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Normal plasma biochemical reference intervals for young and adult arbor acres chickens

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The aim of the study was to investigate the physiological pattern of biochemical variables and to acquire reference intervals for young (less than 1 month) and adult (more than 1 month) Arbor Acres broiler chickens. At 14, 21, 28, 35, 42, 57 days, twenty birds per group were sacrificed by decapitation. Blood for analysis was collected from the jugular vein, separated within 2 hours by centrifugation, and then immediately analyzed. The influence of age was significant for the majority of the investigated variables. A significant age-related decrease in plasma glucose, cholesterol, triglycerides, phosphorus, magnesium, iron and potassium was observed. Also, a significant age-related increase in plasma total protein,

calcium and ASAT was obtained. Other variables did not differ significantly between ages. Calculation of separate reference intervals for young and adult animals was necessary for most estimated parameters. All variables did not follow a Gaussian distribution. Reference intervals are presented for both ages using non parametric method for uric acid, creatinine, sodium and chloride. Robust method was used for all other variables. The established reference intervals will be a usefull guide for interpreting plasma biochemical variables in different strains of broiler chickens raised in Algeria.

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