

MICROSCOPY AS AN IMPORTANT TOOL FOR INCREASING KNOWLEDGE  
ABOUT THE BIOLOGY OF TRYPANOSOMATIDEA RELATED WITH REDUVIDIA  
HEMIPTERA VECTORS OF *TRYPANOSOMA CRUZI*

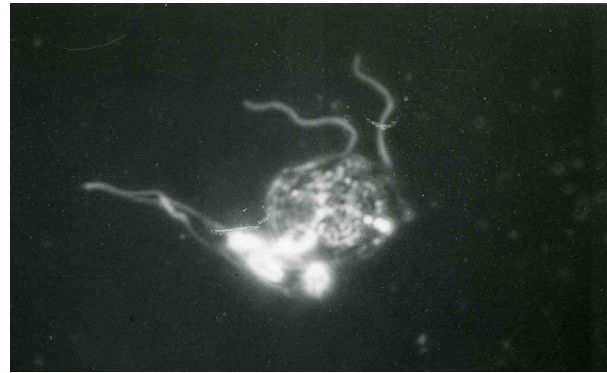
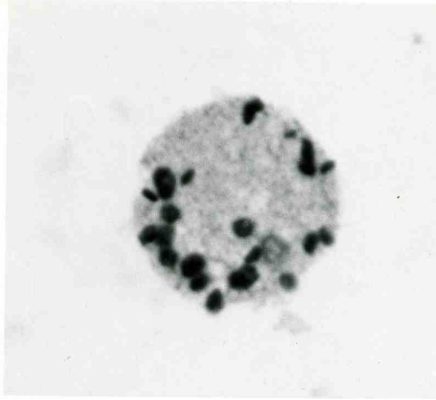
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There are important knowledge about the biology of *Trypanosoma cruzi* and other flagellates that goes by the enteric of hemiptera reduvideae – grouped in the genera Triatoma, Rhodnius, Pastrongilus, Dipetalogaster and Microtomus – that has been obtained in the last twenty years, due to laboratory work done in Ibero-America where the use of microscopy techniques played a foremost role. A review of the way that took place in order to resolve incognita as well as correct mistaken concepts that were maintained for rather long time is the goal of this lecture.

The subjects that have been developed in the near previous time which have broad our knowledge on the biology of flagellates and hemiptera that are responsible of the Chagas disease where microscopy was the important tool applied are according to my guess: a) the understanding of the mitotic division of *T. Cruzi*, *Blastochytidia gallardoii* among other flagellates, b) the relationship of different protozoa species with the enteric cavity wall and peritrophic membrane of the vector insects and the differentiation in the “binding” of the epimastigots to the arthropod digestive tube, c) microscopic and submicroscopic structure differences between the genus *Trypanosoma* and *Blastochritidia*, structures that allow the “synonymy” of the species *Blastocrithidia triatomae* and *Crithidia gallardoii*, d) coelome insect colonization bearing the flagellates by peculiar forms of such protozoa.

Although other subjects might be important to be mentioned as the cause that allow epimastigots rosette build-up in axenic in-vitro cultures, or the pathological alterations produced by *T. Cruzi* on the vertebrates that carry-on the flagellate in chronic condition, we have assort those subjects for our communication (lecture) because they are in close relationship with the invertebrate hosts allowing us to present a better understanding of the flagellates “saga” within the insects as well as to answer some of the questions that pioneer papers by Emanuel Dias, Salvador Mazza and Miguel Jörg thrown in

a clever and clear form to the scientific community while the first thirty five years of the twentieth century roll-by, many of them not yet answered but perhaps with the help of our days microscopy techniques might be deeply considered anew from the perspective provided by the nowadays knowledge increase.



1) *Trypanosoma cruzi* amastigote in broth culture, giemsa; 2) Living division for under dark field; 3) Detail of the cytostome in *Blastochritidia gallardoi*; 4) Two trypomastigotes plus a flagellate division form, giemsa; 5) Living Blastochritidia under phase contrast, micrometer one division = 2.7  $\mu\text{m}$  (1,2 and 4:trypanosoma; 3 and 5 Blastochitydia)