

Abstract:

Housekeeping genes are genes expressed in most tissues of the organism under certain conditions of the environment. Their expression in the cell is essential and relatively stable and may proceed at a low level. The development of genomic and transcriptomic analyses contributed to improving of our knowledge about housekeeping genes, about their structure, number, as well as the intensity and stability of their expression. Housekeeping genes are used as the reference genes for a calibration in semi-quantitative and quantitative studies in molecular biology. In my thesis, I will mention several candidates that have been selected as the most suitable reference genes by many studies. I will focus mainly on human housekeeping genes and the most studied model organisms like *Saccharomyces cerevisiae* or *Arabidopsis thaliana*.