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Effects of some Antimicrobial Agents on the Total Protein Content of the Endoparasitoid *Pimpla turionellae* L. (Hymenoptera: Ichneumonidae)

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Abstract: The effects of thirteen antimicrobial agents that have different structures and modes of action on the total protein content of pupae of the hymenopterous endoparasitoid, *Pimpla turionellae* L., were investigated by rearing the larvae aseptically on chemically defined synthetic diets. These effects varied according to the their kind and dietary levels. The protein content of the pupae was significantly increased by penicillin, streptomycin, rifampicin, tetracycline hydrochloride, lincomycin hydrochloride, methyl p-hydroxybenzoate, cycloheximide and sodium benzoate, while it was decreased by nystatin. The other tested antimicrobial agents had no significant effects on the total protein content of the insect. Depending on dietary levels, most of the tested agents also had an effect on the body wet weight of the insect. It was demonstrated that pupae from larvae fed on diets with some levels of tested antimicrobial agents had a lower body wet weight but contained more protein content than those of the control diet. The diet with 45 mg of nystatin caused a significant decrease in the wet weight of the pupae and their protein content.

Key Words: *Pimpla turionellae*, antimicrobial agents, total protein, endoparasitoid, insects

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