

NEUROBIOLOGICAL CORRELATES OF BEHAVIORAL DEVELOPMENT OF SOCIAL INSECT'S WORKERS

Summary

The present paper overviews current knowledge in neuroanatomical and neurochemical correlates of behavioural development in workers of social insects: honeybees and ants. Both literature data and the results of experimental research of the author are discussed. Social insect workers as a rule participate first in intranidal tasks and then switch to extranidal ones as they age. This process, known as the transition nurse – forager, is accompanied, among others, by neuroanatomical and neurochemical modifications taking place in various brain struc-

tures and/or in the whole brain. The present paper discusses neurobiological correlates of behavioural development of workers of social Hymenoptera with a particular stress laid on the role of biogenic amines and classical amino acid neurotransmitters and the differences between the honeybees and the ants. The author also deals with the question of reversibility of processes contributing to worker behavioural development (the phenomenon of behavioural reversion).