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The Biology of Trypanosomes

Edited by Leslie Hudson

With 25 Figures



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Preface

African and South American trypanosomiases are notable features of clinical and veterinary practice in their respective endemic areas and, as such, are of considerable economic importance. Scientifically, however, their importance extends beyond their clinical significance, as the trypanosomes are intriguing and easily manipulated models for the study of the control of gene expression, membrane chemistry, proliferation and differentiation. It is clear from the scientific press that the rate of advance has “hotted” up in these areas of trypanosome research over the past 5 years and so a single-topic volume within the scope of the present series seemed timely. As ever, the final admixture of review topics was a compromise between what was appropriate and what was available – fortunately with the former in vast excess.

I should like to highlight two omissions, made for entirely different reasons. The first is a detailed treatment of the molecular biology of the variant surface glycoproteins of the African trypanosomes (in particular *Trypanosoma brucei* and *T. equiperdum*). This topic has been the subject of several reviews, for example, BORST and CROSS (1982)¹ and TURNER (1982)², and so was excluded from the present volume. The second omission is a review of the first-class work on genetic recombination from the group of Dr. Leo Jenni at the Schweizerisches Tropeninstitut, Basel. This group has used isoenzyme markers to show that *T. brucei* parasites can undergo genetic recombination in the tsetse fly host – prima facie evidence that trypanosomes have a sexual phase in their life cycle. Unfortunately, Dr. Jenni was prevented from completing his review and I count this volume the poorer for its absence.

¹ Borst P, Cross GAM (1982) Molecular basis for trypanosome antigenic variation. *Cell* 29:291–303

² Turner MJ (1982) Biochemistry of the variant surface glycoprotein of salavarian trypanosomes. *Adv Parasitol* 21:69–153

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I am extremely grateful for the help and cooperation of my many friends and colleagues in the compilation of this volume and in particular acknowledge the patient editing done by Kay Dorelli.

London, Spring 1985

LESLIE HUDSON

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