

A29 ENERGY METABOLISM IN ADULT *SETARIA DIGITATA* (FILARIAL PARASITE)

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Characterization of parasite enzymes is needed for screening of chemotherapeutic agents, identification of specific transport and nutrient uptake mechanisms and in the elucidation of enzymatic pathways associated with reproduction. Certain enzymes of *Setaria digitata* are different from that of the host.

Adult *S. digitata* could be maintained in *in-vitro* culture for long periods and in relative O₂ deficiency but not in the absence of glucose. Glucose uptake appears to be passive, but low level of active transport is not ruled out. Uptake of glucose was independent of the gas phase and the culture medium but varied with external concentration of glucose. Approximately 50% of glucose utilised was converted to lactate. A relative absence of tricarboxylic acid cycle enzymes

was observed.

It is concluded that in adult *S. digitata* glucose is the major source of energy and metabolism is predominantly by anaerobic glycolysis. Pathways alternative to classical TCA cycle are likely to be present. Some of the glycolytic enzymes appear to be different from the host enzyme and are potentially good targets for drug development.

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