

ECTONUCLEOTIDASE ACTIVITIES ARE ALTERED IN BLOOD SERUM AND  
PLATELETS OF L-NAME -TREATED RATS

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Systemic arterial hypertension is characterized by the sustained elevation of arterial blood pressure and its common complication is arteriosclerosis. Extracellular nucleotides are involved in platelet aggregation, vasodilatation and vasoconstriction. Members of E-NTPDase, E-NPP and ecto-5'-nucleotidase families are able to hydrolyze extracellular nucleotides. We evaluate the behavior of ectonucleotidase activities from blood serum and platelets of normotensive (control group, receiving water for 14 days) and L-NAME-treated (treated group, receiving 30 mg/kg/day L-NAME for 14 days in the drinking water) rats. In treated group, the systolic pressure had raised from  $110.96 \pm 9.45$  mmHg to  $149.05 \pm 8.67$  mmHg. Animals were killed by decapitation and serum was obtained by centrifugation (5000 g, 5 minutes). Platelets were isolated by gel-filtration (sepharose 2B column). E-NTPDase, ecto-5'-nucleotidase and E-NPP activities were colorimetrically determined using ATP, ADP, AMP and *p*-Nph-5'-TMP as substrates, respectively. ATP, ADP and AMP hydrolysis were decreased both in serum (36%, 36% and 30%) and platelets (27%, 24% and 32%) of L-NAME-treated rats, respectively. The decrease of circulating nucleotide hydrolysis in hypertensive rats could represent an additional risk for hypertension development. The modulation of ectonucleotidase activities could help to prevent spontaneous platelet aggregation and thrombus formation that are largely related to this pathology (Apoio: CNPq).