

$\beta$ -Arrestin is a ubiquitous protein in cells, where it is involved in signal transduction and can affect different cellular processes.  $\beta$ -Arrestin cooperates with G protein-coupled receptors (GPCRs). Binding of  $\beta$ -arrestin to a receptor after its activation by a relevant ligand results in attenuation of signal transduction through the cognate G proteins, the process called desensitization, which can be associated with receptor internalization. Besides that,  $\beta$ -arrestin acts as adaptor for different molecules, which participate in signal transduction.  $\beta$ -Arrestin also has a role in a regulation of transcription in the cell nucleus. Finally,  $\beta$ -arrestin is explored in research focused on the development of a new type of drugs, so called biased ligands. After binding to a GPCR, these ligands can initiate only one specific activity of the receptor and affect relevant signaling cascades.