

RESUMO

ESTABLISHMENT OF PHARMACOKINETICS PARAMETERS THROUGH COMPARTIMENTAL  
ANALYSIS OF GENTAMICIN SULPHATE LABELED WITH  $^{99m}\text{Tc}$ .

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Gentamicin sulphate is an aminoglycoside antibiotic type specifically used for treatment of infections produced by Gram negative bacterias but at the other hand it presents ototoxic reactions as a serious side effect. The main purpose of labeling gentamicin with  $^{99m}\text{Tc}$  was to obtain a radioactive tracer for compartmental analysis of this antibiotic. The plasma decay curve of  $^{99m}\text{Tc}$  gentamicin was obtained and the half-lives calculated. Furthermore the apparent volume of distribution was determined and the residual radioactivity in the body determined too. The biological half-life and total drug clearance were obtained. The distribution of  $^{99m}\text{Tc}$  gentamicin in rats was set in a two-compartment in addition to a retention one for the 24 hours time interval studied.