

CELL PROLIFERATION AND DIFFERENTIATION IN *TRYPANOSOMA*  
RANGELI MAINTAINED AT  $\beta$ -GLYCEROPHOSPHATE-SUPPLEMENTED  
MEDIUM

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*Trypanosoma rangeli* is a parasite considered harmless to mammals but able to infect triatomids. After the ingestion of trypomastigote forms during the blood meal, *Trypanosoma rangeli* differentiates into short epimastigotes, proliferates in digestive tract, crosses the intestinal barrier and achieves haemolymph, where occurs the differentiation to long epimastigote forms. Parasites complete their development in the lumen of salivary glands, where metacyclogenesis takes place. In this work, we investigate the effects of  $\beta$ -glycerophosphate, an ecto-phosphatase substrate, on cell division and differentiation of *Trypanosoma rangeli*. We also evaluate the influence of different concentrations of sodium orthovanadate, a phosphotyrosine phosphatase inhibitor, during the cell proliferation at  $\beta$ -glycerophosphate-supplemented culture medium. We observed that cells maintained at  $\beta$ -glycerophosphate-supplemented medium exhibited the same proliferation profile of the cells kept in control medium but no long forms could be detected in the first. 1mM sodium orthovanadate inhibited cell division and differentiation in  $\beta$ -glycerophosphate-supplemented medium as well as control medium. Studying the effects of low vanadate concentrations (0.1mM), we observed that cells maintained at  $\beta$ -glycerophosphate-supplemented medium exhibited the same proliferation profile of the cells kept without vanadate but no long forms could be detected in both. Taken together, these data suggest that ecto-phosphatase activities could be important to cell division and differentiation of *Trypanosoma rangeli*.

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