

EXPOSURE TO LPS ALTERS NUCLEOTIDASE EXPRESSION IN  
LYMPHOCYTES FROM MESENTERIC LYMPH NODES OF RATS

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ATP exerts a proinflammatory role and induces cytokine release by acting at P2X<sub>7</sub> receptors. The main source of extracellular adenosine, an important immunomodulator, is the hydrolysis of extracellular ATP by ecto-enzymes: E-NTPDases, E-NPPs and ecto-5'-nucleotidase. Considering the role of ATP and adenosine in inflammatory processes, we have investigated the effect of lipopolysaccharide (LPS) on ectonucleotidases expression in lymphocytes from mesenteric lymph nodes. Studies have demonstrated an increase on nucleotide hydrolysis in lymphocytes after 24 and 48 hours of LPS exposure. However, our results have shown a decrease of E-NTPDase1 (50% and 73%), E-NTPDase2 (61% and 63%), E-NTPDase3 (27% and 36%) and ecto-5'-nucleotidase (62% and 90%) mRNA species after 24 and 48 hours of LPS exposure (2 mg/ Kg, i.p.), respectively, when compared to control. We also evaluated the E-NTPDase8 transcripts in mesenteric lymph nodes, but this enzyme was not expressed in this cell type. The mechanism that could explain the up-regulation of enzyme activities and the down-regulation of transcriptional levels is known as negative feedback autoregulatory loop. The changes observed suggest that these enzymes can act in the regulation of extracellular nucleosides and nucleotides in a model able to trigger inflammatory process.

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