

## CYTOKININS, THEIR STRUCTURE, METABOLISM AND BIOLOGICAL ACTIVITY

### S u m m a r y

Till now our knowledge of cytokinin metabolism and biosynthesis as well as molecular mechanism of their action in plant cells is still very limited. Cytokinin biosynthesis in plants occurs mainly *de novo* from adenine, a nucleoside – adenosine or mononucleotide AMP by the addition of isopentenyl side chain coming from mevalonic acid to nitrogen  $N^6$  of amine group. An alternative indirect biosynthesis pathways of cytokinins – incompletely proved in laboratory research – occurs *via* the hydro-

lysis of tRNA, which appears to be the richest source of the constituent free mononucleotides of these plant hormones.

The possible role of cytokinin in the molecular mechanism of signal perception, transmission and transduction as well as activation of expression of many genes, mainly involved in the cell cycle, as well as formation of meristematic tissues and the process of photosynthesis have been studied during the last years and the main results are presented.