CHARACTERIZATION OF A NOVEL LIPOPHORIN FROM THE COWPEA WEEVIL, *Callosobruchus maculatus*

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Insects from the order Coleoptera (family Bruchidae) cause serious losses of cowpea and other seeds in storage. One of the most important insect pests of the cowpea is the *Callosobruchus maculatus* (Coleoptera: Bruchidae) larva, which avidly attacks the seeds during storage.
A lipoprotein was isolated from *C. maculatus* larvae and adults. This lipoprotein resembles the typical lipoprotein known as lipophorin (Lp). In insects, Lps are the major hemolymphatic lipoproteins that carry and distribute lipids of many classes between the tissues involved in lipid absorption, storage and utilization. The beetle Lp (465,000 daltons) had a hydrated density of 1.12 g/mL, containing 34% lipid and a high carbohydrate content of 9%. The larva Lp (585,000 daltons) showed a hydrated density of 1.14 g/ml, containing 56% lipid and 7 % carbohydrate. Mannose was the only sugar detected by paper chromatography in both Lp hydrolysates. SDS-PAGE revealed two apolipoproteins with masses similar to those of apolipophorins previously described (apoLp-I, 225,000 daltons; apoLp-II, 79,000 daltons). The lipids were extracted and analyzed by thin-layer chromatography (TLC). In adult Lp, phosphatidylserine, phosphatidylcholine and phosphatidylethanolamine were the major phospholipids found, whereas in the larva lipophorin, phosphatidylcholine, phosphatidylethanolamine and sphingomyelin were mainly found. Hydrocarbons, fatty acids and triacylglycerol were the major neutral lipids found in adult and larva Lp. Supported by CAPES, CNPq.