifications can affect enzymatic activity, protein stability, localization as well as interaction with another protein. Due to the complexity of these phosphorylation networks, bacterial cells are capable to adapt very effectively to changing environmental conditions.