

The TCF/LEF transcriptional factors regulate the target genes of the Wnt signalling pathway – one of the key signalling mechanisms involved in development of multicellular organisms. The TCF/LEF genes produce a number of various protein isoforms, which consequently leads to a great functional diversity of the TCF/LEF proteins. In this diploma project we focused on the *Caenorhabditis elegans* gene *pop-1*, the ortholog of the *TCF/LEF* genes, whose isoforms have not been studied yet. Using the Northern blot analysis we tried to identify alternative isoforms of the *pop-1* mRNA in *C. elegans*. Using quantitative RT-PCR we also analyzed the *pop-1* mRNA levels during seven developmental stages of *C. elegans*. Further, we also determined the expression profile of two important partners of *pop-1*, the *bar-1* and *sys-1* genes, whose protein products function as transcriptional co-activators.

Key words:

canonical Wnt signaling pathway, TCF/LEF transcription factors, *Caenorhabditis elegans*, *pop-1*

