

**AN  
ELECTROPHORETIC INVESTIGATION  
OF RAT INTERSTITIAL FLUID  
PROTEINS**

**J. H. COETZEE**

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AN ELECTROPHORETIC INVESTIGATION OF RAT INTERSTITIAL FLUID PRO-  
TEINS

Johannes Hendrik Coetzee

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#### ABSTRACT

Interstitial fluid (obtained from capsules implanted subcutaneously into the backs of rats) and blood plasma were separated by disc electrophoresis into different protein fractions and the concentration of each was determined. Variations in the animal's protein fractions from the normal after exposure to heat, cold and exercise, were studied. Hematocrit readings were recorded and the colloid osmotic pressures of normal interstitial fluid and plasma were determined.

The interstitial fluid gave very similar results to those obtained by some authors who employed different sampling techniques. All the plasma protein fractions were found to be present in interstitial fluid. The albumin concentrations varied in the intra- and extravascular compartments during cold and heat exposures. There was an increased movement of albumin between the two compartments during exercise. Possible explanations for the above and other results obtained are discussed.

The presence of a modified albumin molecule or a protein exclusive to interstitial fluid by immuno- and crossed immunoelectrophoresis could not be demonstrated.



DECLARATION

I declare that this dissertation is my own, unaided work. It is being submitted for the degree of Master of Science in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.

J. H. Bartz  
Twentieth day of March 1981.



To my wife, Alida.



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