

# Effect of DIMBOA, a hydroxamic acid from cereals, on peroxisomal and mitochondrial enzymes from aphids: Evidence for the presence of peroxisomes in aphids

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2,4-Dihydroxy-7-methoxy-1,4-benzoxazin-3-one (DIMBOA), a hydroxamic acid involved in the resistance of cereals to aphids, was administered to adult individuals of the aphid *Sitobion avenae* in artificial diets. Effects on the cellular metabolism were inferred from the evaluation of several organelle marker enzymes. Catalase from peroxisomes and cytochrome c oxidase from mitochondria increased their activities about twofold when aphids were fed with 2 mM DIMBOA. The role of these enzymes in the metabolizing of xenobiotics by aphids is discussed. Biochemical and cytochemical evidences for the presence of peroxisomes in aphids are reported here for the first time.