

# Biological characterization of *Trypanosoma cruzi* zymodemes: In vitro differentiation of epimastigotes and infectivity of culture metacyclic trypomastigotes to mice

Sanchez,

Wallace,

Olivares,

Diaz,

Aguilera,

Apt,

Solari,

Thirty-one *Trypanosoma cruzi* isolates from Chile, Peru, and Bolivia were studied in their capacity to differentiate in vitro from epimastigotes to metacyclic trypomastigotes on TAU-3AAG medium.

Zymodeme 1 parasites displayed the best level of differentiation, which ranges from 60 to 90% depending on the isolate. Zymodeme 2 parasites exhibited highly heterogeneous differentiation rates. This differentiation method permits the obtention of large amounts of metacyclic

trypomastigotes from zymodeme 1 parasites. Metacyclic trypomastigotes obtained in vitro were infective to nude Balb/c hybrid mice. Zymodeme 1 parasites produced high parasitemias in this murine model; in contrast, zymodeme 2 parasites displayed lower parasitemias. Of a total of 27 *T.*

*cruzi* isolates, 20 proved to be infective to mice, 12 gave enough parasites for further studies, and 8 of these were used for biological characterization. Results are compared with the infective clone Dm28 and Tulahuén strains maintained since (